Solenoid Valves Chapter Overview

Solenoid Valves Types Overview

Overview for Solenoid Valves

Note: The following product overview does not show the complete product range of this catalogue. A complete overview can be found **here** ▸

Overview Solenoid Valves

Category	Type	Function	Required Δp [in bar]	Process connection[1]	Pressure range [in bar] [in MPa]	Medium temperature [°C]	Diameter [DN in mm]
Direct-acting plunger valves	**6011** ▸	2/2	–	M5, G ⅛, NPT ⅛, SFB	0…21 0…2.1	−10…+100	1.2…2.4
	6012 ▸	3/2	–	M5, G ⅛…¼, PIC, NPT ⅛, SFB	0…10 0…1	−10…+100	1.2…2.0
	6013 ▸	2/2	–	G ⅛…⅜, NPT ⅛…⅜, SFB	0…25 0…2.5	−10…+180	2…6
	6014 ▸	3/2	–	G ⅛…¼, NPT ⅛…¼, SFB	0…16 0…1.6	−10…+120	1.5…3.0
	6027 ▸	2/2	–	G ¼…½, NPT ¼…½	0…250 0…25	−40…+160	1.2…12
	2610 ▸	2/2	–	G ¼…½ NPT ¼…½	0…10 0…1	−200…+180	6…10
Direct-acting pivoted armature valves	**0330** ▸	2/2 3/2	–	G ¼, NPT ⅛	0…16 0…1.6	−30…+90	2…4
	0331 ▸	2/2 3/2	–	SFB	0…16 0…1.6	−30…+90	2…3
	0121 ▸	2/2 3/2	–	G ¼, G ⅜	0…4 0…0.4	−10…+90	2…8
Direct-acting toggle valves	**0131** ▸	2/2 3/2	–	G ⅜…½	0…3 0…0.3	−30…+50	10…20
Servo-assisted piston valves	**6240** ▸	2/2	–	G ¼…½	0…250 0…25	−40…+160	6, 13
	5404 ▸	2/2	1.0	G ½…1, NPT ¼…2, DIN flange	1…50 0.1…5	−10…+160	12…25
	6407 ▸	2/2	–	G ½…1, DIN flange	0…10 0…1	−20…+150	13…25
Servo-assisted diaphragm valves	**6213EV** ▸	2/2	–	G ¼…2, NPT ⅜…1	0…10 0…1	−30…+120	10…40
	6281EV ▸	2/2	0.5	G ⅜…2, NPT ½…1	0.2…16 0.02…1.6	−30…+120	13…50
	0290 ▸	2/2	–	G ½…2, NPT ½…2½, DIN flange	0…16 0…1.6	−30…+120	12…50
	5282 ▸	2/2	0.2	G ½…2½, DIN flange	0.2…16 0.02…1.6	−30…+90	13…50

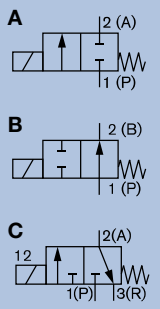
1) PIC = Push–in connection | SFB = Bürkert specific flange pattern
2) S = Standard | A = On request | N = Not available | 1 = Plastic version: Type 0142
3) Only as sealing material
4) x = suitable | o = conditionally suitable | - = not suitable

Body material[2]			Seal material Diaphragm material[2]					Medium[4]				Forerunner Type	Special features and versions
Brass	Stainless steel	Plastic	NBR	EPDM	FKM	PTFE[3]	FFKM[3]	Neutral fluids	Contaminated fluids	Aggressive fluids	Neutral gases		
S	S	S	S	S	S	N	N	x	–	–	x	–	–
S	S	S	S	S	S	N	N	x	–	–	x	–	–
S	S	N	S	A	S	S	A	x	–	–	x	–	FFKM only as seat seal
S	S	S	S	A	S	A	A	x	–	–	x	–	PTFE only up to DN 2.0; FFKM only seat seal and DN 2.0
S	S	N	N	A	S	S	N	x	–	o	x	0285, 2200, 0243, 0255	–
S	S	N	N	N	N	S	N	x	–	x	x	–	Medium separated
S	S	N	S	A	S	N	A	x	x	x	x	0124, 0332, 0780, 0788	Medium separated
S	S	N	N	A	S	N	N	x	x	x	x	0125, 0333, 0780, 0788	Medium separated
N	S	S	N	A	S	N	S	x	x	x	x	0789	Up to DN 8, medium separated
S	N	S	N	S	S	N	N	x	x	x		0323, 0223	Medium separated
S	S	N	N	A	S	S	N	x	–	o	x	2400	
S	N	N	S	N	A	S	N	x	–	–	x	0404, 0406	Flange version in grey cast iron
S	N	N	N	N	N	S	N	x	–	–	x	0407	Flange version in grey cast iron, fixed coupled
S	S	N	S	S	S	N	N	x	–	–	x	–	Spring coupled
S	S	N	S	S	S	N	N	x	–	–	x	0280, 5281	–
S	S	N	S	S	S	N	N	x	–	–	x	–	Flange version in grey cast iron, fixed coupled
S	S	S1	S	S	S	N	N	x	x	x	x	–	Flange version in grey cast iron, pilot medium separated

2/2 or 3/2 way solenoid salve for aggressive medium

0121

- Direct-acting, media-separated valve with diameter of up to DN08
- Maintenance-free pivoted armature technology
- Vibration-proof, block screwed coil system
- Service-friendly, durable manual override
- Explosion proof version optional

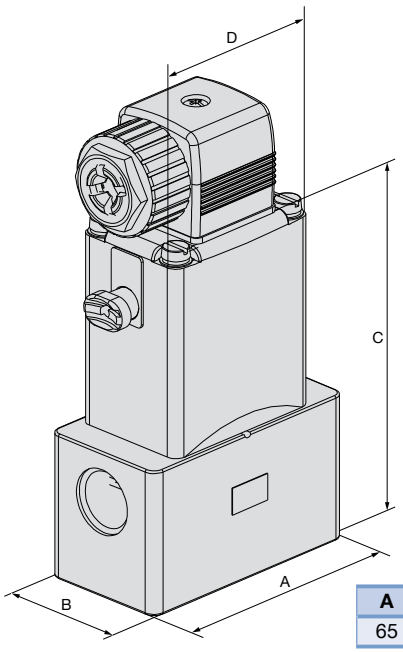


The 0121 valve is a direct-acting, media-separated pivoted armature valve. It is available in 3/2- and 2/2 way versions. As a 3/2 way version, it can be used as a distributor or mixing valve. Various diaphragm material combinations and methods of operation are available depending on the application. The housing offering includes stainless steel (316L), PTFE, and PVC versions. The solenoid coils are moulded with a chemically resistant epoxy. The 0121 is equipped with manual override for commissioning and testing. For reduced energy requirements, all coils can be delivered with electronic power reduction or as an impulse version. The switching status can be indicated with position feedback as a binary or NAMUR signal. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65/67 – in combination with a stainless steel or plastic housing NEMA 4X.

Technical data

General data	
Orifice	DN4.0…DN8.0
Available housing materials	PTFE PVC (resistant acc. to DIN 8062, 8061) PP (Polypropylen) PVDF Stainless steel 1.4401
Seal materials	FKM / FFKM / EPDM
Medium for FKM for FFKM for EPDM	 Oxydizing acids and substances, hot oils with additives, salt solutions, waste gases Aggressive fluids, hot air, hot oils, Aromate, ether, Esther, ketones (please note Bürkert chemical resistance chart). Alkalis, acids up to medium concentration, alkaline washing- and bleaching lyes
All Materials	For more detailed information please consult the resistance chart
Medium temperature for body material PVDF oder PP	EPDM: -30…+70 °C FKM: -10…+70 °C FFKM: -10…+70 °C
Medium temperature for body material PTFE or VA	EPDM: -30…+90 °C FKM: -10…+90 °C FFKM: -10…+90 °C
Medium temperature for body material PVC	EPDM: -30…+50 °C FKM: -10…+50 °C FFKM: -10…+50 °C
Ambient temperature	Max. +50 °C
Viscosity	Max. 37 mm²/s

Dimensions [mm]



A	B	C	D
65	35	91	46

Voltages	24 V DC, 24 V 50 Hz, 230 V 50 Hz, 120 V 60 Hz (others on request)
Voltage tolerance	±10 %
Cycling rate	Max. 100/min with AC Max. 10/min for UC (high-capacity electronic)
Duty cycle for VA	100 %
Duty cycle bei PVDF, PP and PTFE	40 % ED (60 % intermittent operation) in 10 min with 8 W version 100 % ED with 5 W version or high-performance electronics (5 W version on request)
Duty cycle for PVC	With PVC 10 % ED (10 min) 100 % ED for version with high-performance electronics
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A for Cable plug Type 2508 (will be replaced with Type 2518)/2509 (Cable plug included in delivery, on request also with injected cable)
Protection class	IP65 with cable or cable plug

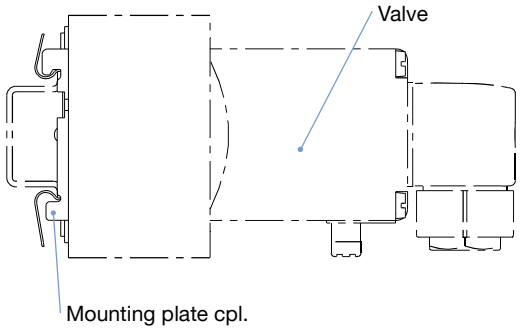
Technical data continued

Thermal insulation class of the coil	H
Installation	As required, preferably with actuator upright
Weight [kg]	
Material VA	0.9
Material PVDF, PP and PVC	0.38
Material PTFE	0.5

Power consumption standard					**Response times**[1]			
Frequency: AC			**Frequency: DC**		**Frequency: AC**		**Frequency: DC**	
Inrush [VA]	**Operation [VA]**	**Operation [W]**	**Cold [W]**	**Warm [W]**	**Opening [ms]**	**Closing [ms]**	**Opening [ms]**	**Closing [ms]**
30	15	8	11	8	20	11	11	8

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

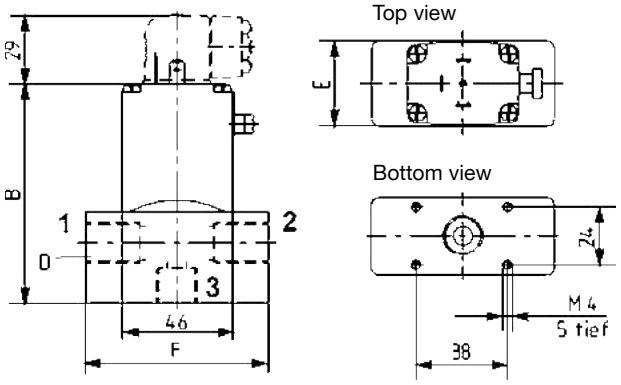
Accessories



Description	Article no.
Mounting plate cpl. for DIN rail mounting[2]	013253

2) Use only with 2/2 way globe valves

Dimensions [mm]



Body material	D	B	E	F
Stainless steel	G ¼	89	32	76
PVC	G ⅜	91	35	65
PP	G ⅜	91	35	65
PVDF	G ⅜	91	35	70
PTFE	G ⅜	91	35	76

Ordering chart

Circuit function	Orifice [mm]	Power connection	Seal material	Body or seat material	Article no. per voltage/frequency [V/Hz]			
					024/DC	024/50	230/50	120/60
A[1] 2/2 way direct-acting solenoid valve, normally closed	4.0	G ⅜	FKM	PVC	049654	048940	047859	–
	4.0	G ⅜	EPDM	PVC	050795	050085	049267	–
	6.0	G ⅜	FKM	PVC	048749	049348	047810	049228
	6.0	G ⅜	EPDM	PVC	049337	049678	049291	–
	8.0	G ⅜	FKM	PVC	049697[3]	052800	052302	–
	8.0	G ⅜	EPDM	PVC	048698[3]	050967	050701	450543
	4.0	G ¼	FKM	VA	055244	056934	052441	–
	4.0	G ¼	EPDM	VA	136290	–	136292	–
	6.0	G ¼	FKM	VA	040482	057086	054595	–
	6.0	G ¼	EPDM	VA	049113	–	–	–
	4.0	G ⅜	EPDM	PP	049017	–	–	–
	6.0	G ⅜	EPDM	PP	052161	–	–	–
	4.0	G ⅜	FFKM[2]	PVDF	133109	–	079653	–
	4.0	G ⅜	FFKM[2]	PTFE	122632[3]	–	077191	457453[4]
	4.0	G ⅜	FFKM	PTFE	151733	–	136205	–
	4.0	G ⅜	FFKM	PTFE	132098[3]	–	–	–
B[1] 2/2 way direct-acting solenoid valve, normally open	4.0	G ⅜	FKM	PVC	–	–	050158	–
	6.0	G ⅜	EPDM	PVC	135416[3]	–	–	–
	4.0	G ⅜	FFKM	PTFE	132096[3]	–	–	–
	6.0	G ⅜	FFKM	PTFE	132097[3]	–	–	–
C 3/2 way direct-acting solenoid valve, normally closed	4.0	G ⅜	FKM	PVC	051701	–	–	–
	6.0	G ⅜	EPDM	PVC	–	–	051577	–
	4.0	G ⅜	FFKM	PTFE	–	–	130625	–
	4.0	G ⅜	FKM	PTFE	044771	–	–	–
	6.0	G ⅜	FFKM[2]	PTFE	131364[3]	–	–	–
	4.0	G ¼	EPDM	VA	–	–	135858	–
E 3/2 way mixing solenoid valve	4.0	G ¼	FKM	VA	–	–	042457	–
	6.0	G ⅜	EPDM	PVC	048673	–	–	–
	4.0	G ⅜	FFKM[2]	PVDF	–	–	120402	–
	4.0	G ⅜	FFKM	PTFE	151715	–	130934	–
	4.0	G ⅜	FFKM[2]	PTFE	135028	–	–	–

Ordering chart continued

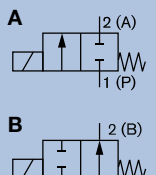
Circuit function	Orifice [mm]	Power connection	Seal material	Body or seat material	Article no. per voltage/frequency [V/Hz]			
					024/DC	024/50	230/50	120/60
F 3/2 way direct-acting, distribution solenoid valve	6.0	G ⅜	FKM	PVC	049533	052181	047916	–
	6.0	G ⅜	EPDM	PVC	040062	048760	050491	–
	4.0	G ⅜	FFKM[2)]	PTFE	–	–	124239	–
	6.0	G ⅜	FFKM	PTFE	141134	–	–	–
	6.0	G ⅜	FKM	PTFE	051256	–	–	–

1) The listed Article no. and circuit functions have a housing with straight pass
2) Seal material seat seal is FFKM; Seal material seat O-ring FKM
3) The listed Article no. are equipped with a high-performance coil (60 W-inrush, 3 W-operation) and injected cable
4) Cable plug is not part of the delivery

2/2 way Solenoid Valve for neutral media

0131

- Direct acting
- With hermetic isolation of fluid
- Lockable manual override as standard
- NC and NO circuit function
- Optional with electrical position feedback

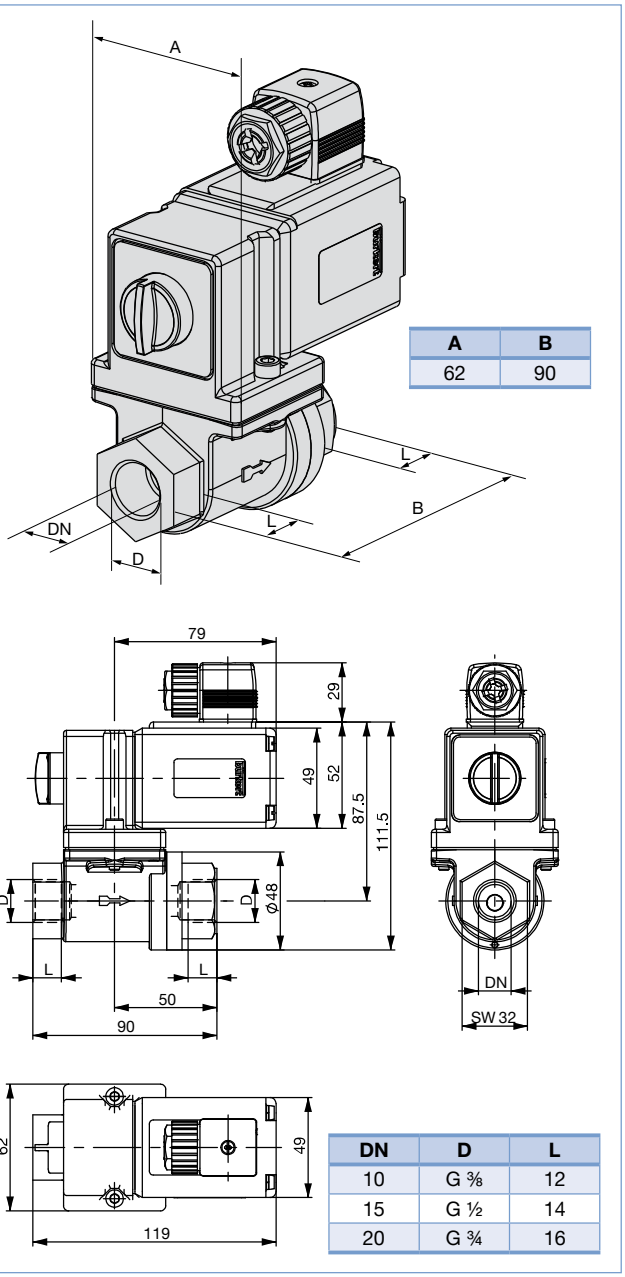


The direct-acting valve, Type 0131, is delivered with circuit function, normally closed or normally open . The solenoid actuator is separated from the medium by a double PTFE seal with a small ventilated space. The valve is used for shut-off, dosing, filling and ventilating medium where low pressures are applicable; also suitable for use in technical vacuum.

Technical data

Body material	Brass
Seal materials	NBR, FKM
Medium	
with NBR	Neutral liquids e.g. compressed air, water, hydraulic oil, oils and fats without additives, technical vacuum
with FKM	Hot air, per-solution, hot oil, oils with additives, technical Vacuum
Medium temperature	
with NBR	-10 °C…+90 °C
with FKM	-10 °C…+130 °C
Ambient temperature	Max. +50 °C
Viscosity	100…21 mm²/s
Operating voltages	24 V/UC 230 V/50 Hz Other Voltages on request
Voltage tolerance	±10 %
Cycling rate	Max. 6/min with UC
Duty cycle	ED 100 %
Electrical connection	Cable plug acc. to DIN EN 175301-803, Form A (included)
Protection class	IP65 with cable plug
Coil insulation class	H
Installation	As required, preferably with actuator upright
Response times [ms]	Measured at valve outlet at 6 bar and +20 °C.
Opening: 10…20	Pressure relief 0…90 %
Closing: 40…60	Pressure relief 100…10 %
Electrical power consumption	
Inrush	AC: 100 VA, UC: 100 W
Hold	AC: 48 VA (16 W), UC: 9 W

Dimensions [mm]



A	B
62	90

DN	D	L
10	G ⅜	12
15	G ½	14
20	G ¾	16

Ordering chart

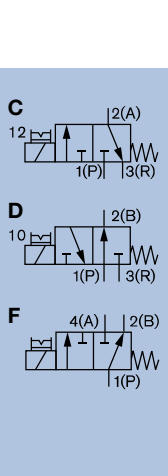
Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h]	Pressure range [bar]	Seal material	Voltage/Frequency [V/Hz]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	10	G ⅜	2	0…3	NBR	24/UC	057475
						230/50	053059
					FKM	24/UC	054053
						230/50	044502
	15	G ½	4.5	0…1	NBR	24/UC	054102
						230/50	052221
					FKM	24/UC	025537
						230/50	040549
	20[1)]	G ¾	6	0…0.5	NBR	24/UC	049751
						230/50	048490
					FKM	24/UC	069752
						230/50	048622
B 2/2 way direct-acting solenoid valve, normally open	10	G ⅜	2	0…2	NBR	24/UC	059208
						230/50	051685
	15	G ½	4.5	0…1	NBR	24/UC	058371
						230/50	046466
					FKM	230/50	046643
	20[1)]	G ¾	6	0…0.5	NBR	24/UC	050461
						230/50	053807

1) Versions with 20 mm nominal diameter are not suitable for vacuum

3/2 way Solenoid Valve for neutral medium

0131

- Direct acting
- With hermetic isolation of fluid
- With lockable manual override
- Universal functions
- Electrical feedback optional

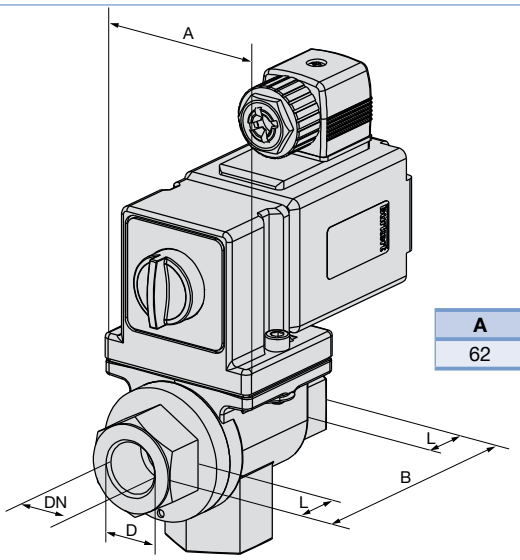


The direct acting 3/2 way valve, Type 0131, is available in different circuit functions.
The solenoid actuator is separated by a double seal of PTFE with a ventilated clearance from Medium.
The valve is used for shut-off, dosing, filling, ventilating and distributing Medium with low pressures; also with technical Vacuum for DN10.

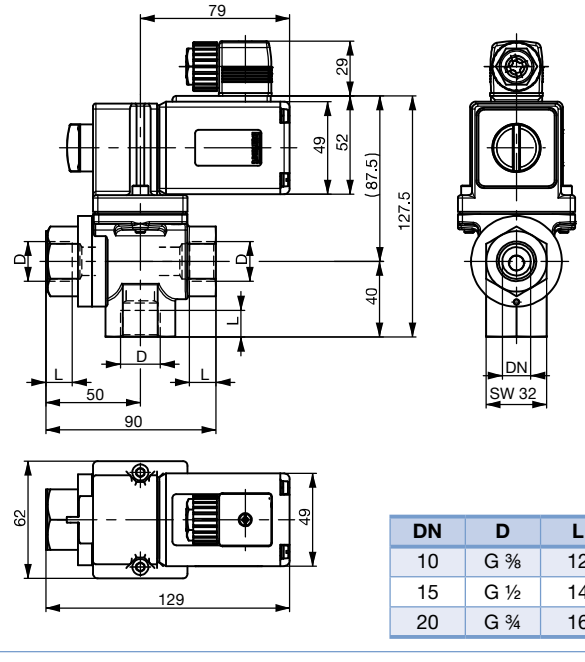
Technical data

Body material	Brass
Seal material	NBR (EPDM or FKM on request)
Medium	Neutral fluids such as e.g. compressed air, water, hydraulic oil, oils and fats without additives, technical vacuum
Medium temperature	-10 °C…+80°C
Ambient temperature	Max +50 °C
Viscosity	100…15 mm²/s
Operating voltage	24/230 V UC Other voltages on request
Voltage tolerance	±10 %
Cycling rate	Max. 6/min with UC
Duty cycle	100 %
Electrical connection	Cable plug acc. to DIN EN 175301-803, Form A (included)
Protection class	IP65 with Cable Plug
Installation	As required, preferably with actuator upright
Response times [ms]	Measured at valve outlet with air at 6 bar and +20 °C
Opening	Pressure build-up 0…90 %, 10…20 ms
Closing	Pressure relief 100…10 %, 40…60 ms
Electrical power consumption	
Inrush	AC: 100 VA, UC: 100 W
Hold	AC: 48 VA (16 W), UC: 9 W

Dimensions [mm]



A	B
62	90



DN	D	L
10	G ⅜	12
15	G ½	14
20	G ¾	16

Ordering chart

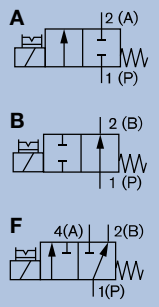
Circuit function	Orifice [mm]	Port connection	K_v value water [m³/h]	Pressure range [bar]	Voltage/frequency [V/Hz]	Article no.
All valves with manual override, brass body, NBR seal and cable plug						
C 3/2 way direct-acting solenoid valve, normally closed, with manual override	10	G ⅜	2	0…1	24/UC	048997
					230/UC	059302
	15[1)]	G ½	4	0…0.5	24/UC	062737
					230/UC	062481
D 3/2 way direct-acting solenoid valve, normally open, with manual override	15[1)]	G ½	4	0…0.5	24/UC	021964
F 3/2 way direct-acting, distribution solenoid valve, with manual override	10	G ⅜	2	0…1	24/UC	064025
					230/UC	062960
	15[1)]	G ½	4	0…0.5	24/UC	058843
					230/UC	062124

1) Versions with orifice 15 mm are not suitable for vacuum

2/2 or 3/2 way PVC Solenoid Valve for aggressive Mediums

0131

- With hermetic isolation of fluid
- Insensitive to aggressive fluids
- Universal functions
- Lockable manual override as standard
- Simple installation and removal

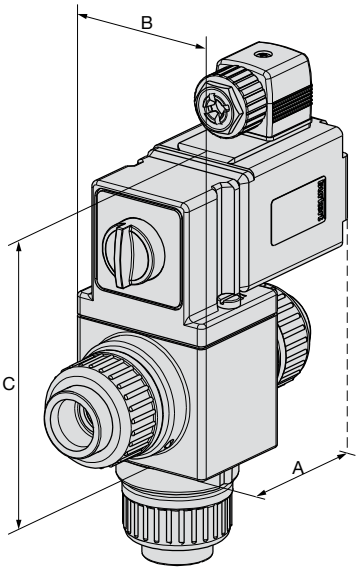


Type 0131 is a direct-acting 2/2- or 3/2 way solenoid valve with different circuit functions. The actuator is isolated from the fluid by a double seal made of PTFE. No fluid contact with metallic components.

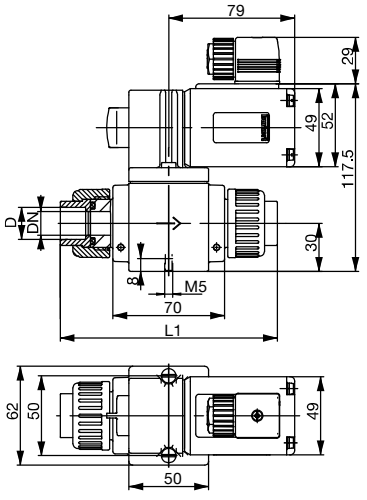
Technical data

Orifice	DN10…DN20
Body material	PVC PVDF on request
Coil material	Epoxy
Coil isolation class	H
Seal material	EPDM, FKM
Medium	
EPDM	Alkalis, alkaline washing and bleaching lyes
FKM	Oxydizing acids and substances, salt solutions
Medium temperature	
Body + Seal (material combination)	
PVC/EPDM	-30 °C…+50 °C
PVC/FKM	-10 °C…+50 °C
Ambient temperature	Max. +50 °C
Viscosity	Max. 37 mm²/s
Voltage tolerance	±10 %
Cycling rate	ca. 100…150/min for AC Max. 6/min for UC
Duty cycle	100 % continuous rating
Electrical connection	Cable plug for Ø 7 mm cable, acc. to DIN EN 175301-803 Form A (supplied as standard)
Electrical power consumption	
Inrush	AC: 100…120 VA, UC: 100 W
Hold (hot coil)	AC: 32 VA (16 W), UC: 9 W
Protection class	IP65 with cable or cable plug
Installation	As required, preferably with actuator upright

Dimensions [mm]



A	B	C
130	62	117.5



DN	D (true union)	D (threaded)	L1
10	Ø 16.2	G ⅜ and G ½	130
15	Ø 20.2	G ½ and G ¾	136
20	Ø 25.2	G ¾	144

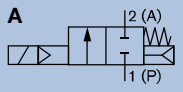
Ordering chart

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Article no. per voltage/frequency [V/Hz]			
					230/UC	230/50	024/50	024/UC
Seal material EPDM								
A 2/2 way direct-acting solenoid valve, normally closed, with manual mode	G ½	10	2	0…3	–	056795	–	023759
	True union Ø 16 mm			0…3	–	050549	–	046949
	True union Ø 20 mm			0…3	–	056791	–	–
	G ½	15	4.5	0…1	–	054831	–	067832
	True union Ø 20 mm			0…1	168193	055423	051028	050809
	True union Ø 25 mm	20	6	0…0.5	–	051257	053992	045225
B 2/2 way direct-acting solenoid valve, normally open, with manual override	True union Ø 16 mm	10	2	0…2	–	017113	–	–
	True union Ø 25 mm	20	6	0…0.5	051748	–	–	–
F 3/2 way direct-acting, distribution solenoid valve, with manual override	True union Ø 16 mm	10	2	0…1	–	052546	064266	055770
	True union Ø 20 mm	15	4	0…0.5	–	052071	058279	049883
	True union Ø 25 mm	20	5	0…0.25	–	054564	040921	067076
Seal material FKM								
A 2/2 way direct-acting solenoid valve, normally closed, with manual mode	True union Ø 16 mm	10	2	0…3	–	050443	052953	047915
	True union Ø 20 mm			0…3	–	056789	055817	056060
	G ½	15	4.5	0…1	–	056663	–	047398
	True union Ø 20 mm			0…1	–	050787	051641	053882
	True union Ø 25 mm	20	6	0…0.5	–	051351	050551	056495
B 2/2 way direct-acting solenoid valve, normally open, with manual override	True union Ø 16 mm	10	2	0…2	–	053221	–	058361
F 3/2 way direct-acting, distribution solenoid valve, with manual override	G ⅜	10	2	0…1	–	–	–	065194
	True union Ø 16 mm			0…1	–	052619	–	058362
	True union Ø 20 mm	15	4	0…0.5	–	050904	–	–
	True union Ø 25 mm			0…0.5	020687	–	–	–
	True union Ø 25 mm	20	5	0…0.25	–	066280	–	058363

2/2 way Solenoid Valve for aggressive media

0142

- Isolating diaphragm between the solenoid and fluid
- Non-metallic valve internals
- Pivoted armature, with lockable manual override
- Simple installation and removal



Servo-assisted solenoid valve with diaphragm, normally closed function. Hermetic isolation of fluid from the actuator. A minimum differential pressure of 0.5 bar is required to fully open the valve. Valves can be mounted or removed radially for a space-saving installation.

Technical Data

General data	
Orifice	DN15 … D50
Body material	PVC, PVDF (on request)
Inner part valve	PVDF
Seal material	FKM, EPDM
Media	
with EPDM	Alkalis, alkaline washing and bleaching lyes
with FKM	Oxydizing acids and substances, salt solutions
Media temperature	
PVC-body	0 °C…+50 °C
PVDF-body	0 °C…+70 °C
Ambient temperature	
PVC-body	0 °C…+40 °C
PVDF-body	0 °C…+55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Cable plug 2508 (will be replaced with Type 2518) for Ø 7 mm acc. to DIN EN 175301-803 Form A (supplied as standard)
Protection class	IP65 with cable plug
Coil insulation class	Class H
Port connection	True union
Installation	As required, preferably with actuator upright
Response times[1]	
Opening [ms]	100 … 800
Closing [ms]	1000 … 4000

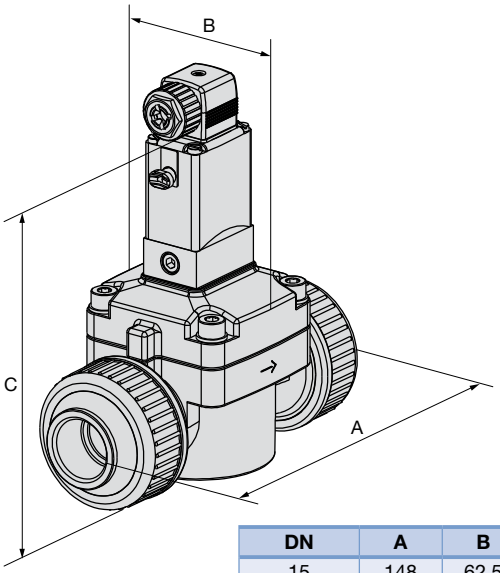
1) Measurement at the valve outlet 6 bar and +20 °C acc. to ISO 12238
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Power consumption			
Inrush		**Hold (hot coil)**	
AC [VA]	**DC [W]**	**AC [VA/W]**	**DC [W]**
20	5	11/5	5

Options

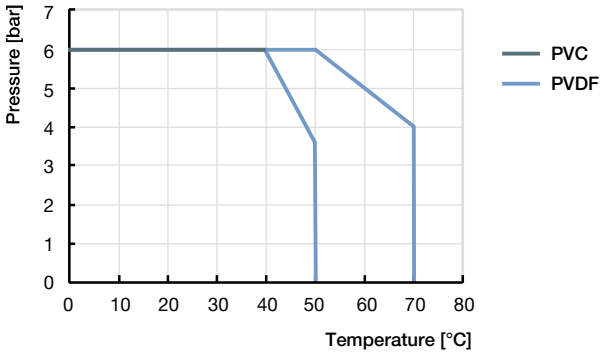
- Further versions see data sheet or on request

Dimensions [mm]



DN	A	B	C
15	148	62.5	148
20	154	62.5	148
25	190	85	174.5
40	254	115	212
50	268	115	212

Pressure Temperature chart for PVC and PVDF



Ordering Chart

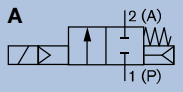
Circuit function	Port connection True union	Orifice (mm)	K_v value water [m^3/h]	Pressure range [bar]	Body material	Article no. per voltage/frequency [V/Hz] 024/DC	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material FKM**						
	Ø 20	15	5	0.5 … 6	PVC	041938	041934
	Ø 25	20	6	0.5 … 6	PVC	042008	042005
	Ø 32	25	14	0.5 … 6	PVC	042079	042113
	Ø 40	32	16	0.5 … 6	PVC	042169	042133
	Ø 50	40	30	0.5 … 6	PVC	042198	042245
	Ø 63	50	36	0.5 … 6	PVC	042264	042262
	Seal material EPDM						
	Ø 20	15	5	0.5 … 6	PVC	041980	041911
	Ø 25	20	6	0.5 … 6	PVC	042045	041986
	Ø 32	25	14	0.5 … 6	PVC	042047	042126
	Ø 40	32	16	0.5 … 6	PVC	042183	042128
	Ø 50	40	30	0.5 … 6	PVC	042195	042247
	Ø 63	50	36	0.5 … 6	PVC	042266	042261

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)

Servo-assisted 2/2 way Diaphragm valve

0290

- Servo-assisted diaphragm with diameter of up to DN50
- Hard-coupled diaphragm opens without differential pressure
- Vibration-proof, block screwed coil system
- Damped design for quiet closing
- Energy-saving power reduction in all DC versions

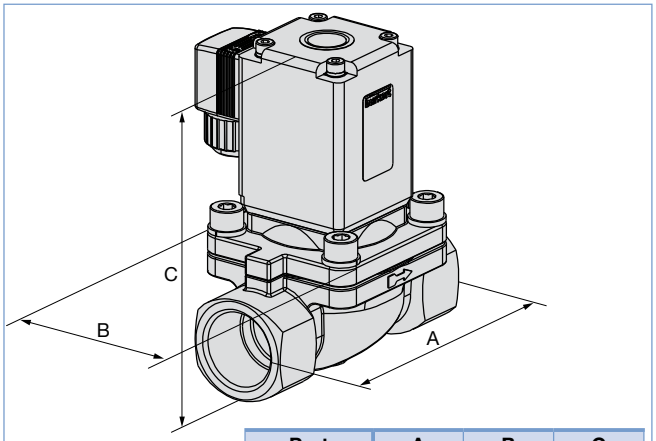


The 0290 valve is a servo-assisted solenoid valve of the S.EV series. The valve opens without differential pressure. The opening process is supported by the fixed coupling of the diaphragm to the plunger. In the process, the integrated 'soft-kick' function opens in a manner that is gentle on the material. Various diaphragm material combinations are available depending on the application. The housing offered is rounded out by a stainless steel and grey cast iron version. The solenoid coils are moulded with a chemically resistant epoxy. 'Kick and drop' electronics are moulded into all DC variants for reduced electrical power consumption. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65 – in combination with a stainless steel housing NEMA 4X.

Technical data

General data	
Orifice With approval acc. to DIN EN 161	DN12 … DN50 mm DN12 … DN25 mm
Body material	Brass, stainless steel 1.4581
Coil material	Epoxy
Coil insulation class	H
Internal parts of valve	Brass, stainless steel 1.4105, 1.4301
Seal material	NBR, FKM, EPDM
Media NBR FKM EPDM NBR with approval acc. to DIN EN 161	 Neutral media, compressed air, water, hydraulic oil Per-solutions, hot oils Oil and fat-free media e.g. hot water Fuel gases of the 1st, 2nd and 3rd gas family
Media temperature[1] NBR FKM EPDM NBR with approval acc. to DIN EN 161	 -10 °C…+80 °C 0 °C…+120 °C -30 °C…+120 °C 0 °C…+80 °C
Ambient temperature With approval acc. to DIN EN 161	Max. +55 °C 0 °C…+55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous cycle
Electrical connection	Cable plug 2508 (will be replaced with Type 2518) for Ø 7 mm cable, acc. to DIN EN 175301-803 Form A (supplied as standard)
Protection class	IP65 with cable plug
Installation	As required, preferably with actuator upright
Flow rate	Measured at +20 °C, 1 bar pressure at valve inlet and free outlet

Dimensions [mm]



Port connection	A	B	C
G ½	74.5	70	95.5
G ¾	100	70	122
G 1	115	70	131
G 1¼	126	70	145
G 1½	126	70	154
G 2	164	70	211

Pressure values [bar] Overpressure to atmospheric pressure

1) Max. medium temperature for versions with high-performance electronics (encryption…/UC) is 90 °C.

Orifice [mm]	Power consumption				Response times[2]	
	Inrush AC [VA]	UC [W]	Hold AC [VA/W]	UC [W]	Opening [ms]	Closing [ms]
12	100	80	25/10	6	100 to 250	700 to 2000
20	120	100	32/16	9		
25	120	100	32/16	9		
32	120	100	32/16	9	300 to 1000	700 to 4000
40	120	100	32/16	9		
50	**-**	**30**	**-**	**30**		

2) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Ordering chart

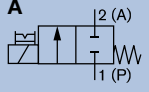
Circuit function	Port connection	Orifice	K_v value water [m³/h]	Pressure range [bar]	Diaphragm material	Article no. per voltage/frequency [V/Hz] 024/50	024/UC/DC[1]	230/50	110/50
Brass and stainless steel body, all valves with cable plugs									
A 2/2 way servo-controlled solenoid valve, normally closed	**Brass body**								
	G ½	12	1.8	0…16	NBR	043816	050294	044373	049500
					FKM	048707	049229	042886	059240
					EPDM	045931	049050	044816	049055
	G ¾	20	6.5	0…16	NBR	058766	049518	045292	057127
					FKM	053910	053674	049745	067973
					EPDM	065033	058427	045290	069138
	G 1	25	10.0	0…16	NBR	048171	053675	045293	053869
					FKM	066270	066981	058627	067974
					EPDM	054245	057155	045291	064887
	G 1¼	32	16.0	0…12	NBR	085290	085291	052513	085292
					FKM	120631	017457	087203	137478
					EPDM	087204	072962	085259	073763
	G 1½	40	16.0	0…12	NBR	085294	085295	085297	085296
					FKM	228118	089619	087663	–
					EPDM	073290	079629	087732	–
	G 2	50	38.0	0…12	NBR	–	085299[3]	085301[2]	085300[2]
					EPDM	–	120104[3]	077494[2]	121308[2]
					FKM	–	120952[3]	088551[2]	–
	Stainless steel body								
	G ½	12	1.8	0…16	NBR	043659	053595	043654	052358
					FKM	048708	049987	042888	058407
					EPDM	045765	048606	043553	049053
	G ¾	20	6.5	0…16	NBR	068338	018754	065121	–
					FKM	065362	066381	064701	066594
					EPDM	066460	059910	065025	025870
	G 1	25	10.0	0…16	NBR	068510	061974	065414	067696
					FKM	018121	065542	066125	069477
					EPDM	059890	018348	059901	054044
Gas valve according to DIN EN 161, all valves with cable plugs						**024/UC**	**230/50**	**230/UC**	
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	12	1.8	0…5	NBR	280855	266512	281001	
	G ¾	20	6.5			280877	266513	280878	
	G 1	25	10.0			280879	266515	280880	

1) The coil for UC power supply is provided with an integrated high power elecronic. Please check sufficient power supply.
2) The valve is provided with a cable plug with integrated rectifier
3) Only DC

Pivot Operated 2/2 way Solenoid Valve in plastic

0330

- With separating diaphragm
- For aggressive media
- Also available for mounting on manifolds (Type 0331)
- Standard with lockable manual override



Direct-acting solenoid valve employing Bürkert's unique pivoted armature. A hermetic isolation is guaranteed against aggressive substances by the flexible diaphragm. Shown is the threaded version in precision moulded engineered polymer. The valve is also available in manifold mount as the Type 0331.

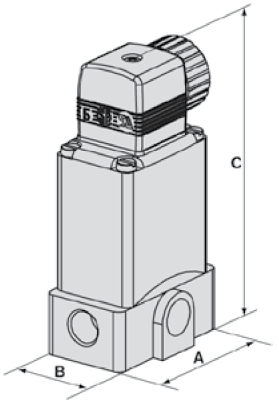
Technical data

General data	
Temperature media	-30 °C…+80 °C (EPDM) 0 °C…+80 °C (FKM)
Ambient temperature	+55 °C, max.
Voltage tolerance	±10 %
Duty cycle Intermittent operation Continuous operation	 40 % ED (30 min) with 8 W version 100 % ED with 5 W version (on request)
Body material	PP or PVDF
Seal material	FKM or EPDM NBR and FFKM on request
Coil material	Epoxy (Class H)
Power consumption	DC: 8 W, AC: 30 VA (inrush), 15 VA (hold)
Protection class	IP65 with cable plug
Electrical connection	Cable plug 2508 (will be replaced with Type 2518) acc. to DIN EN 175301-803, Form A (included)

	Response times[1]			
	AC		DC	
Orifice [mm]	**Opening [ms]**	**Closing [ms]**	**Opening [ms]**	**Closing [ms]**
2…4	8…15	8…15	10…20	10…20

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Dimensions [mm]



Port connection	A	B	C
G ¼	56	34	104

Options

- 2/2 normally open
- 3/2 way version
- Electrical position indicator
- Impulse coil
- Flange version
- Vacuum version
- ATEX version
- International approvals
- 5 W coil
- Further versions see data sheet or on request

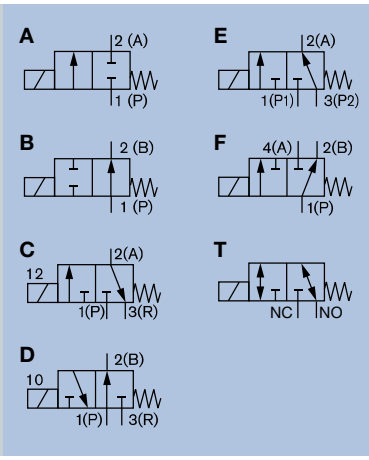
Ordering chart

Circuit function	Port connection	Orifice [mm]	K_v value [m³/h]	Pressure range [bar] DC	Pressure range [bar] AC	Seal material	Article no. voltage/frequency [V/Hz] 024 V DC	024 V AC	230 V AC
Normally closed (other versions on request)									
A 2/2 way direct-acting solenoid valve,normally closed, with manual mode	Polypropylene G ¼	3	0.25	0…8	0…10	EPDM	067214	022105	062398
						FKM	018410	088496	045653
		4	0.3	0…4	0…5	EPDM	021660	067731	063118
						FKM	062695	043005	063116
		5	0.4	0…3	0…4.5	EPDM	061321	054261	049969
						FKM	062624	067007	022619
	PVDF G ¼	3	0.25	0…8	0…10	EPDM	019224	122385	086873
						FKM	018188	020286	069006
		4	0.3	0…4	0…5	EPDM	057573	–	125507
						FKM	023472	069079	087837
		5	0.4	0…3	0…4.5	EPDM	120184	059802	130117
						FKM	064512	–	063786

Direct-acting 2/2 or 3/2 way pivoted armature valve

0330

- Direct-acting, media-separated valve with diameter of up to DN5
- Maintenance-free pivoted armature technology
- Vibration-proof, block screwed coil system
- Suitable for aggressive alkaline and acidic solutions
- Service-friendly, robust manual operation

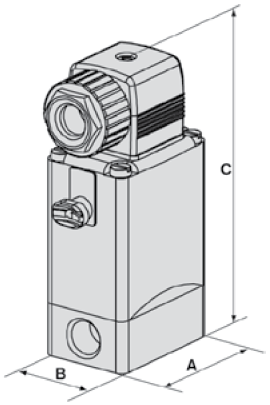


The 0330 valve is a direct-acting, media-separated pivoted armature valve. It is available in 3/2 and 2/2 way versions. As a 3/2 way version, it can be used as a distributor or mixing valve. Various diaphragm material combinations and methods of operation are available depending on the application. The standard brass housing satisfies all European drinking water requirements. Stainless steel (316), PVDF, and polypropylene housing versions complete the offering. The solenoid coils are moulded with a chemically resistant epoxy. The 0330 is equipped with manual override for commissioning and testing. For reduced energy requirements all coils can be delivered with electronic power reduction or as an impulse version. The switching status can be indicated with position feedback as a binary or NAMUR signal. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65/67 – in combination with a stainless steel or plastic housing NEMA 250 Cat. 4X.

Technical data

General data		
Available housing materials	Brass Stainless steel (1.4401) PP (Polypropylene) PVDF (Polyvinylfluoride)	
Port connection	G ¼ (NPT ¼, Rc ¼ and G ⅛ on request)	
Seal material	EDPM / FKM / NBR (FFKM on request)	
Medium		
NBR	Neutral medium such as compressed air, town gas, water, hydraulic oil, oils and fats without additives, oxygen	
EPDM	Alkalis, acids to medium concentrations, alkaline washing and bleaching lyes	
FKM	Oxydizing acids and substances, hot oils with additives, salt solutions, waste gases, oxygen	
FFKM	Aggressive mediums, hot air, hot oils	
All Materials	For more exact information please refer to our chemical resistance chart	
Medium temperature for body material brass or stainless steel	NBR EPDM FKM FFKM	0 °C…+80 °C -30 °C…+90 °C 0 °C…+90 °C +5 °C…+90 °C
Medium temperature for body material PP or PVDF	NBR EPDM FKM FFKM	0 °C…+80 °C -30 °C…+80 °C 0 °C…+80 °C +5 °C…+80 °C
Viscosity	Max. 37 mm^2/s	
Ambient temperature	Max. +55 °C	

Dimensions [mm]



Port connection	A	B	C
G ¼	46	34	100

Voltages	24 V DC; 24 V 50 Hz; 230 V 50 Hz; (further voltages on request)
Voltage tolerance	±10 %
Duty cycle for brass and stainless steel	100 %
Duty cycle for PP and PVDF	40 % ED (60 % intermittent operation) in 30 min for 8 W version 100 % ED for 5 W version (on request)
Electrical connection	Pin terminal acc. to DIN EN 175301-803 Form A for cable pug Type 2508 (will be replaced with Type 2518)/2509, included in delivery (also on request with moulded cable or terminal box)
Protection class	IP65 with Cable Plug
Coil insulation class	H
Installation	As required, preferably with actuator upright
Weight [kg]	
Metal body	0.47
Plastic housing	0.40

Technical data continued

Standard power consumption					Response times[1]				
Frequency AC			Frequency DC		Orifice	Frequency AC		Frequency DC	
Inrush [VA]	Hold [VA]	Operation [W]	Coldv [W]	Warm [W]	[mm]	Opening [ms]	Closing [ms]	Opening [ms]	Closing [ms]
30	15	8	11	8	2…4	8…15	8…15	10…20	10…20

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Ordering chart

Circuit function	Orifice [mm]	Seal Material	Housing or seat material	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
2/2 way pivoted armature valve with connection thread G ¼, manual override and cable plug Type 2508 (will be replaced with Type 2518)[2]						
A 2/2 way direct-acting solenoid valve, normally closed	3	FKM	Brass	020293	022883	124909
	3	FKM	Stainless steel	020292	023984	024563
	3	FKM	PP	018410	088496	045653
	3	FKM	PVDF	018188	020286	069006
	3	NBR	Brass	020294	086553	024902
	3	EPDM	PP	067214	022105	062398
	4	FKM	Brass	024019	025246	124912
	4	FKM	Stainless steel	018276	018857	020873
	4	FKM	PP	062695	043005	063116
	4	FKM	PVDF	023472	069079	087837
	4	NBR	Brass	025084	–	046007
	4	EPDM	PP	021660	067731	063118
	4	EPDM	PVDF	057573	–	125507
	5	FKM	PP	062624	067007	022619
	5	FKM	PVDF	064512	–	063786
	5	EPDM	PP	061321	054261	049969
	5	EPDM	PVDF	120184	059802	130117
B 2/2 way direct-acting solenoid valve, normally open	3	FKM	Brass	141917	130146	141919
	4	FKM	Brass	141920	141921	141923
	3	FKM	Stainless steel	141928	141929	141931
	4	FKM	Stainless steel	141932	141933	141935

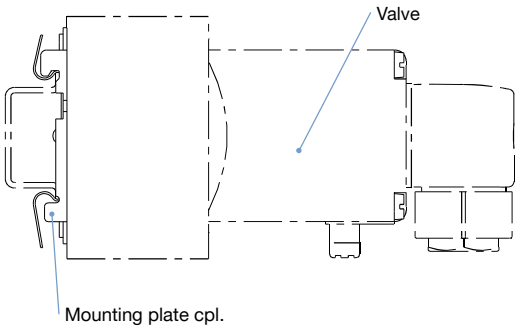
2) The listed ID numbers and circuit functions have a body with a straight channel

Ordering chart continued

Circuit function	Orifice [mm]	Seal Material	Housing or seat material	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
3/2 way pivoted armature valve with connection thread G ¼, manual override and cable plug Type 2508 (will be replaced with Type 2518)						
C 3/2 way direct-acting solenoid valve, normally closed	2	NBR	Brass	041103	042129	041105
	3	NBR	Brass	041107	041108	041116
	3	FKM	Stainless steel	052344	045024	052059
	4	NBR	Brass	042218	042695	042329
	4	FKM	Stainless steel	050483	043324	050979
	4	FKM	PP	–	088420	–
	4	FKM	PVDF	055788	–	019078
	4	EPDM	PP	–	–	063625
D 3/2 way direct-acting solenoid valve, normally open	2	NBR	Brass	056984	041858	041137
	3	NBR	Brass	041139	041141	041147
	4	NBR	Brass	043129	042696	042903
E 3/2 way mixing solenoid valve	3	FKM	PP	069917	066230	022294
	3	EPDM	PP	078556	–	078559
	4	FKM	PP	061077	086921	053406
	4	FKM	PVDF	022340	020550	085599
	4	EPDM	PP	067160	044693	066033
F 3/2 way direct-acting, distribution solenoid valve	4	FKM	PP	020528	–	–
	4	EPDM	PP	–	–	066032
T 3/2 way direct-acting solenoid valve, flow direction optional	2	FKM	Brass	124922	138316	124925
	3	FKM	Brass	124927	124928	124930
	2	FKM	Stainless steel	124932	124933	124935
	3	FKM	Stainless steel	124937	124938	124940

Note: Further versions on request

Accessories

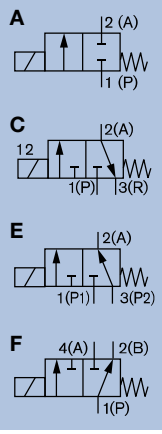


Description	Article no.
Mounting plate cpl. for DIN rail mounting	013253

2/2 or 3/2 way Pivoted Armature Solenoid Valve with Ex approval

0330 Ex

- Direct-acting with isolating diaphragm
- With lockable manual override
- For liquid, gaseous and aggressive media
- For slightly contaminated fluids
- Long service life, even in non-lube conditions

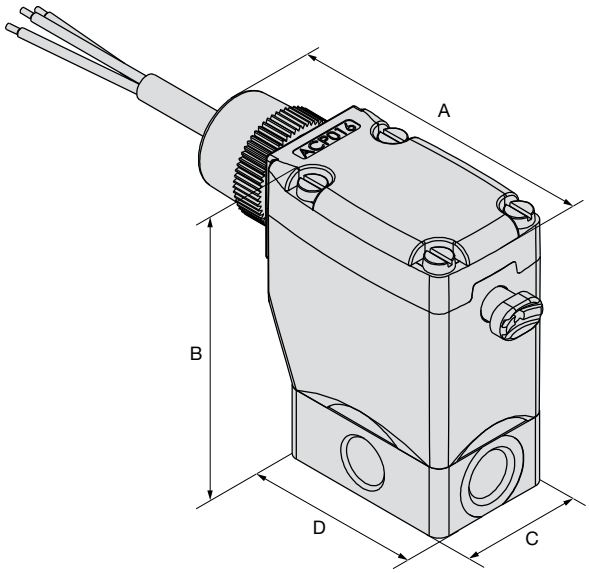


Type 0330 Ex is a direct-acting 2/2 or 3/2 way pivoted armature solenoid valve with Ex approval and high service life, even when run dry. It is suitable for neutral, abrasive and lightly contaminating media, with a stainless steel body for aggressive media.

Technical data

Orifice	DN3,0 and DN4,0	
Available body materials	Brass, stainless steel (1.4401), PP (Polypropylene), PVDF (Polyvinylfluoride)	
Seal materials	EDPM / FKM / FFKM / NBR	
Medium		
with NBR	Neutral medium such as compressed air, town gas, water, hydraulic oil, oils and fats without additives, oxygen	
with EPDM	Alkalis, acids to medium concentrations, alkaline washing and bleaching lyes	
with FKM	Oxydizing acids and substances, hot oils with additives, salt solutions, waste gases, oxygen	
with FFKM	Aggressive mediums, hot air, hot oils	
Medium temperature		
for body material brass or stainless steel	NBR	0 °C…+80 °C
	EPDM	-30 °C…+90 °C
	FKM	0 °C…+90 °C
	FFKM	+5 °C…90 °C
Medium temperature		
for body material PP or PVDF	NBR	0 °C…+80 °C
	EPDM	-30 °C…+80 °C
	FKM	0 °C…+80 °C
	FFKM	+5 °C…+80 °C
Ambient temperature	Max. +55 °C	
Viscosity	Max. 37 mm²/s	
Operating voltage	24 V, 230 V (further voltages on request)	
Voltage tolerance	±10 %	
Frequency	AC/DC	
Cycle rate 1 at medium temp. and at ambient temp.	Max. 20/min to +70 °C to +40 °C	
Cycle rate 2 at medium temp. and at ambient temp.	Max. 5/min to +90 °C to +40 °C	
Duty cycle	100 %	
Electrical connection	Terminal box without safety fuse Moulded cable (For more detailed information, refer to the instruction manual ACP016, chapter 7.6.1) on request	
Power consumption	UC: 40 VA (inrush), 3 W (hold)	
Response times	Measured at valve outlet at 6 bar and +20 °C.	
Opening	Pressure relief 0…90 %, 30 ms	
Closing	Pressure relief 100…10 %, 40 ms	

Dimensions [mm]



A	B	C	D
78.5	72	32	46

Protection class	IP65
Ignition protection class	II 2 G Ex mb IIC T4 Gb II 2 D EX mb IIIC T130° Db
Certificate	EPS 16 ATEX 1 111 X IECEx EPS 16.0049X
Installation	As required, preferably with actuator upright

Options

- Further versions see data sheet or on request

Ordering chart

Circuit function	Orifice [mm]	Seal Material	Housing or seat material	Electrical connection	Article no. per voltage/frequency [V/Hz] 024/UC	230/UC
All devices with connection thread G ¼ and manual override						
A 2/2 way direct-acting solenoid valve, normally closed	3	NBR	MS	Terminal box	306165	306167
	3	NBR	MS	Cable	306005	306006
	3	FKM	Stainless steel	Terminal box	306168	306169
	3	FKM	Stainless steel	Cable	306007	306008
C 3/2 way direct-acting solenoid valve, normally closed	3	NBR	MS	Terminal box	304531	306149
	3	NBR	MS	Cable	305982	305985
	3	FKM	Stainless steel	Terminal box	306154	306164
	3	FKM	Stainless steel	Cable	306003	306004
E 3/2 way mixing solenoid valve	3	FKM	Stainless steel	Terminal box	306171	306157
	3	FKM	Stainless steel	Cable	306009	306010
F 3/2 way direct-acting, distribution solenoid valve	3	FKM	Stainless steel	Terminal box	306198	306172
	3	FKM	Stainless steel	Cable	306011	306012
	4	FKM	Stainless steel	Terminal box	306151	–
	4	FKM	Stainless steel	Cable	306050	–

Note: Further versions on request

Accessories

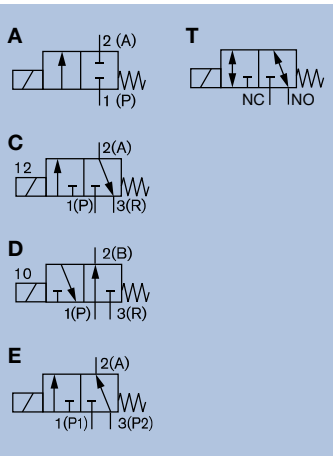
Description	Ex Approvals Certification	Identification	Article no
Ex-Cable glands (polyamide version included in delivery / surcharge applied for brass nickel plated version)			
Brass, nickelplated, 6…13 mm	IECEx PTB 13.0027X, PTB 04 ATEX 1112 X	II 2 D Ex tb IIIC Db IP68, II 2 G Ex e IIC Gb	773278
Polyamide, 7…13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773277

Description	Article no
Special tool to turn the junction box (not included in delivery)	
Set SC02-AC10 Special wrench, service manual	293488

Direct-acting 2/2 or 3/2 way pivoted armature valve

0331
Flange

- Direct-acting, media-separated valve with diameter of up to DN4
- Pilot valve with Bürkert-specific flange design (SFB)
- Maintenance-free pivoted armature technology
- Suitable for aggressive alkaline and acidic solutions
- Service-friendly, robust manual override

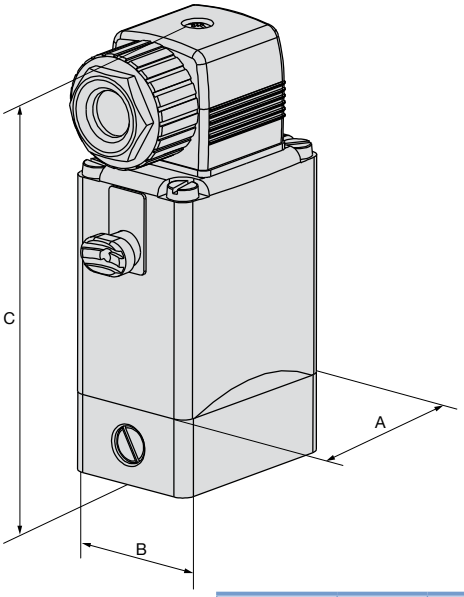


The 0331 valve is a direct-acting, media-separated pivoted armature valve. It is available in 3/2 and 2/2 way versions. As a 3/2 way version, it can be used as a distributor or mixing valve. Various diaphragm material combinations and methods of operation are available depending on the application. The standard brass housing satisfies all European drinking water requirements. Stainless steel (316L), PVDF, and polypropylene housing versions complete the offering. The solenoid coils are moulded with a chemically resistant epoxy. The 0331 is equipped with manual override for commissioning and testing. For reduced energy requirements all coils can be delivered with electronic power reduction or as an impulse version. The switching status can be indicated with position feedback as a binary or NAMUR signal. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65/67 – in combination with a stainless steel or plastic housing NEMA 4X.

Technical data

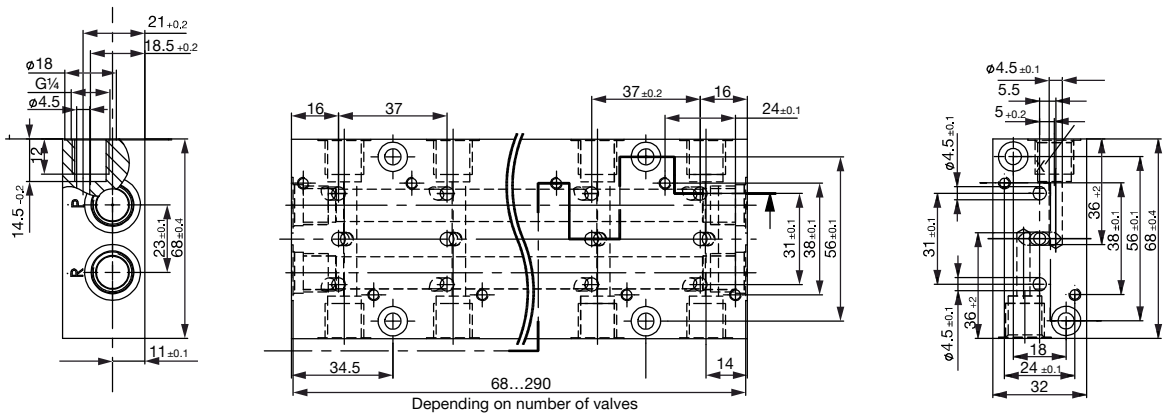
General data	
Available body material	Brass Stainless steel (1.4401) PP (Polypropylene) PVDF (Polyvinyl fluoride) PEEK (on request)
Port connection	Flange interface acc. to Bürkert standard

Dimensions [mm]



Version	A	B	C
Metal body	46	34	100.2
Plastic body	46	34	101

Manifolds



Technical data continued

Medium data	
for NBR	Neutral mediums such as compressed air, town gas, water, hydraulic oil, oils and greases without additives, oxygen
for EPDM	Alkalis, acids to medium concentrations, alkaline washing and bleaching lyes
for FKM	Oxidizing acids and substances, hot oils with additives, salt solutions, waste gases, oxygen
for FFKM	Aggressive mediums, hot air, hot oils
All materials	For more detailed information please refer to our compatibility chart
Medium temperature for body material Brass, Stainless Steel or PEEK	NBR 0 °C…+80 °C EPDM -30 °C…+90 °C FKM 0 °C…+90 °C FFKM +5 °C…+90 °C
Medium temperature for body material PP or PVDF	NBR 0 °C…+80 °C EPDM -30 °C…+80 °C FKM 0 °C…+80 °C FFKM +5 °C…+80 °C
Viscosity	Max. 37 mm²/s
Ambient temperature	Max. +55 °C

Operating voltage	24 V 50 Hz; 110 V 50 Hz; 230 V 50 Hz 12 V DC; 24 V DC; (further voltages on request)
Voltage tolerance	+/-10 %
Duty cycle for brass and stainless steel	100 %
Duty cycle for	
PP	40 % ED (60 % intermittent operation) in 30 min for 8 W version
PVDF	100 % ED for 5 W version
PEEK	60 % ED (40 % intermittent operation) in 30 min for 8 W version
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A for cable plug Type 2508 (will be replaced with Type 2518)/2509 (on request also with moulded cable or terminal box)
Protection class	IP65 with cable plug
Coil thermal isolation class	H
Installation	As required, preferably with actuator upright
Weight [kg]	
Metal body	0.47
Plastic body	0.40

Ordering chart

Circuit function	Orifice [mm]	Seal Material	Body and seat material	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	110/50	230/50
All devices with manual override and cable plug Type 2508 (will be replaced with Type 2518)							
A 2/2 way direct-acting solenoid valve, normally closed	4	FKM	Polypropylene	088352	–	–	020278
C 3/2 way direct-acting solenoid valve, normally closed	2	NBR	Brass	041183	041184	044989	041188
	2	FKM	Stainless steel	048354	–	–	–
	2	EPDM	PVDF	–	–	–	130301
	3	NBR	Brass	041195	041198	041203	041209
	3	FKM	Stainless steel	045796	–	–	–
D 3/2 way direct-acting solenoid valve, normally open	2	NBR	Brass	041234	041235	041798	041242
	2	EPDM	PVDF	079663	–	–	–
	2	FKM	PVDF	–	–	–	078859
	3	NBR	Brass	041247	041248	041531	041254
E 3/2 way mixing solenoid valve	2	NBR	Brass	042061	042799	040064	041265
	3	NBR	Brass	042980	043104	046843	041270
	3	EPDM	Polypropylene	021892	–	–	–
T 3/2 way direct-acting solenoid valve, flow direction optional	2	FKM	Brass	124953	124954	124955	124956
	3	FKM	Brass	124958	124959	124960	124961

Ordering chart for flange valve manifolds and accessories

Number of valve positions [mm]	Length A	Hole spacing B [mm]	Article no.		
			Material, aluminum anodized	Material, stainless steel	Material, brass
Manifolds (the plates connecting thread is G ¼)					
1	32	–	005043	on request	on request
2	69	–	005045	on request	612071
3	106	37	005366	on request	on request
4	143	74	005294	658925	006324
5	180	111	005295	on request	on request
6	217	148	005296	on request	006326
7	254	185	005403	on request	on request
8	291	222	006074	on request	–

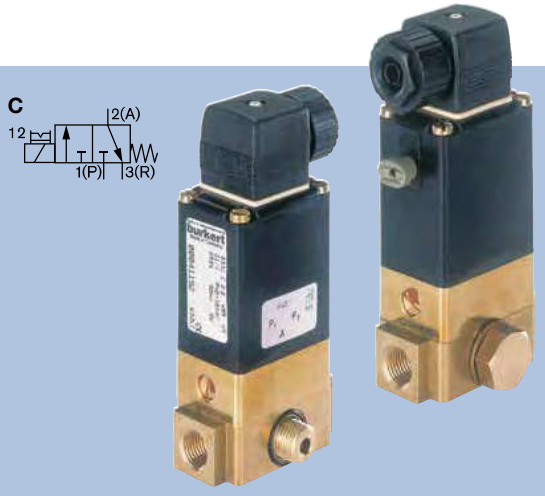
Accessories

Manifolds	Material	Seal material	Article no.
Covering plate (for empty valve places)	Stainless steel	FKM	265294
Covering plate (for empty valve places)	Aluminium anodized	NBR	005625
Nipple (for connecting the collecting ducts of 2 manifolds)	Steel lined	FKM	005049
Nipple (for connecting the collecting ducts of 2 manifolds)	Stainless steel	FKM	007376
Nipple (for connecting the manifolds; connecting duct is closed)	Steel lined	NBR	006049

3/2 way Solenoid Valve with banjo coupler and bolt for direct mounting to pneumatic actuators

0331 P

- Robust pivot operated solenoid valve with manual override
- Direct and quick mounting on process valves
- Fast-acting
- For neutral gases and compressed air
- Long service life, even in non-lube conditions



In Type 0331 P the magnetic system and the Medium chamber are separated from one another by a separating diaphragm system. The valve is fast acting and has a long service life, even when run dry.

Technical data

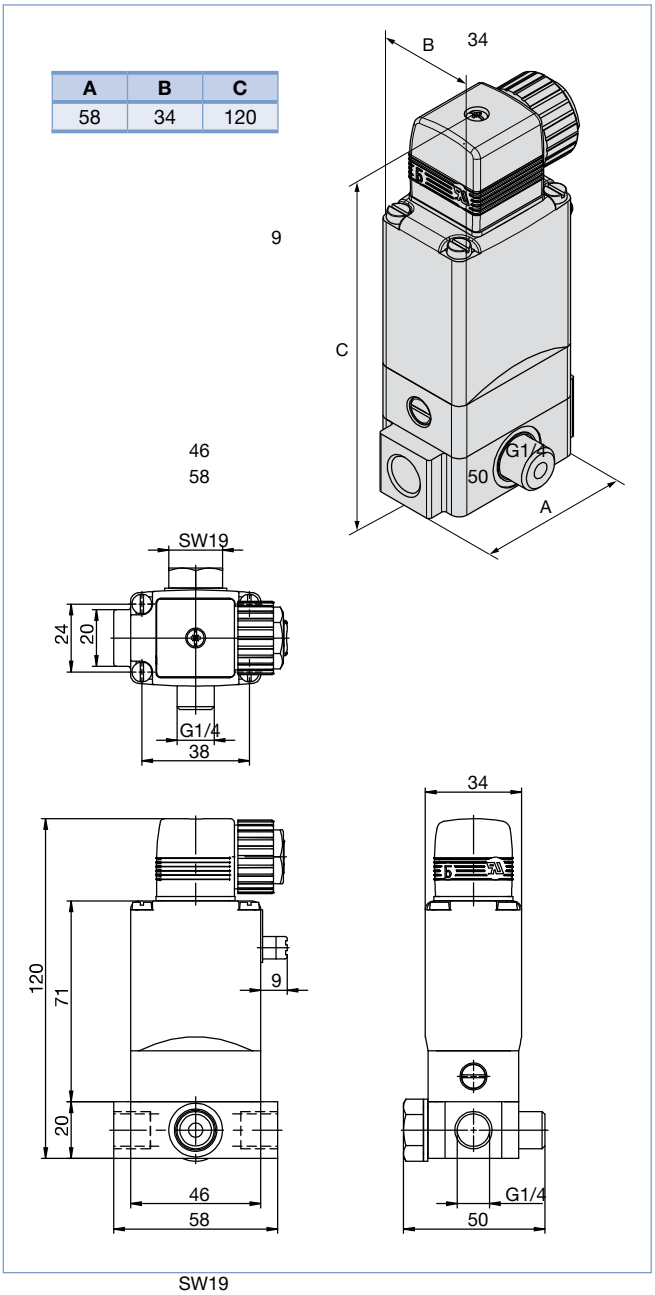
General data	
Orifice	DN2.0…DN3.0
Body and seat materials	Brass
Coil material	Epoxy
Coil insulation class	H
Seal material	NBR, FKM , EPDM
Medium	
NBR	Neutral Medium such as compressed air, water, hydraulic oil
FKM	Hot air
EPDM (on request)	Oil and fat-free Medium
Medium temperature	
NBR	0 °C…+80 °C
FKM	0 °C…+90 °C
EPDM	-30 °C…+90 °C
Ambient temperature	Max. +55 °C (min. temperature see Medium temperature)
Viscosity	Max. 37 mm²/s
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (will be replaced with Type 2518) (supplied as standard)
Protection class	IP65 with cable plug
Installation	A s required, preferably with actuator upright
Response times[1]	
AC opening/closing	8…15 ms
DC opening/closing	10…20 ms

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Power consumption			
Inrush		**Hold (hot coil)**	
AC [VA]	**DC [W]**	**AC [VA/W]**	**DC [W]**
30	8	15/8	8

Dimensions [mm]

A	B	C
58	34	120



SW19

Ordering chart

Circuit function	Port connection	Orifice [mm]	Pressure range [bar][1)]	Seal Material	Body and seat material	Article no. per voltage/frequency [V/Hz]			
						024/DC	024/50	110/50	230/50
All devices with manual override and manifold (banjo version)									
C 3/2 way direct-acting solenoid valve, normally closed, with manual override	G ¼	02.0	0…16	NBR	Brass	041191	–	–	041192
	G ¼	03.0	0…10	NBR	Brass	041217	041219	041223	041228
	G ¼	03.0	0…10	FKM	Brass	041231	–	–	041233

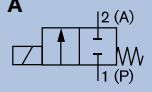
1) Please be aware that the above valves cannot be used for vacuum

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)

2/2 way Solenoid Valve for low and high temperatures

2610

- Medium separation
- Metal bellow system in stainless steel
- High quality PTFE seat seal
- Medium temperature -200 °C to +180 °C
- Energy saving „Kick and Drop" electronic

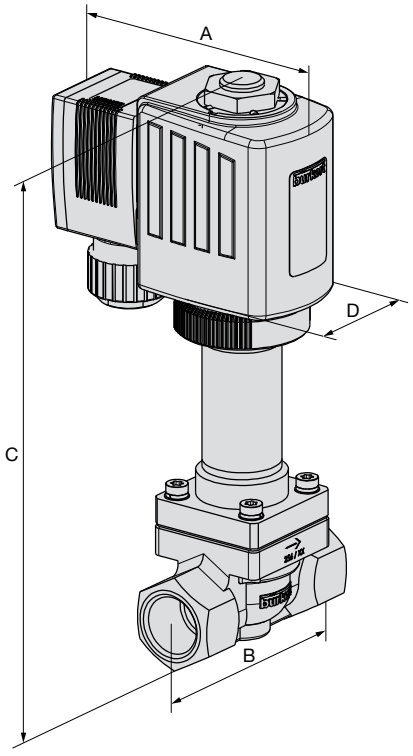


The direct-acting valve, Type 2610, is delivered with a normally closed circuit function. The thermal isolation of the coil and housing by means of stainless steel bellows allows the extreme medium temperature. In this way condensation or an unacceptable heating up of the coil is avoided. The supplied cable head contains a „kick and drop" electronic that supports the opening phase and afterwards reduction of the opening holding power.

Technical data

Body material	Brass with stainless steel seat 1.4581 Stainless steel body and stainless steel seat 1.4581
Metal bellows	Stainless steel 1.4541
Seal material	PTFE
Medium	Neutral gases and liquids
Medium temperature	-200 °C...+180 °C
Ambient temperature	Max. +50 °C
Viscosity	Approx. 21 mm^2/s
Operating voltages	24/110 V UC 220...230 V UC
Voltage tolerance	Max. ±10 %
Cycling rate	10/min
Power consumption	Kick and Drop electronic 72/4 W
Duty cycle	Continuous operation 100 % ED
Electrical connection	Cable plug acc. to DIN EN 175301-803, Type 2508 (will be replaced with Type 2518), for Ø 7 mm cable (included in delivery)
Protection class	IP65 with cable plug
Installation position	As required, preferably with actuator upright
Weight	1.1 kg
Response times Opening Closing	Measured at valve outlet at 6 bar and +20 °C 100...200 ms, pressure relief 0...90 % 300...500 ms, pressure relief 100...10 %

Dimensions [mm]

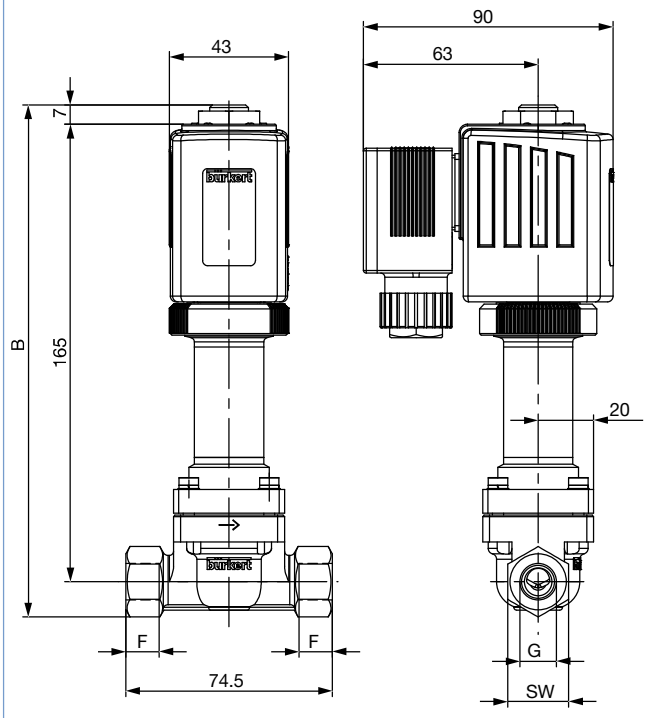


DN	A	B	C	D
6	90	74.5	184	43
8	90	74.5	187	43
12	90	74.5	187	43

Options

- Further versions see data sheet or on request

Dimensions [mm]



Body with threaded port G ½

Body with threaded port, G ¼

DN	B	F1[1)]	G1[1)]	F2[1)]	G2[1)]	SW
6	184	12	G ¼	10.0	NPT ¼	24
8	187	14	G ½	13.5	NPT ½	27
12	187	14	G ½	13.5	NPT ½	27

1) For G-Thread the dimensions F1 and G1 apply
For NPT-Thread the dimensions F2 and G2 apply

Ordering chart

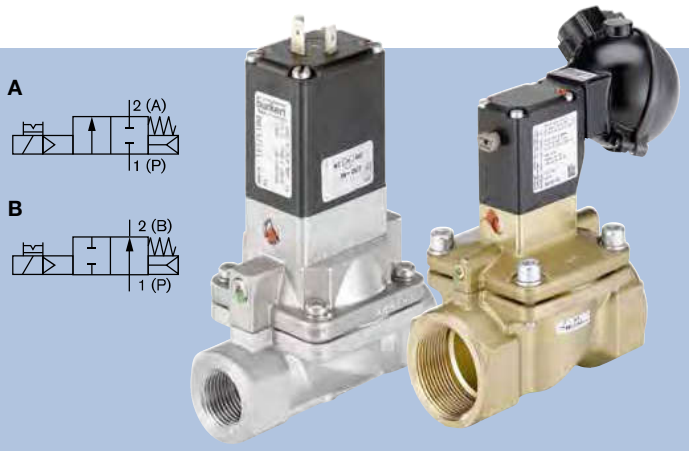
Circuit function	Orifice [mm]	Port connection	K_v value [m^3/h]	Pressure range [bar]	Voltage/frequency V/Hz	Article no.
A 2/2 way solenoid valve, direct-acting, normally closed	6	G ¼	0.8	0…10	024/UC	167737
	6	G ¼	0.8	0…10	230/UC	167739
	8	G ½	0.9	0…10	024/UC	167740
	8	G ½	0.9	0…10	230/UC	167742
	12	G ½	1.8	0…3.5	024/UC	167743
	12	G ½	1.8	0…3.5	230/UC	167745

Note: Cable plug, see **Type 2508** ▸ (will be replaced with Type 2518)

Servo-assisted 2/2 way valve diaphragm valve

5282

- Servo-assisted diaphragm valve with diameter of up to DN65
- Separating diaphragm for aggressive and contaminated media
- Closing and opening times can be individually adjusted
- Explosion proof version (Cat.2)
- Service-friendly manual override

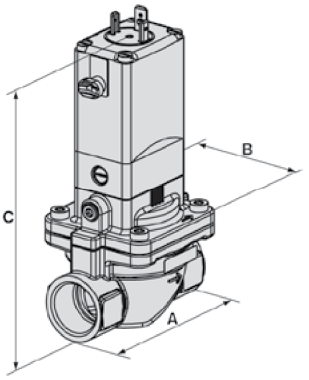


The 5282 valve is a servo-assisted diaphragm valve. A minimum differential pressure is required for the valve to function. Various diaphragm material combinations and methods of operation are available depending on the application. The standard brass housing satisfies all European drinking water requirements. The housing offering is completed with stainless steel and grey cast iron versions. The 3/2 way pilot valve can be easily converted from NC to NO functioning principle by rotating it on the armature. The solenoid coils are moulded with a chemically resistant epoxy. The 5282 is equipped with manual override for commissioning and testing. In combination with a plug in accordance with DIN EN 175301-803 Form A and stainless steel housing the valves satisfy protection class NEMA 4X.

Technical data

Orifice	DN13…DN65
Body material	
Threaded port	Brass acc. to DIN EN 50930-6 Stainless steel 1.4581
Flange	Stainless steel 1.4541, cast iron on request
Coil encapsulation material	Epoxy
Coil insulation class	H
Seal material	NBR, EPDM, FKM
Medium	
NBR	Neutral fluid, such as compressed air, water, hydraulic oil,
EPDM	Oil and fat-free fluid, e.g. alcaline solutions, hot water
FKM	Hot air, peracetic acid, hot oil
Medium temperature	
NBR	0 °C…+80 °C
EPDM	-25 °C…+90 °C
FKM	0 °C…+90 °C
Ambient temperature	Max. +55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	
Standard	Cable plug 2508 (will be replaced with Type 2518) acc. DIN EN 175301-803 Form A (not included)
EX	With moulded-in cable 3 m long, 3 × 0.75 mm²
	With terminal box
Protection class	IP65 with cable plug acc. to DIN EN 175301-803 Form A NEMA 4X units with stainless steel housing IP65 with cable or terminal box

Dimensions [mm]



DN	Port connection	A	B	C
13	G ½	65	40	123
20	G ¾	100	60	131
25	G 1	115	70	142
32	G 1¼	126	85	147
40	G 1½	126	85	156
50	G 2	164	115	177.5
65	G 2½	180	115	185

Ignition protection class (ATEX and IECEx version)	
With cable	II 2G Ex mb IIC Gb II 2D Ex mb IIIC T130 °C Db
With terminal box	II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db
Installation	As required, preferably connected upright

Options

- Further versions see data sheet or on request

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water[1] [m³/h]	Nominal pressure[2] [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
Brass body, threaded port, with manual override, without cable plug								
A 2/2 way servo-controlled solenoid valve, normally closed, with manual override B 2/2 way servo-controlled solenoid valve, normally open, with manual override	**Brass body, threaded port, seal material NBR**							
	G ½	13	4	0.2…10	0.95	134430	134431	134433
	G ¾	20	6.5	0.2…10	1.4	134434	134435	134437
	G 1	25	10	0.2…10	1.85	134438	134439	134441
	G 1¼	32	20	0.2…10	2.6	134442	134443	134445
	G 1½	40	20	0.2…10	3.05	134446	134447	134449
	G 2	50	40	0.2…10	5.15	134450	134451	134453
	G 2½	65	40	0.2…10	5.9	134454	134455	134457
	Brass body, threaded port, seal material EPDM							
	G ½	13	4	0.2…10	0.95	134458	134459	134461
	G ¾	20	6.5	0.2…10	1.4	134462	134463	134465
	G 1	25	10	0.2…10	1.85	134466	134467	134469
	G 1¼	32	20	0.2…10	2.6	134470	134471	134473
	G 1½	40	20	0.2…10	3.05	134474	134475	134477
	G 2	50	40	0.2…10	5.15	134478	134479	134481
	G 2½	65	40	0.2…10	5.9	134482	134483	134485
	Brass body, threaded port, seal material FKM							
	G ½	13	4	0.2…10	0.95	134486	134487	134489
	G ¾	20	6.5	0.2…10	1.4	134490	134491	134493
	G 1	25	10	0.2…10	1.85	134494	134495	134497
	G 1¼	32	20	0.2…10	2.6	134498	134499	134501
	G 1½	40	20	0.2…10	3.05	134502	134503	134505
	G 2	50	40	0.2…10	5.15	134506	134507	134509
	G 2½	65	40	0.2…10	5.9	134510	134511	134513

1) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet, a differential pressure of 0.5 bar is required to open the full orifice.
2) Pressure values [bar]: Overpressure to the atmospheric pressure

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)
Delivered as circuit function A. Change to circuit function B by turning the pilot drive by 180° (only for 10 bar version).

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water[1] [m³/h]	Nominal pressure[2] [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
Stainless steel body, threaded port or flange, with manual override, without cable plug								
A 2/2 way servo-controlled solenoid valve, normally closed, with manual override B 2/2 way servo-controlled solenoid valve, normally open, with manual override	**Stainless steel, threaded port, seal material NBR**							
	G ½	13	4	0.2…10	0.91	281976	281979	281981
	G ¾	20	6.5	0.2…10	1.4	137142	137143	137145
	G 1	25	10	0.2…10	1.8	137146	137147	137149
	G 1¼	32	20	0.2…10	2.25	137150	137151	137153
	G 1½	40	20	0.2…10	2.7	137154	137155	137157
	G 2	50	40	0.2…10	4.8	137158	137159	137161
	Stainless steel, threaded port, seal material FKM							
	G ½	13	4	0.2…10	0.91	220291	220292	220294
	G ¾	20	6.5	0.2…10	1.4	134518	134519	134521
	G 1	25	10	0.2…10	1.8	134522	134523	134525
	G 1¼	32	20	0.2…10	2.25	134526	134527	134529
	G 1½	40	20	0.2…10	2.7	134530	134531	134533
	G 2	50	40	0.2…10	4.8	134534	134535	134537
	Stainless steel, threaded port, seal material EPDM							
	G ½	13	4	0.2…10	0.91	220297	220298	220300
	G ¾	20	6.5	0.2…10	1.4	145709	on request	141714
	G 1	25	10	0.2…10	1.8	141078	93909807	146160
	G 1¼	32	20	0.2…10	2.25	438559	on request	147803
	G 1½	40	20	0.2…10	2.7	141667	on request	139823
	G 2	50	40	0.2…10	4.8	141075	on request	146530
	Stainless steel flange acc. DIN EN 1092-1 with FKM							
	Flange	25	10	0.2…10	3.65	134554	134555	134557
	Flange	32	20	0.2…10	6.45	134558	134559	134561
	Flange	40	20	0.2…10	7.05	134562	134563	134565
	Flange	50	40	0.2…10	10.5	134566	134567	134569
	Stainless steel flange acc. DIN EN 1092-1 with EPDM							
	Flange	25	10	0.2…10	3.65	134570	134571	134573
	Flange	32	20	0.2…10	6.45	134574	134575	134577
	Flange	40	20	0.2…10	7.05	134578	134579	134581
	Flange	50	40	0.2…10	10.5	134582	134583	134585

1) Measured at + 20 °C, 1 bar pressure at valve inlet and free outlet, a differential pressure of 0.5 bar is required to open the full orifice.
2) Pressure values [bar]: Overpressure to the atmospheric pressure

Note: Cable plug, see **Type 2508** ▸ (will be replaced with Type 2518)
Delivered as circuit function A. Change to circuit function B by turning the pilot drive by 180° (only for 10 bar version).

Ordering chart continued

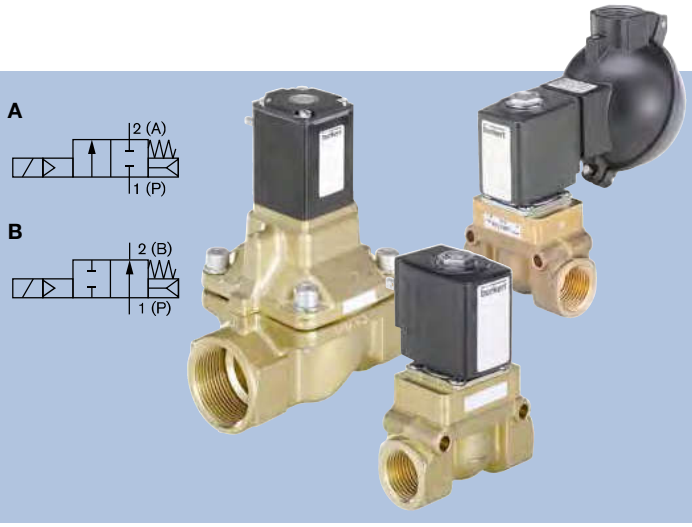
Circuit function	Port connection	Orifice [mm]	K_v value water[1] [m³/h]	Pressure range[2] [bar]	Article no. per Voltage [V/Hz] Seal 024/UC	230/UC
Explosion-proof version with manual override, FKM seal and terminal box (without safety fuse)						
A 2/2 way servo-controlled solenoid valve, normally closed, with manual override B 2/2 way servo-controlled solenoid valve, normally open, with manual override	**Brass - Threaded body, seal material FKM**					
	G ½	13	4	0.5…10	308686	308714
	G ¾	20	6.5	0.5…10	308704	308731
	G 1	25	10	0.5…10	308705	308710
	G 1¼	32	20	0.5…10	on request	on request
	G 1½	40	20	0.5…10	314375	308702
	G 2	50	40	0.5…10	on request	on request
	Stainless steel - Threaded body, seal material FKM					
	G ½	13	4	0.5…10	308716	308738
	G ½	20	5	0.5…10	308677	308708
	G ¾	20	6.5	0.5…10	308706	308709
	G 1	25	10	0.5…10	308688	308733
	G 1¼	32	20	0.5…10	on request	315307
	G 1½	40	20	0.5…10	313855	313857
	G 2	50	40	0.5…10	on request	312632
Explosion-proof version with manual override, NBR seal and moulded-in cable, 3 m						
A 2/2 way servo-controlled solenoid valve, normally closed, with manual override B 2/2 way servo-controlled solenoid valve, normally open, with manual override	**Brass - Threaded body, seal material NBR**					
	G ½	13	4	0.5…10	307168	307171
	G ¾	20	6.5	0.5…10	307188	307192
	G 1	25	10	0.5…10	307204	307212
	G 1¼	32	20	0.5…10	307224	307226
	G 1½	40	20	0.5…10	307236	307237
	G 2	50	40	0.5…10	307243	307245
	G 2½	65	40	0.5…10	on request	307250

1) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet, a differential pressure of 0.5 bar is required to open the full orifice.
2) Pressure values [bar]: Overpressure to the atmospheric pressure

Note: Delivered as circuit function A. Change to circuit function B by turning the pilot drive by 180° (only for 10 bar version).

Servo-assisted 2/2 way piston valve

- Servo-assisted piston valve with diameter of up to DN50
- Vibration-proof, screwed coil system
- Moulded housing with high surface quality
- Explosion proof versions
- Suitable for gas and steam applications



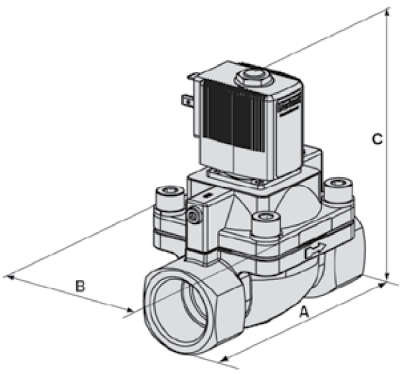
The 5404 valve is a servo-assisted piston valve available in both NC and NO versions. A minimum differential pressure is required for the valve switching function. The standard brass housing satisfies all European drinking water requirements. The solenoid coils are moulded with high-quality polyamide. For reduced energy requirement, all coils can be delivered with electronic power reduction. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65.

Technical data

General data	
Orifice	DN12…DN50
Body material	Brass
Coil material	Epoxy resin (Polyamide on request)
Coil insulation class	H (B on request)
Valve internals	Stainless steel, brass
Seal material	PTFE seat seal + FKM PTFE seat seal + Graphite steam version PTFE seat seal + EPDM on request
Medium	Neutral mediums, compressed air, water, hydraulic oil and steam
Medium temperature **Standard** **Steam version**	 -10 °C…+110 °C Up to 160 °C see Temperature Derating Diagram (from -40 °C on request)
Ambient temperature	-10 °C…+55 °C (from -40 °C on request)
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Tag connector acc. to DIN EN 175301 – 803 Form A
Protection class	IP65 with cable plug (IP67 on request)
Ignition protection class **ATEX** **IECEx**	 PTB 14 ATEX 2023 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db PTB 15 ATEX 1011U IECEx PTB 14,0049 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db PTB 15,0037U
Installation	As required, preferably with actuator upright

Response times	Opening [ms]	Closing [ms]
DN12…DN25	20…400	100…1500
DN32…DN50	200…1500	1000…3000

Dimensions [mm]



Port connection	A	B	C
Standard version DN12, 20, 25			
G ½	65	33	96,5
G ¾	100	60	109
G 1	115	70	119
Standard version DN32, 50			
G 1¼	126	85	161
G 1½	126	85	170
G 2	164	115	198

Technical data continued

Electrical power consumption			
Inrush AC [VA]	Hold AC (hot coil) [VA]	[W]	Hold DC (hot/cold coil) [W]
Circuit function A DN12...DN25 (not in combination with high pressure MX13)			
24	14	8	8/9.5
Circuit function B DN12...DN25			
24	16	7	8/9.5
ATEX/IECEx version			
9	9		9
Circuit function A DN32...DN50 and DN12 as high pressure MX13			
24	16	10	12/13

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range for liquids [bar]	Pressure range for gases [bar]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
Standard version DN12...DN50 (other versions on request)								
Seals PTFE+FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	12	2	1...50	1...50	308501	177853	308502
	G ¾	20	7	1...25	1...32	308503	–	–
				1...25	1...40	–	308504	308505
	G 1	25	10	1...25	1...32	308506	–	–
				1...25	1...40	–	308507	308508
	G 1¼	32	18	1...16	1...16	122579	–	–
				1...25	1...25	–	085337	085340
	G 1½	40	18	1...16	1...16	085343	–	–
				1...25	1...25	–	085342	085345
	G 2	50	36	1...8	1...8	307475	–	–
				1...20	1...20	–	307476	085350
B 2/2 way servo-controlled solenoid valve, normally open	G ½	12	2	1...32	1...32	309022	301170	295636
	G ¾	20	7	1...25	1...25	303209	295276	295651
	G 1	25	10	1...25	1...25	295660	308120	301740

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range for liquids [bar]	Pressure range for gases [bar]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
Steam version NA07, DN13…DN40 (other versions on request)								
Seals PTFE+Graphite								
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	13	3.7	1…5	Brass	307267	–	–
				1…12	Brass	–	307269	307276
	G ¾	20	7	1…5	Brass	307286	–	–
				1…12	Brass	–	307284	307326
	G 1	25	10	1…5	Brass	307342	–	–
				1…12	Brass	–	307343	307351
	Flange acc. to DIN EN 1902 – 1	25	10	1…5	GG 25	307354	–	–
				1…12	GG 25	–	on request	307344
	G 1¼	32	18	1…4	Brass	316584	–	–
				1…12	Brass	–	316580	316579
	Flange acc. to DIN EN 1902 – 1	32	18	1…4	GG 25	on request	–	–
				1…12	GG 25	–	on request	316583
	G 1½	40	18	1…4	Brass	316592	–	–
				1…12	Brass	–	316586	316588
	Flange acc. to DIN EN 1902 – 1	40	18	1…4	GG 25	on request	–	–
				1…12	GG 25	–	on request	316591
High pressure version MX13 (other versions on request)								
Seals PTFE+FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	12	2	1…80	1…80	304191	304193	304194
Discharge valve for compressor systems CF05 (other version on request)								
Seals PTFE+FKM								
B 2/2 way servo-controlled solenoid valve, normally open	G ½	12	2	1…40	1…40	301723	308781	308783

1) High shut off levels may occur with liquids and high differential pressure!

Ordering chart continued

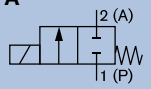
Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range for liquids [bar]	Pressure range for gases [bar]	Article no. per voltage/frequency [V/Hz] 024/DC	230/UC
ATEX/IECEx cable (other versions on request)							
Seals PTFE+FKM							
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	12	2	1…50	1…50	278117	278118
	G ¾	20	7	1…25	1…32	285858	278121
	G 1	25	10	1…25	1…32	290175	300215
B 2/2 way servo-controlled solenoid valve, normally open	G ½	12	2	1…32	1…32	278123	278124
	G ¾	20	7	1…25	1…25	307455	307456
	G 1	25	10	1…25	1…25	305468	307458
ATEX/IECEx terminal box (other versions on request)							
Seals PTFE+FKM							
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	12	2	1…50	1…50	289362	289371
	G ¾	20	7	1…25	1…32	307460	307461
	G 1	25	10	1…25	1…32	307463	307465
B 2/2 way servo-controlled solenoid valve, normally open	G ½	12	2	1…32	1…32	307466	307467
	G ¾	20	7	1…25	1…25	307468	307469
	G 1	25	10	1…25	1…25	307471	307473

Note: The pressure values for liquid media are shown on the rating plate!
The cable plug has to be ordered separately, see **Type 2508** ▶ (will be replaced with Type 2518)

Direct-acting 2/2 way plunger valve

6011

- Direct-acting and compact small-format valve with diameter of up to DN2.4
- Vibration-proof, bolted coil system
- Simple and quick flange or manifold installation
- Quick coupling (push-in fitting) for plug-in hose connections



Valve 6011 is a direct-acting plunger valve. The stopper and plunger guide tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. A Bürkert-specific flange design (SFB) enables space-saving arrangement of valves on a manifold. Push-in fittings can be selected for flexible hose connection. The coils are moulded with polyamide. In combination with a plug in accordance with DIN EN 175301-803 Form B or C, the valves satisfy protection class IP65.

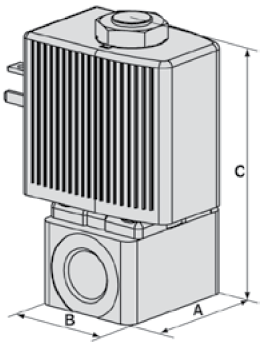
Technical data

General data	
Temperature media	-10 °C…+100 °C
Ambient temperature	+55 °C, max.
Body material	Brass or stainless steel 1.4305
Seal material	FKM
Coil material	Epoxy (Class H)
Viscosity	Max. 21 mm²/s
Voltage tolerance	±10 %
Duty cycle Single valve for block mounting on a manifold	100 % continuous rating Intermittent operation 60 % (30 min) or with 2 W coil (on request)
Power consumption	DC: 4 W, AC: 9 VA (inrush), 6 VA (hold)
Protection class	IP65 (with cable plug)
Electrical connection	Cable plug Type 2507 Form B (not included)

	Response times[1]	
Orifice [mm]	**Opening [ms]**	**Closing [ms]**
1.2	7…10	10…15
1.6	7…10	10…15
2.0	7…12	7…12
2.4	7…12	7…12

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Dimensions [mm]



Port connection	A	B	C
G ⅛	25	20	50.5

Ordering charts

Circuit function	Port connection	Orifice [mm]	K_v value [m³/h]	Pressure range [bar] DC	Pressure range [bar] AC	Article no. voltage/frequency [V/Hz] 024/DC	024/50	230/50
Brass								
A 2/2 way direct-acting solenoid valve, normally closed	sub-base	1.2	0.045	0…12	0…21	163521	–	163524
	G ⅛	1.6	0.06	0…6	0…12	163499	163500	163502
	sub-base					163525	163526	163528
	G ⅛	2	0.11	0…4.5	0…8	163503	163504	163506
	sub-base					163529	163530	163532
	G ⅛	2.4	0.13	0…3	0…6	161193	163507	161194
	sub-base					163533	163534	163536
Stainless steel								
A 2/2 way direct-acting solenoid valve, normally closed	G ⅛	1.6	0.06	0…6	0…12	163509	163510	163512
	sub-base					163537	–	–
	G ⅛	2	0.11	0…4.5	0…8	163513	163514	163516
	sub-base					163541	–	–
	G ⅛	2.4	0.13	0…3	0…6	163517	163518	163520

Note: Cable plug, see **Type 2507** ▶

Accessories

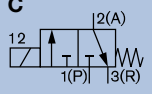
Material	No. of valve connections	Article no.
Manifolds		
Aluminium anodised	1	005312
	2	005355
	3	005313
	4	005314
	5	005315
	6	005316
	7	005893
	8	005166
	9	005241
	10	005819
	11	005242
	12	005222

Accessories for manifold

Description	Feature	Article no.
Blanking plug	with seal ring, G ⅛	005041
Covering plate	for unused valves	005100

Plunger valve 3/2 way direct-acting

- Direct-acting, compact small-format valve with diamet er of up to DN1.6
- Screwed coil system
- Banjo threaded connection for direct mounting on pneumatic valves
- Simple and quick push-in, flange, or manifold installation
- Service-friendly manual override



Direct-acting 3/2 way solenoid valve, normally closed (normally open on request). Threaded valve or Flange for neutral gases and liquids; also suitable for technical vacuum.

Technical data

General data	
Temperature media	-10 °C…+100 °C
Ambient temperature	+55 °C, max.
Viscosity	Max. 21 mm²/s
Voltage tolerance	±10 %
Duty cycle	
Single valve	100 % continuous rating
for block assembly on multiple manifold	Intermittent operation 60 % (30 min) With 2 W coil 100 % (on request)
Body material	Brass, polyamide (PA), stainless steel 1.4305
Seal material	FKM
Coil material	Epoxy (Class H)
Power consumption	DC: 4 W, AC: 9 VA (inrush), 6 VA (hold)
Protection class	IP65 (with cable plug)
Electrical connection	• Acc. to DIN EN 175301-803[2] Form C for cable plug Type 2516 • Acc. to DIN 43650 Form B (Industrial standard) for cable plug Type 2507 (not included) • Flying leads on request

	Power consumption		Response times[1]	
Orifice [mm]	**Inrush**	**Hold**	**Opening [ms]**	**Closing [ms]**
1.2	9 VA	6 VA (4 W)	7…10	9…12
1.6	4 W	4 W	7…12	7…12

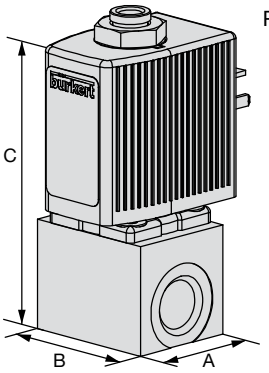
1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %
2) Previously DIN 43650

Options

- Stainless steel body
- P-connection, normally open
- 3/2 way user defined flow direction
- 2 W version

Other versions see data sheet or on request

Dimensions [mm]



Port is M5 fitting.

Port connection	A	B	C
G ⅛	20	25	57.1

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar]	Article no. voltage/frequency [V/Hz] 024/DC	024/50	230/50
Threaded version, brass body without manual override							
C 3/2 way direct-acting solenoid valve, normally closed	G ⅛	1.2	0.045	0…10	161904	163577	163579
		1.6	0.06	0…6	163580	163581	163583
Threaded version, brass body with manual override							
C 3/2 way direct-acting solenoid valve, normally closed	G ⅛	1.2	0.045	0…10	163584	163585	163587
		1.6	0.06	0…6	163588	163589	163591

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar][1)]	Voltage/ frequency [V/Hz]	Article no. Brass body without manual override	Article no. Stainless steel body without manual override	Article no. PA body with manual override
Flange version								
C 3/2 way direct-acting solenoid valve, normally closed	sub-base	1.2	0.045	0…10	024/DC	163600	–	161063
					024/50	163601	–	163616
					230/50	163603	–	163618
		1.6	0.06	0…6	024/DC	163604	163612	163619
					024/50	163605	163613	163620
					230/50	217634	163615	163622

1) Pressure values [bar]: Measured as overpressure to the atmospheric pressure

Note: Cable plug, see **Type 2507** ▸

Accessories

Description	No. of valve places	Article no.
Manifolds		
Aluminium, anodized	1	005312
	2	005355
	3	005313
	4	005314
	5	005315
	6	005316
	7	005893
	8	005166
	9	005241
	10	005819
	11	005242
	12	005222
Accessories for manifold	**Feature**	
Blanking plug	with seal ring, G ⅛	005041
Covering plate	for unused valves	005100

Plunger valve 2/2 way direct-acting

- Direct-acting and compact valve up to diameter of DN6.0
- Vibration-proof, bolted coil system
- Increased leak-tightness with welded plunger guide tube
- Explosion proof versions
- Energy-saving pulse versions

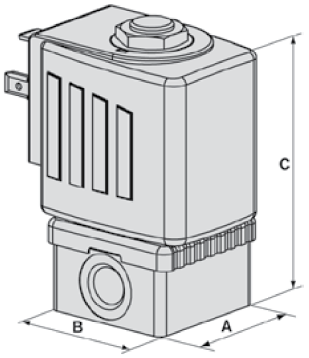
Valve 6013 is a direct-acting plunger valve. The stopper and plunger guid tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. A Bürkert-specific flange design (SFB) enables space-saving arrangement of valves on a manifold. The coils are moulded with polyamide or with chemically resistant epoxy. Pulse coils and 'Kick and Drop' electronics are available for overexcitation (plug 2511) for the reduction of electrical power consumption during operation. Optional manual actuation enables quick commissioning and easy maintenance. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

Technical data

Body material	
Type 6013	Brass, stainless steel 1.4305
Type 6013 A	Brass, stainless steel 1.4305
Seal material	FKM, PTFE/Graphite (EPDM on request)
Analysis version	Silicon, oil and fat free version
Type 6013 A	Tightness > 10…4 mbar l/s
Limit value for risidual carbon	
Type 6013 A	< 0.2 mg/dm²
Medium	• Technical vacuum
Type 6013	• Neutral gases and liquids (e.g. compressed air, water, hydraulic oil)
Type 6013 A	• Neutral medium, which does not attack the body and seal materials
Medium temperature	
FKM	-10 °C…+100 °C (PA coil) till 120 °C (Epoxy coil)
PTFE/Graphite	-40 °C…+180 °C (see chemical resistance chart)
FKM, Circuit function B	-10 °C…100 °C (AC) -10…120 °C (DC)
Ambient temperature	Max. +55 °C
Viscosity	Max. 21 mm²/s
Port connection	
Type 6013	G ⅛, G ¼, G ⅜, sub-base (SFB)
Type 6013 A	G ⅛, G ¼
Operating voltage	
Type 6013	24 V DC, 24 V/50 Hz, 230 V/50 Hz
Type 6013 A	24 V DC, 230 V/50 Hz (other voltages on request)
Voltage tolerance	±10 %
Duty cycle/single valve	100 % continuous rating
With block assembly on manifold	Intermittent operation 60 % (30 min) or with 5 W coil on request
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A for cable plug Type 2508 (will be replaced with Type 2518). Included in delivery. ATX/IECEx version with 3 m moulded cable

Dimensions [mm]

Standard version



Port connection	A	B	C
G ⅛	32.6	35	65.8
G ¼	49	35	71.8

Installation	As required, preferably with actuator upright	
Assembly	No oils, fats or silicone to be used during installation	
Protection class	IP65 with cable plug, ATEX/IECEx junction box version and cable connection version	
Ignition protection class		
Coils with fixed cable outlet	ATEX	PTB 14 ATEX 2023 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db
	IECEx	IECEx PTB 14.0049 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db
Assembly of the coil and the junction box	ATEX	EPS 16 ATEX 1046 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db
	IECEx	IECEx EPS 16.0021 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db
Coil insulation class	Polyamide class B Epoxy class H	

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h][1]	Coil power [W]	Pressure range [bar][2]	Voltage/ Frequency [V/Hz]	Article no. brass body FKM Seal	Article no. Stainless steel body, FKM seal
Standard version								
with FKM seal, brass or stainless steel body (class B)								
A 2/2 way direct-acting solenoid valve, normally closed	2.0	G ⅛	0.12	8	0…12	024/DC	134237	134233
					0…25	024/50	132865	134234
					0…25	230/50	134239	134236
		G ¼	0.12	8	0…12	024/DC	137537	137533
					0…25	024/50	137538	137534
					0…25	230/50	137540	137536
		sub-base (SFB)	0.12	8	0…12	024/DC	134244	–
					0…25	024/50	134245	–
					0…25	230/50	134247	–
	2.5	G ⅛	0.16	8	0…10	024/DC	134240	–
					0…16	024/50	134241	–
					0…16	230/50	134243	–
	3.0	G ⅛	0.23	8	0…6	024/DC	126091	126078
					0…10	024/50	126092	126079
					0…10	230/50	126094	126081
		G ¼	0.23	8	0…6	024/DC	125301	125317
					0…10	024/50	125302	126082
					0…10	230/50	125304	126084
		G ⅜	0.23	10	0…8	024/DC	134248	–
					0…14	024/50	134249	–
					0…14	230/50	134251	–
	4.0	G ¼	0.30	8	0…1.5	024/DC	125306	125318
					0…4	024/50	125307	125319
					0…4	230/50	125309	125320
		G ⅜	0.30	10	0…2.5	024/DC	134252	–
					0…6	024/50	134253	–
					0…6	230/50	134255	–
	6.0	G ¼	0.55	8	0…0.5	024/DC	125311	126086
					0…1.5	024/50	125312	126087
					0…1.5	230/50	125314	126089

Ordering chart continued

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h][1]	Coil power [W]	Pressure range [bar][2]	Voltage/ Frequency [V/Hz]	Article no. brass body FKM Seal	Article no. Stainless steel body, FKM seal
with FKM seal, brass or stainless steel body (class B)								
A 2/2 way direct-acting solenoid valve, normally closed	6.0	G ⅜	0.55	10	0…0.75	024/DC	134256	–
					0…2.5	024/50	134257	–
					0…2.5	230/50	134259	–

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h][1]	Coil power [W]	Pressure range [bar][2]	Voltage/ Frequency [V/Hz]	Article no.
High temperature applications (-40 °C…+180 °C)							
PTFE seat seal, brass body (class H)							
A 2/2 way direct-acting solenoid valve, normally closed	2.0	G ¼	0.12	8	0…12	024/DC	136015
					0…25	024/50	136016
					0…25	230/50	136018
	3.0	G ¼	0.23	10	0…6	024/DC	136019
					0…10	024/50	136020
					0…10	230/50	136022
		G ⅜	0.23	10	0…8	024/DC	136023
					0…14	024/50	136024
					0…14	230/50	136026
FKM seal, brass body (class H)							
B 2/2 way direct-acting solenoid valve, normally open	2.0	G ⅛	0.12	0…16	8	24/DC	213543
					7	230/50	213550
	3.0	G ⅛	0.23	0…8	8	24/DC	213545
					7	230/50	213551
		G ¼	0.23	0…8	8	24/DC	213546
					7	230/50	213552
	4.0	G ¼	0.3	0…4	8	024/DC	213548
					7	230/50	213553
	6.0	G ¼	0.55	0…2	8	024/DC	213549
					7	230/50	213554

1) Measured at +20 °C, 1 bar[2] pressure at valve inlet and free outlet..
2) Measured as overpressure to the atmospheric pressure

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h][1]	Pressure range [bar][2]	Power consumption DC (hot/cold coil) [W]	Article no. per voltage [V] 012/DC	024/DC
Impulse valves							
Seal material FKM, brass body (class H)							
A 2/2 way direct-acting solenoid valve, normally closed	Sub-base (SFB)	2.0	0.12	0…16	7	209266	209272
		2.5	0.16	0…10	7	209267	209273
		3.0	0.23	0…6	7	209268	209274
	G ⅛	2.0	0.12	0…16	7	209269	209275
		2.5	0.16	0…10	7	209270	209276
		3.0	0.23	0…6	7	209271	209277

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h][1]	Pressure range [bar][2]	Coil power [W]	Voltage/ Frequency [V/Hz]	Article no.
Analysis valves							
Seal material FKM and brass body (class B)							
A 2/2 way direct-acting solenoid valve, normally closed	2.0	G ⅛	0.12	0…12	8	24/DC	137826
				0…25		230/50	137827
	2.5	G ⅛	0.16	0…10	8	24/DC	137828
				0…16		230/50	137829
	3.0	G ¼	0.23	0…6	8	24/DC	137830
				0…10		230/50	137831
	4.0	G ¼	0.30	0…1.5	8	24/DC	137832
				0…4		230/50	137833
Seal material FKM and stainless steel body (class B)							
A 2/2 way direct-acting solenoid valve, normally closed	2.0	G ⅛	0.12	0…12	8	24/DC	137818
				0…25		230/50	137819
	2.0	G ¼	0.12	0…12	8	24/DC	137820
				0…25		230/50	137821
	3.0	G ¼	0.23	0…6	8	24/DC	137822
				0…10		230/50	137823
	4.0	G ¼	0.30	0…1.5	8	24/DC	137824
				0…4		230/50	137825

1) Measured at +20 °C, 1 bar[2] pressure at valve inlet and free outlet..
2) Measured as overpressure to the atmospheric pressure

Note: The cable plug has to be ordered separately, see **Type 2508** ▶ (will be replaced with Type 2518)

Ordering chart continued

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h]	Coil effective power [W]	Pressure range [bar]	Voltage/ Frequency [V/Hz]	Article no. Brass body	Article no. Stainless steel body
ATEX/IECEx cable versions								
Ex m T4 approved with seal material FKM and molded cable (3 m), single mounting only								
A 2/2 way direct-acting solenoid valve, normally closed	2.0	sub-base (SFB)	0.11	7	0…6	24/UC	278607	278614
						230/UC	278608	on request
		G ⅛	0.12	9	0…10	24/UC	278592	278584
						230/UC	on request	278585
		G ¼	0.12	9	0…10	24/UC	278605	278601
						230/UC	278606	278603
	2.5	G ⅛	0.16	9	0…8	24/UC	278593	on request
						230/UC	on request	on request
	3.0	G ⅛	0.23	9	0…5	24/UC	on request	278586
						230/UC	on request	on request
		G ¼	0.23	9	0…5	24/UC	278594	278587
						230/UC	278596	278589
	4.0	G ¼	0.30	9	0…1.2	24/UC	278597	278590
						230/UC	on request	278591
	6.0	G ¼	0.55	9	0…0.4	24/UC	278598	278604
						230/UC	278599	on request
ATEX/IECEx junction box versions								
Ex m T4 approved with seal material FKM and junction box, single mounting only								
A 2/2 way direct-acting solenoid valve, normally closed	1.5	sub-base (SFB)	0.08	9	0…16	24/UC	288424	on request
	2	G ⅛	0.12		0…10	24/UC	288430	288437
						230/UC	288431	288438
		G ¼				24/UC	288433	288439
						230/UC	288435	288441
	3	G ⅛	0.23		0…5	24/UC	297741	on request
						230/UC	on request	on request
		G ¼				24/UC	on request	288449
						230/UC	on request	288451
	4		0.3		0…1.2	24/UC	288452	288453
						230/UC	on request	288455
	6		0.55		0…0.4	24/UC	288456	288459
						230/UC	288457	288460

Note: The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K).

Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A - see Type 2508 ▸		
without circuitry (standard), without cable	0…250 V AC/DC	008376
with LED	12…24 V AC/DC	008360
with LED and varistor	12…24 V AC/DC	008367
with LED and varistor	200…240 V AC/DC	008369
with inverter[1)]	24 V AC/DC	on request
Cable plug Type 2513 acc. to DIN EN 175301-803 Form A[2)] - see Type 2513 ▸		
Cable length, 12000 mm	max. 230 V AC/DC	260893
Cable length, 5000 mm	max. 230 V AC/DC	260892
Cable length, 3000 mm	max. 230 V AC/DC	260891
Cable length, 300 mm	max. 230 V AC/DC	260890

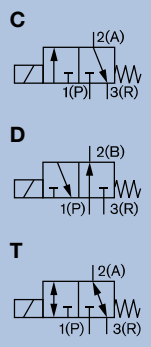
1) The inverter plug contains an electronic, which especially enables the electric 3 wire control. Input for 3 wire technology, common "-" polarity, two split "+" polarity. Output suitable for implulse version for Type 6013/6014
2) Meets the requirements of ATEX category 3 GD

Description	Ex Approvals		Article no
	Certification	Identification	
Ex-Cable glands (polyamide version included in delivery / surcharge applied for brass nickel plated version)			
Brass, nickelplated, 6…13 mm	IECEx PTB 13.0027X, PTB 04 ATEX 1112 X	II 2 D Ex tb IIIC Db IP68, II 2 G Ex e IIC Gb	773278
Polyamide, 7…13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773277

Description	Article no
Special tool to turn the junction box (not included in delivery)	
Set SC02-AC10 Special wrench, service manual	293488

Plunger valve 3/2 way direct-acting

- Direct-acting, compact valve with diameter of up to DN2.5
- Vibration-proof, bolted coil system
- Service-friendly manual override
- Energy-saving pulse versions



Direct-acting 3/2 way, normally closed or normally open solenoid valve. It is for neutral gases and liquids and it is also suitable for technical vacuum.

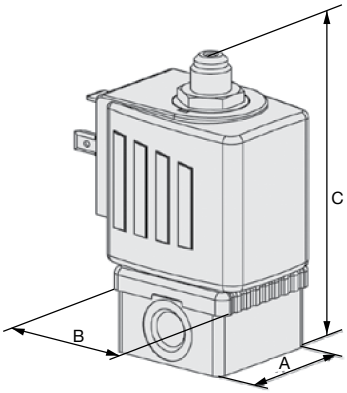
Technical data

General data	
Body material	Brass or stainless steel, polyamide (sub-base)
Seal material	FKM (EPDM on request)
Medium	Neutral gases and fluids (e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol). Suitable for technical vacuum
Medium temperature Polyamide coil (FKM seal)	-10 °C…+100 °C (PA coil) to 120 °C Epoxy coil
Ambient temperature	Max. +55 °C
Viscosity	Max. 21 mm^2/s
Port connection	G ⅛, G ¼, sub-base (SFB)
Operating voltage	24 V DC, 24 V/50 Hz, 230 V/50 Hz (other voltages on request)
Voltage tolerance	±10 %
Duty cycle/single valve Assembly	100 % continuous rating Intermittent operation 60 % (30 min) or with 5 W coil (on request)
Electrical connection	DIN EN 175301-803 Form A for Cable Plug, Type 2508 (will be replaced with Type 2518). Included in delivery. ATEX/IECEx version with 3 m moulded cable
Installation	As required, preferably with actuator upright
Protection class	IP65 with cable plug, ATEX/IECEx junction box version and cable connection version NEMA 4x with cable plug 2508 (will be replaced with Type 2518) or 2509 only for stainless steel versions (other versions on request)
Coil insulation class	Polyamide class B (Epoxy class H on request)
Coil material	Polyamide (Epoxy on request)
Orifice	DN1.5 … DN2.5

	Power consumption		Response times[1]	
Orifice [mm]	**Inrush AC**	**Hold AC**	**Opening [ms]**	**Closing [ms]**
1.5	24 VA	17 VA (8 W)	10…15	15…20
2.0	24 VA	17 VA (8 W)	10…15	15…20
2.5	24 VA	17 VA (8 W)	15…20	10…22

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Dimensions [mm]



Port connection	A	B	C
G ⅛	32	35	73.3
G ¼	46	35	78.3

Options

- Cable plug with LED and varistor
- Impulse version
- Oxygen version
- Vacuum version
- Analysis version
- Hazardous area approvals
- Explosion-proof version
- Further circuit functions
- SIL - certificated
- UL and CSA approvals

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h][1]	Pressure range [bar][2]	Effective coil power [W]	Article no. per voltage / frequency		
						024/DC	024/50	230/50
Threaded valves with FKM seal, (class B)								
Brass body								
C 3/2 way direct-acting solenoid valve, normally closed	1.5	G ⅛	0.07	0…16	8	125329	125331	125332
	2.0	G ⅛	0.11	0…10	8	125333	125334	125336
		G ¼	0.11	0…10	8	125348	126138	126140
	2.5	G ⅛	0.16	0…6	8	125341	125340	125342
		G ¼	0.16	0…6	8	126142	126143	126145
D 3/2 way direct-acting solenoid valve, normally open	1.5	G ⅛	0.07	0…16	8	126195	126196	125355
	2.0	G ⅛	0.11	0…10	8	125357	125358	125360
		G ¼	0.11	0…10	8	126198	126199	126201
	2.5	G ⅛	0.16	0…6	8	125363	126202	126204
		G ¼	0.16	0…6	8	126205	126206	126208
T 3/2 way direct-acting solenoid valve, flow direction optional	1.5	G ⅛	0.07	0…7	8	126150	126151	126153
With manual override								
C 3/2 way direct-acting solenoid valve, normally closed	2.0	G ⅛	0.11	0…10	8	125337	125338	125339
		G ¼	0.11	0…10	8	125349	126147	126149
D 3/2 way direct-acting solenoid valve, normally open	2.0	G ⅛	0.11	0…10	8	126209	125361	126211
		G ¼	0.11	0…10	8	126212	126213	126215
Stainless steel body								
C 3/2 way direct-acting solenoid valve, normally closed	1.5	G ⅛	0.07	0…16	8	126216	126217	126219
	2.0	G ⅛	0.11	0…10	8	126220	126221	126223
	2.0	G ¼	0.11	0…10	8	126224	126225	126227
T 3/2 way direct-acting solenoid valve, flow direction optional	1.5	G ⅛	0.07	0…7	8	126228	126229	126231

1) Measured at +20 °C, 1 bar[2] pressure difference
2) Measured as overpressure to the atmospheric pressure

Ordering chart continued

Circuit function	Orifice [mm]	K_v value water [m^3/h][1]	Pressure range [bar][2]	Effective coil power [W]	Article no. per voltage / frequency 024/DC	024/50	230/50
With FKM seal and sub-base body (SFB), (class B)							
Brass body							
C 3/2 way direct-acting solenoid valve, normally closed	1.5	0.07	0…16	8	126154	126155	125366
	2.0	0.11	0…10	8	125367	125368	125370
D 3/2 way direct-acting solenoid valve, normally open	2.0	0.11	0…10	8	126161	126162	125383
With manual override							
C 3/2 way direct-acting solenoid valve, normally closed	1.5	0.07	0…10	5	126403	126404	126406
	1.5	0.07	0…16	8	126157	126158	126160
	2.0	0.11	0…6	5	126407	126408	126410
	2.0	0.11	0…10	8	125371	125372	125374
Polyamide body material							
C 3/2 way direct-acting solenoid valve, normally closed	1.5	0.07	0…10	5	126390	126391	126393
With manual override							
C 3/2 way valve, NC	1.5	0.07	0…10	5	126396	126397	126399

Circuit function	Port connection	Orifice [mm]	K_v value water [m^3/h][1]	Pressure range [bar][2]	Power consumption DC (hot/cold coil) [W]	Article no. per voltage [V] 012/DC	024/DC
Impulse valve with FKM seal material and brass body (class H)							
C 3/2 way direct-acting solenoid valve, normally closed	Threaded port G ⅛	1.5	0.07	0…16	7	209280	209284
		2.0	0.11	0…10	7	209281	209285
	Sub-base {SFB)	1.5	0.07	0…16	7	209278	209282
		2.0	0.11	0…10	7	209279	209283

1) Measured at + 20 °C, 1 bar[2] pressure difference
2) Measured as overpressure to the atmospheric pressure

Note: Cable plug, see **Type 2508** ▸ (will be replaced with Type 2518)

Accessories

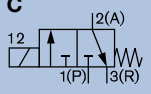
Features				Article no.
Single manifold				
in aluminium black anodized				005020
Multiple manifold				
in aluminium	Hole spacing A [mm]	Total length B [mm]	Hole spacing C [mm]	
2 valves	57	65	–	005023
3 valves	90	98	–	005286
4 valves	123	131	–	005287
5 valves	156	164	57	005035
6 valves	189	197	57	005038
8 valves	255	263	90	005386
10 valves	321	329	90	005764
Covering plate with plugs and O-ring, for closing off unused valve positions				005630

Manifolds in Brass or stainless steel on request.

3/2 way Solenoid Valve with Ex approval

6014 Ex mb

- 3 way direct-acting valve
- High cycling rate
- Compact design
- Push-over coil



The 6014 Ex valve corresponds to the 6014 standard unit, but with an Ex coil and a moulded-on cable (available on request with terminal box). The valve is available as a sub-base or as a threaded port model.

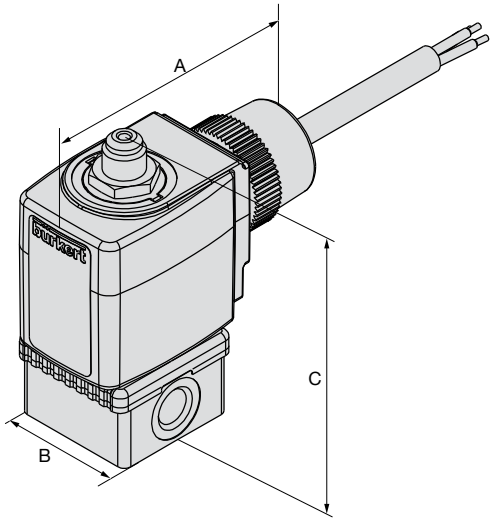
Technical data

General data	
Orifice	DN1.5…DN2.0
Body material	Brass, stainless steel 1.4305
Seal material	FKM
Medium temperature	The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), of minus 5 K.
Ambient temperature Single mounting Manifold assembly	 -10 °C…+55 °C -10 °C… +40 °C
Voltage tolerance	±10 %
Duty cycle / single valve Assembly	100 % continuous rating Intermittent operation 60 % (30 min) or with 5 W coil (on request)
Electrical connection	ATEX/IECEx version with 3 m moulded cable
Protection class	IP65 with cable plug, ATEX/IECEx terminal box version and cable connection version
Approval for coils with fixed cable outlet	ATEX: PTB 14 ATEX 2023 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T135 °C Db IECEx: IECEx PTB 14.0049 X Ex mb IIC T4 Gb Ex mb IIIC T135 °C Db

Response times[1]	
Opening [ms]	**Closing [ms]**
10	15
to	to
15	20

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Dimensions [mm]



Coil size	A
5	69
6	75

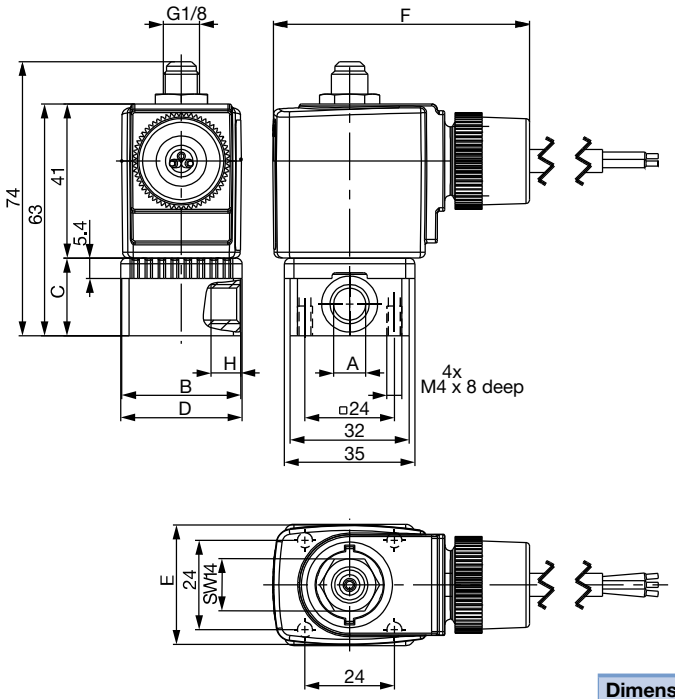
Version		B	C
Thread	G ⅛	32.6	74
	G ¼	49	74
Flange		32.6	74

Options

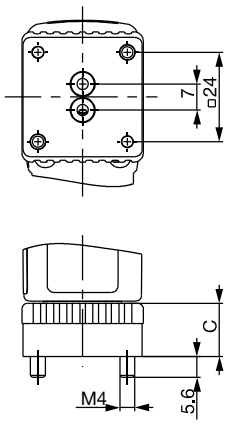
- SIL certificate
- Further versions see data sheet or on request

Dimensions [mm]

Threaded version



Flange version (SFB)



Coil size	E	F
5	32	69
6	40	75

Dimensions					
Version	A	B	C	D	H
Threaded	G ⅛	32	20.8	32.6	8
	G ¼	46	26.8	49	12
Flange	–	32	14.3	32.6	–

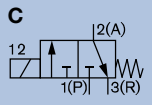
Ordering chart

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Body material	Nominal power consumption [W]	Voltage/ frequency [V/Hz]	Article no. without manual override	Article no. with manual override
Version according to Ex m II T4, valves with sub-base connection (SFB), cable outlet downwards, approved for manifold mounting									
C 3/2 way direct-acting solenoid valve, normally closed	Sub-base (SFB)	1.5	0.07	0…10	Brass	7	024/UC	–	278655
							230/UC	–	278656
	Sub-base (SFB)	2	0.11	0…6	Brass	7	024/UC	–	278658
							230/UC	–	278659
Version acc. to Ex m II T4, valves with threaded ports, cable outlet downwards, for single mounting only									
C 3/2 way direct-acting solenoid valve, normally closed	G ⅛	2	0.11	0…10	Brass	9	024/UC	278637	278645
							230/UC	278638	278646
					Stainless steel	9	024/UC	278660	–
							230/UC	278661	–
	G ¼	2	0.11	0…10	Brass	9	024/UC	278639	278647
							230/UC	278641	278649
					Stainless steel	9	024/UC	278662	–
							230/UC	278663	–

Note: For flange version – manifolds, see **Type 6014** ▶

3/2 way Ex ia Solenoid Valve for pneumatic applications

- Direct-acting
- Intrinsically-safe operation
- Compact design
- Push-over coil system
- Threaded port and sub-base port in brass or stainless steel



The direct-acting, intrinsically safe 6014 Ex ia valve consists of a metal body and a push-over coil with tag connectors on the side. Type 6014 Ex ia can be used in a wide variety of ways, as a single valve, as a pilot valve or grouped together in blocks. The valve is also suitable for technical vacuum.

Technical data

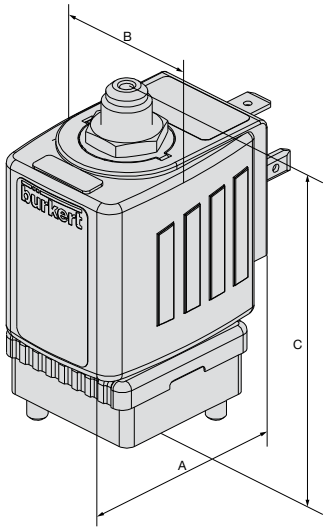
General data	
Orifice	DN0.9
Port connection	Sub-base/Threaded port
Body material	Stainless steel or brass
Metal parts	Stainless steel 1.4305
Seal material	FKM
Medium	Neutral gases and fluids (e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol). Suitable for technical vacuum
Medium temperature	-10 °C…+100 °C
Ambient temperature	-10 °C…+65 °C for T6 -10 °C…+75 °C for T5 on request
Electrical connection	DIN EN 175301-803 Form A for Cable Plug, Type 2508 (will be replaced with Type 2518) (see Ordering chart for accessories)
Protection class	IP65 with cable plug, NEMA 4x with cable plug 2508 (will be replaced with Type 2518) or 2509 only for stainless steel versions (other versions on request)
Ignition protection class	ATEX: PTB 01 ATEX 2101 0102 II 2G Ex i IIC T6 Gb II 2D Ex i IIIC T85 °C Db IECEx: PTB IECEx 12,0040 II 2G Ex i IIC T6 Gb II 2D Ex i IIIC T85 °C Db

	Response times[1]	
Orifice [mm]	**Opening [ms]**	**Closing [ms]**
0.9	20	22

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Function values for switching valve		
	at +20 °C	**at +55 °C**
Minimum switching current	30 mA	30 mA
Nominal resistance coil	310 Ω	360 Ω
Minimum terminal voltage	9,3 V	10,8 V

Dimensions [mm]



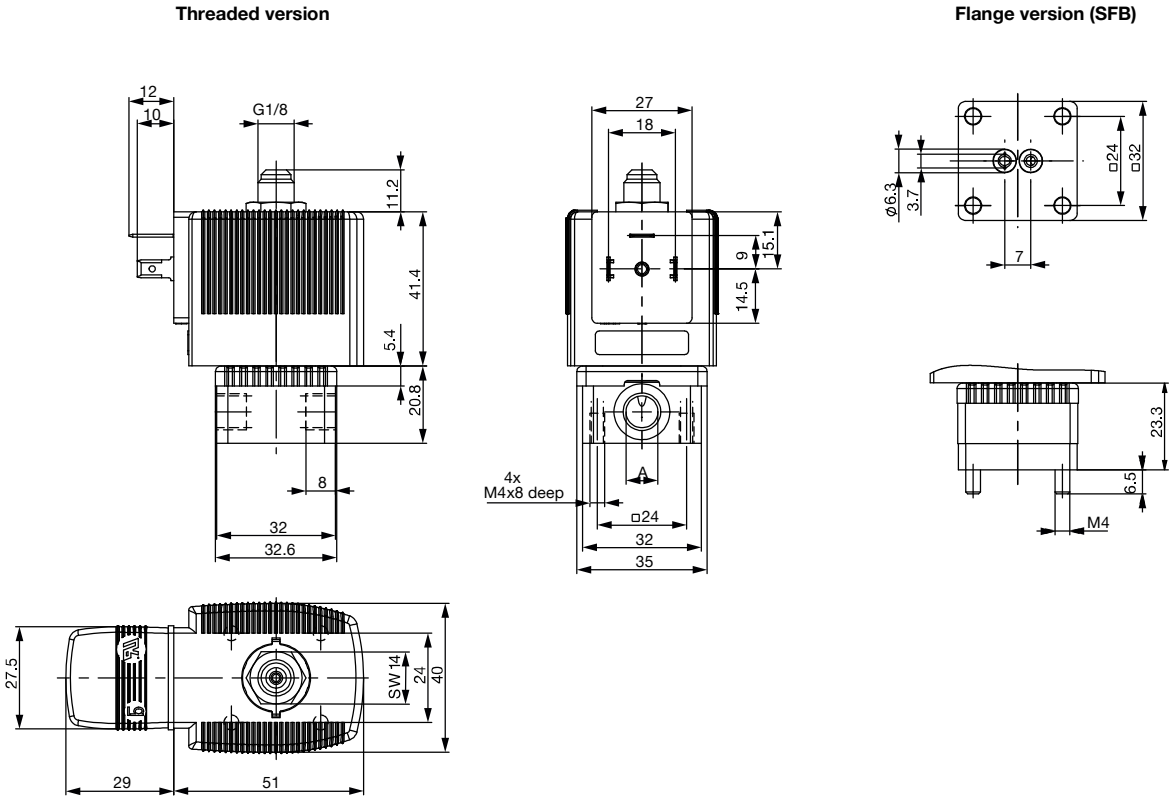
A	B	C
51	40	55.3

Options

- Further versions see data sheet or on request

Max. allowable values acc. to the certificate of conformity	
Ui	28 V
Ii	120 mA
Pi	1,1 W
Ambient temperature	+60 °C at T6 +75 °C at T5

Dimensions [mm]



Ordering chart

Circuit function	Orfice [mm]	Q_{Nn}-value air [l/min]	Seal material	Pressure range [bar]	Body material	Port connection	Article no. without manual override
6014 valve; Ex ia II T6 with FKM seal material only for approved single mounting, cable plug acc. to DIN EN 175301-803 Form A, ambient temperature from -10 °C to 60 °C for T6, -10 … -75 °C for T5							
C 3/2 way direct-acting solenoid valve, normally closed	0.9	30	FKM	Vacuum to 10	Stainless steel	Bürkert sub-base (SFB)	144540
						Threaded port G ⅛	147226
					Brass	Bürkert sub-base (SFB)	147227
						Threaded port G ⅛	146214

The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

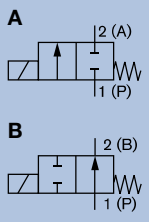
Accessories

Description	Article no.
Stainless steel cap nut, for additional protection of the exhaust air channel from damp penetration	649554
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN EN 175301-803 (previously DIN 43650) with blue compression gland nut	438574

Direct-acting 2/2 way plunger valve

6027

- Direct-acting, powerful valve with diameter of up to DN13
- Vibration-proof, bolted coil system
- Increased leak-tightness with welded plunger guide tube
- Explosion proof versions
- High pressure variants for gases and liquids



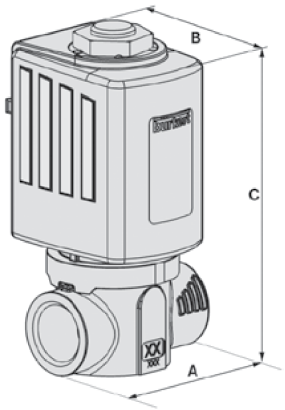
Valve 6027 is a direct-acting plunger valve. The stopper and plunger guide tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The coils are moulded with chemically resistant epoxy. An optional sliding ring bearing increases the service life with dry gases. Special seal technology is used for high-pressure applications. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

Technical data

General data		
Port connection	G ¼, G ⅜, G ½, G ⅜ (NPT and Rc on request)	
Orifice	DN1.0…DN13.0	
Body material	Brass or stainless steel 1.4404 (316L)	
Coil material	Epoxy	
Coil insulation class	Epoxy class H	
Medium Medium resistance according to material combination	Vacuum, neutral gases and liquids (e.g. compressed air, town gas, natural gas, water, hydraulic oil, petrol) and slightly aggressive medium Hot liquids and steam	
Viscosity	Max. 21 mm²/sec	
Seal material combination and medium temperature **Seat seal/external seal**		
Circuit function	Normally Closed (NC)	Normally Open (NO)
FKM/FKM	-10 °C…+140 °C	-10 °C…+100 °C
PEEK/FKM	-10 °C…+80 °C	-10 °C…+80 °C
PTFE/PEEK	-40 °C…+140 °C	-40 °C…+100 °C
NBR/NBR	-10 °C…+80 °C	
Ambient temperature	Max. 55 °C	
Voltage tolerance	±10 %	
Duty cycle / single valve	100 % continuous rating	
Electrical connection	Acc. to DIN EN 175301-803 Form A for cable plug Type 2508 (will be replaced with Type 2518). Not included in delivery. See ordering chat for accessories	
Protection class	IP65 with cable plug	
Installation	As required, preferably with actuator upright	

Power consumption				
Orifice	**Inrush AC**	**Hold AC (hot coil)**		**DC (hot/cold coil)**
[mm]	**[VA]**	**[VA]**	**[W]**	**[W]**
2.0…12.0	105	37	16	16 / 21

Dimensions [mm]



Port connection	A	B	C
G ¼	55	55.5	98.2
G ⅜	55	55.5	101.2
G ½	59	55.5	103.2

Response times[1]				
Orifice	**Response times AC**		**Response times DC**	
[mm]	**Opening [ms]**	**Closing [ms]**	**Opening [ms]**	**Closing [ms]**
1.0…13.0	10…30	50…80	20…30	50…80

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Options

- ATEX approval
- Higher pressures for gaseous medium to 100 bar
- Oxygen versions
- High temperature version up to +180 °C
- Further versions see data sheet or on request

Ordering chart

Circuit function	Port connec-tion	Orifice [mm]	K_v value water [m³/h]	Max. medium pressure [bar]						Article no. acc. to voltage/ frequency [V/Hz]		
				Water		Oil		Air				
				DC	AC	DC	AC	DC	AC	24/DC	24/50	230/50
Standard version elastomer seal up to 30 bar												
Housing material brass, G-inner thread, seal material FKM/FKM												
A 2/2 way direct-acting solenoid valve, normally closed	G ¼	3.0	0.28	0…30	0…25	0…30	0…25	0…30	0…25	178295	178296	178297
		4.0	0.54	0…12	0…16	0…12	0…16	0…12	0…16	178299	178300	178301
		5.0	0.73	0…6	0…10	0…6	0…10	0…6	0…10	178303	178304	178305
		6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178307	178308	178309
	G ⅜	3.0	0.28	0…30	0…25	0…30	0…25	0…30	0…25	178311	178312	178313
		4.0	0.54	0…12	0…16	0…12	0…16	0…12	0…16	178315	178316	178317
		5.0	0.73	0…6	0…10	0…6	0…10	0…6	0…10	178319	178320	178321
		6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178323	178324	178325
		8.0	1.6	0…1	0…3	0…1	0…3	0…1	0…3	178327	178328	178329
	G ½	6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178331	178332	178333
		8.0	1.6	0…1	0…3	0…1	0…3	0…1	0…3	178335	178336	178337
		10.0	1.8	0…0.4	0…2	0…0.4	0…2	0…0.4	0…2	178339	178340	178341
B 2/2 way direct-acting solenoid valve, normally open	G ¼	3.0	0.28	0…16	0…16	0…16	0…16	0…16	0…16	211914	228487	228488
		4.0	0.54	0…10	0…10	0…10	0…10	0…10	0…10	208623	228489	228490
		6.0	0.95	0…6	0…6	0…6	0…6	0…6	0…6	211915	on request	227530
	G ⅜	6.0	0.95	0…6	0…6	0…6	0…6	0…6	0…6	228497	228498	228499
		8.0	1.6	0…3	0…3	0…3	0…3	0…3	0…3	228500	228501	228502
	G ½	8.0	1.6	0…3	0…3	0…3	0…3	0…3	0…3	211916	228503	228504
		10.0	1.8	0…2	0…2	0…2	0…2	0…2	0…2	210436	219530	210438
Housing material stainless steel, G-inner thread, seal material FKM/FKM												
A 2/2 way direct-acting solenoid valve, normally closed	G ¼	3.0	0.28	0…30	0…25	0…30	0…25	0…30	0…25	178239	178240	178241
		4.0	0.54	0…12	0…16	0…12	0…16	0…12	0…16	178243	178244	178245
		5.0	0.73	0…6	0…10	0…6	0…10	0…6	0…10	178247	178248	178249
		6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178251	178252	178253
	G ⅜	3.0	0.28	0…30	0…25	0…30	0…25	0…30	0…25	178255	178256	178257
		4.0	0.54	0…12	0…16	0…12	0…16	0…12	0…16	178259	178260	178261
		5.0	0.73	0…6	0…10	0…6	0…10	0…6	0…10	178263	178264	178265
		6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178267	178268	178269
		8.0	1.6	0…1	0…3	0…1	0…3	0…1	0…3	178271	178272	178273

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Max. medium pressure [bar]						Article no. acc. to voltage/ frequency [V/Hz]		
				Water		Oil		Air				
				DC	AC	DC	AC	DC	AC	24/DC	24/50	230/50
Housing material stainless steel, G-inner thread, seal material FKM/FKM												
A 2/2 way direct-acting solenoid valve, normally closed	G ½	6.0	0.95	0…3	0…6	0…3	0…6	0…3	0…6	178275	178276	178277
		8.0	1.6	0…1	0…3	0…1	0…3	0…1	0…3	178279	178280	178281
		10.0	1.8	0…0.4	0…2	0…0.4	0…2	0…0.4	0…2	178283	178284	178285
		12.0	2	0…0.2	0…1.2	0…0.2	0…1.2	0…0.2	0…1.2	178287	178288	178289
B 2/2 way direct-acting solenoid valve, normally open	G ¼	3.0	0.28	0…16	0…16	0…16	0…16	0…16	0…16	230243	230244	230245
		4.0	0.54	0…10	0…10	0…10	0…10	0…10	0…10	230246	230247	230248
		6.0	0.95	0…6	0…6	0…6	0…6	0…6	0…6	230255	230256	230257
	G ⅜	6.0	0.95	0…6	0…6	0…6	0…6	0…6	0…6	230255	230256	230257
		8.0	1.6	0…3	0…3	0…3	0…3	0…3	0…3	230258	230259	230260
	G ½	8.0	1.6	0…3	0…3	0…3	0…3	0…3	0…3	230261	230262	230263
		10.0	1.8	0…2	0…2	0…2	0…2	0…2	0…2	225248	230264	230265
		12.0	2	0…1	0…1	0…1	0…1	0…1	0…1	210441	230266	210321

Note: Further versions with alternative voltages, NPT- or Rc-inner thread, seal material EPDM/EPDM on request.

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Max. medium pressure [bar]						Article no. acc. to voltage/ frequency [V/Hz]		
				Water		Oil		Air				
				DC	AC	DC	AC	DC	AC	24/DC	24/50	230/50
Standard version pendulum seal up to 100 bar												
Housing material brass, G-inner thread, seal material PTFE/PEEK												
A 2/2 way direct-acting solenoid valve, normally closed	G ¼	2.0	0.14	0…100	0…75	0…100	0…75	0…100	0…75	on request	on request	on request
		3.0	0.28	0…60	0…50	0…60	0…50	0…60	0…50	262435	on request	on request
		4.0	0.54	0…20	0…30	0…20	0…30	0…20	0…30	206367	on request	319934
		6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	257403	on request	on request
	G ⅜	4.0	0.54	0…20	0…30	0…20	0…30	0…20	0…30	263995	on request	317310
		6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	187966	on request	208842
		8.0	1.6	0…1	0…5	0…1	0…5	0…1	0…5	293606	on request	on request
	G ½	6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	260425	on request	on request
		8.0	1.6	0…1	0…5	0…1	0…5	0…1	0…5	254796	on request	on request
		10.0	1.8	0…0.4	0…2	0…0.4	0…2	0…0.4	0…2	255365	on request	on request

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Max. medium pressure [bar]						Article no. acc. to voltage/ frequency [V/Hz]		
				Water		Oil		Air				
				DC	AC	DC	AC	DC	AC	24/DC	24/50	230/50
Housing material brass, G-inner thread, seal material PTFE/PEEK												
B 2/2 way direct-acting solenoid valve, normally open	G ¼	2.0	0.14	0…30	0…16	0…16	0…16	0…16	0…16	on request	on request	on request
		3.0	0.28	0…16	0…10	0…10	0…10	0…10	0…10	214561	on request	231075
		4.0	0.54	0…10	0…6	0…6	0…6	0…6	0…6	299424	on request	on request
		6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	317174	on request	on request
	G ⅜	4.0	0.54	0…10	0…6	0…6	0…6	0…6	0…6	263993	on request	on request
		6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	251443	on request	on request
	G ½	6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	254762	on request	on request
G-inner thread, seal material PTFE/PEEK												
A 2/2 way direct-acting solenoid valve, normally closed	G ¼	2.0	0.14	0…100	0…75	0…100	0…75	0…100	0…75	184689	271441	184690
		3.0	0.28	0…60	0…50	0…60	0…50	0…60	0…50	247937	on request	on request
		4.0	0.54	0…20	0…30	0…20	0…30	0…20	0…30	184692	230667	184693
		6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	300077	on request	304305
	G ⅜	4.0	0.54	0…20	0…30	0…20	0…30	0…20	0…30	292674	on request	on request
		6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	184695	202757	184696
		8.0	1.6	0…1	0…5	0…1	0…5	0…1	0…5	184698	on request	184699
	G ½	6.0	0.95	0…5	0…12	0…5	0…12	0…5	0…12	259348	on request	280481
		8.0	1.6	0…1	0…5	0…1	0…5	0…1	0…5	271411	on request	on request
		10.0	1.8	0…0.4	0…2	0…0.4	0…2	0…0.4	0…2	184701	on request	184702
		12.0	2	0…0.2	0…1.2	0…0.2	0…1.2	0…0.2	0…1.2	184704	227982	184705
B 2/2 way direct-acting solenoid valve, normally open	G ¼	2.0	0.14	0…30	0…16	0…16	0…16	0…16	0…16	on request	on request	on request
		3.0	0.28	0…16	0…10	0…10	0…10	0…10	0…10	256088	on request	255406
		4.0	0.54	0…10	0…6	0…6	0…6	0…6	0…6	242618	on request	223726
		6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	299913	on request	on request
	G ⅜	4.0	0.54	0…10	0…6	0…6	0…6	0…6	0…6	on request	on request	on request
		6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	267659	316119	239314
	G ½	6.0	0.95	0…6	0…2	0…2	0…2	0…2	0…2	on request	on request	on request

Note: Further versions with alternative voltages, NPT- or Rc-inner thread, seal material PTFE/FKM or PTFE/EPDM on request.

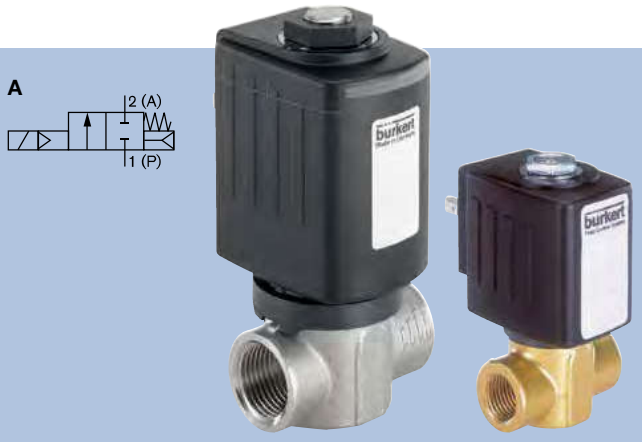
Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced by Type 2518) acc. to DIN 175301-803 Form A – see Type 2508 ▸		
without circuitry (standard), without cable	0…250 V AC/DC	008376
with LED	12…24 V AC/DC	008360
with LED	200…240 V AC/DC	008362
with LED and varistor	12…24 V AC/DC	008367
with LED and varistor	200…240 V AC/DC	008369
with rectifier, LED and varistor	12…24 V AC/DC	008363
Cable plug Type 2513 acc. to DIN EN 175301-803 Form A – see Type 2513 ▸		
Cable length, 12000 mm	max. 230 V AC/DC	260893
Cable length, 5000 mm	max. 230 V AC/DC	260892
Cable length, 3000 mm	max. 230 V AC/DC	260891
Cable length, 300 mm	max. 230 V AC/DC	260890

Servo-assisted 2/2 way piston valve

6240

- Servo-assisted and compact piston valve with diameter of up to DN13
- Vibration-resistant , screwed coil system
- Increased leak-tightness with welded plunger guiding tube
- Safe opening with hard-coupled piston system
- Explosion proof versions optional

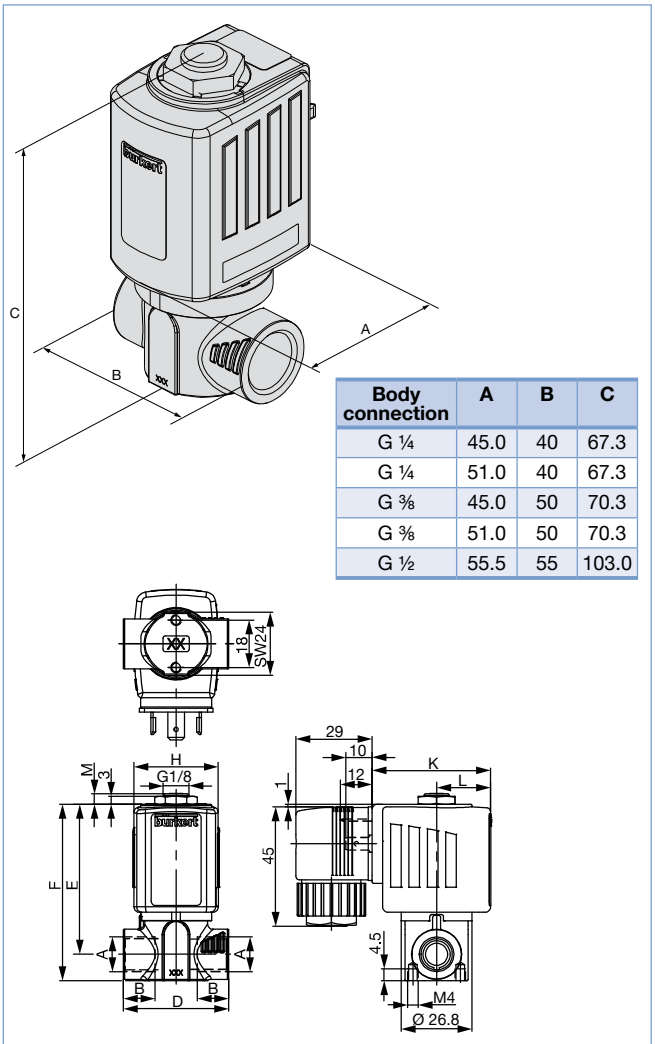


The 6240 valve is a servo-assisted plunger valve. The stopper and plunger guiding tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The housing design and surface quality enable maximum flow rates. The coils are moulded with chemically resistant epoxy. An optional sliding ring bearings increases the life cycle with dry gases. ‚Kick and Drop' electronics are available for over-excitation (plug 2511) and reduced electrical power consumption in operation. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65. Stainless steel valves satisfy NEMA 4X.

Technical data

General data	
Port connections	G ¼, G ⅜, G ½ (NPT and Rc on request)
Orifice	DN6, DN12
Body material	Brass, Stainless steel
Coil material	Epoxy
Coil insulation class	Class H
Seal material combination and medium temperature **Seat seal/external seal**	
Standard	
FKM/FKM	-10 °C…+140 °C
EPDM/EPDM	-30 °C…+120 °C (on request)
PTFE/FKM	-10 °C…+140 °C (on request)
Standard high temp.	
PTFE/PEEK DN6	-40 °C…+180 °C
PTFE/PEEK DN12	-40 °C…+140 °C
Medium	Neutral gases and liquids, such as e.g. compressed air,
High temperature version	water, hydraulic oil, steam and hot mediums
Viscosity	max. 21 mm²/sec
Medium temperature	
FKM	-10 °C…+140 °C
PTFE/PEEK DN6	-40 °C… +180 °C
PTFE/PEEK DN12	-40 °C…+140 °C
EPDM	-30 °C to +120 °C (on request)
Ambient temperature	max. 55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Tag connector acc. DIN EN 175301-803 Form A for cable plug Type 2508 (will be replaced with Type 2518) (not included in the delivery)
Protection class	IP65 with cable plug, ATEX/IECEx junction box version and cable connection version NEMA 4x with cable plug 2508 (will be replaced with Type 2518) or 2509 only for stainless steel versions (other versions on request)
Installation	As required, preferably with actuator upright

Dimensions [mm]



Body connection	A	B	C
G ¼	45.0	40	67.3
G ¼	51.0	40	67.3
G ⅜	45.0	50	70.3
G ⅜	51.0	50	70.3
G ½	55.5	55	103.0

A Body connection	B	D	E	F	M	H	K	L
G ¼	12	40	57.3	67.3	3.7	32	45.0	20.5
G ¼	12	40	57.3	67.3	3.7	40	51.0	23.5
G ⅜	12	50	58.3	70.3	3.7	32	45.0	20.5
G ⅜	12	50	58.3	70.3	3.7	40	51.0	23.5
G ½	12	55	89.0	103.0	7.5	42	55.5	27.0

H G1/8 K L

Technical data continued

Power consumption									
Coil size	AC			DC		ATEX/IECEx AC/DC	KD-Coil AC/DC Cold		Warm
	Inrush	Hold		Cold	Warm	Nominal power	Inrush	Hold	Hold
[mm]	[VA]	[VA]	[W]	[W]	[W]	[W]	[W] 500 ms	[W]	[W]
32 (5)	32	18	8	12	10	–	–	–	–
40 (6)	40	23	10	14	12	9	–	–	–
42 (K)	150	37	16	21	16	12	85	8.5	7
65 (L)	–	–	–	28	21	20	–	–	–

KD coil AC/DC
"Kick and Drop" coil (KD coil): Integrated electronics for short-term power increase and reduction in dual coil technology

Response times[1]		
Version	Opening [ms]	Closing [ms]
Standard DN6	10…20	40…50
Standard DN12	20…40	80…100
Steam version DN13	80…100	200…300
High pressure MX3	100…200	300…500

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Ordering chart

Standard version, all valves with FKM seal								
Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar][2]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**FKM seal**							
	Brass body							
	G ¼	6	0.6	0…16	32	177800	177801	177802
	G ⅜	6	0.6	0…16	32	177803	177804	177805
	Stainless steel body							
	G ¼	6	0.6	0…16	32	177806	177807	177808
	G ½	12	2.2	0…16	42	238632	238633	238634

High temperature version, all valves with PTFE/PEEK seal, without cable plug								
Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar][2]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**PTFE/Graphite seal**							
	2/2 way servo-controlled solenoid valve, normally closed							
	G ¼	6	0.6	0…16	32	184739	184740	184741
	G ½	12	2.2	0…25	42	238638	238639	238640

High pressure version, all valves with PTFE/FKM seal, without cable plug								
Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar][2] liquid medium	gaseous medium	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**PTFE/FKM seal**								
	Brass body								
	G ¼	6	0.6	0…25	0…40	40	184742	184743	184744
	G ⅜	6	0.6	0…25	0…40	40	184745	184746	184747

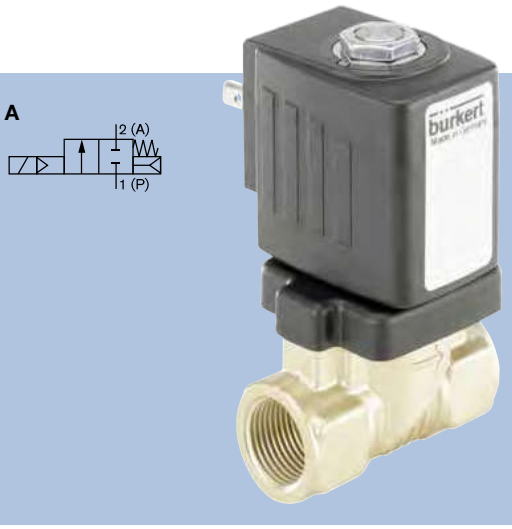
2) Overpressure to the atmospheric pressure

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)

Servo-assisted 2/2 way diaphragm valve

6213 EV

- Servo-assisted diaphragm with diameter of up to DN40
- Spring coupled diaphragm opens without differential pressure in the HP00 version
- Vibration-proof, screwed coil system
- Damped design for quiet closing
- Compact construction with high flow rate

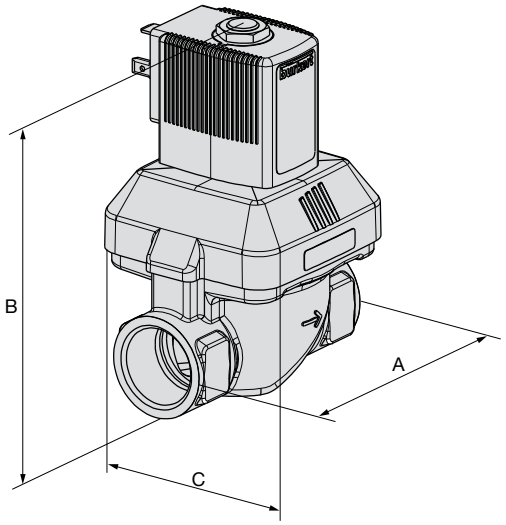


The 6213 EV valve is a servo-assisted solenoid valve of the S.EV series. The spring coupling of the diaphragm supports the opening process of the valve. In its standard version, the valve is suitable for use in liquids. A minimum differential pressure is required for complete opening. A special version (HP00) which opens the valve without differential pressure is available for gas and vacuum applications. Various diaphragm material combinations are available depending on the application. The standard brass housing satisfies all European drinking water requirements. Lead-free or dezincification-resistant brass types are available for other markets. The housing offering is rounded out by a stainless steel version. For reduced energy requirement, all coils can be delivered with electronic power reduction. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65 – in combination with a stainless steel housing NEMA 4X.

Technical data

General data	
Orifice	Standard DN10 … DN40 HP00: DN13 … DN20
Body material	Brass acc. to DIN EN 50930-6, Stainless steel 1.4408 (316), Nickel-plated brass (5 µm) on request, Gunmetal (external thread)
Inner part of valve	
Brass body	Brass, stainless steel and PPS
Stainless steel body	Stainless steel and PPS
Seal material	NBR, FKM, EPDM
Medium	
NBR	Neutral fluids, water, hydraulic oil, oil without additives
FKM	Per-solutions, hot oils with additives
EPDM	Oil and fat-free fluids and gases
Ambient temperature	Max. +55 °C
Medium viscosity	Max. 21 mm²/s
Medium temperature	
NBR	-10 °C…+80 °C
FKM	0 °C…+90 °C with polyamide coil 0 °C…+120 °C with epoxy coil
EPDM	-30 °C…+90 °C with polyamide coil -30 °C…+100 °C with epoxy coil
Voltages	Standard 024/DC, 024/50, 230/50 (further voltages on request) HP00: 024/DC, 24 V (50…60 Hz), 230 V (50…60 Hz)
Voltage tolerance	±10 %

Dimensions [mm]



AC coil, 32 mm

DN	A	B	C
10	50	78.4	36
		78.4	
	50/55	82.9	
13	58/65	92.4	44.5
	65	96.9	
20	80	109.4	65
		116.4	

AC coil, 42 mm / DC coil 65 mm

DN	A	B	C
40	132	193.3	104.5
	126	182.3	
25	95	166.3	77
	95	156.8	
40	132	193.3	104.5
	126	182.3	
25	95	166.3	77
	95	156.8	

DC coil, 40 mm

DN	A	B	C
10	50	78.4	36
		78.4	
	50/55	82.9	
13	58/65	92.8	44.5
	65	97.3	
20	80	109.8	65
		116.8	

Technical data continued

Duty cycle	100 % continuous rating; KD coil 50 % max. rating 6 circuit switches/minute
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A
Protection class	IP65 with cable plug
Installation	As required, preferably with actuator upright
Response times[1]	0.1…4 seconds (depending on orifice and differential pressure)

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Options

- Further versions see data sheet or on request

Orifice DN	Port connection	Coil size width [mm]		Power consumption[2]			Insulation class coil[3]		Weight [kg]	
				Inrush	Hold (hot coil)		Seal material	Seal material	Brass coil	Brass coil
		AC	DC	AC [VA]	AC [VA/W]	DC [W]	FKM	NBR and EPDM	AC	DC
Power consumption										
10	G ¼, G ⅜	32	40	34	14/8	10 (11)	H	B	0.33	0.41
10	G ½	32	40	34	14/8	10 (11)	H	B	0.37	0.44
13	G ½	32	40	36	14/8	10 (11)	H	B	0.46	0.54
13	G ¾	32	40	36	14/8	10 (11)	H	B	0.49	0.57
20	G ¾	32	40	38	14/8	10 (11)	H	B	0.74	0.82
20	G 1	32	40	38	14/8	10 (11)	H	B	0.95	1.03
25	G 1	42	65	150	37/16	28 (29)	H	H	1.6	2.2
25	G 1¼	42	65	150	37/16	28 (29)	H	H	1.7	2.3
40	G 1¼	42	65	190	37/16	28 (29)	H	H	3.2	3.7
40	G 1½	42	65	190	37/16	28 (29)	H	H	3.2	3.7
40	G 2	42	65	190	37/16	28 (29)	H	H	3.38	3.9
HP00 - Power consumption										
13	G ½	42		125	37/16	16 (21)	H	H	0.80	0.81
13	G ¾	42		125	37/16	16 (21)	H	H	0.86	0.87
20	G ¾	42		140	37/16	16 (21)	H	H	1.13	1.14
20	G 1	42		140	37/16	16 (21)	H	H	1.30	1.31

2) Values in brackets applies at coil temperature 20 °C
3) H Epoxy coil, B Polyamide coil

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h][4) 7)]	Pressure range [bar][5)]	Weight [kg] (DC)[6)]	Article no. per voltage/frequency [V/Hz]		
						024/DC	024/50	230/50
Valves with brass body, DN10…DN40								
A 2/2 way servo-controlled solenoid valve, normally closed	**Brass body, NBR Diaphragm, polyamide coil, medium temperature -10…+80 °C**							
	G ¼	10	1.3	0…10	0.3 (0.5)	221674	221675	221677
	G ⅜	10	1.9	0…10	0.3 (0.5)	221598	221599	221601
	G ½	10	1.9	0…10	0.4 (0.5)	221606	221607	221609
	G ½	13	3.6	0…10	0.4 (0.5)	221602	221603	221605
	G ¾	13	3.6	0…10	0.5 (0.6)	221618	221619	221621
	G ¾	20	8.3	0…10	0.7 (0.8)	221630	221631	221633
	G 1	20	8.3	0…10	0.9 (1.0)	221634	221635	221637
	Brass body, NBR Diaphragm, epoxy coil, medium temperature -10…+80 °C							
	G 1	25	11	0…10	1.6 (2.2)	227533	221725	221728
	G 1¼	25	11	0…10	1.7 (2.3)	227534	221729	221732
	G 1¼	40	23	0…10	2.9 (3.4)	270903	270895	270899
	G 1½	40	30	0…10	3.2 (3.7)	227539	221750	221753
	G 2	40	30	0…10	3.4 (3.9)	227541	221754	221757

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h][4) 7)]	Pressure range [bar][5)]	Weight [kg] (DC)[6)]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**Brass body, FKM Diaphragm, epoxy coil, medium temperature 0 °C...120 °C**							
	G ¼	10	1.3	0...10	0.3 (0.5)	221678	221679	221681
	G ⅜	10	1.9	0...10	0.3 (0.5)	221610	221611	221613
	G ½	10	1.9	0...10	0.4 (0.5)	221614	221615	221617
	G ½	13	3.6	0...10	0.4 (0.5)	221622	221623	221625
	G ¾	13	3.6	0...10	0.5 (0.6)	221626	221627	221629
	G ¾	20	8.3	0...10	0.7 (0.8)	221638	221639	221641
	G 1	20	8.3	0...10	0.9 (1.0)	221642	221643	221645
	G 1	25	11	0...10	1.6 (2.2)	227537	221733	221736
	G 1¼	25	11	0...10	1.7 (2.3)	227538	221737	221740
	G 1¼	40	23	0...10	2.9 (3.4)	270905	270906	270908
	G 1½	40	30	0...10	3.2 (3.7)	227544	227724	227726
	G 2	40	30	0...10	3.4 (3.9)	227545	227728	227730
	Brass body, EPDM Diaphragm, polyamide coil, medium temperature -30 °C...+90 °C							
	G ¼	10	1.3	0...10	0.3 (0.4)	221670	221671	221673
	G ⅜	10	1.9	0...10	0.3 (0.4)	221646	221647	221649
	G ½	10	1.9	0...10	0.4 (0.5)	221650	221651	221653
	G ½	13	3.6	0...10	0.4 (0.5)	221654	221655	221657
	G ¾	13	3.6	0...10	0.5 (0.6)	221658	221659	221661
	G ¾	20	8.3	0...10	0.7 (0.8)	221662	221663	221665
	G 1	20	8.3	0...10	0.9 (1.0)	221666	221667	221669
	Brass body, EPDM Diaphragm, epoxy coil, medium temperature -30 °C...+100 °C							
	G 1	25	11	0...10	1.6 (2.2)	227535	221717	221720
	G 1¼	25	11	0...10	1.7 (2.3)	227536	221721	221724
	G 1¼	40	23	0...10	2.9 (3.4)	270904	270890	270894
	G 1½	40	30	0...10	3.2 (3.7)	227542	221741	221745
	G 2	40	30	0...10	3.4 (3.9)	227543	221746	221749
	Gunmetal housing with external thread, EPDM Diaphragm, epoxy coil, medium temperature -30 °C...+100 °C[5)]							
	G ½	10	1.9	0...10	0.4	311670	311674	311679
	G ¾	13	3.6	0...10	0.6	311681	311684	311688
	G 1	20	8.3	0...10	1.1	311691	311693	311696

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_V value water [m^3/h][4]	Pressure range [bar][5]	Weight [kg] (DC)	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
HPOO version, DN13…DN20								
A 2/2 way servo-controlled solenoid valve, normally closed	**Brass body, FKM Diaphragm, epoxy coil, medium temperature 0 °C…+120 °C**							
	G ½	13	3.6	0…10	0.8	221706	221705	231574
	G ¾	20	8.3	0…10	1.3	221712	221711	221713
	G 1	20	8.3	0…10	1.4	221715	221714	221716
	Brass body, EPDM Diaphragm, epoxy coil, medium temperature -30 °C…+100 °C							
	G ½	13	3.6	0…10	0.8	221694	221693	221695
	G ¾	20	8.3	0…10	1.3	208422	221699	189592
	G 1	20	8.3	0…10	1.4	221703	221702	221704
	Gunmetal housing with external thread, EPDM Diaphragm, epoxy coil, medium temperature -30 °C…+100 °C[8]							
	G ¾	13	3.6	0…10	0.6	312248	312249	312250
	G 1	20	8.3	0…10	1.3	312247	312244	312246

4) Measured at +20 °C, 1 bar[5] pressure at valve inlet and free outlet
5) Pressure data [bar]: Overpressure with respect to atmospheric pressure
6) The values in brackets regarding the weight apply to the DC version
7) A minimum differential pressure of 0.5 bar is required for full (100 %) opening
8) Approved for drinking water according to KTW and W270

Circuit function	Port connection	Orifice [mm]	K_V value water [m^3/h][1) 4)]	Pressure range [bar][2]	Weight [kg] (DC)[3]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
Valves with Stainless steel body, DN10…DN40								
A 2/2 way servo-controlled solenoid valve, normally closed	**Stainless steel body, NBR Diaphragm, polyamide coil, medium temperature -10 °C…80 °C**							
	G ⅜	10	1.9	0…10	0.3 (0.4)	222150	222151	222152
	G ½	13	3.6	0…10	0.4 (0.5)	222156	222157	222158
	G ¾	20	8.3	0…10	0.7 (0.8)	222168	222169	222170
	G 1	20	8.3	0…10	0.9 (1.0)	222171	222172	222173
	Stainless steel body, NBR Diaphragm, epoxy coil, medium temperature -10 °C…+80 °C							
	G 1	25	11	0…10	1.6 (2.2)	227546	228429	222193
	G 1¼	25	11	0…10	1.7 (2.3)	227547	228432	222197
	G 1½	40	30	0…10	3.2 (3.7)	227552	228435	222201
	G 2	40	30	0…10	3.4 (3.9)	227554	228438	222205

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m^3/h][1) 4)]	Pressure range [bar][2)]	Weight [kg] (DC)[3)]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
A 2/2 way servo-controlled solenoid valve, normally closed	**Stainless steel body, FKM Diaphragm, epoxy coil, medium temperature 0…120 °C**							
	G ⅜	10	1.9	0…10	0.3 (0.4)	221758	221759	221761
	G ½	13	3.6	0…10	0.4 (0.5)	221762	221763	221765
	G ¾	20	8.3	0…10	0.7 (0.8)	222122	222123	222125
	G 1	20	8.3	0…10	0.9 (1.0)	222126	222127	222129
	G 1	25	11	0…10	1.6 (2.2)	227550	228430	222143
	G 1¼	25	11	0…10	1.7 (2.3)	227551	228433	222145
	G 1½	40	30	0…10	3.2 (3.7)	227557	228436	222147
	G 2	40	30	0…10	3.4 (3.9)	227558	228439	222149
	Stainless steeel-body, EPDM Diaphragm, polyamide coil, medium temperature -30…+90 °C							
	G ⅜	10	1.9	0…10	0.3 (0.4)	222153	222154	222155
	G ½	13	3.6	0…10	0.4 (0.5)	222159	222160	222161
	G ¾	20	8.3	0…10	0.7 (0.8)	222174	222175	222176
	G 1	20	8.3	0…10	0.9 (1.0)	222177	222178	222179
	Stainless steeel-body, EPDM Diaphragm, epoxy coil, medium temperature -30…+100 °C							
	G 1	25	11	0…10	1.6 (2.2)	227548	228431	222195
	G 1¼	25	11	0…10	1.7 (2.3)	227549	228434	222199
	G 1½	40	30	0…10	3.2 (3.7)	227555	228437	222203
	G 2	40	30	0…10	3.4 (3.9)	227556	228440	222207

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_V value water [m^3/h][1]	Pressure range [bar][2]	Weight [kg] (DC)	Article no. per voltage/frequency [V/Hz]		
						024/DC	024/50…60	230/50…60
HPOO version, DN13…DN20								
A 2/2 way servo-controlled solenoid valve, normally closed	**Stainless steel body, FKM Diaphragm, epoxy coil, medium temperature 0…+120 °C**							
	G ½	13	3.6	0…10	0.8	208694	220585	205351
	G ¾	20	8.3	0…10	1.3	222137	222136	222138
	G 1	20	8.3	0…10	1.4	222140	222139	222141
	Stainless steeel-body, EPDM Diaphragm, epoxy coil, medium temperature -30…+100 °C							
	G ½	13	3.6	0…10	0.8	213132	222166	220584
	G ¾	20	8.3	0…10	1.3	222186	222187	222188
	G 1	20	8.3	0…10	1.4	222189	222190	222191

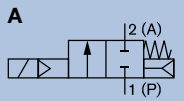
1) Measured at +20 °C, 1 bar[2] pressure at valve inlet and free outlet.
2) Pressure data [bar]: Overpressure with respect to atmospheric pressure.
3) The values in brackets regarding the weight apply to the DC version.
4) A minimum differential pressure of 0.5 bar is required for full (100 %) opening.

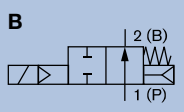
Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)

Servo-assisted 2/2 way diaphragm valve

6281 EV

- Servo-assisted diaphragm with diameter of up to DN50
- Vibration-proof, central screwed coil system
- Damped design for quiet closing
- Service-friendly manual override
- Explosion-proof versions optional





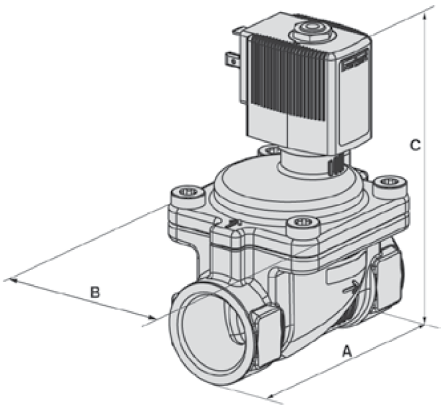
The 6281 valve is a servo-assisted solenoid valve of the S.EV series. A minimum differential pressure is always required for the function of the valve. Various diaphragm material combinations and methods of operation are available depending on the application. The standard brass housing satisfies all European drinking water requirements. Dezincification-resistant brass is available for other markets. The housing offering is rounded out by a stainless steel version. For reduced energy requirement, all coils can be delivered with electronic power reduction. The valve can be equipped with manual override for easy maintenance and commissioning. In combination with a plug in accordance with DIN EN 175301-803 Form A, the valves satisfy protection class IP65 – in combination with a stainless steel housing NEMA 4X.

Technical data

Orifice	DN10…DN50
Body material	Brass acc. to DIN EN 50930-6 Stainless steel (dezincification resistant on request)
Inner part of valve	Stainless steel, Brass, Plastic (PPS)
Seal material	NBR, EPDM, FKM
Media NBR EPDM FKM	 Neutral fluids, e.g. compressed air, water Oil and fat-free fluids, hot water, aceton, aqueous alkali solution Hot air, per-solution
Ambient temperature	max. +55 °C
Media temperature NBR EPDM FKM	 -10 °C…+80 °C -30 °C…+90 °C (with epoxy coil to +100 °C) 0 °C…+90 °C (with epoxy coil to +120 °C)
Voltages	024/DC, 024/50…60, 230/50…60
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (will be replaced with Type 2518). Not included.
Protection class	IP65 with cable plug IP65 with cable connection and junction box in combination with ATEX (on request)
Installation	As required, preferably with actuator upright
Response times[2)]	0.1…4 seconds (depending on orifice and differential pressure)
Coil isolation class	Polyamide class B Epoxy class H

2) Measured at valve outlet at 6 bar and +20 °C.
Opening: pressure build-up 0…90 %, closing: pressure decay 100…10 %

Dimensions [mm]



DN	Port connection	A	B	C
10	G ¼	50	32	94.1
	G ⅜			
	G ½	50		98.6
	G ¼	50		94.6
	G ⅜			
	G ½	55		99.1
13	G ⅜	58	42	104.6
	G ½	65		
	G ¾	65		109.1
20	G ¾	80	60	115.6
	G 1	80		122.6
25	G 1	95	70	127.1
	G 1¼	95		136.6
40	G 1¼	126	99	145.1
	G 1½	126		155.6
	G 2	132		166.6
50	G 2	164	115	154.9
	G 2½	179		162.1

Options

- Further versions see data sheet or on request

Technical data continued

Ignition protection class		
Coils with fixed cable outlet	ATEX	PTB 14 ATEX 2023 X II 2G Ex mb IIC T4 Gb II 2D Ex mb IIIC T130 °C Db
	IECEx	IECEx PTB 14.0049 X Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db

Ignition protection class		
Assembly of the coil and the junction box	ATEX	EPS 16 ATEX 1046 X II 2G Ex eb mb IIC T4 Gb II 2D Ex mb tb IIIC T130 °C Db
	IECEx	IECEx EPS 16.0021 X Ex eb mb IIC T4 Gb Ex mb tb IIIC T130 °C Db

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz]		
						024/DC	024/50…60	230/50…60
Circuit function A (normally closed, normally closed), Brass body								
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material NBR, Polyamide coil, Medium temperature - 10 °C…+ 80 °C**							
	G ¼	10	1.5	0.2…16	0.43	322499	322500	322501
	G ⅜	10	1.9	0.2…16	0.4	322502	322503	322504
	G ⅜	13	3.8	0.2…16	0.58	221841	221842	221843
	G ½	13	3.8	0.2…16	0.54	221844	221845	221846
	G ¾	13	3.8	0.2…16	0.59	221847	221848	221849
	G ¾	20	8.5	0.2…16	0.89	221850	221851	221852
	G 1	20	8.5	0.2…16	1	221853	221854	221855
	G 1	25	12	0.2…16	1.3	221856	221857	221858
	G 1¼	25	12	0.2…16	1.5	221859	221860	221861
	G 1¼	40	23	0.2…16	2.7	270131	268550	270132
	G 1½	40	30	0.2…16	3	221862	221863	221864
	G 2	40	30	0.2…16	3.2	221865	221866	221867
	G 2	50	40	0.2…16	4.5	253156	253157	253158
	G 2½	50	40	0.2…16	5.2	253159	253160	253161
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material NBR, Polyamide coil, Medium temperature - 10 °C…+ 80 °C, with manual override**							
	G ¼	10	1.5	0.2…16	0.43	322505	322506	322507
	G ⅜	10	1.9	0.2…16	0.4	322508	322509	322510
	G ½	13	3.8	0.2…16	0.54	221952	–	221953
	G ¾	13	3.8	0.2…16	0.59	221954	–	221955
	G ¾	20	8.5	0.2…16	0.89	221956	–	221957
	G 1	20	8.5	0.2…16	1	221958	–	221959
	G 1	25	12	0.2…16	1.3	221960	–	221961
	G 1¼	25	12	0.2…16	1.5	221962	–	221963
	G 1¼	40	23	0.2…16	2.7	270142	–	270143
	G 1½	40	30	0.2…16	3	221964	–	221965
	G 2	40	30	0.2…16	3.2	221966	–	221967

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
Circuit function A (normally closed, normally closed), Brass body								
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material FKM, Epoxy coil, Medium temperature 0 °C…+120 °C**							
	G ¼	10	1.5	0.2…16	0.43	322511	322512	322513
	G ⅜	10	1.9	0.2…16	0.4	322514	322515	322516
	G ⅜	13	3.8	0.2…16	0.58	221868	221869	221870
	G ½	13	3.8	0.2…16	0.54	221871	221872	221873
	G ¾	13	3.8	0.2…16	0.59	221874	221875	221876
	G ¾	20	8.5	0.2…16	0.89	221877	221878	221879
	G 1	20	8.5	0.2…16	1	221880	221881	221882
	G 1	25	12	0.2…16	1.3	221883	221884	221885
	G 1¼	25	12	0.2…16	1.5	221886	221887	221888
	G 1¼	40	23	0.2…16	2.7	270133	270134	270135
	G 1½	40	30	0.2…16	3	221889	221890	221891
	G 2	40	30	0.2…16	3.2	221892	221893	221894
	G 2	50	40	0.2…16	4.5	253168	253169	253170
	G 2½	50	40	0.2…16	5.2	253171	253172	253173
	Seal material EPDM, Polyamide coil, Medium temperature -30 °C…+90 °C							
	G ¼	10	1.5	0.2…16	0.43	322517	322518	322519
	G ⅜	10	1.9	0.2…16	0.4	322520	322521	322522
	G ⅜	13	3.8	0.2…16	0.58	221895	221896	221897
	G ½	13	3.8	0.2…16	0.54	221898	221899	221900
	G ¾	13	3.8	0.2…16	0.59	221901	221902	221903
	G ¾	20	8.5	0.2…16	0.89	221904	221905	221906
	G 1	20	8.5	0.2…16	1	221907	221908	221909
	G 1	25	12	0.2…16	1.3	221910	221911	221912
	G 1¼	25	12	0.2…16	1.5	221913	221914	221915
	G 1¼	40	23	0.2…16	2.7	270136	270137	270138
	G 1½	40	30	0.2…16	3	221916	221917	221918
	G 2	40	30	0.2…16	3.2	221919	221920	221921
	G 2	50[1)]	40	0.2…16	4.5	253162	253163	253164
	G 2½	50[1)]	40	0.2…16	5.2	253165	253166	253167

1) Drinking water approved acc. to KTW and W270.

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
Circuit function B (normally open, normally open), Brass body								
B 2/2 way servo-controlled solenoid valve, normally open	**Seal material NBR, Epoxy coil, Medium temperature -10 °C…+80 °C**							
	G ¼	10	1.5	0.2…16	0.43	322523	322524	322525
	G ⅜	10	1.9	0.2…16	0.4	322526	322527	322528
	G ⅜	13	3.8	0.2…16	0.58	221923	221924	221925
	G ½	13	3.8	0.2…16	0.54	221926	221928	221929
	G ¾	13	3.8	0.2…16	0.59	221930	221931	221933
	G ¾	20	8.5	0.2…16	0.89	221934	221935	221936
	G 1	20	8.5	0.2…16	1	221937	221938	221939
	G 1	25	12	0.2…16	1.3	221940	221941	221942
	G 1¼	25	12	0.2…16	1.5	221943	221944	221945
	G 1¼	40	23	0.2…16	2.7	270139	270140	270141
	G 1½	40	30	0.2…16	3	221946	221947	221948
	G 2	40	30	0.2…16	3.2	221949	221950	221951
	G 2	50	40	0.2…16	4.5	253174	253175	253176
	G 2½	50	40	0.2…16	5.2	253177	253178	253179
Circuit function A (normally closed, normally closed), Stainless steel body								
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material NBR, Polyamide coil, Medium temperature -10 °C…+80 °C**							
	G ¼	10	1.5	0.2…16	0.43	322529	322530	322531
	G ⅜	10	1.9	0.2…16	0.4	322532	322533	322534
	G ½	13	3.8	0.2…16	0.54	221968	221969	221970
	G ¾	20	8.5	0.2…16	0.86	221971	221972	221973
	G 1	20	8.5	0.2…16	0.97	221974	221975	221976
	G 1	25	12	0.2…16	1.3	221977	221978	221979
	G 1¼	25	12	0.2…16	1.4	221980	221981	221982
	G 1½	40	30	0.2…16	2.8	221983	221984	221985
	G 2	40	30	0.2…16	3	221986	221987	221988

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
A 2/2 way servo-controlled solenoid valve, normally closed	**Seal material FKM, Epoxy coil, Medium temperature 0 °C…+120 °C**							
	G ¼	10	1.5	0.2…16	0.43	322535	322536	322537
	G ⅜	10	1.9	0.2…16	0.4	322538	322539	322540
	G ½	13	3.8	0.2…16	0.54	221989	221990	221991
	G ¾	20	8.5	0.2…16	0.86	221992	221993	221994
	G 1	20	8.5	0.2…16	0.97	221995	221996	221997
	G 1	25	12	0.2…16	1.3	221998	221999	222000
	G 1¼	25	12	0.2…16	1.4	222001	222002	222003
	G 1½	40	30	0.2…16	2.8	222004	222005	222006
	G 2	40	30	0.2…16	3	222007	222008	222009
	Seal material FKM, Epoxy coil, Medium temperature 0 °C…+120 °C, with manual override							
	G ¼	10	1.5	0.2…16	0.43	323894	-	323968
	G ⅜	10	1.9	0.2…16	0.4	323971	-	323972
	G ½	13	3.8	0.2…16	0.54	323973	-	323975
	G ¾	20	8.5	0.2…16	0.86	323977	-	323978
	G 1	25	12	0.2…16	1.3	323979	-	323980
	G 1¼	25	1.4	0.2…16	1.4	323982	-	323984
	G 1½	40	30	0.2…16	2.8	323986	-	323987
	G 2	40	30	0.2…16	3	323988	-	323989
	Seal material EPDM, Polyamide coil, Medium temperature -30 °C…+90 °C							
	G ¼	10	1.5	0.2…16	0.43	322541	322542	322543
	G ⅜	10	1.9	0.2…16	0.4	322544	322545	322546
	G ½	13	3.8	0.2…16	0.54	222010	222011	222012
	G ¾	20	8.5	0.2…16	0.86	222013	222014	222015
	G 1	20	8.5	0.2…16	0.97	222016	222017	222018
	G 1	25	12	0.2…16	1.3	222019	222020	222021
	G 1¼	25	12	0.2…16	1.4	222022	222023	222024
	G 1½	40	30	0.2…16	2.8	222025	222026	222027
	G 2	40	30	0.2…16	3	222028	222029	222031

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50…60	230/50…60
Circuit function B (normally open, normally open), Stainless steel body								
B 2/2 way servo-controlled solenoid valve, normally open	**Seal material FKM, Epoxy coil, Medium temperature 0 °C…+120 °C**							
	G ¼	10	1.5	0.2…16	0.43	322547	322548	322549
	G ⅜	10	1.9	0.2…16	0.4	322550	322551	322552
	G ½	13	3.8	0.2…16	0.54	228387	228388	228389
	G ¾	20	8.5	0.2…16	0.86	228390	228391	228392
	G 1	25	12	0.2…16	1.3	228393	228394	228395
	G 1¼	25	12	0.2…16	1.4	228396	228397	228398
	G 1½	40	30	0.2…16	2.8	228399	228400	228401
	G 2	40	30	0.2…16	3	228402	228403	228404

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)

Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A – see Type 2508 ▶		
without circuitry (standard), without cable	0…250 V AC/DC	008376
Cable plug Type 2513 acc. to DIN EN 175301-803 Form A[1] – see Type 2513 ▶		
Cable length, 12000 mm	max. 230 V AC/DC	260893
Cable length, 5000 mm	max. 230 V AC/DC	260892
Cable length, 3000 mm	max. 230 V AC/DC	260891
Cable length, 300 mm	max. 230 V AC/DC	260890

1) Meets the requirements of ATEX category 3 GD

Note: The delivery of a cable plug includes the flat seal and the fixing screw.

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/UC	230/UC
ATEX/IECEx cable versions – electrical connection with 3 m cable							
A 2/2 way servo-controlled solenoid valve, normally closed[1)]	**Seal material NBR, Brass body, Medium temperature -10 … +80 °C**						
	G ¼	10	1.5	0.2…16	0.62	322553	322554
	G ⅜	10	1.9	0.2…16	0.59	322555	322556
	G ½	13	3.8	0.2…16	0.84	277539	277535
	G ¾	20	8.5	0.2…16	1.2	278095	278097
	G 1	25	12	0.2…16	1.7	277543	277540
	G 1¼	25	12	0.2…16	1.8	278103	278105
	G 1¼	40	23	0.2…16	3.0	279557	279558
	G 1½	40	30	0.2…16	3.3	278106	278107
	G 2	40	30	0.2…16	3.5	278191	278250
	G 2	50	40	0.2…16	4.8	278109	278112
	G 2½	50	40	0.2…16	5.5	278248	278249
	Seal material FKM, Stainless steel body, Medium temperature 0 … +90 °C						
	G ¼	10	1.5	0.2…16	0.62	322557	322558
	G ⅜	10	1.9	0.2…16	0.59	322559	322560
	G ½	13	3.8	0.2…16	0.84	277545	277544
	G ¾	20	8.5	0.2…16	1.2	278187	278188
	G 1	25	12	0.2…16	1.6	277547	277546
	G 1¼	25	12	0.2…16	1.7	278251	278252
	G 1½	40	30	0.2…16	3.1	278193	278194
	G 2	40	30	0.2…16	3.3	278253	278254
ATEX/IECEx junction box versions – electrical connection with junction box							
A 2/2 way servo-controlled solenoid valve, normally closed[1)]	**Seal material NBR, Brass body, Medium temperature -10 … +80 °C**						
	G ¼	10	1.5	0.2…16	0.62	322561	322562
	G ⅜	10	1.9	0.2…16	0.59	322563	322564
	G ½	13	3.8	0.2…16	0.84	289544	289550
	G ¾	20	8.5	0.2…16	1.2	289560	289561
	G 1	25	12	0.2…16	1.7	289565	289568
	G 1¼	25	12	0.2…16	1.8	289571	289572
	G 1¼	40	23	0.2…16	3.0	289575	289576
	G 1½	40	30	0.2…16	3.3	289577	289579
	G 2	40	30	0.2…16	3.5	289583	289584
	G 2	50	40	0.2…16	4.8	289587	289591

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h]	Pressure range [bar]	Weight [kg]	Article no. per voltage/frequency [V/Hz] 024/UC	230/UC
A 2/2 way servo-controlled solenoid valve, normally closed[1)]	**Seal material FKM, Stainless steel body, Medium temperature 0 … +90 °C**						
	G ¼	10	1.5	0.2…16	0.62	322565	322566
	G ⅜	10	1.9	0.2…16	0.59	322567	322568
	G ½	13	3.8	0.2…16	0.84	289556	289557
	G ¾	20	8.5	0.2…16	1.2	289562	289563
	G 1	25	12	0.2…16	1.6	289569	289570
	G 1¼	25	12	0.2…16	1.7	289573	289574
	G 1½	40	30	0.2…16	3.1	289580	289581
	G 2	40	30	0.2…16	3.3	289585	289586

1) Only with Epoxy coil available

Note: The maximum fluid temperature must not in any case exceed the permissible temperature class (T4 135 °C, 100 °C T5, T6 85 °C), minus 5 K.

Accessories

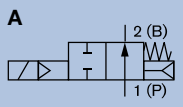
Description	Ex Approvals: Certification	Ex Approvals: Identification	Article no
Ex-Cable glands (polyamide version included in delivery / surcharge applied for brass nickel plated version)			
Brass, nickelplated, 6…13 mm	IECEx PTB 13.0027X, PTB 04 ATEX 1112 X	II 2 D Ex tb IIIC Db IP68, II 2 G Ex e IIC Gb	773278
Polyamide, 7…13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773277

Description	Article no
Special tool to turn the junction box (not included in delivery)	
Set SC02-AC10 Special wrench, service manual	293488

Servo-assisted 2/2 way piston valve

6407

- Servo-assisted piston valve up to diameter DN25
- Safe opening with hard-coupled piston system without differential pressure
- Vibration-resistant, push-over coil
- Explosion-proof versions
- Energy-saving double coil technology with Kick and Drop electronics

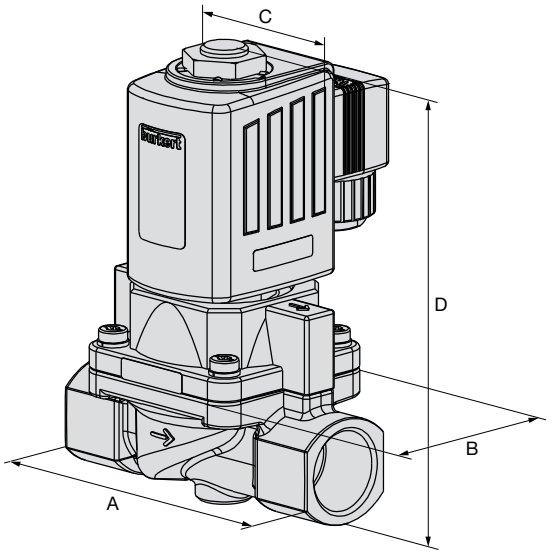


Type 6407 is a servo-assisted piston valve. The fix coupling between pilot valve and piston provides an opening of the valve without differential pressure.
As a piston valve 6407 is particular applicable for media like gas and steam. As well as liquids with low temperature under 0 °C. The stopper and plunger guiding tube are welded together to enhance pressure resistance and leak-tightness. Various seal material combinations are available depending on the application. The coils are moulded with chemically resistant epoxy.
To reduce power consumption in operation coils with “Kick and Drop” (KD) electronics (double coil technology) are available. In combination with a plug in accordance to DIN EN 175301-803 Form A, the valves satisfy protection class IP65.

Technical data

Orifice	DN13…DN50
Body material	Brass
Coil material	Epoxy
Coil insulation class	H
Seal material	PTFE/graphite
Media	Neutral gases and liquid media (e.g. compressed air, water, hydraulic oil) hot water and steam
Media temperature	
Standard	
PTFE + Graphit	-40 °C…150 °C
PTFE + FKM	-10 °C…120 °C
Steam version	
PTFE + Graphit	0 °C…150 °C
PTFE + FKM	0 °C…120 °C
ATEX/IECEx version	-10 °C…90 °C
Ambient temperature	
Standard	
PTFE + Graphit	-40 °C…45 °C
PTFE + FKM	-10 °C…55 °C
Steam version	
PTFE + Graphit	0 °C…45 °C
PTFE + FKM	0 °C…55 °C
ATEX/IECEx version	-10 °C…40 °C
Viscosity	Max. 21 mm²/s
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating; KD coil max. 6 switching cycles/minute
Electrical connection	Cable plug for cable Ø 7 mm, acc. to DIN EN 175301-803 Form A (not included in delivery)

Dimensions [mm]



	Threaded port in brass			
DN	**A**	**B**	**C**	**D**
13	65	40	43	132.7
20	100	60	43	135.7
25	115	70	43	146.2
32	126	85	43	167.7

Protection class	IP65 with cable plug
Installation	As required, preferably with actuator upright

Options

- Further versions see datasheet or on request

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h][1]	Pressure range [bar][2]	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
Standard version									
DN13…DN32, Brass body, seal PTFE+Graphite									
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	13	3.7	0…10	150	42	332166	332164	332165
	G ¾	20	5.6	0…10	150	42	–	332167	332168
						65	332169	–	–
	G 1	25	10.0	0…10	150	42	–	332170	332172
						65	332171	–	–
	G 1¼	32	16.0	0…10	150	42	–	332173	332174
						65	332176	–	–
	G 1½	32	16.0	0…10	150	42	–	332177	332178
						65	332179	–	–
Steam version with valve seat in stainless steel									
DN13…DN32, Brass body, seal PTFE+Graphite									
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	13	3.7	0…10	150	42	320877	320859	320856
	G ¾	20	5.6	0…10	150	42	–	320861	320857
						65	320878	–	–
	G 1	25	10.0	0…10	150	42	–	320862	320858
						65	320879	–	–
	G 1¼	32	16.0	0…10	150	42	–	330406	330401
							330420	–	–
	G 1½	32	16.0	0…10	150	42	–	330427	330429
							330435	–	–
Steam version with KD-coil cURus (UL-recognized) coil approval									
DN13…DN32, Brass body, seal combination PTFE/Graphite									
A 2/2 way servo-controlled solenoid valve, normally closed	NPT ½	13	3.7	0…10	150	42	320874	320863	320866
	NPT ¾	20	5.6	0…10	150	42	320875	320864	320867
	NPT 1	25	10.0	0…10	150	42	320876	320865	320868
	NPT 1¼	32	16.0	0…10	150	42	330421	330425	330426
	NPT 1½	32	16.0	0…10	150	42	330442	330443	330444

Ordering chart continued

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h][1]	Pressure range [bar][2]	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
Dampfausführung mit DC-Spule cURus (UL-recognized) Spulenzulassung									
DN13...DN32, Messinggehäuse, Dichtungskombination PTFE/Graphit									
A 2/2 way servo-controlled solenoid valve, normally closed	NPT ½	13	3.7	0...10	140	42	324978	–	–
	NPT ¾	20	5.6	0...10	140	65	324979	–	–
	NPT 1	25	10.0	0...10	140	65	324980	–	–
	NPT 1¼	32	16.0	0...10	140	65	332519	–	–
	NPT 1½	32	16.0	0...10	140	65	332520	–	–

1) Measured at +20 °C, 1 bar[2] pressure at valve inlet and free outlet.
2) Pressure data [bar]: Overpressure with respect to atmospheric pressure

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h][3]	Pressure range [bar][4]	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	230/UC[5]
Standard version								
DN50, Brass body, seal combination PTFE/FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G 2	50	36.0	0...10	150	72	332162	332163
	G 2½	50	36.0	0...10	150	72	332160	332161
Steam version with valve seat in stainless steel								
DN50, Brass body, seal combination PTFE/FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G 2	50	36.0	0...10	150	72	332149	332156

3) Measured at +20 °C, 1 bar[4] pressure at valve inlet and free outlet.
4) Pressure data [bar]: Overpressure with respect to atmospheric pressure
5) For versions with external rectifier the cable plug is included in the delivery.

Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h][6]	Pressure range [bar][7]	Max. media temperature [°C]	Coil size [mm]	Article no. per voltage/frequency [V/Hz] 024/DC	230/UC
Valves with ATEX/IECEx with 3 meter cable								
Brass body, seal combination PTFE/FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	13	3.7	0...10	90	42	326054	320872
	G ¾	20	5.6	0...10	90	65	331566	331567
	G 1	25	10	0...10	90	65	331568	331570
Valves with ATEX/IECEx terminal connection box								
Brass body, seal combination PTFE/FKM								
A 2/2 way servo-controlled solenoid valve, normally closed	G ½	13	3.7	0...10	90	42	326055	326057
	G ¾	20	5.6	0...10	90	65	331571	331572
	G 1	25	10	0...10	90	65	331574	331575

6) Measured at +20 °C, 1 bar[7] pressure at valve inlet and free outlet.
7) Pressure data [bar]: Overpressure with respect to atmospheric pressure

Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A – see Type 2508 ▶		
without circuitry (standard), without cable	0…250 V AC/DC	008376
with LED	12…24 V AC/DC	008360
with LED	200…240 V AC/DC	008362
with LED and varistor	12…24 V AC/DC	008367
with LED and varistor	200…240 V AC/DC	008369
with rectifier, LED and varistor	12…24 V AC/DC	008363

Description	Ex Approvals		Article no
	Certification	Identification	
Ex-Cable glands (polyamide version included in delivery / surcharge applied for brass nickel plated version)			
Brass, nickelplated, 6…13 mm	IECEx PTB 13.0027X, PTB 04 ATEX 1112 X	II 2 D Ex tb IIIC Db IP68, II 2 G Ex e IIC Gb	773278
Polyamide, 7…13 mm	PTB 13 ATEX 1015 X, IECEx PTB 13.0034X	II 2 G Ex e IIC Gb, II 2 D Ex tb IIIC Db IP68	773277

Description	Article no
Special tool to turn the junction box (not included in delivery)	
Set SC02-AC10 Special wrench, service manual	293488

Overview for Micro Fluidics

Note: The following product overview does not show the complete product range of this catalogue. A complete overview can be found **here** ▸

Category	Type	Function	Width [in mm]	Process connection[1)]	Pressure range [in bar] [in MPa]	Medium temperature [°C]	Diameter [DN in mm]
Direct-acting rocker valves	**0127** ▸	3/2	16	G ⅛, NPT ⅛, UNF ¼ - 28 SFB	0…6 0…0.6	-10…+55	0.8…1.6
	6624 ▸	3/2	10	UNF ¼ - 28, hose connection, SFB	0…5 0…0.5	-10…+55	0.8…1.6
	6106 ▸	3/2	16	SFB	0…10 0…1	-10…+55	0.9 and 1.2
	6626 ▸	3/2	16	G ⅛, UNF 5/16 - 24, hose connection, SFB	0…5 0…0.5	-10…+50	2.0 and 3.0
	6628 ▸	3/2	22	G ⅛, NPT ⅛, PIC, hose connection, SFB	0…5 0…0.5	-10…+55	2.0 and 3.0
Direct-acting flipper valves	**6650** ▸	3/2	4.5	SFB	0…7 0…0.7	+15…+55	0.4 and 0.8
	6144 ▸	3/2	10	SFB	0…7 0…0.7	0…+55	0.6
Pneumatic cartridge solenoid valve	**6164** ▸	3/2	11	Cartridge connection	1,5…9	-20…+55	0.5...1.2
Whisper Valve	**6712** ▸	2/2	7	Flange	0…5	0…+55	0.4 and 0.8
	6724 ▸	3/2	8.9	Flange, UNF ¼" - 28	Vacuum up to 5	0…+50	0.8 and 1.2
Micro dosing unit	**7615** ▸	Self-priming dosing unit	28.8	Flange, UNF ¼" - 28	1	+5…60	–

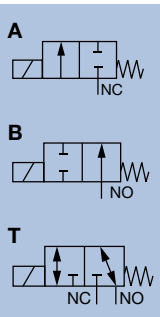
1) PIC = Push-in connection | SFB = Bürkert specific flange pattern
2) S = Standard | A = On request | N = Not available

Body material[2]			Seal material Diaphragm material[2]					Medium[2]			
Brass	Stainless steel	Plastic	NBR	EPDM	FKM	PTFE*	FFKM*	Neutral fluids	Contaminated fluids	Aggressive fluids	Neutral gases
N	N	S	N	S	S	S	S	S	S	S	S
N	N	S	N	S	S	N	S	S	S	S	S
N	N	S	S	N	S	N	N	N	N	N	S
N	N	S	N	S	S	N	S	S	S	S	S
N	N	S	N	S	S	N	S	S	S	S	S
N	N	S	N	N	N	N	S	S	S	S	S
N	N	S	N	S	S	N	N	S	N	N	S
N	N	S	N	N	S	N	N	N	N	N	S
N	N	S	N	S	S	N	S	S	N	S	S
N	N	S	N	S	S	N	S	S	N	S	S
N	N	S	N	A	N	N	S	S	N	S	N

2/2 or 3/2 way Miniature Rocker Solenoid Valve

0127

- For maximum chemical resistance requirements
- Compact design with 16 mm width and C_V ratings up to 0.058
- Proven reliability since 1993
- Flexible design for custom manifold assemblies
- High back pressure tightness, excellent cleanability and 100 % duty cycle



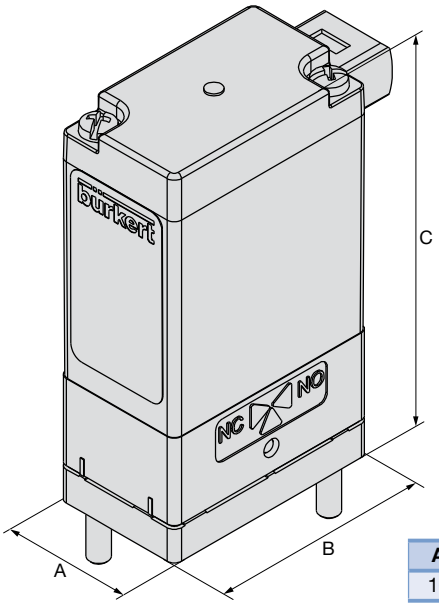
Bürkerts solenoid valve Type 0127 is considered the pioneer in the controlling of fluids in the microfluidic industry. The valve has been launched in the earlier 90th and has been further developed and improved to meet the increased requirements of the market. The use of the rocker technology, which operates the diaphragm between the actuator and media, ensures a very reliable and precise switching of smallest volumes. And still today this valve is a benchmark in its industry. A high variety of different diaphragm and housing materials as well as different housing and electrical connectors the valve Type 0127 was designed for the use in laboratories, medical- and analysis technology. Beyond medical industry it is also used for applications within other industries, for example ink-jet printers and vending machines.

Technical data

Orifice [mm]	DN0.8…DN1.6 (for details see ordering chart)
Body material	PEEK, PVDF, ETFE, PPS
Seal material	FFKM, FKM, EPDM
Media	Resistant to neutral and aggressive liquids and gases (see Burkert chemical resistance chart)
Media temperature	-10 °C…55 °C[1]
Ambient temperature	Max. 55 °C
Service life	10.000.000 (according to laboratory endurance test with FKM and EPDM)[2]
Internal volumes	
with sub-base	starting at 44 µl
with G ⅛ and NPT ⅛	starting at 100 µl
with UNF ¼-28	starting at 25 µl
with tube spigot	starting at 33 µl
on request	<10 µl[3]
Port connection	Bürkert sub-base (16×27 mm), G ⅛, NPT ⅛, UNF ¼ -28, tube connection
Electrical connection	Cable plug Type 1054 Two FEP-leads 0.2 mm², length 500 mm Rectangular cable plug, Type 2505[4]
Operating voltage	12/24 V DC; 24 V UC; other voltages on request
Voltage tolerance	±10 %
Power consumption	3.4 W
Duty cycle	100 % continuous rating
Manifold mounting	If media or ambient temperatures are above +40 °C: intermittent operation 40 % (10 min)
Installation	As required, preferably with actuator upright

Dimensions [mm]

Manifold mount version with rectangular plug



A	B	C
16	27	42.4

Protection class	IP54 with flying leads and single cable plug IP40 with Rectangular plug
Response times	Measured at valve outlet with air at 2 bar and +20 °C According to ISO 12238:2001;
Open	Approx. 25 ms (Pressure rise 0…10 %)
Closing	Approx. 25 ms (Pressure drop 100…90 %)

1) Temperature may vary depending on orifice and seal material. For further information see datasheet.
2) Life expectancy depends on media, temperature, pressure, seal material, individual application conditions.
3) The internal volume can vary depending on the housing. For further information see datasheet.
4) Other electric connectors and other cable lengths upon request.

Options

- Further versions see datasheet or on request

Application examples

Flying leads unit with flange

Rectangular plug unit with tube connection

Plug on top of unit with threaded port

Detailed medium temperature (depending on material and orifice)

	Orifice	Seal material	Temperature range
Media temperature	DN0.8	FFKM	+5 °C...+50 °C
	DN0.8	FKM	0 °C...+50 °C
	DN0.8	EPDM	-5 °C...+50 °C
	DN1.2 & 1.6	FFKM	+10 °C...+50 °C
	DN1.2 & 1.6	FKM	+5 °C...+50 °C
	DN1.2 & 1.6	EPDM	0 °C...+50 °C
Media temperature with limitation on switching time and life expectancy	DN0.8	FFKM	0 °C...+50 °C
	DN0.8	FKM	-5 °C...+55 °C
	DN0.8	EPDM	-10 °C...+50 °C
	DN1.2 & 1.6	FFKM	+5 °C...+50 °C
	DN1.2 & 1.6[1)]	FKM	0 °C...+55 °C
	DN1.2 & 1.6	EPDM	-5 °C...+50 °C

1) Upon request up to -15 °C available.

Detailed internal volume (depending on fluid housing)

Body	2 way low dead volume		2 way		3 way	
	fluid chamber	total	fluid chamber	total	fluid chamber	total
sub-base	44 µl	54 µl	97 µl	106 µl	90 µl	106 µl
G ⅛, NPT ⅛	–	–	100 µl	211 µl	92 µl	229 µl
UNF ¼-28	25 µl	69 µl	55 µl	79 µl	54 µl	95 µl
tube connection	33 µl	112 µl	62 µl	142 µl	69 µl	185 µl

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_v value water [m³/h]	C_v value [gal/min]	Q_{Nn} value air [l/min]	Pressure range [bar][1]	Seal material	Fluid housing material	Electrical connection	Voltage/ frequency [V/Hz][2]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	0.8	Sub-base	0.015	0.017	16	0…6	FFKM	PEEK	leads, 0.5 m	24/DC	276699
							FKM	PPS	leads, 0.5 m	24/DC	264327
							EPDM	PPS	rectangular plug	24/DC	276701
	1.0	UNF ¼-28	0.02	0.023	22	0…2[3]	FFKM	ETFE	leads, 0.5 m	12/DC	457785
									rectangular plug	24/DC	276702
A 2/2 way direct-acting solenoid valve, normally closed	1.2	Sub-base	0.03	0.035	32	0…5	FFKM	PEEK	leads, 0.5 m	24/DC	276703
									rectangular plug	24/DC	276710
							FKM	PPS	leads, 0.5 m	24/DC	276718
							EPDM	PPS	cable plug	24/DC	276728
		UNF ¼-28	0.025	0.029	27	0…5	FFKM	PEEK	leads, 0.5 m	12/DC	244706
	1.5	UNF ¼-28	0.03	0.035	33	0…2[3]	FFKM	ETFE	leads, 0.5 m	24/DC	120680
									rectangular plug	24/DC	276733
									cable plug	24/UC	136366
	1.6	G ⅛	0.05	0.058	54	0…2	FFKM	PVDF	leads, 0.5	24/DC	120677
									rectangular plug	24/DC	272153
		NPT ⅛	0.05	0.058	54	0…2	FFKM	PVDF	rectangular plug	24/DC	272160
		UNF ¼-28	0.03	0.035	33	0…2	FFKM	PEEK	leads, 0.5 m	24/DC	463551
		Sub-base	0.045	0.052	49	0…2	FFKM	PVDF	leads, 0.5 m	24/DC	276738
								PEEK	leads, 0.5 m	24/DC	242451
							FKM	PPS	rectangular plug	24/DC	273398
							EPDM	PPS	rectangular plug	12/DC	276746
		Tube connection	0.045	0.052	49	0…2[3]	FFKM	PVDF	leads, 0.5 m	24/DC	455390
									rectangular plug	24/DC	272154
B 2/2 way direct-acting solenoid valve, normally open	1.5	UNF ¼-28	0.03	0.035	33	0…2	FFKM	ETFE	leads, 0.5 m	24/DC	120681
	1.6	G ⅛	0.05	0.058	54	0…2	FFKM	PVDF	leads, 0.5 m	24/DC	120678
		Tube connection	0.045	0.052	49	0…2[3]	FFKM	PVDF	leads, 0.5 m	24/DC	120684
		Sub-base	0.045	0.052	49	0…2	EPDM	PPS	rectangular plug	24/DC	276747

Ordering chart continued

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h]	C_V value [gal/min]	Q_{Nn} value air [l/min]	Pressure range [bar][1]	Seal material	Fluid housing material	Electrical connection	Voltage/ frequency [V/Hz][2]	Article no.
T 3/2 way direct-acting solenoid valve, flow direction optional	0.8	Sub-base	0.015	0.017	16	0…6	FFKM	PEEK	leads, 0.5 m	24/DC	276748
							FKM	PPS	rectangular plug	24/DC	276749
							EPDM	PPS	rectangular plug	24/DC	276750
	1.0	UNF ¼-28	0.02	0.023	22	0…2	FFKM	ETFE	leads, 0.5 m	24/UC	214280
									rectangular plug	24/DC	276751
T 3/2 way direct-acting solenoid valve, flow direction optional	1.2	Sub-base	0.03	0.035	32	0…5	FFKM	PEEK	leads, 0.5 m	24/DC	276753
									rectangular plug	24/DC	276754
							FKM	PPS	leads, 0.5 m	24/DC	276756
							EPDM	PPS	rectangular plug	24/DC	276758
		UNF ¼-28	0.025	0.029	27	0…5	FFKM	PEEK	cable plug	24/DC	269045
	1.5	UNF ¼-28	0.03	0.035	33	0…2	FFKM	ETFE	leads, 0.5	24/DC	120682
									rectangular plug	24/DC	272158
									cable plug	24/UC	079901
	1.6	G ⅛	0.05	0.058	54	0…2	FFKM	PVDF	leads, 0.5 m	24/DC	120679
									rectangular plug	24/DC	272156
		NPT ⅛	0.05	0.058	54	0…2	FFKM	PVDF	leads, 0.5 m	24/DC	121781
		UNF ¼-28	0.03	0.035	33	0…2	FFKM	PEEK	rectangular plug	24/DC	262461
		Sub-base	0.045	0.052	49	0…2	FFKM	PVDF	rectangular plug	24/DC	273853
								PEEK	leads, 0.5 m	24/DC	460264
							FKM	PPS	rectangular plug	24/DC	271604
							EPDM	PPS	rectangular plug	24/DC	276759
		Tube connection	0.045	0.052	49	0…2	FFKM	PVDF	leads, 0.5 m	24/DC	120685
									rectangular plug	24/DC	272157

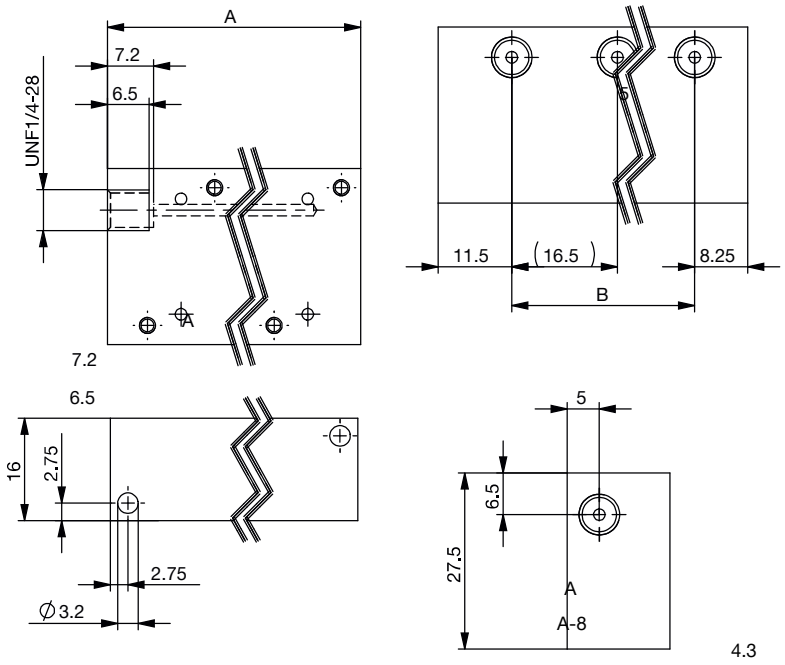
1) Overpressure with respect to atmospheric pressure. On request different pressure ranges available.
2) In universal Current (UC) are rectifier, LED and varistor integrated. Other voltages on request.
3) Low dead-volume version, maximum back pressure 1 bar.

Accessories

Description	Article no.
Cable plug type 1054 (without cable)	006699
Cable plug type 1054 with 3 m cable	413552
Recangular plug type 2505 with 3 m cable	252572
Rectangular plug type 2505 with 300 mm flying leads	262346

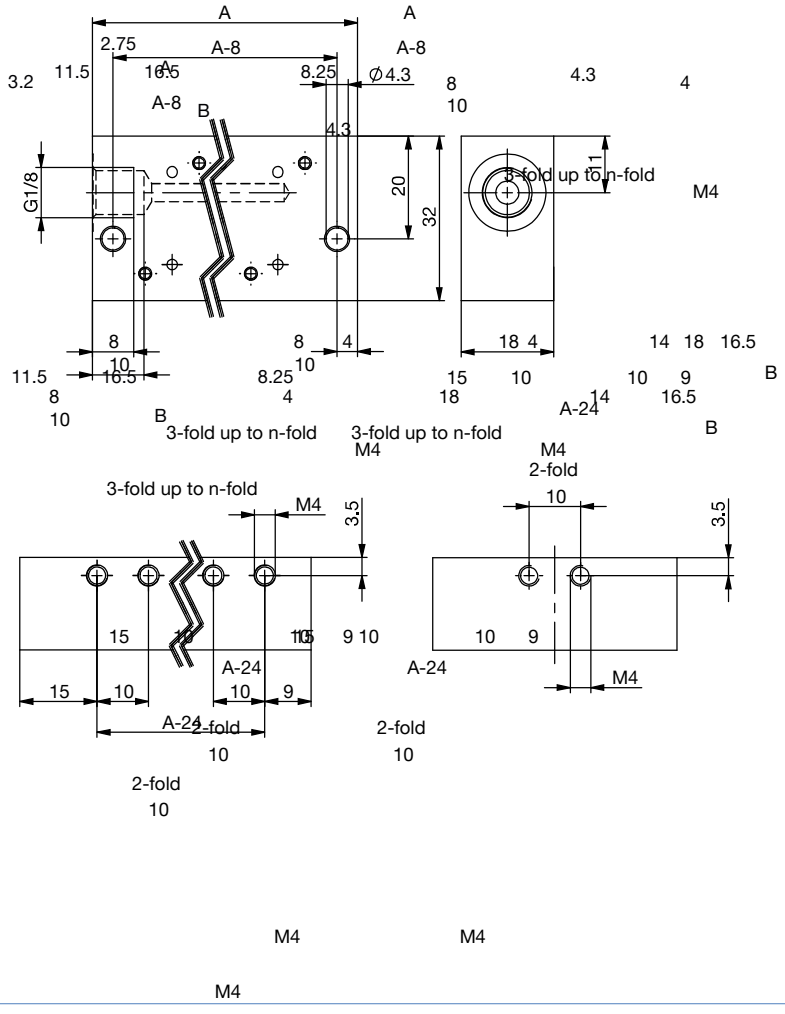
Accessories continued

Manifolds in PEEK for Bürkert flange interface 16 × 27 2 way [mm]



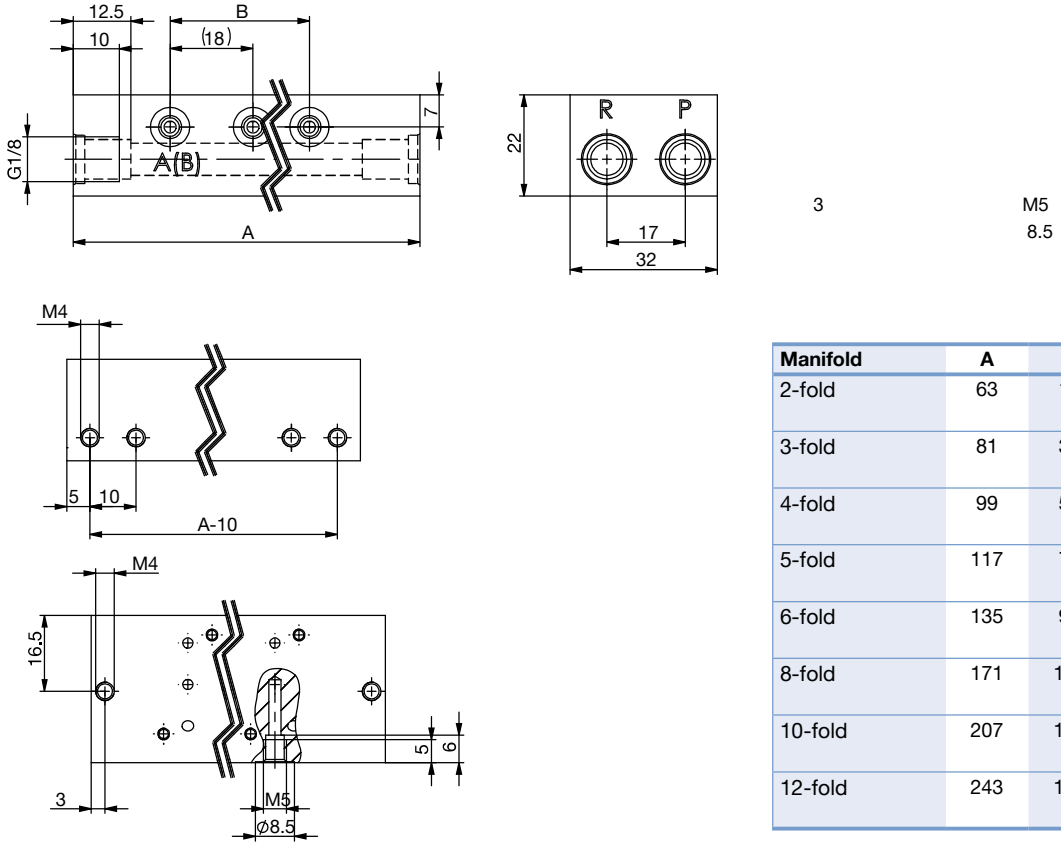
Manifold	A	B	Article no.
2-fold	36.25	16.5	651506
3-fold	52.75	33	651510
4-fold	69.25	49.5	651507
5-fold	85.75	66	651508
6-fold	102.25	82.5	651509
7-fold	118.75	99	651521
8-fold	135.25	115.5	651522

Manifolds in PPS for Bürkert flange interface 16 × 27 2 way [mm]



Manifold	A	B	Article no.
2-fold	47.5	16.5	675628
3-fold	64	33	675629
4-fold	80.5	49.5	675630
5-fold	97	66	675631
6-fold	113.5	82.5	675632
7-fold	130	99	675633
8-fold	146.5	115.5	675634
9-fold	163	132	675635
10-fold	179.5	148.5	675636

Manifolds in aluminium for Bürkert flange interface 16 x 27 3 way [mm]

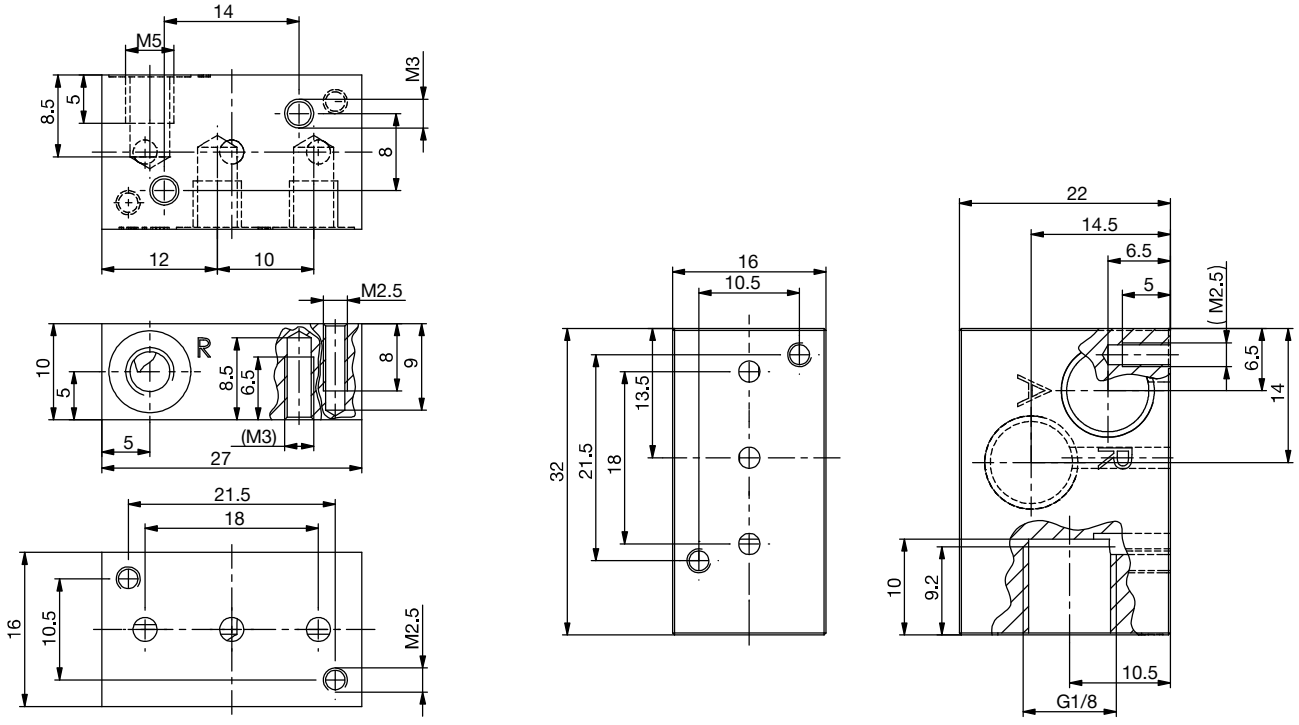


3 M5
8.5

17
32

Manifold	A	B	Article no.
2-fold	63	18	658695
3-fold	81	36	658696
4-fold	99	54	658697
5-fold	117	72	658698
6-fold	135	90	658699
8-fold	171	126	658700
10-fold	207	162	658701
12-fold	243	198	658703

Single manifolds in aluminium for Bürkert flange interface 16 x 27 [mm]



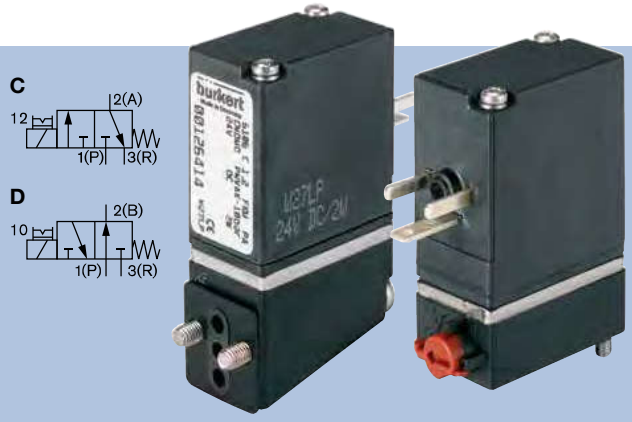
Manifold	Article no.
made from aluminium, black anodized, Port connection M5	623873

Manifold	Article no.
made from aluminium, black anodized, Port connection M5	634917

3/2 way Miniature Rocker Solenoid Valve for pneumatic systems

6106

- Direct-acting
- High cycling rate
- Reduced power consumption
- With manual override
- CNOMO and Bürkert flange interface



The direct-acting rocker solenoid valve, Type 6106, is especially designed for neutral gaseous mediums.

The valves are generally equipped with a DC coil. When using an AC power source, use an appliance with A rectifier.

The heat input in the medium is minimal, because the housing is separated from the coil by a stainless steel plate.

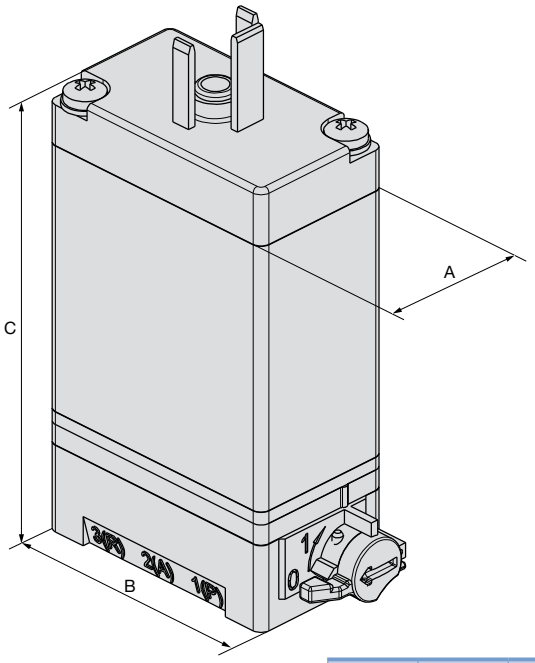
The valves can be mounted directly or also single or manifold mounted. They are used for dosing, filling, mixing and distributing small quantities of medium.

Technical data

Orifice	DN0.9 and DN1.2, other on request
Body material	PA (polyamide)
Seal material	FKM
Media	Compressed air, neutral gases (5 µm filtering) technical vacuum
Media temperature	-10 °C…+55 °C
Ambient temperature	-10 °C…+55 °C
Port connection	Bürkert flange below, CNOMO flange sideways
Operating voltages	220…240 V DC, 24 V DC, other voltages on request
Voltage tolerance	±10 %
Power consumption	See ordering chart
Cycling rate	Approx. 1000/min
Duty cycle	100 % continuous rating
Electrical connection	Tag connector sidewards acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C, other options on request (not included)
Protection class	IP20 with tag connector, IP65 with cable plug
Installation	As required, preferably with actuator upwards
Response times[1]	Acc. ISO 12238:2001; Measured at valve outlet at 6.3 bar and +20 °C
Opening	Approx. 25 ms (pressure rise 0…10 %)
Closing	Approx. 25 ms (pressure drop 100…10 %)

1) Measurement at the valve outlet 6 bar and +20 °C
Opening: Pressure rise 0…90 %, Closing: Pressure drop 100…10 %

Dimensions [mm]

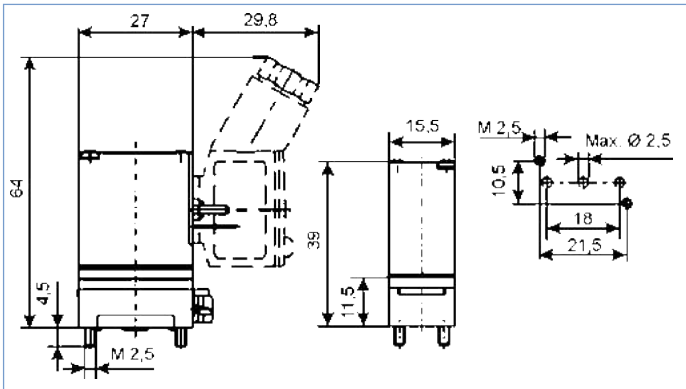


A	B	C
15.5	27	39

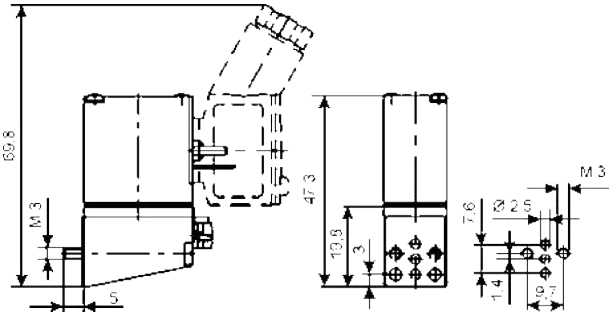
Options

- Further versions see data sheet or on request

Dimensions [mm]



Flange interface for manifold, Bürkert flange



Flange interface for manifold, CNOMO flange

Ordering chart

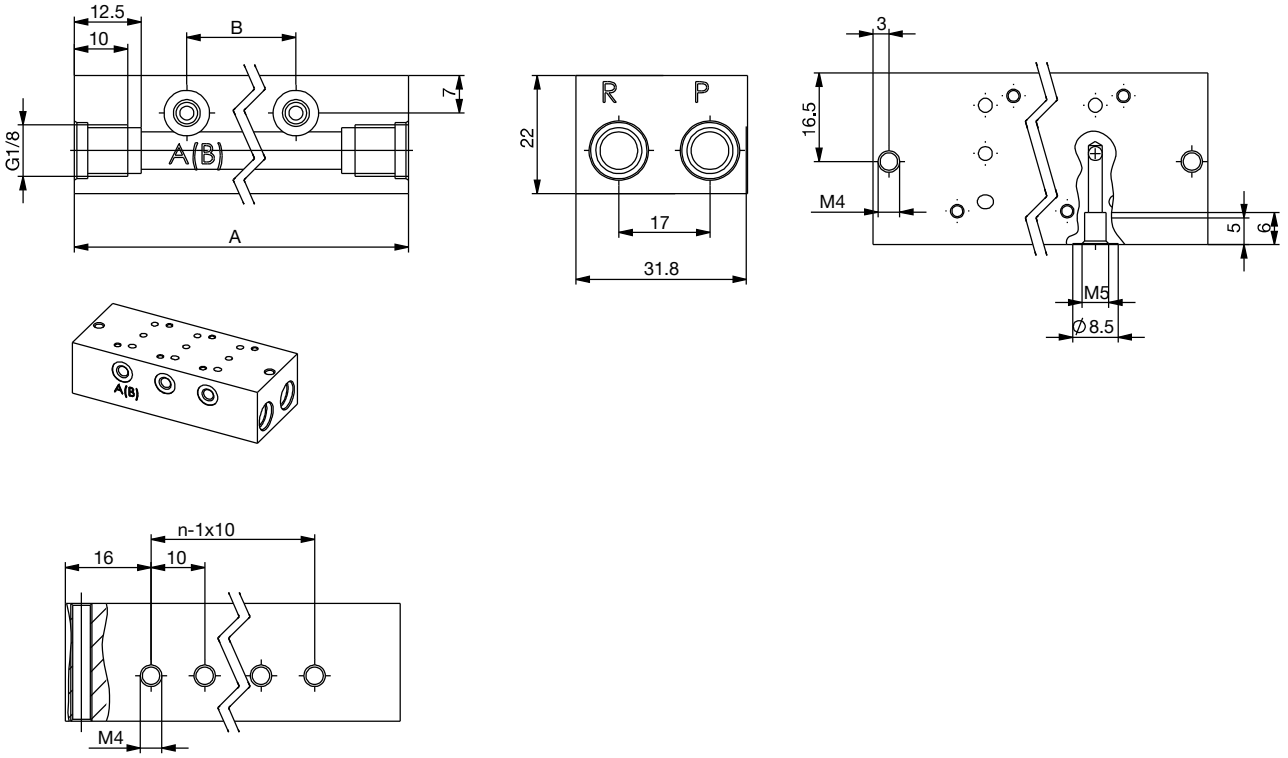
Circuit function All circuit fucntions monostable	Port connec-tion	Orifice [mm]	Q_{Nn} value air 1 → 2 [l/min]	Q_{Nn} value air 2 → 3 [l/min]	Pres-sure range [bar]	Power consumption [W]	Article no. per voltage/ frequency [V/Hz] 024/DC[1]	220...240/DC[1]
All valves with manual override, tag connector sidewards, mounting screws and flange seal, without cable plug								
C 3/2 way direct-acting solenoid valve, normally closed, with manual override	Bürkert flange	0.9	22	25	Vac.-8	1	126417	–
	Bürkert flange	1.2	40	47	Vac.-10	2	126411	–
						3	–	126413
D 3/2 way direct-acting solenoid valve, normally open, with manual override	Bürkert flange	0.9	22	25	Vac.-8	1	126421	–
	Bürkert flange	1.2	40	47	Vac.-10	2	126419	–
C 3/2 way direct-acting solenoid valve, normally closed, with manual override	CNOMO	0.9	22	25	Vac.-8	1	126418	–
	CNOMO	1.2	33	38	Vac.-10	2	126414	–
						3	–	126416
D 3/2 way direct-acting solenoid valve, normally open, with manual override	CNOMO	0.9	22	25	Vac.-8	1	126422	–
	CNOMO	1.2	33	38	Vac.-10	2	126420	–

1) When using an AC power source, use an appliance with a rectifier.

Note: Cable plug, see **Type 2516** ▶

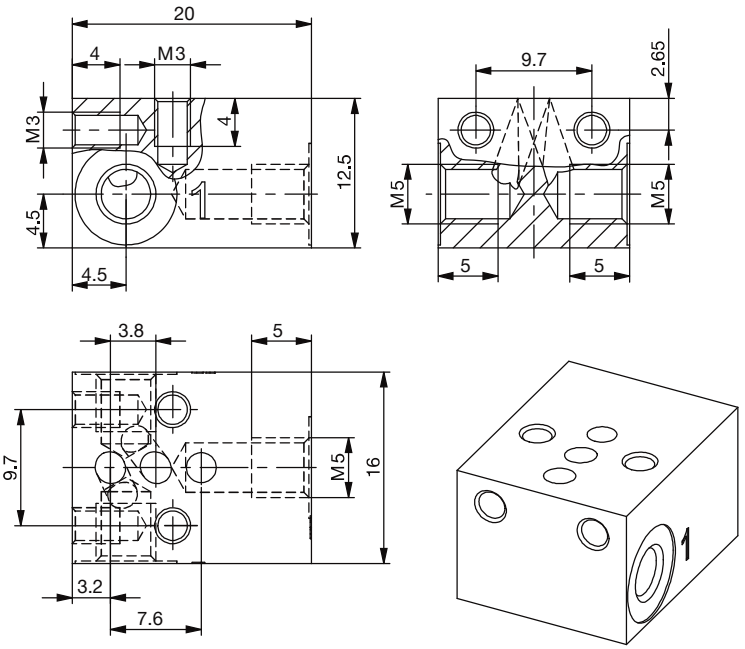
Unit	Features	Article no.
Single manifolds from aluminium, black anodised		
Single manifold	for Bürkert flange, 16 mm width, M5	623873
	for Bürkert flange, 16 mm width, G ⅛	634917
	for CNOMO flange, 16 mm width, M5	639885
Single module with plug-in coupling	for single or series connection of valves with Bürkert flange	643566
Complete mounting kit	for standard rail TS 35 × 7.5 mm	629254
Blanking plate kit	for unused valve positions on Bürkert plates	629327
	for unused valve positions on CNOMO plates	639695
Banjo coupler with banjo bolts	G ⅛, with tube hose connector Ø 6 mm, for pilot valve	781126
	G ¼, with tube hose connector Ø 6 mm, for pilot valve	781735

Dimensions for Bürkert flange manifolds [mm]

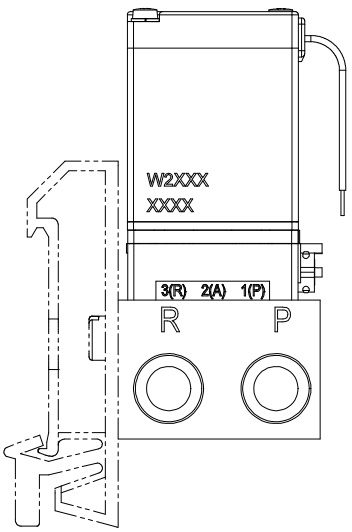


Dimensions for CNOMO flange manifolds [mm]

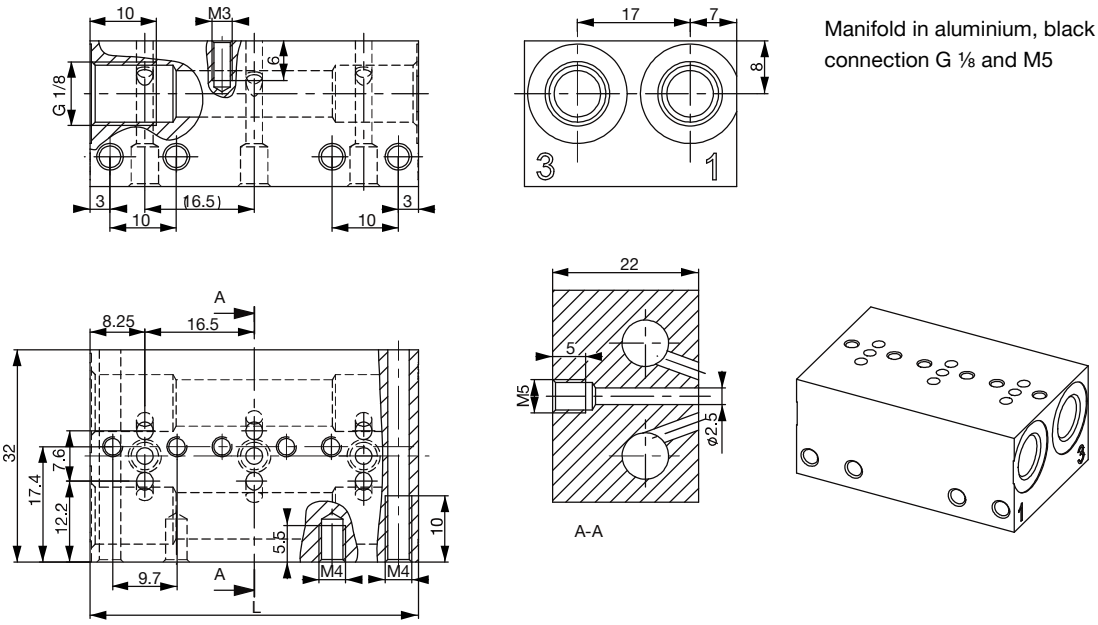
Manifold for CNOMO flange,
black anodised, port connection M5



Mounting kit, complete for standard rail
TS35 × 7.5 mm



Dimensions for multiple manifolds CNOMO flange 3-way [mm]



Manifold in aluminium, black anodised, port connection G ⅛ and M5

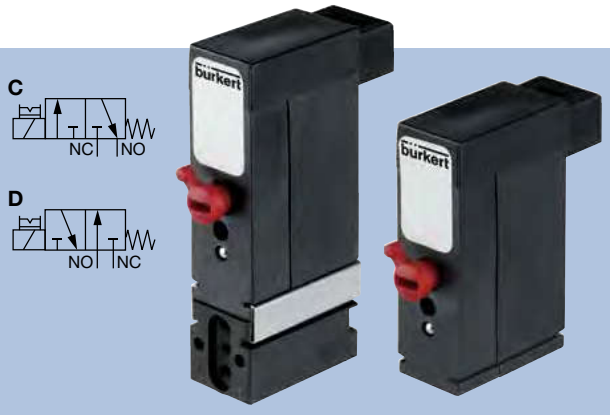
Accessories

No. of valves	Dimension A [mm]	Dimension B [mm]	Article no. G ⅛ and M5	Length L [mm]	Article no.. G ⅛ and M5
Aluminium manifolds					
	Bürkert flange, 18 mm width per station			**CNOMO flange, 16,5 mm width per station**	
2	60	18	658695	33	639887
3	78	36	658696	49,5	639862
4	96	54	658697	66	639863
5	114	72	658698	82,5	639864
6	132	90	658699	99	639865
8	168	126	658700	132	639866
10	204	162	658701	165	639867
12	240	198	658703	198	639868
Blanking plate kit for non-configured valve positions			629327		639695
Manifold for CNOMO flange					
Manifold for CNOMO flange, black anodised, port connection M5					639885
Mounting kit, complete for standard rail TS35 × 7.5 mm					629254

3/2 way Flipper Solenoid Valve, direct acting

6144

- Direct-acting
- 0...10 bar
- Low power consumption
- Sub-base connection
- 10 mm width per station

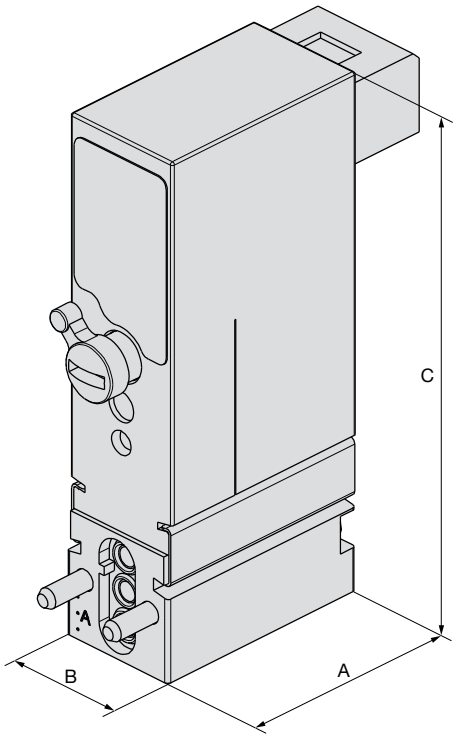


Type 6144 is a direct-action 3/2 way solenoid valve designed for neutral gases and liquids. Through the movement between the 2 end positions, the switching element (fl ipper) seals one of the two opposing valve seats and connects the other to the working port. This movement is caused by the solenoids magnetic field pushing a permanent magnet that is fixed to the flipper element. In addition to its exceptional performance characteristics, the flipper principle is especially marked by its very low switching noise and its low wear level. Further more, integrated medium separation enables use above and beyond pneumatic applications. Depending on the case of operation, various flange connections are available that are suitable for both individual and block mounting.
Installation advice: The valve must have a minimum distance of 5 mm from other ferromagnetic materials in order to avoid malfunctioning during operating conditions.

Technical data

Body material	PPS (Polyphenylensulfide)
Seal material	FKM
Media	Compressed air lubricated, oil-free or dry; neutral gases and liquids (5 µm filtering); technical vacuum
Media temperature	-10 °C...+55 °C
Ambient temperature	-10 °C...+55 °C
Port connection	• Bürkert flange • Lateral angle flange • Lateral flange • Hose connector • UNF ¼-28
Electrical connection	Rectangular plug as standard, on request: • Circular plug M8 x 1 • Flying lead 0.2 mm² • Blank connector (5.08 mm)
Operating voltage	24 V DC[1] 12 V DC[1] Further voltages on request
Voltage tolerance	±10 %[2]
Nominal power	0.8 W
Switching function	Monostable Bistable (impulse) on request
Duty cycle	100 % continuous rating
Installation	As required, preferably with actuator upright; 5 mm minimum distance to ferromagnetic materials
Protection class	3 acc. VDE 0580
Protection class	IP40 IP65 for flying leads and round plug (without manual override) on request
Cycling rate	ca. 1000/min

Dimensions [mm]



A	B	C
18	10	41.45

Electrical control	with SPS possible
Response times[3]	
Open	ca. 8 ms (Standard)
Close	ca. 10 ms (Standard)

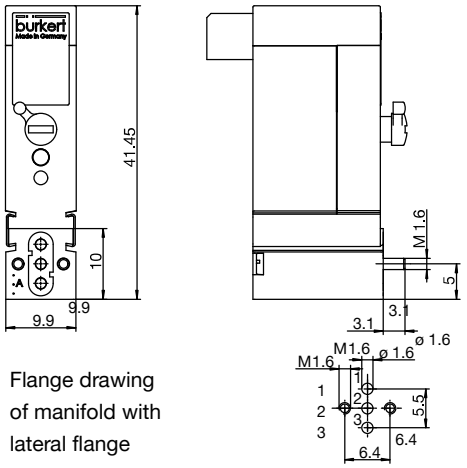
1) Battery voltage; observe polarity as shown on top of the valve
2) Max. residual ripple allowed
3) Measured at valve outlet at 6 bar and +20 °C acc. to DIN ISO 12238
Opening: pressure rise 0...10 %, closing: pressure drop 100...10 %

Options

- Further versions see data sheet or on request

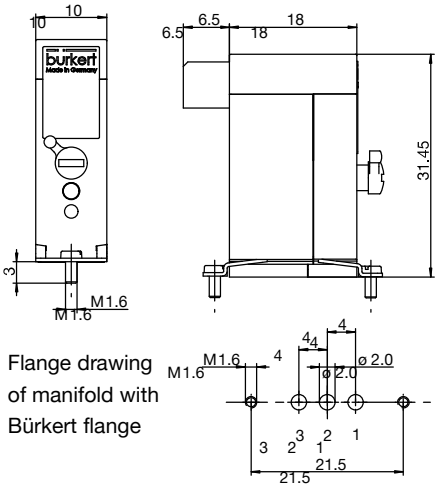
Dimensions [mm]

Type 6144 with lateral flange



Flange drawing of manifold with lateral flange

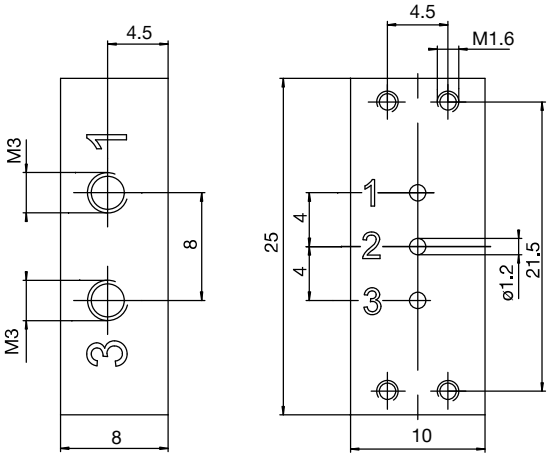
Type 6144 with Bürkert flange



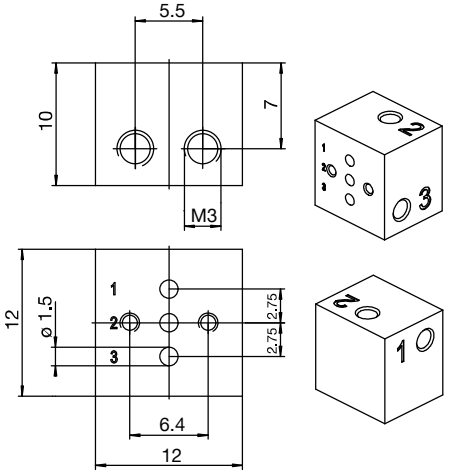
Flange drawing of manifold with Bürkert flange

The valve can optionally be delivered with manual override on the left or right hand side (standard: opposite the electrical connection).

Single manifold for Bürkert flange
Material: Aluminium, M3 threaded

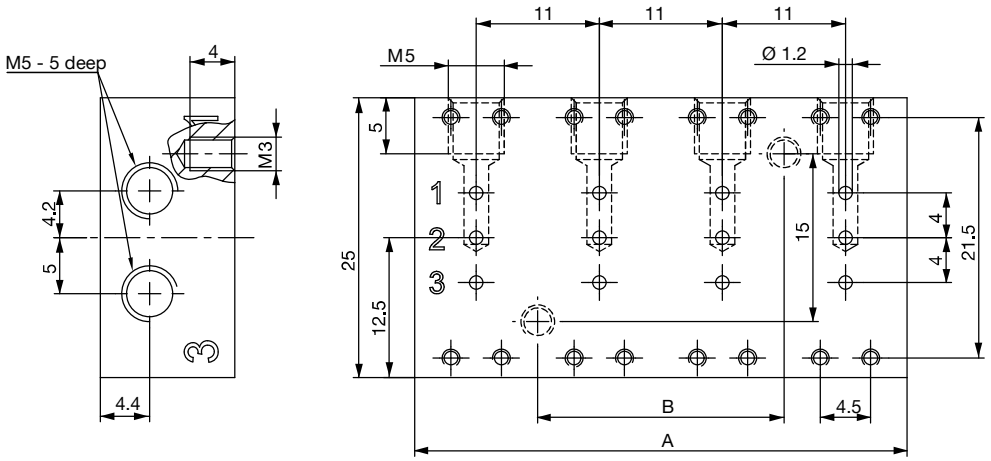


Single manifold for lateral flange
Material: Aluminium, M3 threaded



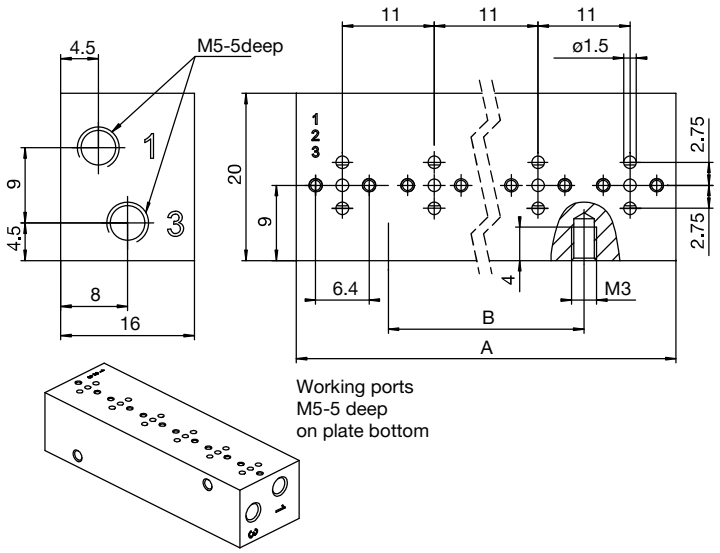
Dimensions [mm] continued

Multiple manifolds for Bürkert flange, Material: Aluminium, M5 threaded



	A	B
2 valves	22	–
4 valves	44	22
6 valves	66	44

Multiple manifolds for lateral flange, Material: Aluminium, M5 threaded



	A	B
2 valves	22	–
4 valves	44	22
6 valves	66	44
8 valves	88	66

Ordering chart

Circuit function	Port connection	Orifice [mm]	Q_{Nn} value air [l/min][1]	K_V value water [l/min][2]	Pressure range [bar][3]	Manual override	Voltage [V]	Nominal power [W]	Article no.
All valves with rectangular plug, mounting screws and flange seal; without plug connection									
C 3/2 way direct-acting solenoid valve, normally closed, with manual override	Bürkert flange	0.6	8.5	0.0075	0…10[4]	with	24	0.8	181367
	lateral flange		8.5	0.0075					175682
D 3/2 way direct-acting solenoid valve, normally open, with manual override	Bürkert flange	0.6	8.5	0.0075	0…10	with	24	0.8	175653
	lateral flange		8.5	0.0075					179098

1) Q_{Nn} value air [l/min]: Measurement with +20 °C, 6 bar pressure on the valve input and 1 bar pressure differential
2) Measured at +20 °C, 1 bar pressure difference, measured as overpressure to the atmospheric pressure
3) Pressure values [bar]: Measured as overpressure to the atmospheric pressure
4) Vacuum up to 10 bar on request

Fixing screws for Bürkert flange: M1.6 × 5, for lateral flange: M1.6 × 20

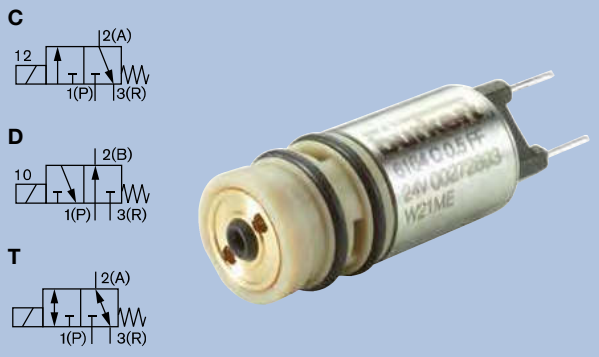
Accessories

Unit	Characteristics	Article no.
Manifolds		
Single manifold	for Bürkert flange, M3	639873
Single manifold	for lateral flange, M3	639234
Manifold 2-fold	for Bürkert flange, M5	641911
Manifold 4-fold	for Bürkert flange, M5	641912
Manifold 6-fold	for Bürkert flange, M5	639874
Blanking plate kit	for multiple manifolds, Bürkert flange	645512
Manifold 2 valves	for lateral flange, M5	641915
Manifold 4 valves	for lateral flange, M5	641916
Manifold 6 valves	for lateral flange, M5	639235
Manifold 8 valves	for lateral flange, M5	672676
Blanking plate set	for multiple manifolds angle flange	645513
Push-in fitting	Brass, straight, M3, for 4/2 mm tube	782534
Push-in fitting	Brass, straight, M5, for 4/2 mm tube	787810
Rectangular cable plug, Type 2505	with 3 m cable	133486
Rectangular cable plug, Type 2505	with 300 mm flying leads	644068
Rectangular cable plug, Type 2505	with 2 single contacts	644067

3/2 way pneumatic cartridge solenoid valve

6164

- Compact design with 11 mm width per station
- Orifices from 0.5 mm (10 bar) to 1.2 mm (1.5 bar)
- High durability and reliability
- Low power consumption, as well as optional ATEX Ex ib version
- Design for optimum integration

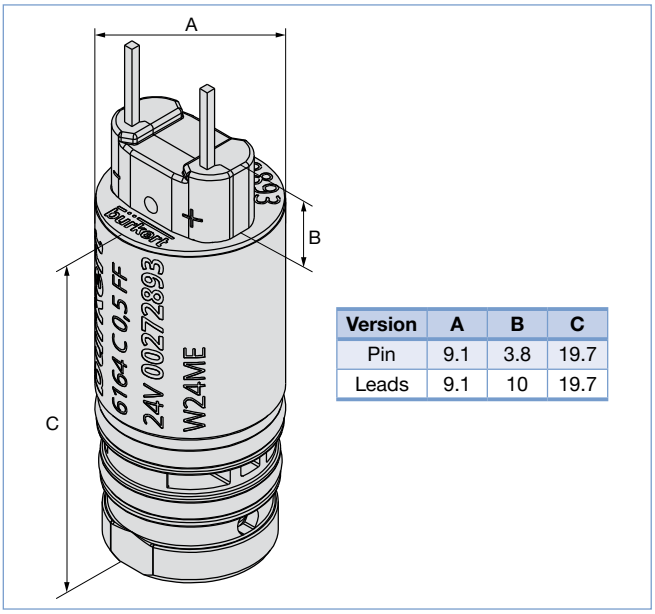


Customer specific applications are becoming more complex. Size, fluidic performance, low power consumption and cost efficiency are critical criteria. Therefore the demands on the components used are increasing. Type 6164 was developed with the goal, to simplify pneumatic control with optimum integration of a pilot valve in block and plastic moulding parts. Thus, making a more compact design possible.
This valve sets new standards with its uncompromising reliability, above average life cycle span and excellent fluidic characteristics. Various certifications and conformities make the use of the valve in medical applications such as media multiplexers in dental technology and oxygen control in respirators possible.

Technical data

Orifice and pressure range	DN0.5 (Vac-9 bar)[1]/DN0.8 (Vac-7.5 bar)[1] DN1.0 (Vac-5 bar)[1]/DN1.2 (Vac-1.5 bar)[1]
Permissible leakage	Vac-10 bar (Dependent on the version used)[1] [2]
Body material	PEEK
Seal material	FKM
Medium	Neutral gases
Medium temperature	
FKM	-10 °C...+55 °C
Low temperature version	-20 °C...+55 °C
Ambient temperature	
FKM	-10 °C...+55 °C[3]
Low temperature version	-20 °C...+55 °C[3]
Typical life span	100,000,000 switching cycles (accordance to endurance tests)[4]
Port connection	Bürkert-Cartridge-Connection
Electrical connection	Plug/Solder Flying leads
Operation voltage	12 and 24 V DC (other voltages on request)
Voltage tolerance	±10 %
Power consumption	0.7 W 2.8 W/0.3 W (with external electric power reduction) 0.3 W (for Ex i version)
Duty cycle	100 % ED continuous rating
Installation	As required
Protection class	Depending on the electrical connection when installed
Pins	IP00
Special plug	IP40
Leads	IP54

Envelope Dimensions [mm]



Version	A	B	C
Pin	9.1	3.8	19.7
Leads	9.1	10	19.7

Response times	Measurement at valve oulet acc. to
Open	DIN ISO 12238:2001
Closed	<5 ms (pressure rise 0...10 %)
	<5 ms (pressure drop 100...90 %)
Switching frequency	16 Hz
Switching noise	42 dB[5]
Weight	6 g (standard version)
Approvals and conformity on request	BVS 16 ATEX E 088 X: II 2G Ex ib IIC T6...T4 Gb II 2D Ex ib IIIB T155 °C Db IECEx BVS 16.0053 X: Ex ib IIC T6...T4 Gb Ex ib IIIB T155 °C Db UL class 2 Oxygen compatible

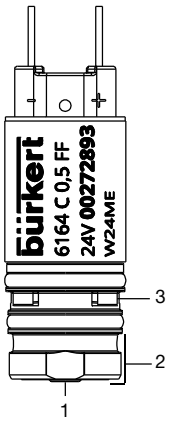
1) VAC corresponds to -0.8 bar relative
2) Overpressure to the atmospheric pressure
3) Depending on installation conditions (see manual), higher temperatures on request
4) Life span is dependent on temperature, pressure, sealing material and operating conditons
5) According to ISO 3745, testing environment in brass manifold, free-hanging

Options

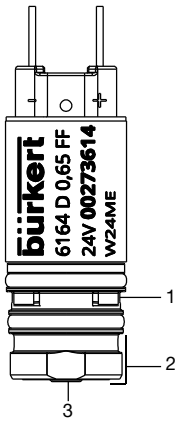
- Further versions see data sheet or on request

Port connection

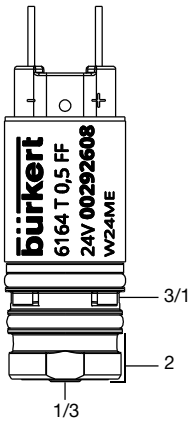
Circuit function C
(applicable to WWA by using blind connectors on 3)



Circuit function D
(applicable to WWB by using blind connectors on 3)



Circuit function T

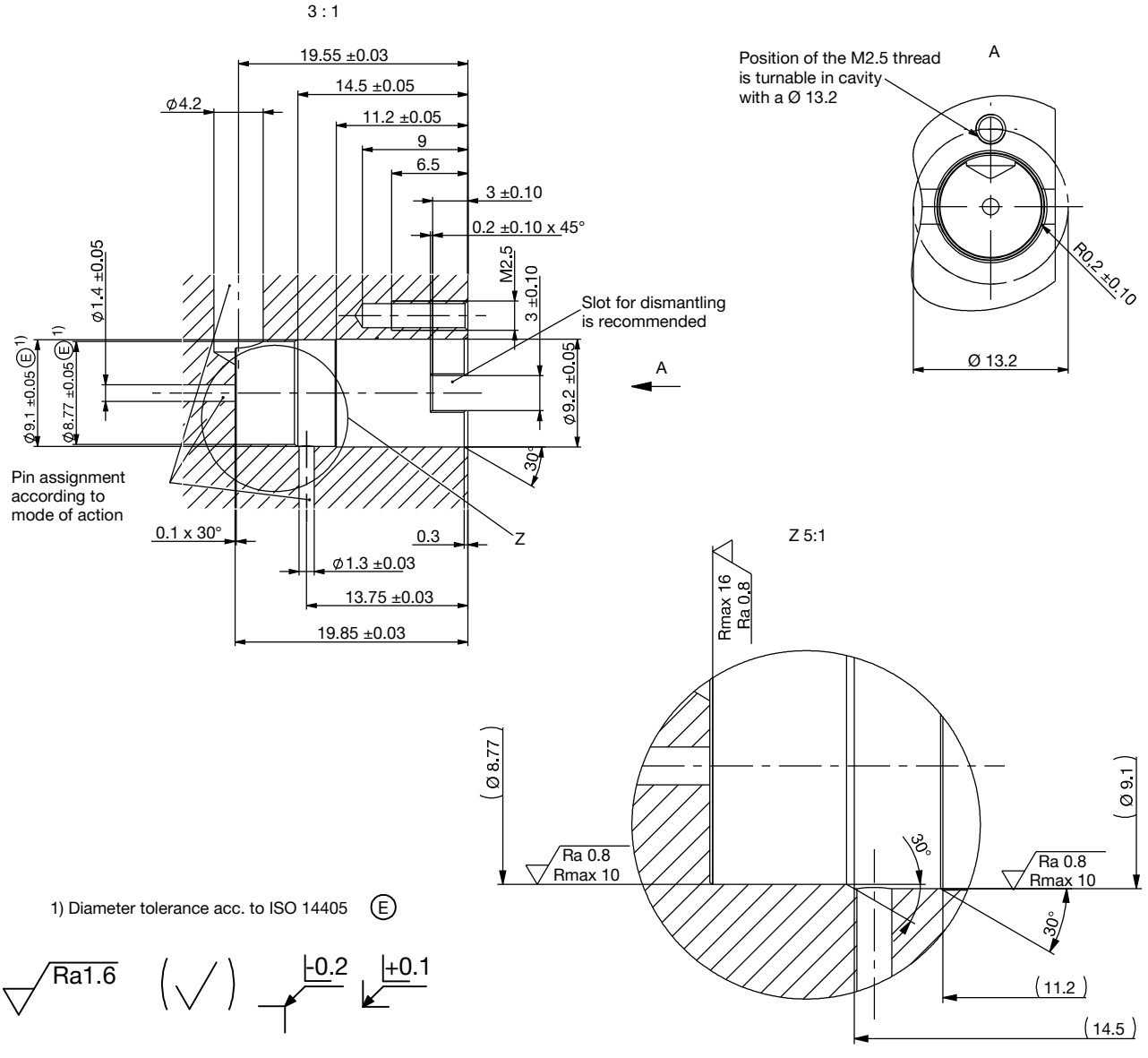


1. Pressure port
2. Working port
3. Ventilation

The polarity must be observed only in the Ex version.

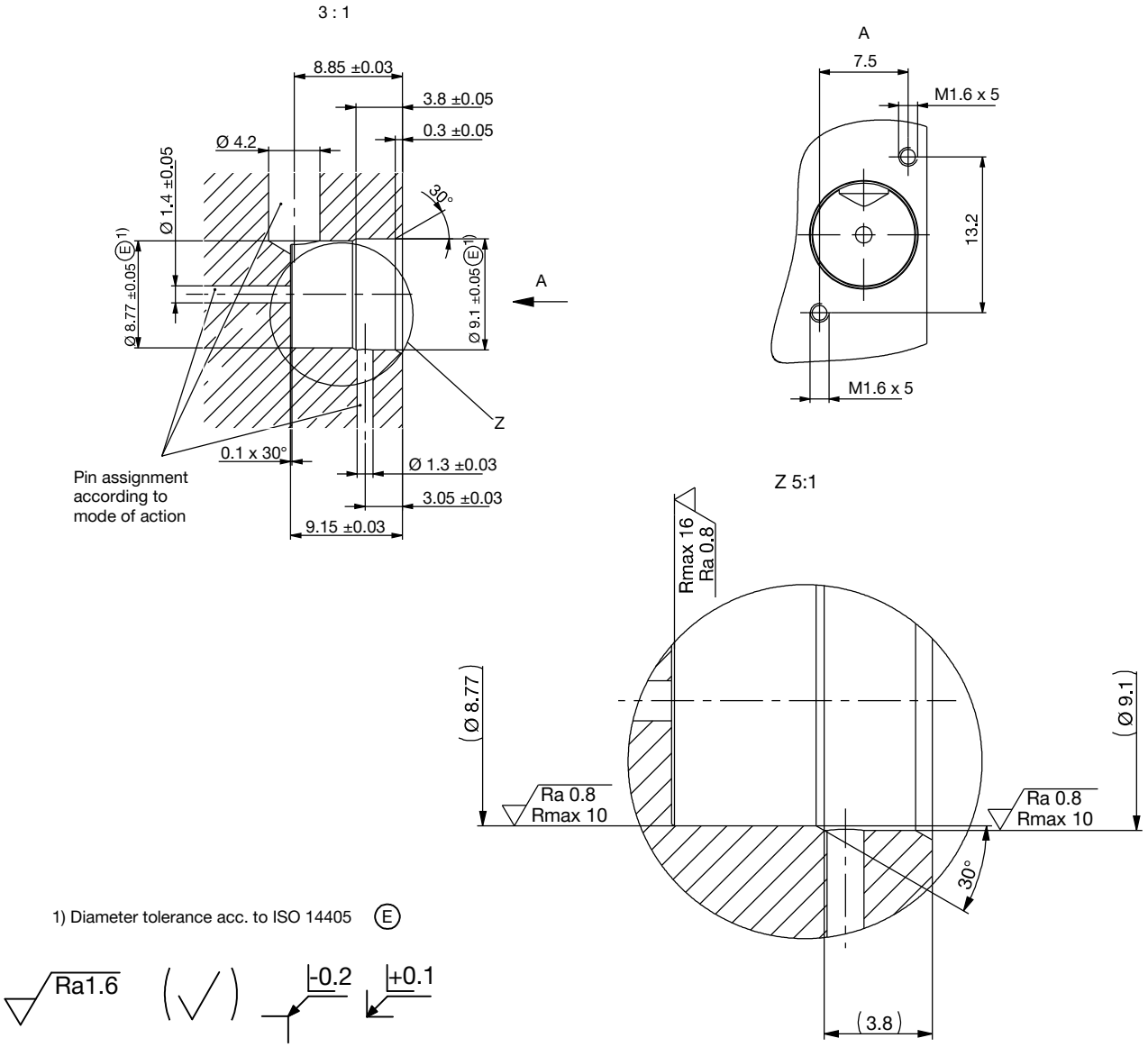
Defining of the installation area

Fully sunken cartridge

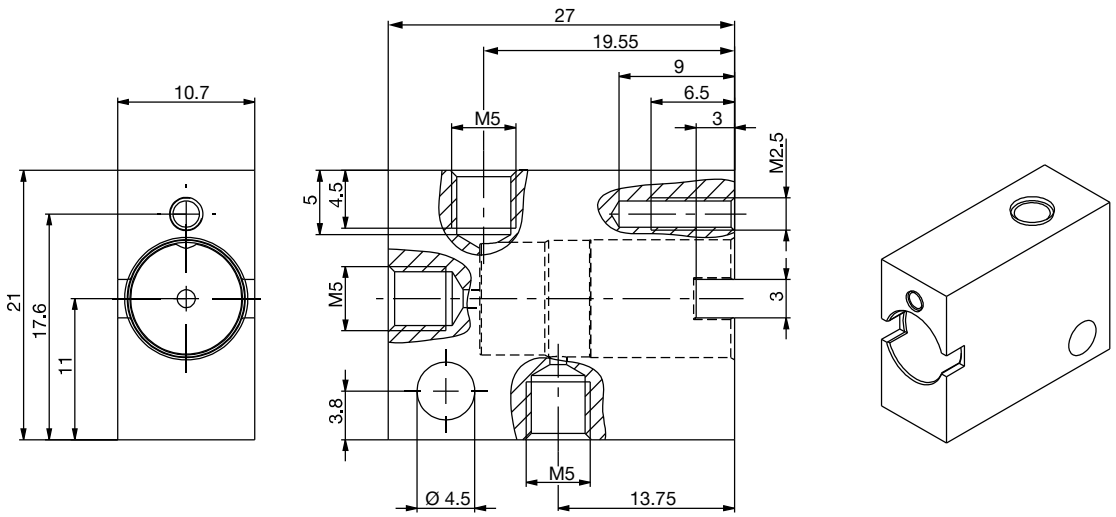


Defining of the installation area

Half sunken Cartridge with retaining bracket



Manifold fully sunken (accessories)



Ordering chart

Circuit function	Port connection	Orifice ventilation 1-2	Orifice ventilation 2-3	Q_{Nn} value 1-2 air [l/min][3]	Q_{Nn} value 2-3 air [l/min][3]	Pressure range [bar]	Voltage	Power rating [W]	Article no. with connection pin
C 3/2 way direct-acting, impulse solenoid valve, normally closed	Bürkert Cartridge port connection	0.5	0.65	6	9.5	Vac.-9[1]	12	0.7	273612
		0.5	0.65	6	9.5	Vac.-9[1]	24	0.7	272893
		0.5	0.65	6	9.5	2.5...10	24	0.7	281022
		0.8	1.1	16	20	Vac.-7.5[1]	24	2.8/0.3[2]	285701
		1	1.1	20	20	Vac.-5[1]	24	2.8/0.3[2]	285700
		1.2	1.1	25	22	Vac.-1.5[1]	24	2.8/0.3[2]	272894
D 3/2 way direct-acting solenoid valve, normally open	Bürkert Cartridge port connection	0.65	0.5	6.5	6	Vac.-6[1]	12	0.7	273615
		0.65	0.5	6.5	6	Vac.-6[1]	24	0.7	273614
T 3/2 way direct-acting solenoid valve, flow direction optional	Bürkert Cartridge port connection	0.5	0.65	6	6	Vac.-4[1]	24	0.7	292608

1) Vac. corresponds to -0.8 bar relative
2) External electric power reduction necessary
3) Measurement at +20 °C, 6 bar pressure at the valve input and 1 bar pressure difference

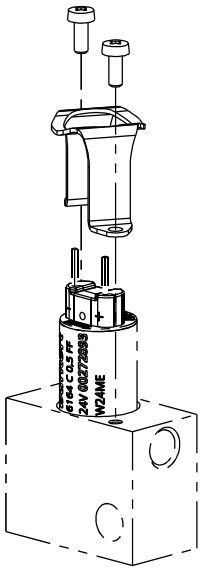
Ordering chart Ex version

Circuit function	Port connection	Orifice ventilation 1-2	Orifice ventilation 2-3	Q_{Nn} value 1-2 air [l/min][5]	Q_{Nn} value 2-3 air [l/min][5]	Pressure range [bar]	Resistance with 20 °C [Ω]	Min. holding current [mA]	Article no. with connection pin
C 3/2 way direct-acting, impulse solenoid valve, normally closed	Bürkert Cartridge port connection	0.5	0.65	6	9.5	Vac.-6[1]	320	29	289027
							510	23	289028
D 3/2 way direct-acting solenoid valve, normally open	Bürkert Cartridge port connection	0.65	0.5	6.5	6	Vac.-4[4]	320	29	on request

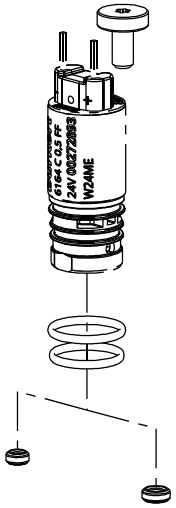
4) Vac. corresponds to -0.8 bar relative
5) Measurement at +20 °C, 6 bar pressure at the valve input and 1 bar pressure difference

Accessories

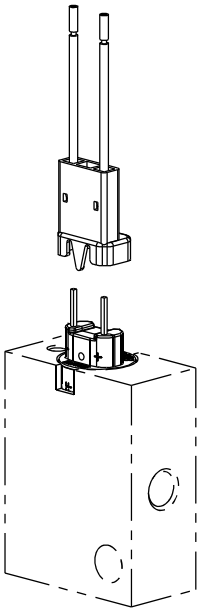
Mounting bracket for semi-submerged configuration



Spare part set O-ring and fixing screw



Plug with IP40 locking



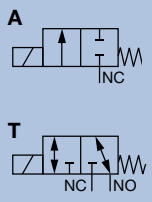
Description	Article no.
Manifold 1place, brass	695913
Spare part set for Type 6164	696033
Mounting bracket Set for Type 6164	696032
Plug IP40 for Type 6164	695951

Note:

Max. tightening of the screws (see manual)

2/2 and 3/2 way Flipper Solenoid Valve, with hermetic isolation of fluid

- Low internal volume
- High chemical resistance
- Low power consumption
- Impulse version
- High back pressure tightness



Thanks to the patented Bürkert flipper technology, the direct-acting 6604 solenoid valve is unique. It combines fast, precise switching behaviour with reliable media separation, and the design eliminates heat transfer between fluid and coil. The use of high quality materials makes it possible to also use it where high chemical resistance is required. The optional impulse model works with the smallest energy requirement, and is therefore especially suitable for battery operation; the heat transfer to the medium is negligible for this model. A minimal dead volume and gap-free internal design make it possible to use it in medical, analytical and laboratory technology.

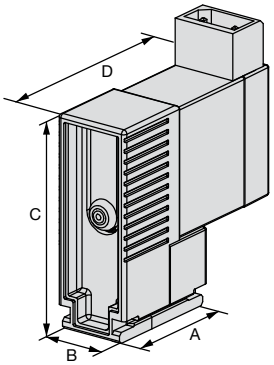
Technical data

Orifice	DN0.6
Body material	PEEK
Seal material	FFKM (Perfluorelastomer)
Medium	Resistant to neutral and aggressive liquids and gases, see Bürkert chemical resistance chart; technical vacuum
Medium temperature	0 °C...+50 °C
Ambient temperature	Max. +55 °C
Viscosity	Max. 21 mm²/s
Internal volume Fluid chamber 3/2 way versions 2/2 way versions	 Ca. 15µl Ca. 45µl Ca. 35µl
Port connection	Flange
Manual override	Push-button
Operating voltage	6, 12, 24 V DC[1)]
Voltage tolerance	±10 %
Power consumption	1.5 W
Duty cycle **with manifold mounting** (in case Medium or ambient temperature higher +40 °C)	100 % continuous rating 40 % intermittent rating (within 10 min)
Cycling function	Monostable or bistable (option)
Electrical connections	Rectangular plug 2505 or 2 single flying leads, 300 mm. Not included.
Protection class	IP40 with rectangular plug
Mounting (sub-base valve)	With holders and mounting screw
Installation	As required, preferably with flange downwards

1) 10 % residual ripple allowed

Dimensions [mm]

Flange connection



Version	A	B	C	D
Flange connection	24.8	11	29.5	31.9

Options

- Further port connections
- Further versions see data sheet or on request

Ordering chart

Circuit function	Orifice [mm]	K_V value water [m^3/h]	K_V value ll water [l/min]	Q_{Nn} value air [l/min]	Pressure range [bar]	Electrical connection	Article no. per Voltage/frequency [V/Hz] Cycling function			
							monostable		bistable (impulse)	
							012/DC[1)]	024/DC[1)]	06/DC[1)]	012/DC[1)]
Valves with flange										
A 2/2 way direct-acting solenoid valve, normally closed	0.6	0.006	0.1	6.4	Vac. -3	Rectangular plug 5.08 mm	145467	140464	140467	143170
						Flying leads 300 mm	140465	140466	140468	145467
T 3/2 way direct-acting solenoid valve, flow direction optional	0.6	0.006	0.1	6.4	Vac. -3	Rectangular plug. 5.08 mm	140469	140470	140473	141388
						Flying leads 300 mm	140471	140472	140474	145470

1) 10 % residual ripple allowed

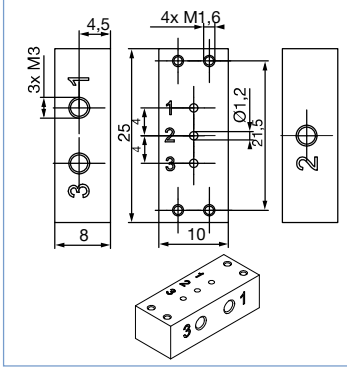
Accessories

Description	Feature	Article no.
Rectangular cable plug Type 2505 - see Type 2505 ▶		
Raster 5.08 mm	3 m cable	133486
Raster 5.08 mm	300 mm flying leads	644068
Raster 5.08 mm	2 single contacts	644067

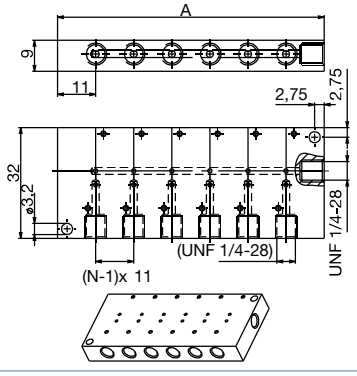
Quantity of valves places	Dimensions A [mm]	Article no.
Manifolds for Type 6604		
Single manifold in stainless steel	10	644684
2 valves	33	659285
3 valves	44	659286
4 valves	55	659287
5 valves	66	653131
6 valves	77	659288
7 valves	88	659289
8 valves	99	659290
9 valves	110	659291
10 valves	121	651379

Manifold dimensions [mm]

Single manifold M3, stainless steel



Multistation manifold, PEEK



No. of valve positions	2	3	4	5	6	7	8	9	10
Dimensions A [mm]	33	44	55	66	77	88	99	110	121

2/2 and 3/2 way Rocker Solenoid Valve for analytical applications

- With isolating diaphragm
- For aggressive media
- Zero dead volume
- Also suitable for vacuum
- 16 mm width
- High back pressure tightness

The direct-acting rocker solenoid valve, Type 6606 (2/2 and 3/2 way), has minimal dead volume and low-gap, plus an easy to wash inside contour. The medium is exposed only to the housing material and the seal. The heat transfer into the medium is minimal, since the housing is also separated from the coil by a stainless steel plate. The valve is particularly suitable for dosing, filling, mixing and dispensing small quantities of corrosive medium optimal.

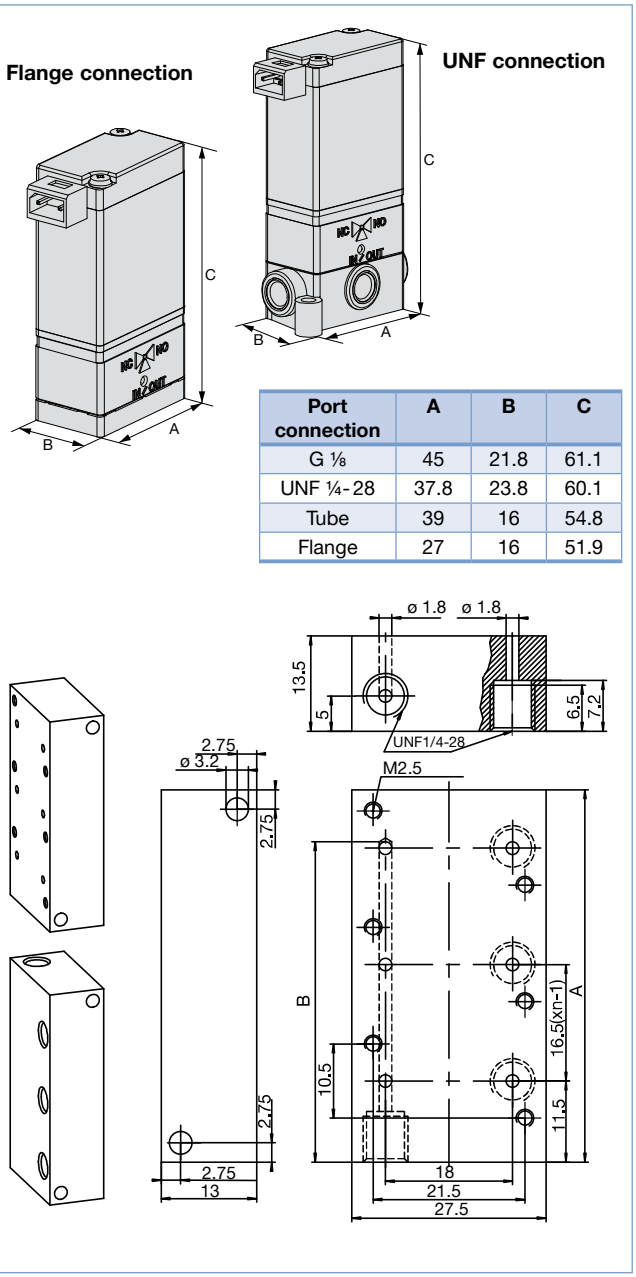
Technical data

Pressure range	Vac - 2 bar
Medium temperature	0 °C...+50 °C
Ambient temperature	Max. +55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Body material	PEEK, PVDF, ETFE
Seal material	FFKM
Power consumption	3.4 W
Protection class	IP65 with flying leads or with cable plug IP40 with rectangular plug
Electrical connection	- Rectangular plug, Type 2505 - Tag connection acc. to DIN EN 175301-803 (previously DIN 43650) for cable plug, Form C - 2 FEP flying leads, AWG 24, 500 mm long - Circular connector and spade connection at side on request
Response times	Acc. to ISO 12238:2001; measured at valve outlet at 2 bar and +20 °C
Opening	Ca. 25 ms (pressure rise from 0...10 %)
Closing	Ca. 25 ms (pressure drop 100...90 %)
Internal volume	Depending on body
at G/NPT ⅛	85 µl
with Flange	68 µl
at UNF body	30 µl (2/2), 55 µl (3/2)
on request	<10 µl

Options

- Further versions see data sheet or on request

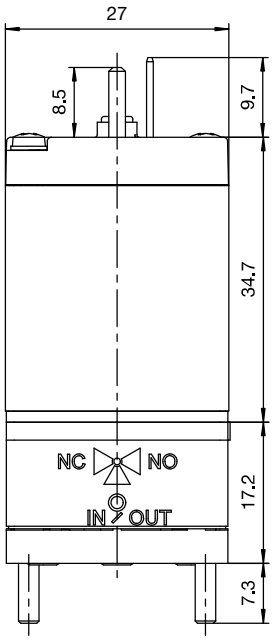
Dimensions [mm]



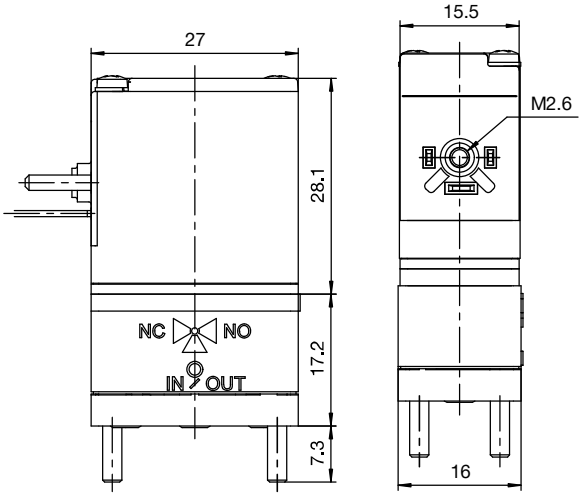
Port connection	A	B	C
G ⅛	45	21.8	61.1
UNF ¼-28	37.8	23.8	60.1
Tube	39	16	54.8
Flange	27	16	51.9

Dimensions [mm]

Bürkert Manifold connection

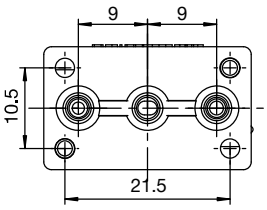


Spade connection on top

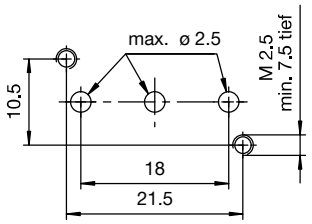


Spade connection on side

bottom view

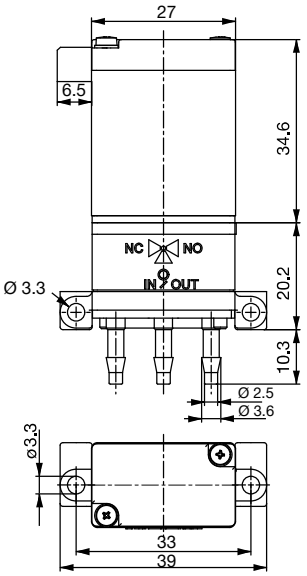


flange interface for manifold



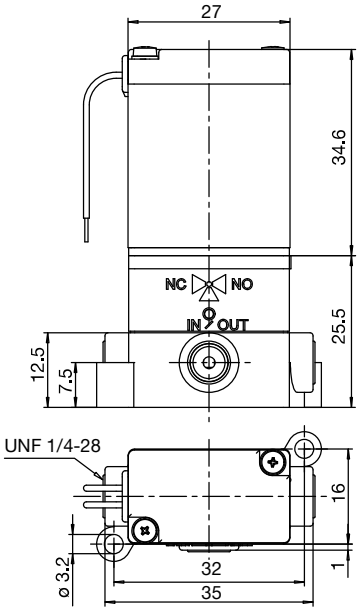
The middle port does not apply for the 2/2 way function

Valve with barb tube fittings and rectangular plug



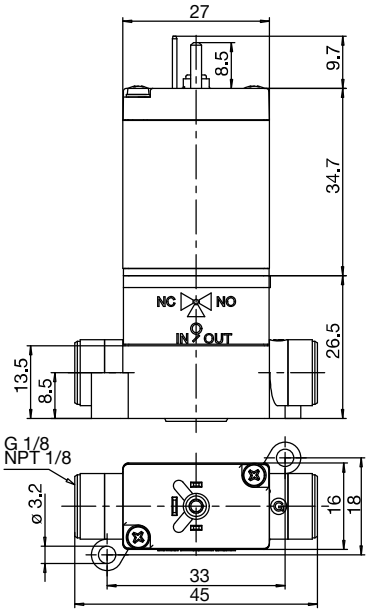
For the 2/2 way version the NO port does not apply

Valve with UNF ¼- 28 and flying lead



For the 2/2 way version the NO port does not apply

Valve with G ⅛ or NPT ⅛ and spade connection on top



For the 2/2 way version the middle port does not apply

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m³/h][1]	K_V value water [l/min]	Q_{Nn}-value air [l/min]	Pressure range [bar][2]	Body material	Electrical connection	Voltage/ frequency [V/Hz]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	UNF ¼-28	1.5	0.039	0.66	42	Vac. -2	ETFE	Flying leads, 500 mm	024/DC	137759
	G ⅛	1.6	0.060	1.02	65	Vac. -2	PVDF	Rectangular plug	024/DC	139146
								Tag connector sidewards	024/DC	137746
	Tube spigot	1.6	0.039	0.66	42	Vac. -2	PVDF	Flying leads, 500 mm	024/DC	137764
								Rectangular plug	024/DC	139147
	Bürkert Flange connection	1.6	0.039	0.66	42	Vac. -2	PEEK	Flying leads, 500 mm	012/DC	137744
									024/DC	137745
								Tag connector sidewards	024/DC	137741
B 2/2 way direct-acting solenoid valve, normally open	G ⅛	1.6	0.060	1.02	65	Vac. -2	PVDF	Tag connector sidewards	024/DC	137747
T 3/2 way direct-acting solenoid valve, flow direction optional	UNF ¼-28	1.5	0.025	0.43	27	Vac. -2	ETFE	Flying leads, 500 mm	024/DC	137779
	G ⅛	1.6	0.047	0.80	51	Vac. -2	PVDF	Flying leads, 500 mm	024/DC	137771
								Rectangular plug	024/DC	139149
								Tag connector sidewards	024/DC	137769
	Tube spigot	1.6	0.025	0.43	27	Vac. -2	PVDF	Flying leads, 500 mm	012/DC	137782
									024/DC	137783
								Rectangular plug	024/DC	139150
								Tag connector sidewards	012/DC	137781
	Bürkert Flange connection	1.6	0.032	0.54	35	Vac. -2	PEEK	Flying leads, 500 mm	024/DC	137768
								Rectangular plug	024/DC	139148
								Tag connector sidewards	012/DC	137766
									024/DC	137765

1) Measured at +20 °C , 2 bar pressure at valve inlet and 1 bar at outlet
2) Gauge pressure with respect to the prevailing atmosphere pressure

Note: Cable plug, see **Type 2505** ▸ and **Type 2516** ▸

Ordering chart

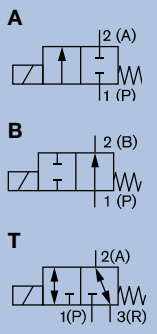
Number of valve stations	Dimensions A [mm]	Article no.
Manifolds		
2	37.50	651506
3	53.75	651510
4	70.25	651507
5	86.75	651508
6	103.30	651509
7	119.80	651521
8	163.30	651522

Standard distributor/collector: a common In/Output, individual Out/Input (all UNF ¼…28) supplied without valves; PEEK material

2/2 and 3/2 way Bürkert TwinPower Rocker-Solenoid Valve with separating diaphragm

6624 TwinPower

- For highest chemical resistance requirements
- Ultra compact design due to Bürkert Twinpoweractuatur with 10.3 mm width
- DN0.8 (5 bar) and DN1.6 (2 bar)
- Integrated hit and hold electronic
- High back pressure tightness with excellent cleanability

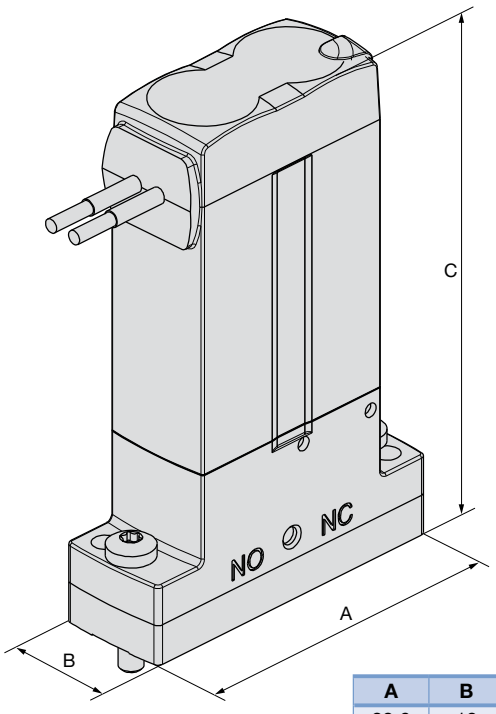


Type 6624 combines the reliable and successful Rocker principle with a highly innovative new actuator. The Bürkert TwinPower concept of this actuator reduces the size greatly without loss in performance. Hence the 10 mm wide medium isolated rocker valve, 6624, with a 1.6 mm orifice and a pressure resistance of 2 bar, provides the same performance as a traditional 16 mm valve. In addition, the integrated power reduction decreases the energy consumption by 75 %. In combination with other design features the heat transfer into the medium can be reduced to a minimum.
In the design of the 6624, the main benefits lie in its excellent cleanability and a high reliability. By using high performance materials the 6624 suits the handling of aggressive medium perfectly. The valve is available in a 2 way and 3 way version.

Technical data

Orifice	DN0.8 mm (Vac…5 bar), DN1.6 mm (Vac…2 bar)
Body material	PEEK/PPS
Seal material	FFKM/FKM/EPDM
Medium	Resistant to neutral and aggressive gases and liquids acc. to our chemical resistance chart
Medium temperature	
FFKM	+15 °C…+50 °C
FKM	-10 °C…+50 °C
EPDM	-10 °C…+50 °C (for orifice DN0.8) +5 °C…+50 °C (for orifice DN1.6)
Ambient temperature	
FFKM	+15 °C…+55 °C
FKM	-10 °C…+55 °C
EPDM	-10 °C…+55 °C
Internal volume	<100 µl
Port connection	Sub-base/UNF/Tube connection
Electrical connection	Flying leads, Rectangular plug
Power supply	24 V[1]/12 V[1]
Voltage tolerance	
24 V	±10 %[2]
12 V	+10 %/-5 %[2]
Nominal power consumption	4 W inrush power 1 W nominal holding power (internal power reduction)
Duty cycle	100 % continuous rating
Installation	As required
Protection class	IP40

Dimensions [mm]



A	B	C
29.6	10	44.4

Switching frequency	Max. 5 Hz[3]
Response times[3]	Acc. DIN 12238
opening	ca. 10 ms (Pressure rise 0…10 %)
closing	ca. 13 ms (Pressure drop 100…90 %)

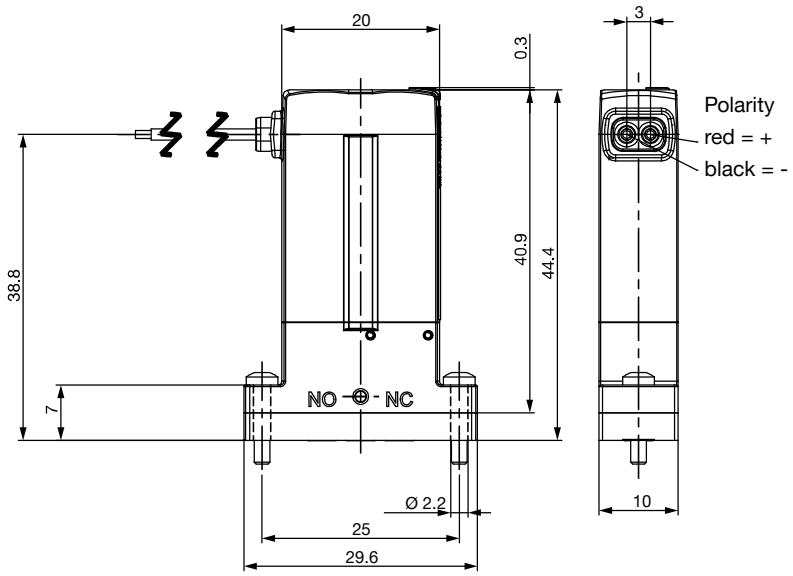
1) Battery voltage, observe polarity (red = +, black = –)
2) Max. allowed ripple
3) with ambient temperature of 20 °C

Options

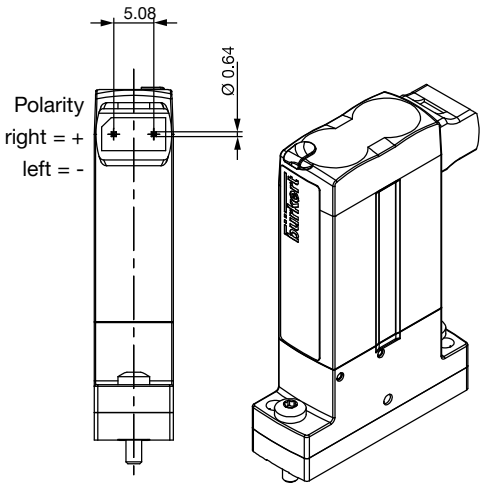
- Further versions see data sheet or on request

Dimensions [mm]

Electrical connections: flying leads

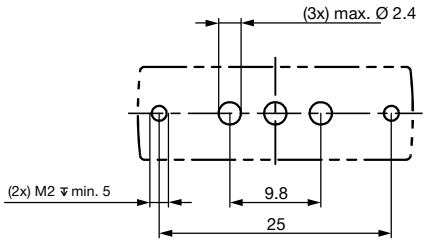


Electrical connections: rectangular plug

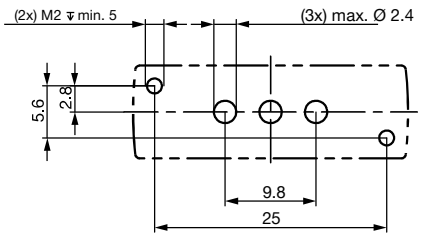


Sub-base body for 3/2 way connection

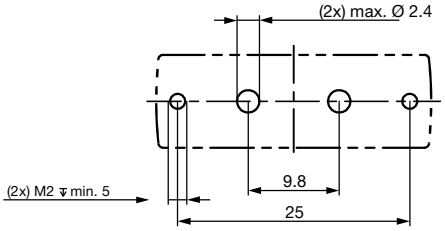
preferred threaded connection

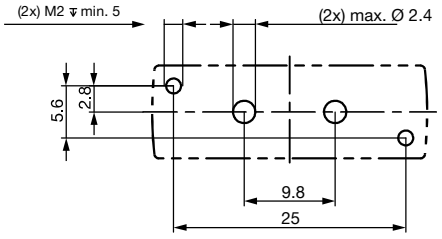


further possible threaded connection



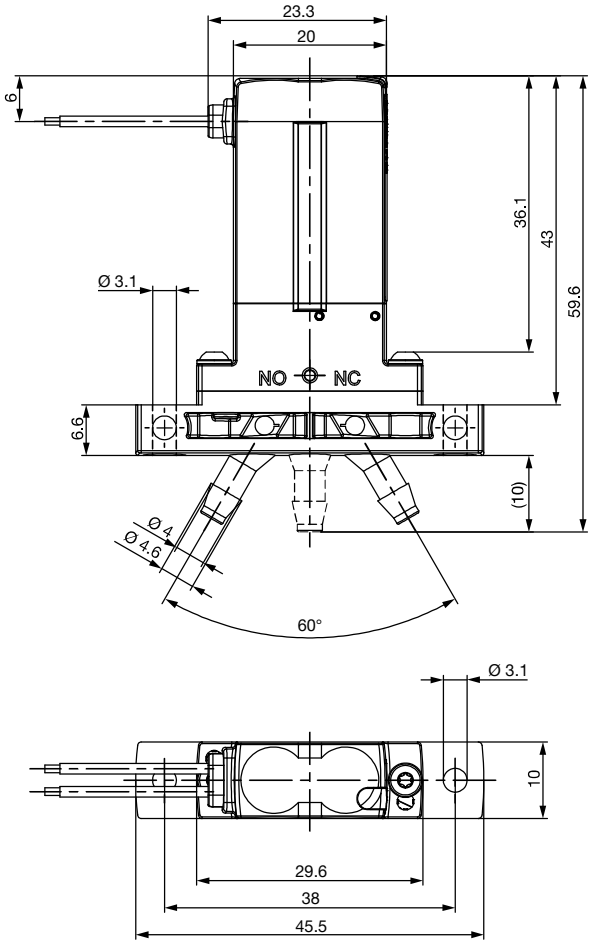
Sub-base body for 2/2 way connection



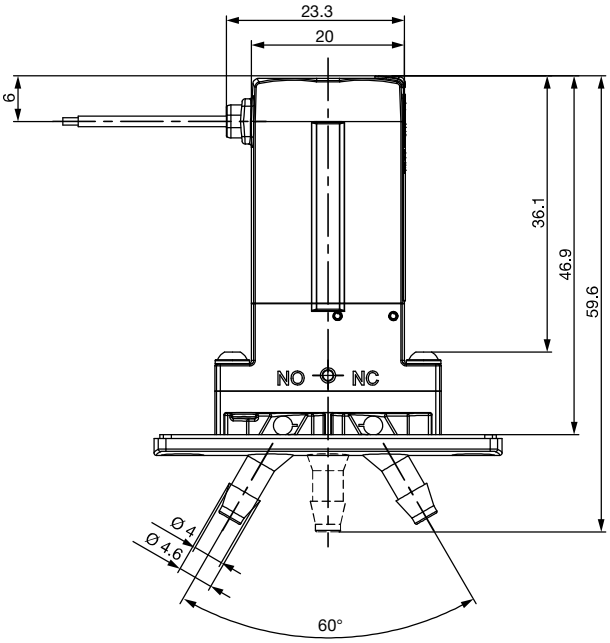


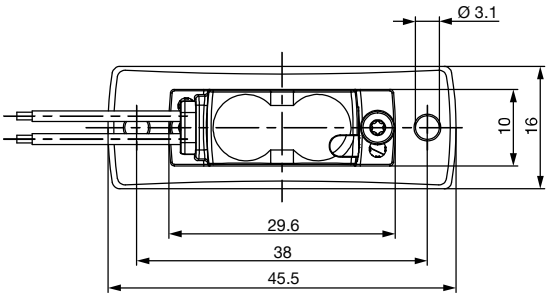
Dimensions [mm]

Tube connector housing

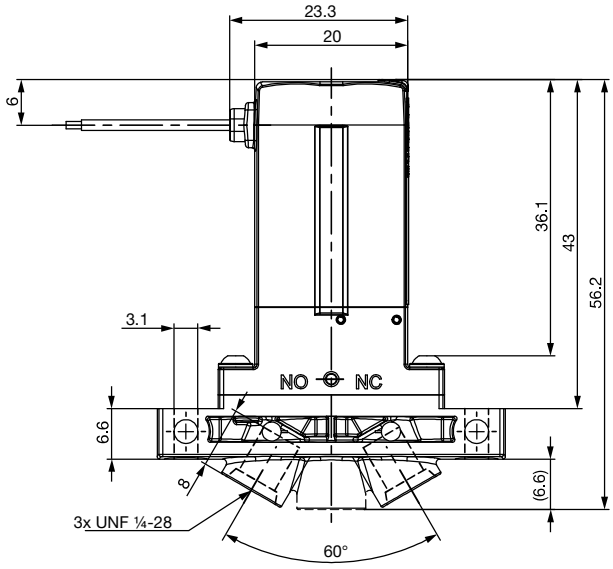


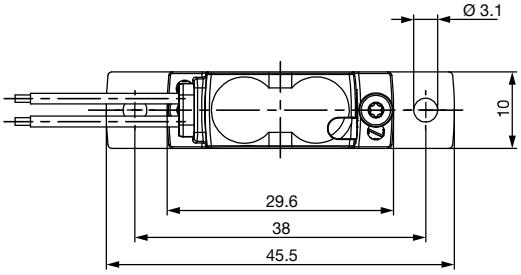
Tube connector housing with shield





Body UNF ¼- 28 Flat-Bottom





Ordering chart

Circuit function	Orifice [mm]	Port connection	K_v value water [m/h][1]	Pressure range [bar][2]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Flying leads	12	241341
	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Rectangular plug[3]	12	241398
	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Flying leads	24	241342
	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Rectangular plug[3]	24	241399
	0.8	Sub-base	0.01	Vac…5	5	FFKM	PEEK	Flying leads	12	241344
	0.8	Sub-base	0.01	Vac…5	5	FFKM	PEEK	Flying leads	24	227015
	0.8	Sub-base	0.01	Vac…5	5	FKM	PPS	Rectangular plug[3]	12	241405
	0.8	Sub-base	0.01	Vac…5	5	FKM	PPS	Flying leads	24	241351
	0.8	UNF	0.01	Vac…5	5	FFKM	PEEK	Flying leads	24	241346
	0.8	UNF	0.01	Vac…5	5	FKM	PEEK	Flying leads	24	241349
	0.8	UNF	0.01	Vac…5	5	FKM	PEEK	Rectangular plug[3]	24	241404
	1.6	Sub-base	0.04	Vac…2	2	EPDM	PPS	Rectangular plug[3]	12	241412
	1.6	Sub-base	0.04	Vac…2	2	EPDM	PPS	Rectangular plug[3]	24	241413
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Flying leads	12	241359
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Rectangular plug[3]	24	229429
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Flying leads	12	241367
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Rectangular plug[3]	12	241424
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Flying leads	24	241368
	1.6	UNF	0.04	Vac…2	2	EPDM	PEEK	Rectangular plug[3]	24	241411
	1.6	UNF	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	241361
	1.6	UNF	0.04	Vac…2	2	FKM	PEEK	Flying leads	24	241366
	1.6	UNF	0.04	Vac…2	2	FKM	PEEK	Rectangular plug[3]	24	241423
	1.6	Tube	0.04	Vac…2	2	EPDM	PEEK	Rectangular plug[3]	24	241409
	1.6	Tube	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	237705
	1.6	Tube	0.04	Vac…2	2	FKM	PEEK	Flying leads	24	241363
	1.6	Tube	0.04	Vac…2	2	FKM	PEEK	Rectangular plug[3]	24	241421
B 2/2 way direct-acting solenoid valve, normally open	0.8	Sub-base	0.01	Vac…5	5	FFKM	PEEK	Flying leads	24	on request
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	on request
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Rectangular plug[3]	24	on request

Ordering chart continued

Circuit function	Orifice [mm]	Port connection	K_v value water [m/h][1]	Pressure range [bar][2]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Article no.
T 3/2 way direct-acting solenoid valve, flow direction optional	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Rectangular plug[3]	12	241428
	0.8	Sub-base	0.01	Vac…5	5	EPDM	PPS	Rectangular plug[3]	24	241429
	0.8	Sub-base	0.01	Vac…5	5	FFKM	PEEK	Flying leads	12	241373
	0.8	Sub-base	0.01	Vac…5	5	FFKM	PEEK	Flying leads	24	222936
	0.8	Sub-base	0.01	Vac…5	5	FKM	PPS	Flying leads	24	241379
	0.8	Sub-base	0.01	Vac…5	5	FKM	PPS	Rectangular plug[3]	12	241435
	0.8	UNF	0.01	Vac…5	5	FFKM	PEEK	Flying leads	24	241375
	0.8	UNF	0.01	Vac…5	5	FKM	PEEK	Flying leads	24	241377
	0.8	UNF	0.01	Vac…5	5	FKM	PEEK	Rectangular plug[3]	24	241434
	1.6	Sub-base	0.04	Vac…2	2	EPDM	PPS	Rectangular plug[3]	12	241442
	1.6	Sub-base	0.04	Vac…2	2	EPDM	PPS	Rectangular plug[3]	24	241443
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Flying leads	12	239935
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	227815
	1.6	Sub-base	0.04	Vac…2	2	FFKM	PEEK	Rectangular plug[3]	24	229430
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Flying leads	12	241394
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Rectangular plug[3]	12	241453
	1.6	Sub-base	0.04	Vac…2	2	FKM	PPS	Flying leads	24	241395
	1.6	UNF	0.04	Vac…2	2	EPDM	PEEK	Rectangular plug[3]	24	241441
	1.6	UNF	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	241389
	1.6	UNF	0.04	Vac…2	2	FKM	PEEK	Rectangular plug[3]	24	241452
	1.6	UNF	0.04	Vac…2	2	FKM	PEEK	Flying leads	24	241393
	1.6	Tube	0.04	Vac…2	2	EPDM	PEEK	Rectangular plug[3]	24	241439
	1.6	Tube	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	241387
	1.6	Tube[4]	0.04	Vac…2	2	FFKM	PEEK	Flying leads	24	242320
	1.6	Tube	0.04	Vac…2	2	FFKM	PEEK	Rectangular plug[3]	24	241445
	1.6	Tube	0.04	Vac…2	2	FKM	PEEK	Flying leads	24	241391
	1.6	Tube	0.04	Vac…2	2	FKM	PEEK	Rectangular plug[3]	24	241450

1) Measured at + 20 °C, 1 bar pressure at value inlet and free outlet.
2) Measured as overpressure with respect to atmospheric pressure.
3) Rectangular cable plug with 300 mm flying leads; Article no. 644068 (please order separately)
4) Housing has a shield for easy separation of electronics and fluidics.

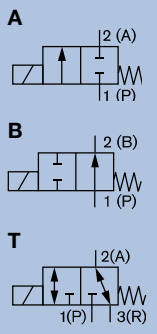
Accessories

Features	Article no.
Rectangular plug Type 2505 with 3 m cable	133486
Rectangular plug Type 2505 with 300 mm flying leads	644068
Rectangular plug Type 2505, single contact for individual mounting	644067
foamed EPDM gasket for tube connector housing with shield	685294
EPDM dust protection	on request

2/2 and 3/2 way solenoid valve for analytical applications

6626

- 16 mm width
- Orifice DN2.0...DN3.0 with pressure range vacuum to 5 bar
- Medium separation, for aggressive fluids
- High back-pressure tightness
- Direct acting



Our revolutionary Twin-power technology operates with two coils. The innovative drive concept is combined with the proven rocker principle. The integrated power reduction decreases the energy consumption by 75 % and has the same features as a traditional 22 mm unit. In combination with other design features the heat transfer into the medium can be reduced to a minimum.

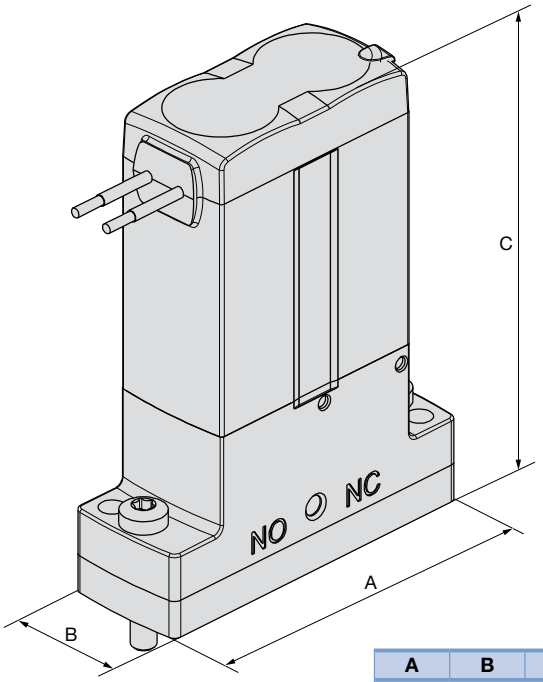
In the design of the 6626, the main benefits lie in its excellent cleanability and a high reliability. By using high performance materials the 6626 suits the handling of aggressive medium perfectly. The valve is available in a 2/2 way and 3/2 way version.

Technical data

Orifice	DN2.0...DN3.0
Body material	PEEK, PPS
Seal material	FFKM, FKM, EPDM
Medium	Resistant to neutral and aggressive fluids and gases; see Bürkert resistance table
Medium temperature	
FFKM	+15 °C...+50 °C
FKM	-10 °C...+50 °C
EPDM DN2.0	-10 °C...+50 °C
EPDM DN3.0	+5 °C...+50 °C
Ambient temperature	
FFKM	+15 °C...+55 °C
FKM	-10 °C...+55 °C
EPDM DN2.0	-10 °C...+55 °C
EPDM DN3.0	+5 °C...+55 °C
Internal volume	<470 µl
Port connection	Flange, UNF, G ⅛, tube
Electrical connection	Flying leads, Rectangular plug
Operating voltages	24 V[1], 12 V[1]
Voltage tolerance	24 V ±10 %[2] 12 V +10 % / -5 %[2]
Nominal power	13.6 W inrush power 3.4 W nominal holding current (internal power reduction)
Duty cycle	Continuous operation 100 % ED
Installation	As required
Protection class	IP40
Switching frequency	Max. 2 Hz[3]
Response times	Acc. ISO 12238
Opening	ca. 10 ms (Pressure rise 0...10 %)
Closing	ca. 15 ms (Pressure drop 100...90 %)

1) Battery voltage, check polarity (red= +, black= –)
2) Max. allowed ripple
3) at ambient temperature of 20 °C

Dimensions [mm]



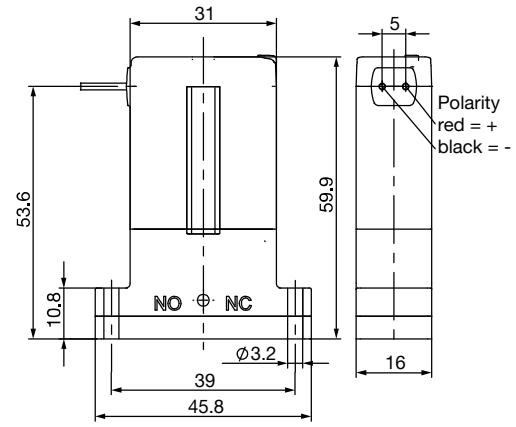
A	B	C
45.8	16	59.9

Options

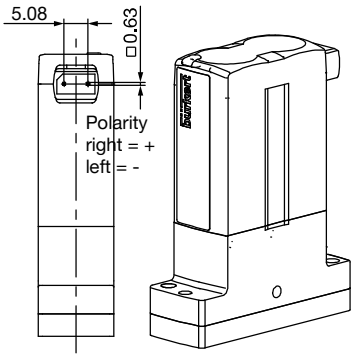
- Further versions see data sheet or on request

Dimensions [mm]

Electrical connections: flying leads

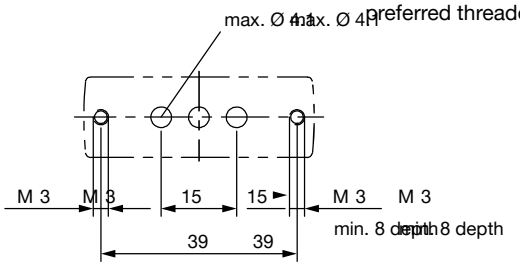


Electrical connections: rectangular plug

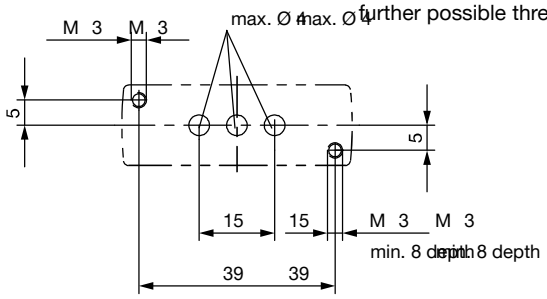


Sub-base body for 3/2 way connection

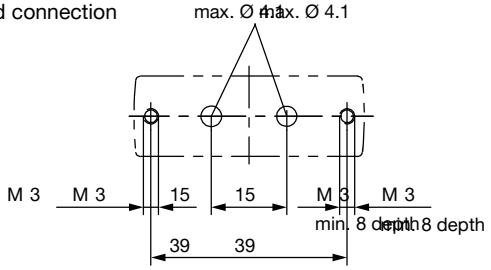
preferred threaded connection

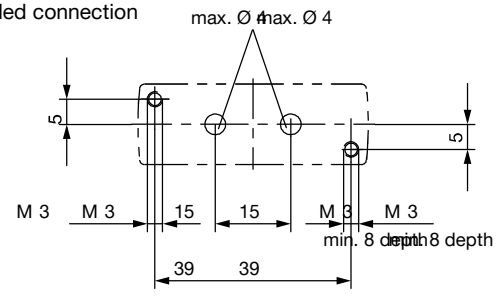


further possible threaded connection

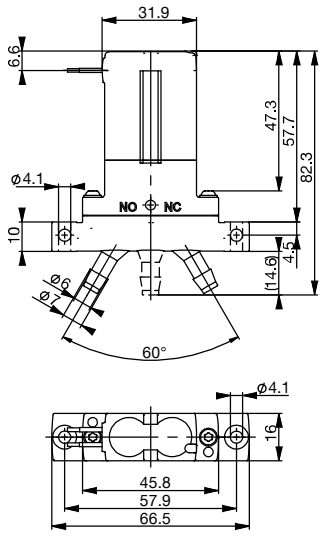


Sub-base body for 2/2 way connection

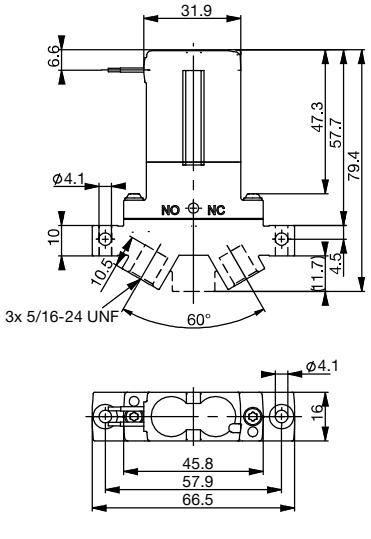




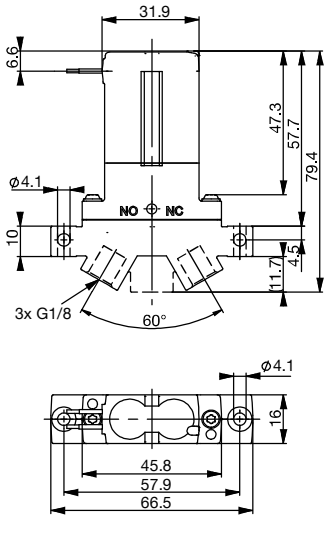
Body, tube connector



Body, UNF 5/16'' -24



Body, G1/8



Ordering chart

Circuit function	Orifice [mm]	Port connection	K_V value water [m^3/h][1]	Pressure range [bar][2]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	2.0	Sub-base	0.10	Vac. -3 (Vac. -5)	3 (5)	EPDM	PPS	Rectangular plug[3]	12	247769
									24	247771
				Vac. -3	3	FFKM	PEEK	Flying leads	12	247775
				Vac. -3 (Vac. -4)	3 (4)	FKM	PPS		24	247786
		UNF		Vac. -3	3	FFKM	PEEK			251709
				Vac. -3 (Vac. -4)	3 (4)	FKM		Rectangular plug[3]		252770
		G ⅛		Vac. -3	3	FFKM		Flying leads		234278
	3.0	Sub-base	0.19	Vac. -2	2	EPDM	PPS	Rectangular plug[3]	24	247797
						FFKM	PEEK			238530
						FKM	PPS		12	247816
								Flying leads	24	247819
		UNF	0.15			FFKM	PEEK			251711
						FKM				252771
								Rectangular plug[3]		252772
		Tube	0.19			EPDM				247789
						FFKM		Flying leads		228642
						FKM		Rectangular plug[3]		247810
B 2/2 way direct-acting solenoid valve, normally open	2.0	Sub-base	0.10	Vac. -3	3	FFKM	PEEK	Flying leads	24	252773
	3.0		0.19	Vac. -2	2					242597
								Rectangular plug[3]		245910

1) Measured at +20 °C, 1 bar pressure at value inlet and free outlet.
2) Measured as overpressure with respect to atmospheric pressure.
3) Rectangular cable to be ordered separately, selection option see accessories.

Note: ( ) Values in brackets apply only for gaseous media.

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_v value water [m^3/h][1]	Pressure range [bar][2]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage [V]	Article no.
T 3/2 way direct-acting solenoid valve, flow direction optional	2.0	Sub-base	0.10	Vac. - 3 (Vac. - 5)	3 (5)	EPDM	PPS	Rectangular plug[3]	24	247826
				Vac. - 3	3	FFKM	PEEK	Flying leads	12	247829
				Vac. - 3 (Vac. - 4)	3 (4)	FKM	PPS		24	247841
								Rectangular plug[3]	12	247838
		UNF		Vac. - 3	3	FFKM	PEEK	Flying leads	24	251713
				Vac. - 3 (Vac. - 4)	3 (4)	FKM				252774
								Rectangular plug[3]		252775
	3.0	Sub-base	0.19	Vac. - 2	2	EPDM	PPS	Rectangular plug[3]	12	247851
									24	247853
						FFKM	PEEK	Flying leads		234371
								Rectangular plug[3]		238531
						FKM	PPS		12	247874
								Flying leads	24	247877
		UNF	0.15			EPDM	PEEK	Rectangular plug[3]		252776
						FFKM		Flying leads		251715
		G ⅛	0.19			FKM		Rectangular plug[3]		247872
		Tube				EPDM				247844
						FFKM		Flying leads		247859
								Rectangular plug[3]		247858
						FKM		Flying leads		247869

1) Measured at + 20 °C, 1 bar pressure at value inlet and free outlet.
2) Measured as overpressure with respect to atmospheric pressure.
3) Rectangular cable to be ordered separately, selection option see accessories.

Note: ( ) Values in brackets apply only for gaseous media.

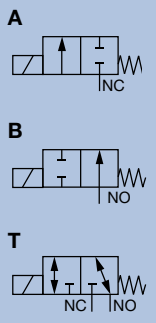
Ordering chart for accessories

Features	Article no.
Rectangular plug with 3 m cable	133486
Rectangular plug with 300 mm flying leads	644068
Rectangular plug, single contact for individual mounting	644067

2/2 and 3/2 way solenoid valve for analytical applications

6628

- 22 mm Installation width
- Isolating diaphragm for aggressive fluids
- High back-pressure tightness
- Minimal internal volume with good cleanability



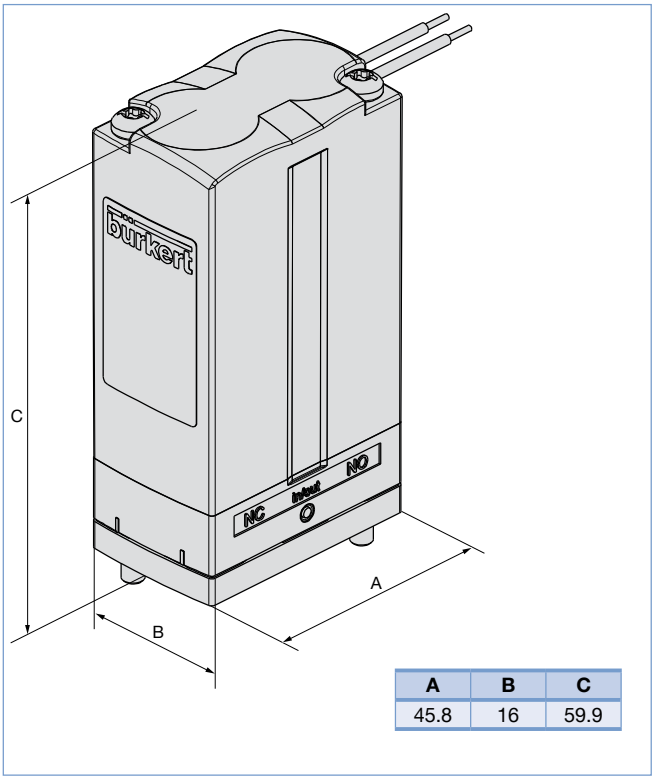
Direct acting medium separated 2/2 and 3/2 way rocker solenoid valve for control of aggressive fluids and gases in analytical medical applications, the food industry, and also the chemical industry for dosing, filling, mixing and distribution.

The medium is in contact with fluid housing and seal material solely through the isolating diaphragm. This valve with the new TwinPower actuator, robust screw-in connection and 22 mm installation width, will fulfil the highest requirements. The established rocker solenoid technology is characterized through full back pressure tightness, good rinsing capability and low internal volume. Type 6628 is available in different technical versions and by virtue of several body options, it offers a perfect adaption in fluid applications.

Technical data

Orifice	DN2.0 or DN3.0
Body material	PEEK or PPS (PVDF, PP on request)
Seal material	FFKM, FKM or EPDM
Medium	Resistant to neutral and aggressive gases and liquids acc. to our chemical resistance chart
Medium temperature FKM, EPDM, FFKM	0 °C...+55 °C +10 °C...+55 °C -10 °C...+55 °C
Ambient temperature FKM, EPDM, FFKM	0 °C...+55 °C +10 °C...+55 °C -10 °C...+55 °C
Internal volume	Ca. 200 µl
Viscosity	Max. ca. 21 mm²/s
Electrical connection	• PFA single flying leads, 0.5 mm², 500 mm • Rectangular plug for cable plug Type 2505 (not included) • Industry plug acc. to DIN 43650 Form B for cable plug Type 2507 (not included) • Circular connector M8 on request
Operating voltages	24 V DC, other voltages on request
Voltage tolerance	±10 %
Nominal power	5 W
Duty cycle	100 % continuous operation
Installation	As required, preferably with actuator upright

Dimensions [mm]



A	B	C
45.8	16	59.9

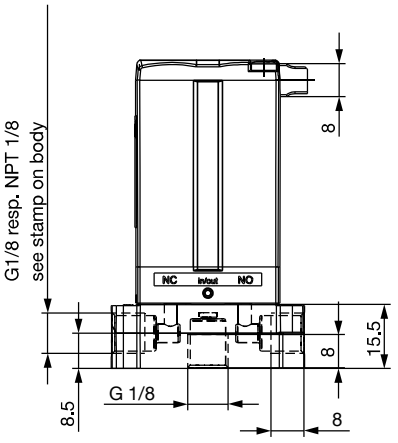
Protection class	IP54 (IP40 with rectangular plug Type 2505)
Response times	Measurement at valve output with 2 bar and 20 °C acc. to DIN ISO 12238:2001
Opening	25 ms (Pressure rise 0...10 %)
Closing	25 ms (Pressure drop 100...90 %)
Manual override	On request

Options

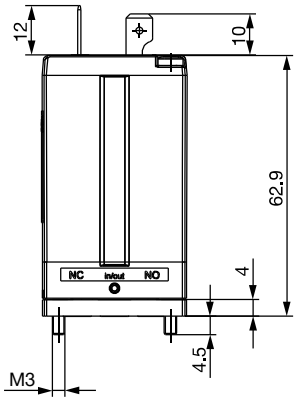
- Further versions see data sheet or on request

Dimensions [mm]

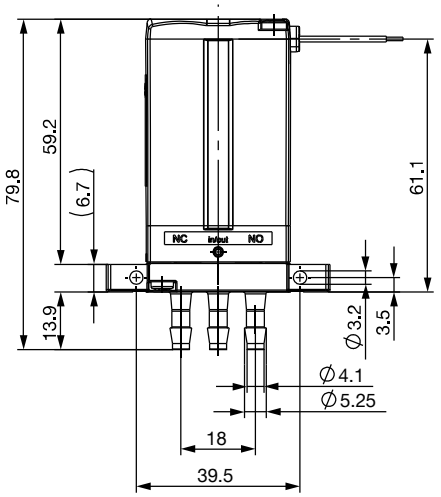
Threaded port version with Rectangular plug

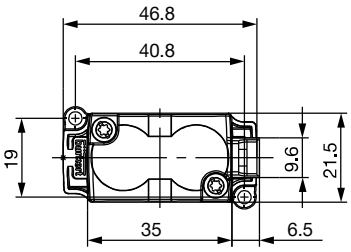


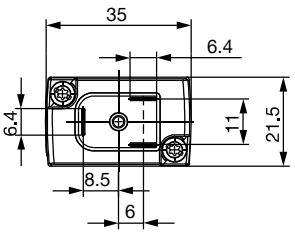
Flange version for Cable Plug

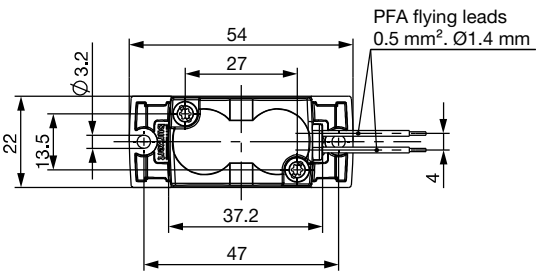


Barbed hose connector with Flying leads

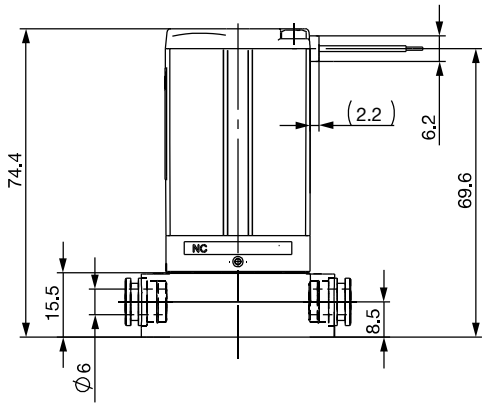


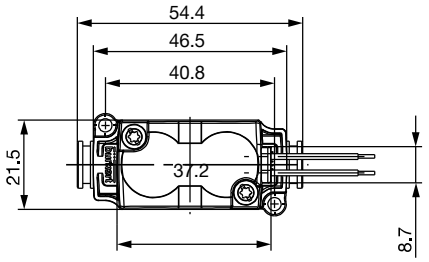




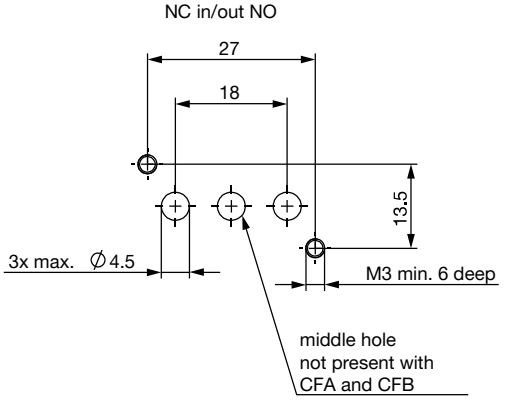


Push-in connector





Flange interface for manifold



Classification of fluid connections

CFA (Circuit function A)
2/2 way-valve, normally closed
inflow at „NC“-connector

CFB (Circuit function B)
2/2 way-valve, normally open
inflow at „NO“-connector

CFT (Circuit function T)
3/2 way-valve , universal
flow as required

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h]	Q_{Nn} value air [l/min]	Pressure range [bar]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage/ Frequency [V/Hz]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	2	Bürkert-Flange	0.1	110	Vac- 5	5	EPDM	PPS	Rectangular plug	24/DC	250857
									Flying leads, 500 mm		251614
	3		0.17	180	Vac- 3	3				12/DC	241727
									Rectangular plug	24/DC	246199
									Flying leads, 500 mm		242030
									Plug top		251643
		Hose connector						PEEK	Flying leads, 500 mm		251613
		G ⅛									236170
									Plug top		251644
	2	Bürkert-Flange	0.1	110	Vac- 5	5	FKM	PPS	Rectangular plug	24/DC	251618
									Flying leads, 500 mm		251620
	3		0.17	180	Vac- 3	3				12/DC	246382
									Rectangular plug	24/DC	248017
									Flying leads, 500 mm		251624
									Plug top		238616
		Hose connector						PEEK	Flying leads, 500 mm		251628
		G ⅛									242340
									Plug top		238615
		Push-in connection						PPS	Flying leads, 500 mm		251650
	2	Bürkert-Flange	0.1	110	Vac- 5	5	FFKM	PEEK	Rectangular plug	24/DC	235315
									Flying leads, 500 mm		234350
	3		0.17	180	Vac- 3	3				12/DC	235316
								PVDF			270082
								PEEK	Rectangular plug	24/DC	235317
								PVDF			270083
								PEEK	Flying leads, 500 mm		230304
								PVDF			270081
		Hose connector						PEEK			235318
		G ⅛									235319
B 2/2 way direct-acting solenoid valve, normally open	3	Bürkert-Flange	0.17	180	Vac- 3	3	FFKM	PEEK	Flying leads, 500 mm	24/DC	251686

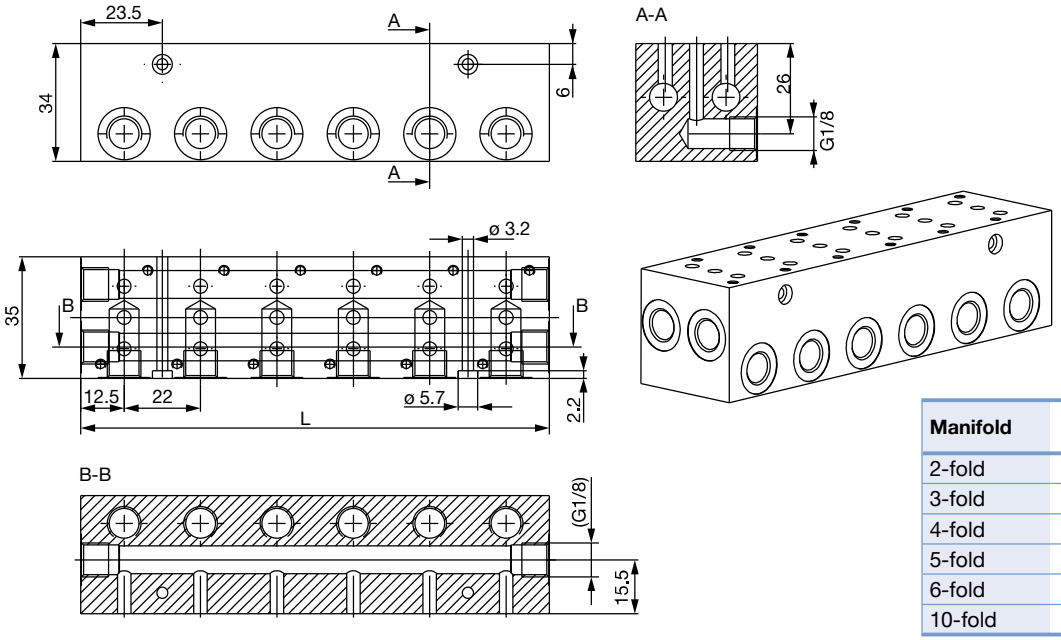
Ordering chart continued

Circuit function	Orifice [mm]	Port connection	K_v value water [m³/h]	Q_{Nn} value air [l/min]	Pressure range [bar]	Max. pressure difference [bar]	Seal material	Body material	Electrical connection	Voltage/ Frequency [V/Hz]	Article no.
T 3/2 way direct-acting solenoid valve, flow direction optional	2	Bürkert-Flange	0.1	110	Vac-5	5	EPDM	PPS	Rectangular plug	24/DC	250859
									Flying leads, 500 mm		241889
	3		0.17	180	Vac-2	2				12/DC	241726
									Rectangular plug	24/DC	251616
									Flying leads, 500 mm		245256
									Plug top		251645
		Hose connector						PEEK	Flying leads, 500 mm		251617
		G ⅛									245205
									Plug top		251647
	2	Bürkert-Flange	0.1	110	Vac-5	5	FKM	PPS	Rectangular plug	24/DC	251629
									Flying leads, 500 mm		251630
	3		0.17	180	Vac-2	2				12/DC	251633
									Rectangular plug	24/DC	251634
									Flying leads, 500 mm		251635
									Plug top		251684
		Hose connector						PEEK	Flying leads, 500 mm		251637
		G ⅛									251638
									Plug top		251649
		Push-in connection						PPS	Flying leads, 500 mm		251685
	2	Bürkert-Flange	0.1	110	Vac-5	5	FFKM	PEEK	Rectangular plug	24/DC	235320
									Flying leads, 500 mm		234340
	3		0.17	180	Vac-2	2				12/DC	235321
								PVDF			270079
								PEEK	Rectangular plug	24/DC	235322
								PVDF			270080
								PEEK	Flying leads, 500 mm		230305
								PVDF			270078
		Hose connector						PEEK			235323
		G ⅛									235325

- K_v value water [m³/h] max. flow rate for water measured at +20 °C, 1 bar pressure to atmosphere
- Rectangular plug types delivered without plug (see ordering chart for accessories)

Manifolds

Multiple Manifolds with individual service port (G ⅛) and diverter function on 2 common channels (G ⅛); Delivery without valves; Material: anodized aluminium



Manifold	L [mm]	Article no.
2-fold	47	669571
3-fold	69	672633
4-fold	91	669572
5-fold	113	672661
6-fold	135	669570
10-fold	223	672660

Note: Other versions on request.

Accessories

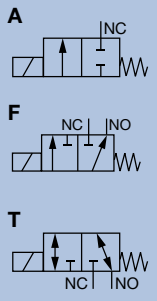
Description	Feature	Article no.
Rectangular cable plug Type 2505 - see Type 2505 ▸		
Raster 5.08 mm	3 m cable	133486
Raster 5.08 mm	300 mm flying leads	644068

Description	Voltage	Article no.
Cable plug Type 2507 acc. to industry standard Form B - see Type 2507 ▸		
without circuitry (standard)	0…250 V AC/DC	423845
with LED	24 V AC/DC	423849

2/2 and 3/2 way flipper solenoid valve for analytical applications

6650

- Only 4.5 mm wide
- Medium isolation, for aggressive fluids
- Direct-acting
- Short response times



With a width of only 4.5 mm, Type 6650 sets a new standard in medium isolation miniature solenoid valves. The optimized design enables reproducible and precise dosing, good rinsing capability and is suitable for the application of aggressive chemicals owing to the high quality of the materials used. With the two nominal sizes of 0.4 and 0.8 mm, as well as the selection between 2/2 way and 3/2 way function, it is ideal for applications where the highest fluid performances are required in the smallest space. Type 6650 opens up new possibilities, owing to the 4.5 mm station width, in particular in connection with dosing in 384-well microtiter plates.

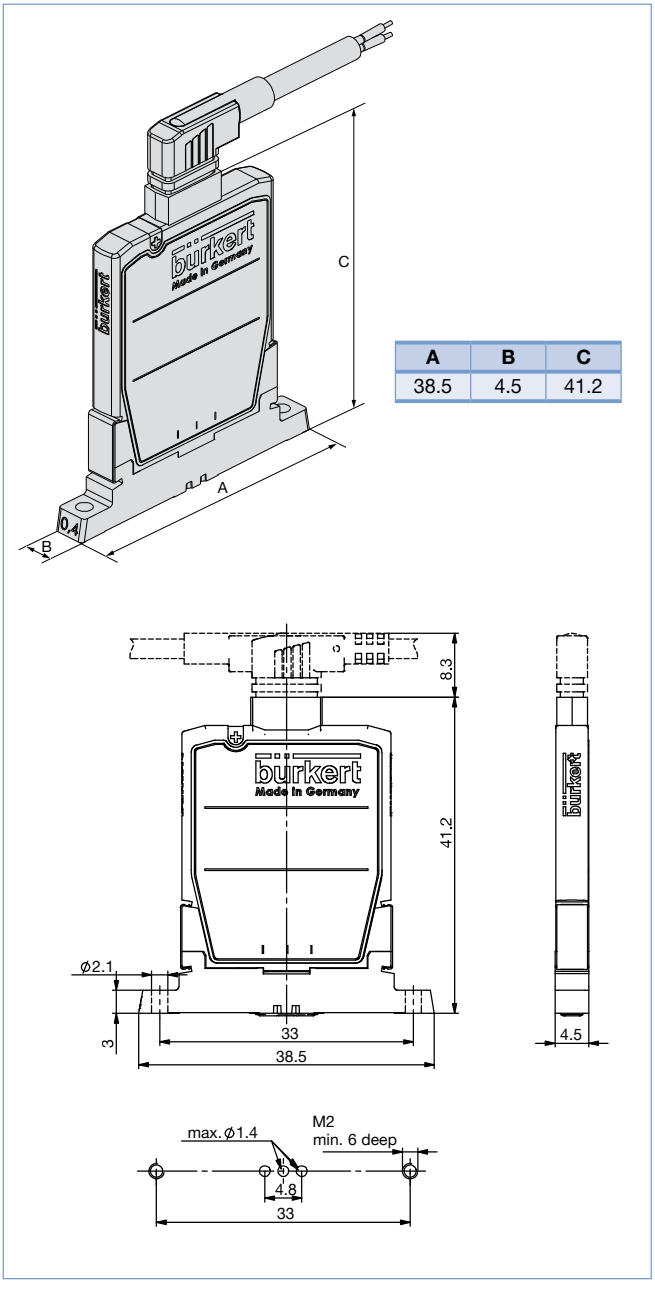
Technical data

Orifice	DN0.4 and DN0.8
Body material	PEEK
Seal material	FFKM (Simriz)
Medium	Resistant to neutral and aggressive fluids and gases; see Bürkert resistance table
Medium temperature	+15 °C…+50 °C
Ambient temperature	+10 °C…+50 °C
Internal volume	Approx. 30 µl
Port connection	Flange
Electrical connection	Plug Bürkert Type 2504 (not included)
Operating voltages	24 V (12 V on request)
Voltage tolerance	±10 %
Nominal power	5.7 W For 100 % duty cycle power has to be reduced externally.
Duty cycle	100 % continuous operation only with external power reduction
Installation	As required; with side by side connection standard polarity is adhered to
Protection class	IP65
Switching frequency	80 Hz (for mechanical limit observe maximum temperature) 15 Hz (continuous with external power reduction, for more information see manual)
Response times	<5 ms (acc. to ISO 12238)

Options

- Further versions see data sheet or on request

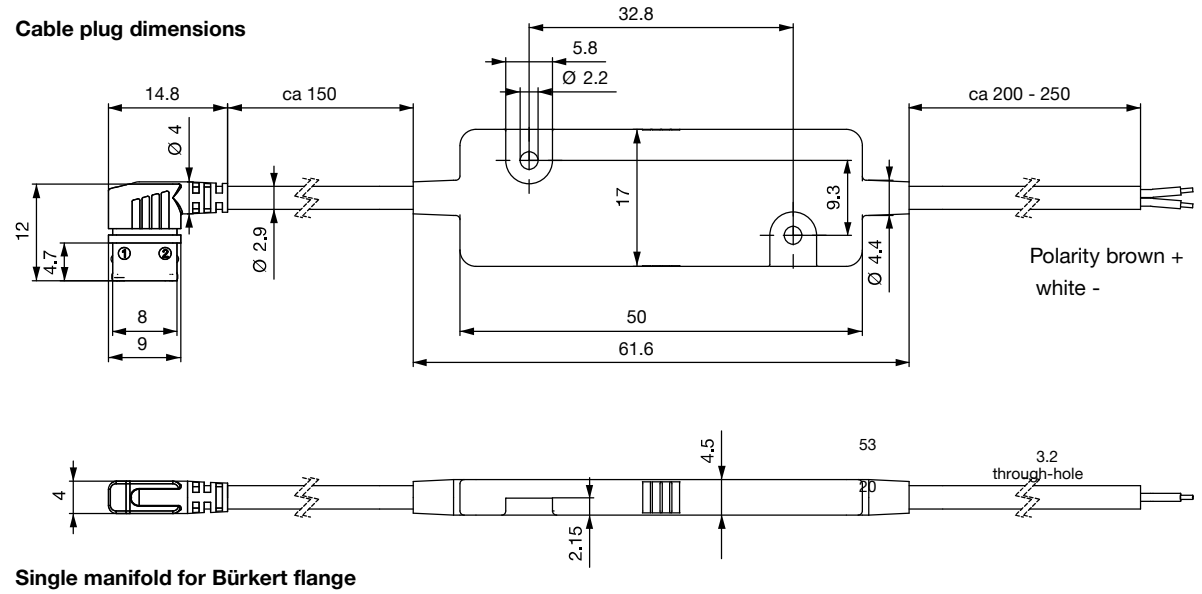
Dimensions [mm]



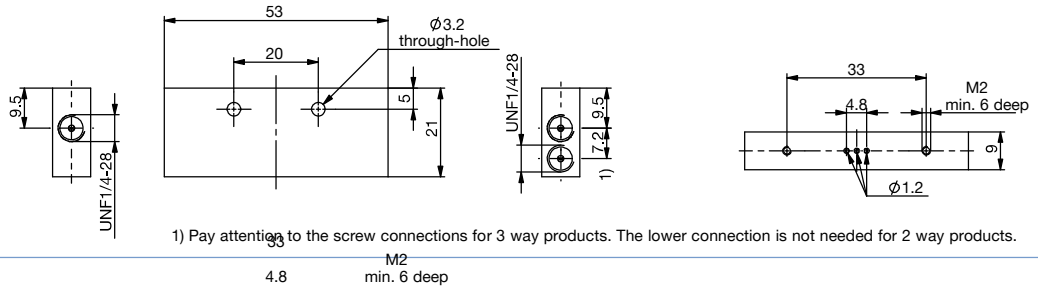
A	B	C
38.5	4.5	41.2

Dimensions [mm]

Cable plug dimensions



Single manifold for Bürkert flange



1) Pay attention to the screw connections for 3 way products. The lower connection is not needed for 2 way products.

Ordering chart

Circuit function	Orifice [mm]	K_V 1.2 value water [m/h][1]	Pressure range [bar][2]	Max. pressure difference [bar]	Voltage [V]	Nominal power [W] (Inrush-/nominal holding power)	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	0.4[3]	0.004	Vac.-7	7	24	5.7 / 0.7	182284
	0.8[4]	0.01	Vac.-3	3	24	5.7 / 0.7	226664
T 3/2 way direct-acting solenoid valve, flow direction optional	0.8	0.01	Vac.-1	1	24	5.7 / 0.7	189292
F 3/2 way direct-acting, distribution solenoid valve	0.8	0.01	Vac.-3	3	24	5.7 / 0.7	227020

1) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet
2) Measured as overpressure to the atmospheric pressure
3) With orifice 0.4 mm flow permitted in both directions
4) With orifice 0.8 mm flow direction according to label

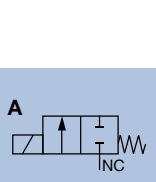
Accessories

Description	Feature	Article no.
Hit and hold electronic cable plug Type 2504		
24 V AC/DC, power reduction to 0.7 W after 5 ms	500 mm	670178
Single cable[5]	500 mm	670164
Single cable[5]	5000 mm	680840
Single manifold material Peek		670181

5) The valve must be operated with external power reduction. Please refer to the manual for further details.

2/2 way Whisper Valve with media separation

- Highest chemical resistance with minimal internal volume
- Compact design with 7 mm width
- Orifice size 0.8 mm (3 bar) and 0.4 mm (5 bar)
- Switching noise <36 dB
- For dosing applications with excellent flush ability

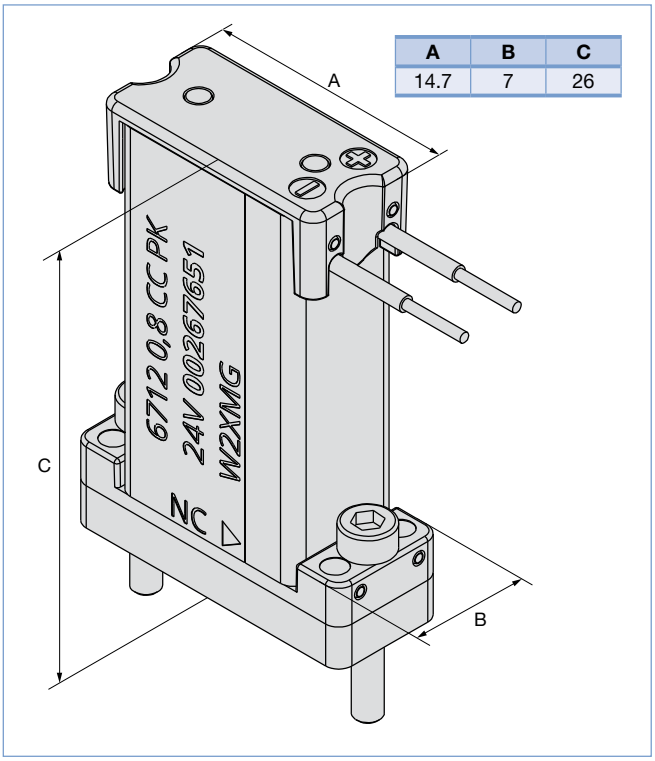


Fluidical “point-of-care” applications, as dialysis or artificial respiration, and applications at the “point-of-use” for example at pipetting arms in biological analysis have special requirements. The new media separated Whisper Valve type 6712 was particularly developed for these applications. Especially the reduced switching noise and the good flush ability set a new benchmark. But also in industrial applications like inkjet printers, the type 6712 is the first choice due to the high lifecycle and the excellent switching dynamic.
With the modular design and the available material variants this valve is applicable with virtually all liquids and gases in life science and industrial applications.
A valve that combines dosing accuracy and flush ability.

Technical data

General data	
Orifice sizes and pressure ranges	DN0.8 / 0…3 bar[1)] DN0.4 / 0…5 bar[1)]
Pressure output (Back pressure)	DN0.8: max. 1.2 bar[2)] DN0.4: max. 1.8 bar[2)]
Tightness to outside	8 bar[2)]
Body material	PEEK, PPS
Seal material	FFKM, FKM and EPDM
Medium	Resistant to neutral and aggressive gases and liquids (acc. to Bürkert resistance chart)
Medium temperature	EPDM: 0 °C…+55 °C FFKM: +10 °C…+55 °C FKM: +15 °C…+55 °C
Ambient temperature	EPDM: 0 °C…+55 °C FFKM: +10 °C…+55 °C FKM: +15 °C…+55 °C
Typical service life	30.000.000 (acc. to laboratory duration tests)[3)]
Internal volume	Fluid chamber: 2 µl Total (incl. connections): 5 µl
Viscosity	Max. 21 mm²/s
Port connection	Bürkert flange (7 × 18.2 mm)
Electrical connection	Single flying leads, AWG26, 500 mm Dimension plug grid 2 mm (solder pin on request)
Power supply	12 V DC, 24 V DC
Voltage tolerance	±10 %
Power consumption	0.9 W[4)]
Duty cycle	100 % continuous operation
Installation	As required, preferably with actuator upright
Protection class	IP40 acc. IEC 60144

Dimensions [mm]



A	B	C
14.7	7	26

Switching frequency	50 Hz
Switching noise	36 dB(A)[5)]
Approvals and compliance on request[6)]	Suitability for drinking water: KTW (W270) Suitability for foodstuffs: FDA

1) Maximum tightened relative pressure at the seat.
2) Relative pressure
3) Service life depends on the type of medium, the temperature, the pressure, the seal material and the specific operational conditions.
4) No further power reduction possible.
5) Tested under Bürkert test conditions. The value may vary with conditions.
6) Other versions on request

Options

- Further versions see data sheet or on request

Response times

Seal material		DN = 0.8 mm at 3 bar[1]	DN = 0.4 mm at 5 bar[1]
EPDM	Opening[2]	0.5 ms	0.8 ms
	Closing[3]	0.9 ms	1.2 ms
FFKM	Opening[2]	0.7 ms	0.9 ms
	Closing[3]	1.0 ms	1.8 ms
FKM	Opening[2]	0.8 ms	0.9 ms
	Closing[3]	1.0 ms	3.2 ms

1) Response time is typically measured between valve output and flow resistance according to DIN ISO 12238:2001 at 25 °C; the response time depends on temperature, pressure and sealing material. Electronics to further reduce the response time are available on request.
2) Pressure rise 0…10 %
3) Pressure rise 100…90 % against maximum back pressure

Accessories

Description	Article no.
Manifold UNF ¼ - 28 PEEK (Figure 1)	694895
Manifold UNF ¼ - 28 PEEK (Figure 2) (low internal volume)	695956
Plug with flying leads AWG24 with length of 500 mm	689974

Dimensions [mm]

Figure 1

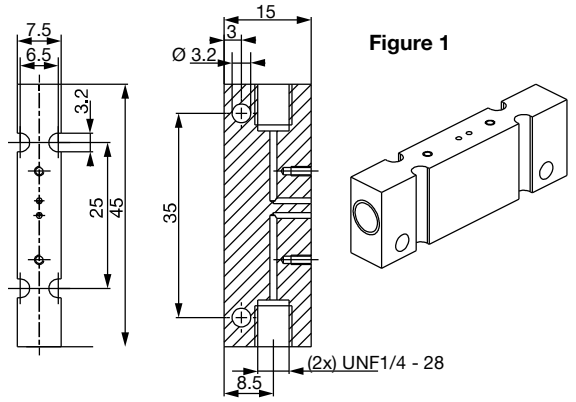
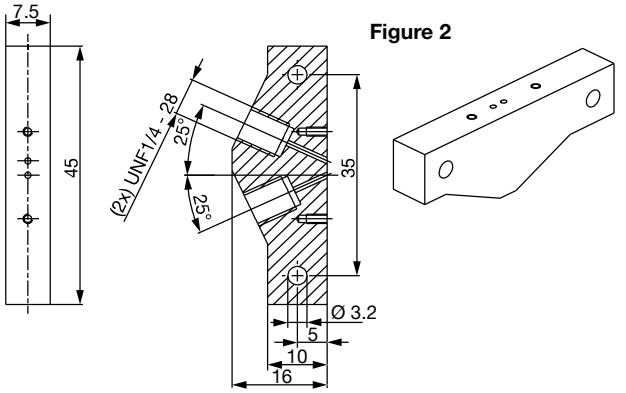


Figure 2



Ordering chart

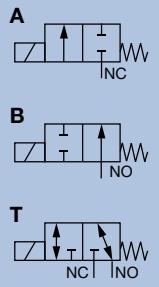
Circuit function	Orifice [mm]	Port connection[4]	K_V value water [m³/h][5]	C_V value water [gpm]	Q_{Nn} value air [l/min][7]	Pressure range [bar]	Max. back pressure at output [bar]	Seal material	Body material	Electrical connection[6]	Voltage/ frequency [V/Hz]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed	0.4	Bürkert flange	0.005	0.006	5.8	0…5	1.8	EPDM	PPS	Plug	12 V DC	273226
								FFKM	PEEK	Flying lead	24 V DC	273206
	0.8		0.012	0.014	13.1	0…3	1.2	EPDM	PPS	Plug	12 V DC	273232
								FKM				273233
								FFKM	PEEK			273231
								EPDM	PPS	Flying lead		273188
								FKM				273189
								FFKM	PEEK			273187
								EPDM	PPS	Plug	24 V DC	273236
								FKM				273237
								FFKM	PEEK			273235
								EPDM	PPS	Flying lead		273190
								FKM				273191
								FFKM	PEEK			267651

4) 2 stainless steel cylinder head screws, ISO 4762, M1.6×8 A2 included in delivery.
5) Water flow rate measured at +20 °C and 1 bar pressure at valve input and free outlet.
6) Plug delivered without plug connection. Please order connection socket with strand separately (see ordering chart accessories).
Other suitable plug connectors are: W+P series 521, JST series PHR-2 or Würth series ConWTB 2.00 mm. Other electrical assemblies on request.
7) Measurement at +20 °C, 1 bar pressure at valve inlet and 1 bar pressure difference.

2/2 or 3/2 way Whisper Valve with media separation

6724 Whisper Valve

- Highest chemical resistance with minimal internal volume
- Compact design with 7 mm width
- Orifice size 0.8 mm (3 bar) and 0.4 mm (5 bar)
- Switching noise <36 dB
- For dosing applications with excellent flush ability

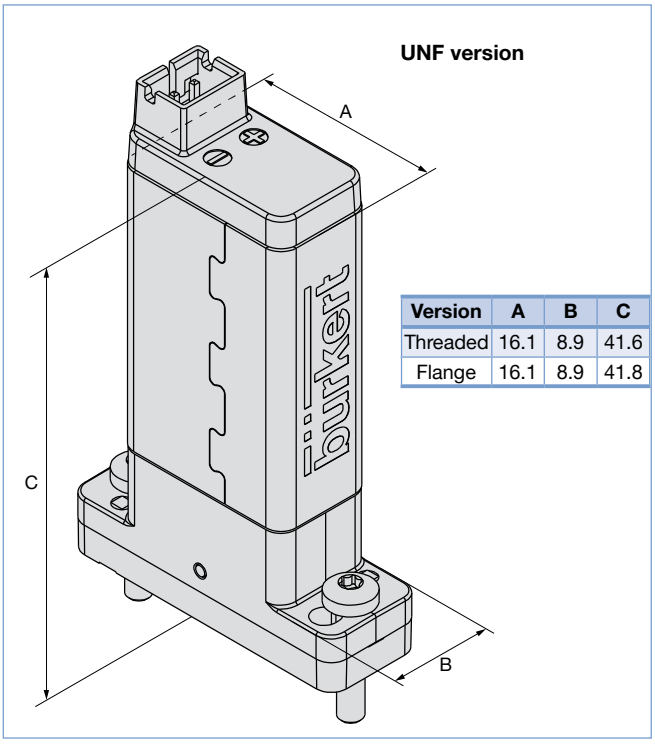


Many fluidic processes come closer to the point of interest. For example medical devices like dialysis machines become homecare devices and operate close to the patient. Washing units in analytical equipment are positioned on the pipetting arm or directly on the print head in printing applications. This requires special components. Solenoid valves need to switch without noise. They need to be smaller and lighter. Nevertheless it is essential to guarantee a long lifetime and excellent switching characteristics. All this is concerted in the Whisper Valve type 6724 and thanks to the modular structure and the range of available materials this valve is almost universal.

Technical data

Orifice size / pressure range	DN0.8 / vacuum[1] to 5 bar[2] DN1.2, 2/2 way / vacuum to 3 bar[2] DN1.2, 3/2 way / vacuum to 2 bar[2]
Body material	PEEK, PPS
Seal material	FFKM, EPDM and FKM
Medium	Resistant to neutral and aggressive gases and liquids (see Bürkert resistance chart)
Media temperature	FFKM: +15 °C…+50 °C (59…122 °F) FKM: 0 °C…+50 °C (32…122 °F) EPDM: 0 °C…+50 °C (32…122 °F)
Ambient temperature	FFKM: +15 °C…+50 °C (59…122 °F) FKM: 0 °C…+50 °C (32…122 °F) EPDM: 0 °C…+50 °C (32…22 °F)
Typical service life	10.000.000 (acc. to laboratory duration tests)[3]
Internal volume	Fluid chamber 28 µl / Total (incl. connection) 38 µl
Viscosity	Max. 21 mm²/s
Port connection	Flange; UNF ¼-28
Electrical connection	Plug Raster 2 mm[4]
Power supply	12 V DC; 24 V DC (other voltages on request)
Voltage tolerance	±10 % (incl. Residual rippler)
Power consumption	1 W[5]
Duty cycle	100 % continuous operation
Installation	As required, preferably with actuator upright
Protection class	IP40 acc. to IEC 60144
Switching noise	30 dB (A) / <20 dB (A) on request[6]
Response times	Measurement at valve output with 2 bar and 20 °C acc. to DIN ISO 12238:2001
Opening	3 ms (pressure build-up 0…10 %)
Closing	3 ms (pressure build-up 100…90 %)

Dimensions [mm]



Version	A	B	C
Threaded	16.1	8.9	41.6
Flange	16.1	8.9	41.8

Approvals and compliance (on request)	Suitable for food industry: FDA Suitable for drinking water: KTW (W270) Oxygen application: BAM

1) Technical vacuum (-0.8 bar); connection only to NC or NO; do not apply vacuum at the valve outlet (COM /OUT).
2) With optional boost electronics, see accessories: Vacuum[1] to 7 bar at NC connection, back pressure max. 3 bar permissible.
3) Service life depends on the type of medium, the temperature, the pressure, the seal material and the specific operational conditions.
4) Please order socket with flying leads separately → see ordering chart for accessories. other suitable connectors are e.g: W + P: 521 series (Socket 521S-02-1; Contact 521S-01-2-00) or JST (Socket PHR-2; Contact SPH-002GW-P0.5S); Stand 04/2015
5) No further power reduction possible.
6) <20 dB(A) with optional soft-close electronics possible, see accessories

Options

- Further versions see data sheet or on request

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_V value water [m³/h][1]	C_V value water [gpm]	Q_{Nn}-value air [l/min]	Pressure range [bar][2] [3]	Max. pressure difference [bar]	Seal material	Body material	Voltage/ frequency [V/Hz]	Article no.
A 2/2 way direct-acting solenoid valve, normally closed[4]	0.8	Sub-base	0.01	0.012	10.7	Vac-5	5	FFKM	PEEK	24 V DC	299245
	1.2		0.026	0.03	28	Vac-3	3				281506
		UNF	0.026	0.03	28	Vac-3	3				281933
	0.8	UNF	0.01	0.012	10.7	Vac-5	5				299246
		Sub-base	0.01	0.012	10.7	Vac-5	5	EPDM	PPS		299247
	1.2		0.026	0.03	28	Vac-3	3				281934
	0.8		0.01	0.012	10.7	Vac-5	5	FKM	PPS		299248
	1.2	UNF	0.026	0.03	28	Vac-3	3		PEEK	12 V DC	295793
		Sub-base	0.026	0.03	28	Vac-3	3		PPS	24 V DC	281936
B 2/2 way direct-acting solenoid valve, normally open	1.2	Sub-base	0.026	0.03	28	Vac-2	2	FFKM	PEEK	24 V DC	281507
T 2/2 way direct-acting, bi-directional solenoid valve, normally closed	0.8	Sub-base	0.01	0.012	10.7	Vac-5	5	FFKM	PEEK	24 V DC	299249
	1.2		0.026	0.03	28	Vac-2	2			12 V DC	295322
			0.026	0.03	28	Vac-2	2			24 V DC	276458
	0.8	UNF	0.01	0.012	10.7	Vac-5	5				299250
	1.2	UNF	0.026	0.03	28	Vac-2	2				280888
	0.8	Sub-base	0.01	0.012	10.7	Vac-5	5	EPDM	PPS	12 V DC	299279
			0.01	0.012	10.7	Vac-5	5			24 V DC	299251
	1.2		0.026	0.03	28	Vac-2	2				281935
	0.8		0.01	0.012	10.7	Vac-5	5	FKM	PPS		299252
	1.2		0.026	0.03	28	Vac-2	2				281937

1) Measured at +20 °C, 1 bar pressure at valve inlet and free outlet.
2) Gauge pressures with respect to the prevailing atmospheric pressure
3) Technical vacuum (-0.8 bar); Connection only to NC or NO; At the valve outlet (COM /OUT) do not apply low pressure.
4) With the new Boost Close Electronics Type 2503 (689998) the valve can also be operated in reverse flow direction.

Accessories

Description	Article no.
Connector[5] with flying leads AWG 24, 500 mm length (Connector not included)	689974
Plug connectors with 500 mm flying leads and soft-close electronics for noise reduction – For further information refer to the operating instructions for the Type 2503 SoftClose.	689999
Plug connector with 500 mm flying lead and boost electronics to increase the permissible pressure under NC – For further information refer to the operating instructions for the Type 2503 BoostClose.	689998

5) Connector comparable with JST PHR-2

Micro Dosing Unit for precise dosing in microlitre-range

- Diaphragm pump for high chemical resistance
- Dosing volume 5 µl/stroke up to 8 ml/min. in both directions
- Dosing accuracy < ±3.5 %
- Self priming
- Integrated electronics, easy to use

Bürkert's Micro Dosing Unit has been designed for precise dosing applications in the microliter range. It combines high dosing accuracy and precision with excellent chemical inertness. The unit is comprised of three valves which can be opened simultaneously for flushing. Active inlet and outlet valves enable the device to pump liquid in two directions. This feature can be used to mix fluids inside a tube or channel or to constantly keep them in motion.
Reagents can be sucked back from the dispensing tip to prevent drying out after dosing. The integrated heating function heats up the valves and the medium, and the unit comes with dry running capabilities.

Technical data

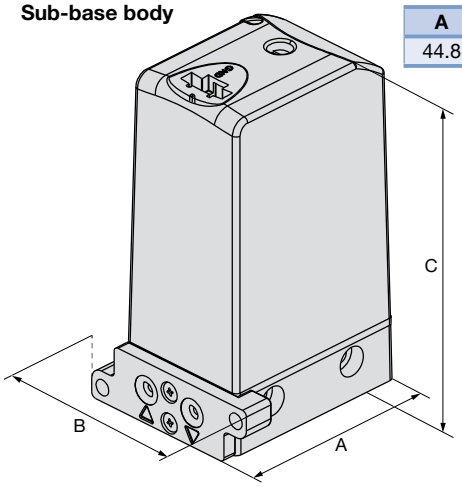
Body Material	PEEK
Seal Material	FFKM, EPDM-pump diaphragm on request
Fluids	Neutral and aggressive liquids (see Chemical Resistance Chart)
Fluid Temperatures	+15 °C…60 °C (FFKM)/+5 °C…60 °C (EPDM)[1]
Ambient Temperature	+10…+55 °C[1]
Dosing Quantity	Adjusted to 5 µl/stroke ±1.5 %[2]; max. ca. 8 ml/min; at 40 Hz both directions
Dosing accuracy	±3.5 %[4]
Repetition accuracy	±2 %[2]
Max. Outlet Pressure	1.0 bar[3]
Max. Suction Lift	>2 m (dry); >4 m (wet)
Duty Cycle	100 %
Voltage	12 V DC, 24 V DC
Voltage Tolerance	±10 %
Power Consumption	11 W (short term); 5 W
Electrical Connection	e.g. suitable for connection to Molex plug no. 50-57-9404
Installation	Variable, unit with two holes for M3 fixing screws
Fluid Connection	Sub-base connection; UNF ¼-28
Protection class	IP40
Lifetime	Approx. 20 Mio cycles (at 20 °C; 10 Hz; water)
Dimensions (L x W x H)	50×28.5×70 mm (UNF ¼-28) 44×39.5×70 mm (sub-base)
Max. Viscosity	<250 mm²/s
Weight	ca. 120 g

1) For lower temperatures the unit can be electrically preheated (heating mode without media feed).
2) At 20 °C ambient temperature, medium degassed DI water, 5 Hz, no backpressure.
3) Relative pressure
4) Typical value under Burkert test conditions see footnote 2. The typical repetition accuracy is ±2 %. This is a guiding value only!

Dimensions [mm]

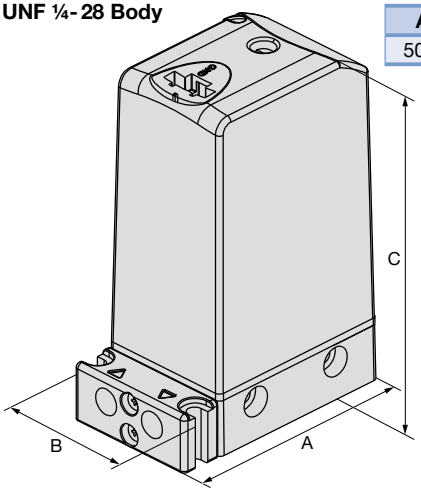
Sub-base body

A	B	C
44.8	40	70.4



UNF ¼-28 Body

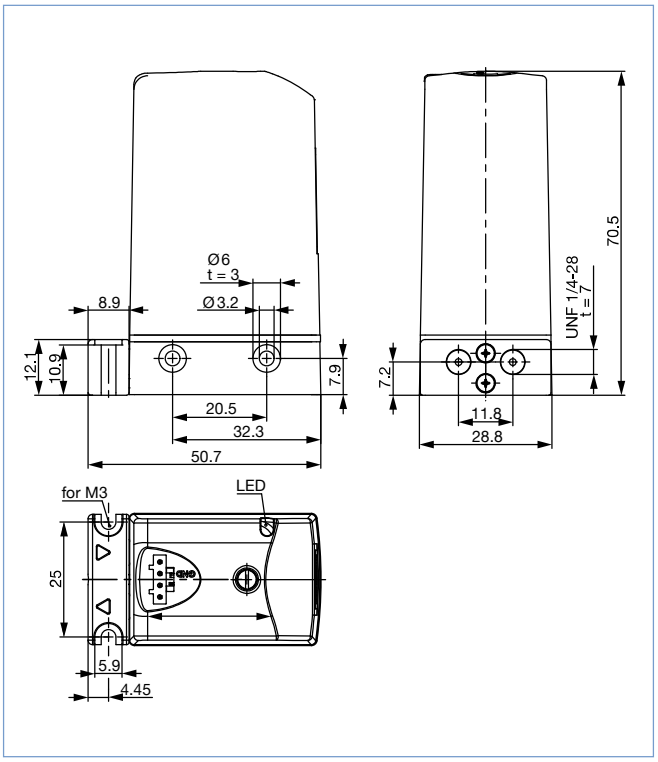
A	B	C
50.7	28.8	70.5



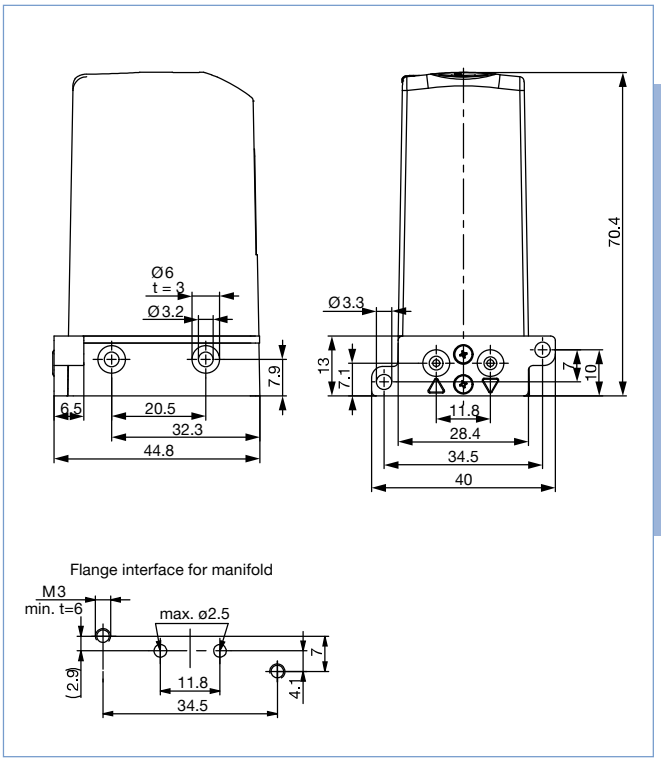
Options

- Further versions see data sheet or on request

Dimensions [mm] UNF-Version



Dimensions [mm] Flange version



Ordering chart

Version	Voltage	Connection	Seal material	Function mode[1)]	Article no.
Standard	24 V DC	Sub-base	FFKM	5 Hz	238190
Standard	24 V DC	UNF ¼-28	FFKM	5 Hz	215793
Standard	24 V DC	Sub-base	FFKM/EPDM	5 Hz	238193
Standard	24 V DC	UNF ¼-28	FFKM/EPDM	5 Hz	238194
Standard	12 V DC	UNF ¼-28	FFKM/EPDM	5 Hz	238195
FEP-Leads 500 mm with 4 pin connector	12…24 V	–	–	–	683613

1) Function mode can be changed see user manual

Overview for Electromagnetic Proportional Valves

Note: The following product overview does not show the complete product range of this catalogue. A complete overview can be found **here** ▸

Overview Proportional Valves

Type	Operating principle	Design feature	Width [mm]	Sealing material	Medium	Port connection
2871 ▸	Plunger directly on valve seat (NC)	Frictionless plunger guide	20	FKM, EPDM	Neutral gases, liquids on request	⅛", sub-base
2873 ▸	Plunger directly on valve seat (NC)	Frictionless plunger guide	32	FKM, EPDM	Neutral gases, liquids on request	⅛", ¼", sub-base
2875 ▸	Plunger directly on valve seat (NC)	Frictionless plunger guide	49	FKM, EPDM	Neutral gases, liquids on request	⅜", ½", sub-base
2836 ▸	Plunger directly on valve seat (NC)	Slide ring	72	FKM, EPDM	Neutral gases, liquids	½", ¾"
6024[2)] ▸	Plunger directly on valve seat (NC)	Slide ring	49	FKM	Neutral gases, liquids	½", ¾"
6223 ▸	Plunger directly on servo piston (NC)	Servo-assisted	32…43	FKM	Neutral liquids	⅜", ½", ¾", 1"

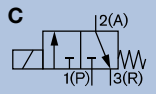
1) Within a type, the following generally applies: The larger the valve orifice, the lower the maximum possible operating pressure at which the valve closes tight
2) Max. differential pressure allowed: 3 bar

Power consumption [W]	Orifice sizes [mm][1)]	Repeatability	Sensitivity	Span [%]	Response time [ms]	Typical application
2…5 (depending on application)	0.05…2	0.25 % F.S.	0.1…0.25 % F.S.	0.5…100	<15	– Medical and analytical equipment – Burner controls – Fuel cell technology – Plasma control – Powder coating
9	0.8…4	0.5 % F.S.	0.25 % F.S.	0.5…100	<20	– Burner controls – Waste gas treatment – Inert gas dosing – Plasma control – Vacuum control – Fuel dosing
16	2…8	0.5 % F.S.	0.25 % F.S.	0.5…100	<25	– Fuel cell technology – Test stand technology – Burner controls – Vacuum control – Filling level control
24	3…12	1 % F.S.	0.5 % F.S.	4…100	<100	– Cooling – Inert gas dosing
18	8…12	0.5 % F.S.	0.5 % F.S.	4…100	<50	– Combustion gas dosing – Forced air throttling
8…15	10…20	1 % F.S.	1 % F.S.	10…100	<200	– Cooling/heating circuits – Water dosing

Plunger Operated 3/2 way Solenoid Valve for high temperatures

0355

- Seat valve direct acting
- Medium temperature up to +180 °C
- Push-over solenoid system
- For gases and fluids

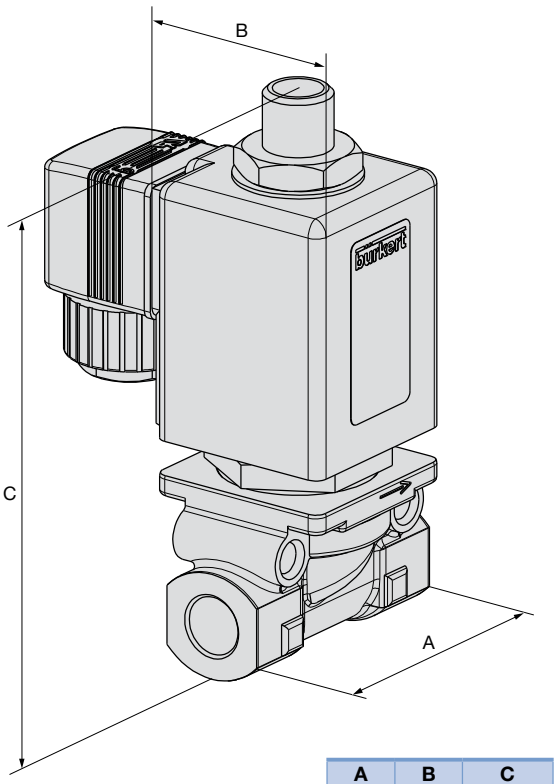


Direct-acting plunger solenoid, Type 355, for neutral gases and liquids.
Also suitable for high temperatures, such as hot water, hot air, steam.

Technical data

Orifice	DN2…DN4
Body material	Brass with stainless steel seat 1.4305, Stainless steel 1.4581
Coil material	Epoxy
Coil isolation class	H
Inner part valve	Stainless steel
Seal material	NBR, FKM, PTFE, EPDM
Medium	
NBR	Neutral fluids, hydraulic oil, oil without additives
EPDM	Oil and fat-free fluids
FKM	Per-solutions, hot oils with additives
PTFE	Steam, organic solvents
Medium temperature	
NBR	-10 °C… +90 °C
EPDM	-40 °C…+130 °C
FKM	0 °C…+130 °C
PTFE	-40 °C…+180 °C
Ambient temperature	Max. +55 °C
Voltage tolerance	±10 %
Duty cycle	100 % continuous rating
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A (previously DIN 43650) for cable plug Type 2508 (will be replaced with Type 2518) (supplied as standard)
Power consumption	
Inrush	AC: 35…40 VA
Hold (hot coil)	AC: 16 VA, 10 W DC: ca. 12 W
Protection class	IP65 with cable plug
Installation	As required, preferably with actuator upright

Dimensions [mm]

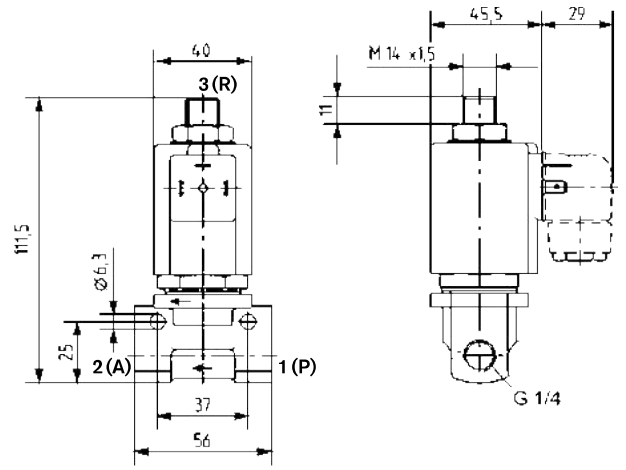


A	B	C
56	45.5	111.5

Options

- Circuit function D and E on request
- UL, UR and CSA approval
- Further versions see data sheet or on request

Dimensions [mm]



A = Stainless steel version 74.5 mm
B = Brass version 56 mm

Ordering chart

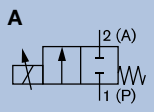
Circuit function	Port connection	Orifice [mm]	K_v value water [m³/h]	Pressure range [bar]	Seal material	Article no. per voltage/frequency [V/Hz] 024/DC	024/50	230/50
C 3/2 way direct-acting solenoid valve, normal-ly closed	**Brass body**							
	G ¼	2	0.11	0…16	EPDM	–	150300	066007
					NBR	043089	026069	068078
				0…14	PTFE	062188	049998	049025
		3	0.2	0…10	FKM	064392	157603	126056
					NBR	068557	017668	061174
				0…8	PTFE	052665	067817	054885
		4	0.4	0…6	FKM	069637	066454	046655
					NBR	061104	019095	061019
				0…5	PTFE	052078	065552	058403
	Stainless steel body							
	G ¼	4	0.4	0…5	PTFE	018478	136558	021253
				0…6	FKM	020978	062713	066759

Note: Cable plug, see **Type 2508** ▸ (will be replaced with Type 2518)

2/2 way Solenoid Control Valve

2836

- Direct-acting, normally closed
- DN3...DN12
- Port Connection ½" or ¾"



The direct-acting solenoid control valve, Type 2836, works as an electromagnetically actuated control valve in applications with relatively high flow rates. The valve is normally closed.
Valve control takes place through the control electronics of Type 8605, which converts an analogue input signal into a PWM[1] (pulse-width modulation) signal.

Further, functional features of the Type 8605 electronic control unit:
- Temperature compensation for coil heating by internal current regulation
- Simple zero and span settings
- Ramp function to dampen fast status changes

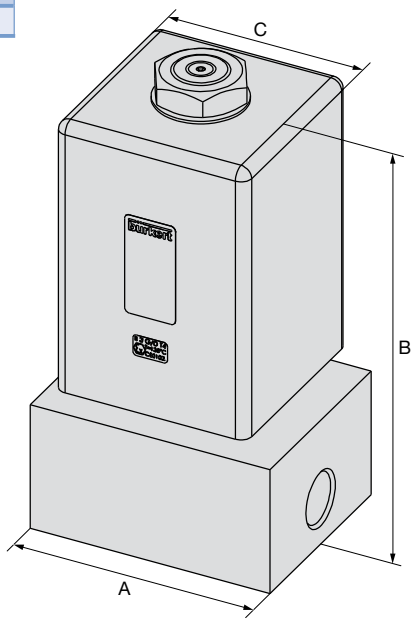
Technical data

Body material	Brass, stainless steel
Seal material	FKM, others on request
Fluids	Neutral gases and liquids
Pressure range	0...25 bar[2]
Fluid temperature	-10 °C...+90 °C (14 °F...194 °F)
Ambient temperature	Max. +55 °C (max. 131 °F)
Viscosity	Max. 21 mm²/s (max. 21 cSt)
Power supply	24 V DC
PWM frequency	150...180 Hz
Power consumption	Max. 24 W
Max. coil current	1100 mA
Duty cycle	100 % continuously rated
Port connection	G ½, G ¾, NPT ½, NPT ¾, others on request
Electrical connection	Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN EN 175301-803 Form A
Installation	As required, preferably with actuator in upright position
Typical control data[3]	
Hysteresis	< 5 %
Repeatability	< 1 % of F.S.
Sensitivity	< 0.5 % of F.S.
Span	1:25
Protection class	IP65

1) PWM pulse-width modulation
2) Pressure data [bar]: Overpressure with respect to atmospheric pressure
3) Characteristic data of control behaviour depends on process conditions

Dimensions [mm]

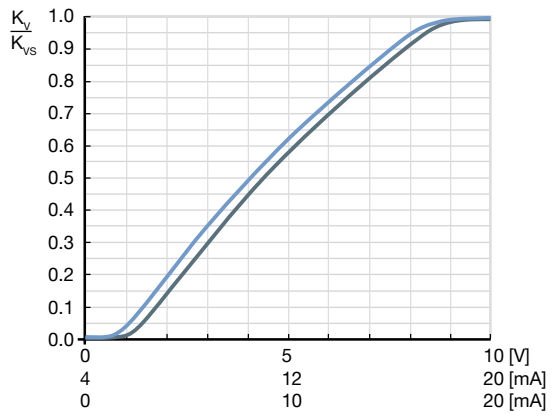
A	B	C
90	162.5	72



Options

- Further versions see data sheet or on request

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: Δp_{valve} > 25 % of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed.
If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.
For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering chart

Valve operation	Orifice [mm]	Port connection	K_{VS} value water [m^3/h][1]	Q_{Nn} value [l/min][2]	Maximum operating pressure [bar][3]	Article no. brass body	Article no. stainless steel body
A 2/2 way direct-acting, solenoid proportional control valve	3	G ½	0.25	270	25	154541	154542
		NPT ½	0.25	270	25	164592	–
	4	G ½	0.40	430	16	154543	154544
		NPT ½	0.40	430	16	164593	–
	6	G ½	0.90	970	8	145654	154545
		NPT ½	0.90	970	8	164594	–
		G ¾	0.90	970	8	154546	154547
		NPT ¾	0.90	970	8	164595	–
	8	G ½	1.5	1615	5	154548	154549
		NPT ½	1.5	1615	5	164596	–
		G ¾	1.5	1615	5	154550	154551
		NPT ¾	1.5	1615	5	164597	–
	10	G ¾	2.0	2150	3	154552	154553
		NPT ¾	2.0	2150	3	164598	–
	12	G ¾	2.5	2700	2	154554	154555
		NPT ¾	2.5	2700	2	164599	–

1) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.
2) Q_{Nn} value: Flow rate value for air with inlet pressure of 6 bar[6], 1 bar pressure differential and +20 °C.
3) Pressure data [bar]: Overpressure with respect to atmospheric pressure

Please note that the valves are delivered without control electronics unit and cable plug (see accessories below).

Accessories

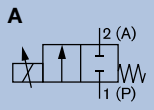
Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced by Type 2518) acc. to DIN 175301-803 Form A - see Type 2508 ▶		
without circuitry (standard), without cable	0…250 V AC/DC	008376
without circuitry (standard), 3 m cable	0…250 V AC/DC	783573

Note: The valves are delivered without control electronics, see **Type 8605** ▶

2/2 way Proportional Valve

2871

- Excellent range
- Very good repeatability
- Compact Design



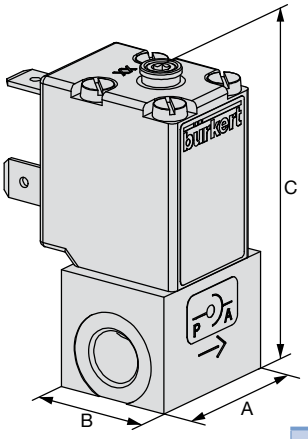
The direct-acting solenoid control valve, Type 2871 (20 mm installation width), is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.
The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

Technical data

Body material	Brass, stainless steel
Medium	Neutral gases, liquids on request
Span	1 : 200 Responsivity 0.25 % of full scale
Response sensitivity	0.25 % of full scale
PWM frequency	1500 Hz
Max. coil current	220 mA (Maximum value, value depends on the operating pressure)
Medium temperature	-10 °C…+90 °C
Duty cycle	100 % continuously rated
Ambient temperature	Max. 55 °C
Seal material	FKM
Operating voltages	24 V DC
Power consumption	2 W (to DN0.6), 5 W (from DN0.8)
Electrical connection	Cable Plug Type 2507 acc. to Form B Industrial standard (not included)
Typical control data[1] at PWM control	
Hysteresis	<5 %
Repeatability	<0.25 % F.S.[2]
Sensitivity	<0.25 % F.S. to <0.1 % F.S. with DN <0.8 mm[2]
Span	1:200 (DN0.8…2), 1:500 (DN0.05…0.6)
Response time (10…90 %)	<15 ms
Protection class	IP65 (with cable plug)

1) Characteristic data of control behaviour depends on process conditions
2) By flow measurement

Dimensions [mm]

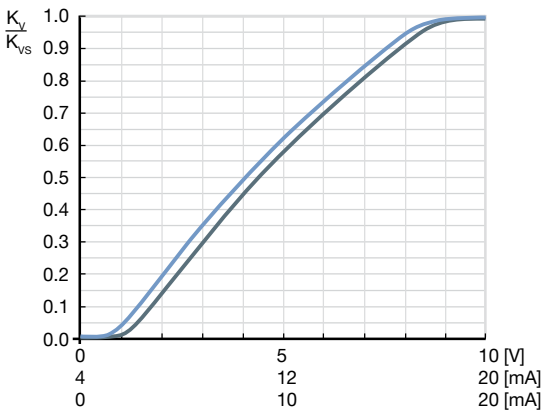


Port connection	A	B	C
G ⅛	25	20	49.5

Options

- Seal material EPDM
- 12 V coil
- Coil with 30 cm flying leads
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange
- Further versions see data sheet or on request

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: Δp_{valve} > 25 % of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed.
If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.
For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value [m^3/h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Article no.	
							Brass	Stainless steel
A 2/2 way direct-acting, solenoid proportional control valve	G ⅛	0.3	0.002	10	10	90	254451	254452
	G ⅛	0.4	0.004	8	8	90	254453	254454
	G ⅛	0.6	0.01	6	6	90	254455	254457
	G ⅛	0.8	0.018	12	6	220	235994	235995
	G ⅛	1.0	0.027	10	5	220	236000	236001
	G ⅛	1.2	0.038	8	4	220	236261	236262
	G ⅛	1.6	0.055	6	3	220	236267	236268
	G ⅛	2.0	0.09	3	1.5	220	236273	236274

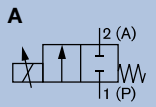
Accessories

Description	Voltage	Article no.
Cable plug Type 2507 acc. to industry standard Form B - see Type 2507 ▸		
without circuitry (standard)	0…250 V AC/DC	178362
Control electronics Type 8605, DIN-Rail version		178362

Direct-acting 2-way standard solenoid control valve

2873

- Excellent range
- Very good response
- Compact valve design
- Orifice sizes DN0.8...DN6
- Optional: Explosion-protected coil



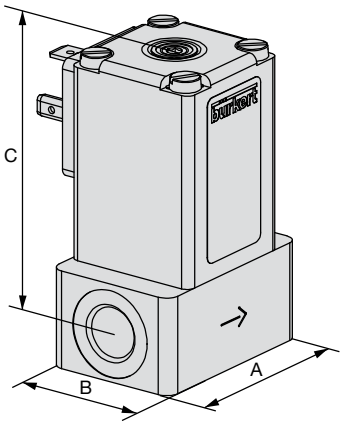
The direct-acting solenoid control valve Type 2873 (32 mm installation width) is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight, up to the DN specific nominal pressure.
The operation lever of the valve is suspended frictionless, which leads to an extraordinary adjustment characteristic. Valve control takes place through a PWM signal (see control electronics, Type 8605).

Technical data

Body material	Brass, stainless steel
Medium	Neutral gases, liquids on request
Span	1 : 200
Response sensitivity	0.25 % of full scale
Rotation time	<20 ms
PWM frequency	1200 Hz
Medium temperature	-10 °C...+90 °C
Ambient temperature	Max. 55 °C
Seal material	FKM
Operating voltages	24 V DC
Power consumption	9 W
Max. coil current[1]	420 mA
Duty cycle	100 % continuously rated
Electrical connection	Cable Plug Type 2508 (will be replaced with Type 2518) acc. to DIN EN 175301-803 Form A (previously DIN 43650) (not included)
Typical control data[2] **at PWM control**	
Hysteresis	<5 %
Repeatability	<0.5 % F.S.[3]
Protection class	IP65 (with cable plug)

1) Maximum value, value depends on operating pressure
2) Characteristic data of control behaviour depends on process conditions
3) By flow measurement

Dimensions [mm]

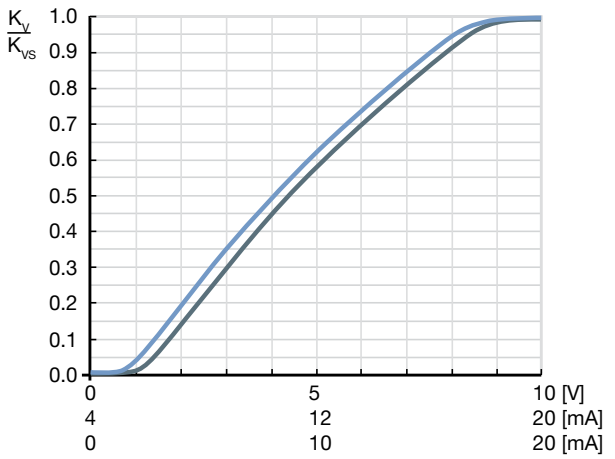


Port connection	A	B	C
G ⅛	32	32	64.5
G ¼	46	32	69.5

Options

- Seal material EPDM
- 12 V coil
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange
- Further versions see data sheet or on request

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: Δpvalve > 25 % of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed.
If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.
For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value [m^3/h]	Nominal pressure [bar(ü)]	Max. differential pressure [bar]	Max. coil current [mA]	Article no.	
							Brass	Stainless steel
A 2/2 way direct-acting, solenoid proportional control valve	G ⅛	0.8	0.018	16	8	420	234289	234305
	G ⅛	1.2	0.04	12	6	420	234292	234307
	G ⅛	1.5	0.06	10	5	420	234294	234309
	G ¼	2	0.1	8	4	420	234297	234312
	G ¼	2.5	0.15	5	2.5	420	234299	234314
	G ¼	3	0.22	3.5	1.75	420	234301	234316
	G ¼	4	0.32	2	1	420	234303	234318

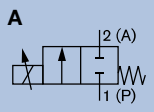
Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A - see Type 2508 ▸		
without circuitry (standard), without cable	0…250 V AC/DC	008376
without circuitry (standard), 3 m cable	0…250 V AC/DC	783573

2/2 way Proportional Valve

2875

- Excellent range
- Very good repeatability
- Compact Design

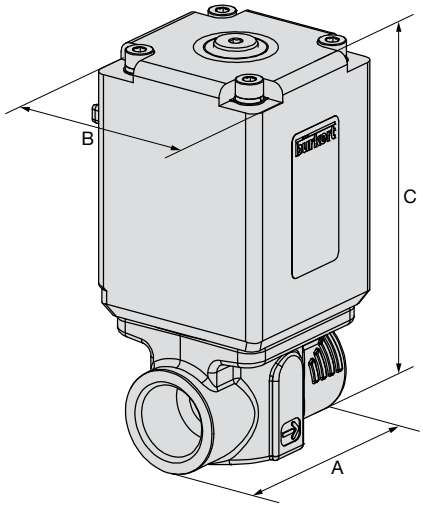


The direct-acting solenoid control valve Type 2875 is used as the regulating unit in control loops. Due to an elastomeric seat seal the valve closes tight (integrated shut-off function), up to the DN specific nominal pressure. The plunger of the valve is assembled frictionless, which leads to an extraordinary adjustment characteristic. This valve is particularly suitable for demanding control tasks (high control range, dry gases, etc.).
Valve control takes place through a PWM signal[1]. The duty cycle of the PWM signal determines the coil current and hence the position of the plunger. Optionally the valve can also be driven with DC voltage.

Technical data

Body material	Brass, stainless steel
Seal material	FKM, EPDM on request
Medium	Neutral gases, liquids on request
Pressure range	0…25 bar[2]
Medium temperature	-10 °C…+90 °C
Ambient temperature	max. +55 °C
Power supply	24 V DC
PWM frequency	900 Hz
Power consumption	16 W
Max. coil current[3]	750 mA
Duty cycle	100 % continuously rated
Port connection	G ⅜, G ½, NPT ⅜, NPT ½
Electrical connection	Tag connector (DIN EN 175301-803 Form A)
Installation	As required, preferably with actuator in upright position
Typical control data at PWM-Control[4]	
Hysteresis	< 5 %
Repeatability	< 0.5 % FS[5]
Sensitivity	< 0.25 % FS[5]
Span	1:200
Response time (10…90 %)	25 ms
Approvals	UR (UL recognized) DVGW: Approval acc. to the European gas device guidelines (DIN EN 161)
Ignition protection class	ATEX: II 2 G Ex mb IIC T4 Gb II 2 D Ex mb IIIC T130 °C Db IECEx: Ex mb IIC T4 Gb Ex mb IIIC T130 °C Db
Protection class	IP65

Dimensions [mm]



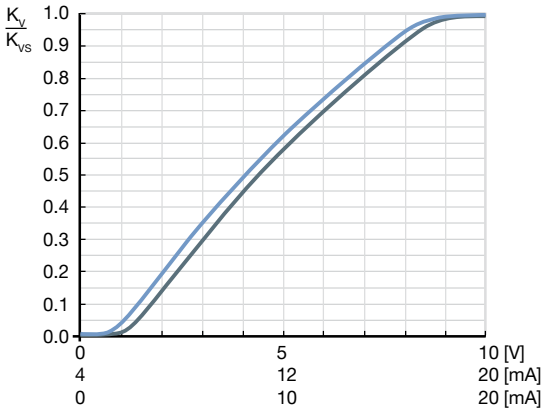
A	B	C
55	49	104.5

Options

- Seal material EPDM
- 12 V coil
- Oxygen versions
- Parts oil-, fat- and silicon free
- Flange
- Further versions see data sheet or on request

1) PWM pulse width modulation
2) Pressure data [bar]: Measured as overpressure to the atmospheric pressure, orifice further depends on nominal pressure
3) Maximum value, value depends on operating pressure
4) Characteristic data of control behaviour depends on process conditions
5) By flow measurement

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: Δp_{valve} > 25 % of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed.
If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.
For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering chart

Circuit function	Orifice [mm]	Port connection	K_{VS} value water [m^3/h][1]	Nominal pressure [bar][2]	Max. differential pressure [bar]	Article no. Brass	Article no. Stainless steel
All valves with FKM seal							
A 2/2 way direct-acting, solenoid proportional control valve	2	G ⅜	0.12	25	12.5	236897	236899
		NPT ⅜	0.12	25	12.5	236898	236900
	3	G ⅜	0.25	10	5	236901	236903
		NPT ⅜	0.25	10	5	236902	236904
	4	G ⅜	0.45	8	4	236905	236910
		NPT ⅜	0.45	8	4	236908	236912
		G ½	0.45	8	4	236906	236911
		NPT ½	0.45	8	4	236909	236913
	6	G ½	0.8	4	2	236915	236919
		NPT ½	0.8	4	2	236917	236921
	8	G ½	1.1	2	1	236922	236924
		NPT ½	1.1	2	1	236923	236925
	9.5	G ½	1.4	0.7	0.35	273004	314557
		NPT ½	1.4	0.7	0.35	314555	314559

1) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.
2) Pressure data [bar]: Overpressure with respect to atmospheric pressure, with a differential pressure (difference between inlet and outlet pressure) above half of the nominal pressure there are discontinuities in the valve's characteristics possible.

Note: Cable plug, see **Type 2508** ▶ (will be replaced with Type 2518)
The valves are delivered without control electronics, see **Type 8605** ▶

Ordering chart continued

Circuit function	Orifice [mm]	Approvals	Port connection[1]	K_{VS} value water [m^3/h][2]	Nominal pressure [bar]	Max. differential pressure [bar]	Article no. Brass	Article no. Stainless steel
Variants with approvals, all valves with FKM seal								
A 2/2 way direct-acting, solenoid proportional control valve	2	UR	G ⅜	0.12	25	12.5	274976	274988
			NPT ⅜	0.12	25	12.5	274977	274989
		DVGW	G ⅜	0.12	5	5	314262	on request
		ATEX / IECEx	G ⅜	0.12	20	10	291483	on request
	3	UR	G ⅜	0.25	10	5	274978	274990
			NPT ⅜	0.25	10	5	274979	274991
		DVGW	G ⅜	0.25	5	5	314265	on request
		ATEX / IECEx	G ⅜	0.25	9	4.5	291485	on request
	4	UR	G ⅜	0.45	8	4	274980	274992
			NPT ⅜	0.45	8	4	274981	274993
		DVGW	G ⅜	0.45	5	4	314267	on request
		ATEX / IECEx	G ⅜	0.45	7	3.5	291486	on request
		UR	G ½	0.45	8	4	274982	274994
			NPT ½	0.45	8	4	274983	274995
	6	UR	G ½	0.8	4	2	274984	274996
			NPT ½	0.8	4	2	274985	274997
		DVGW	G ½	0.8	4	2	314269	on request
		ATEX / IECEx	G ½	0.8	3.5	1.75	291487	on request
	8	UR	G ½	1.1	2	1	274986	274998
			NPT ½	1.1	2	1	274987	274999
		DVGW	G ½	1.1	2	1	314270	on request
		ATEX / IECEx	G ½	1.1	1.5	0.75	291488	on request

1) Others on request.
2) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.

Ordering chart continued

Circuit function	Orifice [mm]	Approvals	Port connection[1]	K_{VS} value water [m^3/h][2]	Nominal pressure [bar]	Article no. Brass	Article no. Stainless steel
Variants for higher differential pressure, all valves with FKM seal							
A 2/2 way direct-acting, solenoid proportional control valve	2	–	G ⅜	0.12	25	239040	239085
		UR	G ⅜	0.12	25	275000	275005
		ATEX / IECEx	G ⅜	0.12	20	291468	on request
	3	–	G ⅜	0.25	10	239086	239087
		UR	G ⅜	0.25	10	275001	275006
		ATEX / IECEx	G ⅜	0.25	9	291470	on request
	4	–	G ⅜	0.45	8	239088	239089
		UR	G ⅜	0.45	8	274090	274091
		ATEX / IECEx	G ⅜	0.45	7	291474	on request
	6	–	G ½	0.8	4	239090	239091
		UR	G ½	0.8	4	275002	275007
		ATEX / IECEx	G ½	0.8	3.5	291476	on request
	8	–	G ½	1.1	2	239092	239093
		UR	G ½	1.1	2	275004	275008
		ATEX / IECEx	G ½	1.1	1.5	291477	on request
	9.5	–	G ½	1.4	0.7	291586	314558

1) Others on request.
2) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.

Note for the variants with higher differential pressures: The following technical data change in comparison to the technical data listed above.

- PWM frequency 500 Hz, span 1:100.
- Other connection variations (sub-base, NPT) on request
- For Δp> 145 PSI it is possible to get inconsistencies in the characteristic curve because of flow conditions in the application.

Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A - see Type 2508 ▶		
without circuitry (standard), without cable	0…250 V AC/DC	008376
without circuitry (standard), 3 m cable	0…250 V AC/DC	783573

Note: The valves are delivered without control electronics, see **Type 8605** ▶

2 way motor valve

3280

- Actuator isolated from flow path
- Excellent range and fast response times
- Low power consumption
- Orifice sizes DN1...DN10
- Versions: Standard, positioner, process controller and high pressure version up to 22 bar

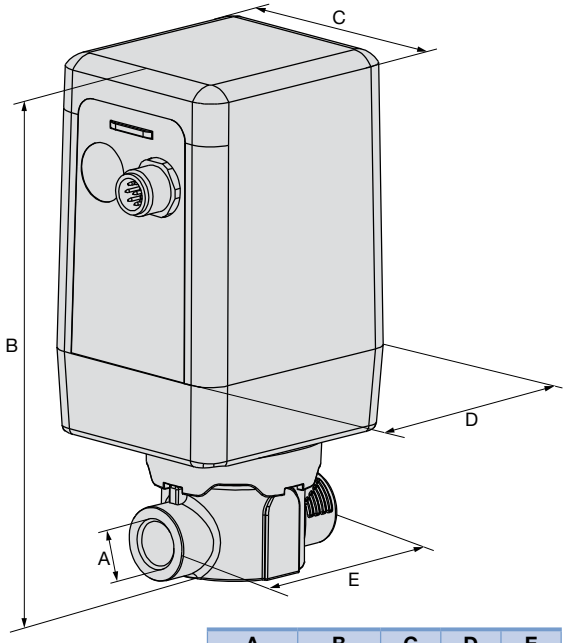
The direct-acting proportional valve of Type 3280 is used for dosing of liquids and gases in closed or open control loops. The valve features a linear stepper motor as actuator. The integrated electronics simplify the process integration; additional actuation modules are not necessary. The motor's power consumption to hold a specific opening position of the valve is zero. This key feature can reduce the energy consumption of a plant dramatically and thus make it more efficient. Type 3280 is available as standard proportional valve, as version with integrated positioner and as version with integrated process controller.

Technical data

Materials	
Body	Brass or stainless steel
Housing	PC (Polycarbonate), PPS (Polyphenylene sulfide)
Seals[1)]	NBR for liquids EPDM for liquids and special gases (e. g. ammonia, acetylene) FKM for neutral gases
Medium	Neutral gases, liquids
Pressure Range[2)]	0…6 bar (high pressure version up to 22 bar (depending on orifice size) available)
Closure time	2.5 sec.(0…100 % stroke)
Fluid temperature	0 °C…+70 °C
Ambient temperature	-10 °C…+60 °C
Viscosity	Max. 600 mm²/s (cSt)
Power supply	24 V DC ±10 % (max. residual ripple 10 %)
Power consumption	Max. 8 W (DN2…DN6) resp. max. 12 W (DN8 and DN10) <1 W in holding position
Duty cycle	Up to 100 % (depending on fluid and ambient temperature)
Port connection	G or NPT ¼, ⅜, ½, sub-base, Cartridge (on request)
Typical control data[3)]	
Hysteresis	<5 %
Repeatability	<1 % FS
Sensitivity	<1 % FS
Span	1:100
Protection class	IP54
Installation	As required, preferably with actuator upright
Status display	LED (details: see manual)
Weight	~0.7 kg

1) PEEK seat seals are used for orifice sizes 1, 1.5, 5 and in the high-pressure version additionally for orifice sizes 4. In this case, the seat tightness of the valve is reduced.
2) Pressure data [bar]: Overpressure with respect to atmospheric pressure
3) Characteristic data of control behaviour depends on process conditions

Dimensions [mm]



A	B	C	D	E
G ⅜	137.2	58	65.5	55
NPT ⅜	137.2			
G ¼	134.2			
NPT ¼	134.2			
G ½	139.2			
NPT ½	139.2			

Options

- Further versions see data sheet or on request

Accessories

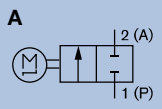
Article	Article no.
M12 socket, 8 pin with 2 m ready to use cable	919061
M12 socket, 8 pin with 2 m ready to use cable shielded cable	918991
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1 A	772361
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 2 A	772362
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 4 A	772363
Buffer module Type 1573 for safety positon when power failure	773440
For positioner and process controller versions	
M12 plug, 5 pin with 2 m ready to use cable shielded cable	559177
büS adapter, M12 socket, 8 pin to M12 plug, 5 pin (for büS stick connection)[1)]	773286
büS-Stick Set 1 (incl. power supply, büS-Stick, termination resistor, Y-connector, cable, …)	772426
büS-Stick Set 2 (incl. büS-Stick, cable)	772551
Software Bürkert Communicator	Download from www.buerkert.com

1) For the fieldbus version this is not necessary. The büS-Stick contained in büS-Stick-Set 1 and 2 is connected via a 5 pin M12 cable. Therefore an adapter for 8 pin M12 connector of the valve is necessary. Please note that the valve must be supplied with power during the connection of the parameterization interface. In büS-Stick-Set 1 a corresponding power supply is included.

2/2 way Proportional Valve (motor-driven)

3285

- Actuator isolated from flow path
- Excellent range and fast response times
- Low power consumption
- Orifice sizes DN8...DN25
- Versions: Standard, positioner, process controller



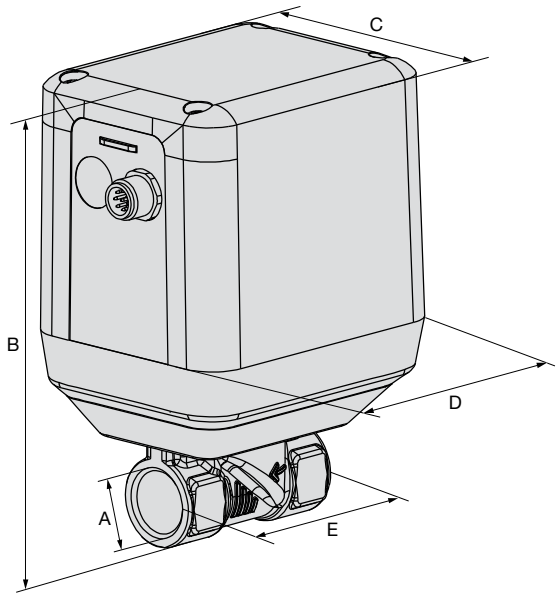
The direct-acting motor valve of type 3285 is used for dosing of liquids and gases in closed or open control loops. The valve features a stepper motor as the actuator. The integrated electronics simplifies the process integration; additional actuation modules are not necessary. The motor's power consumption to hold a specific opening position of the valve is zero. This key feature can reduce the energy consumption of a plant dramatically and thus make it more efficient. Type 3285 is available as a standard proportional valve, as a version with integrated positioner and as a version with integrated process controller.

Technical data

Materials	
Body	Brass or stainless steel
Housing	PC (Polycarbonate), PPS (Polyphenylene sulfide)
Seals	NBR for liquids, EPDM for liquids and special gases (e.g. ammonia, acetylene), FKM for neutral gases
Seat sealing	Technical ceramics
Medium	Neutral gases, liquids
Seat leakage based on IEC/EN 60534-4	Shut-off class IV
Pressure Range[1]	0…6 bar
Closure time	Ca. 4 sec.
Medium temperature	0 °C…+70 °C
Ambient temperature	-10 °C…+60 °C
Power supply	24 V DC ±10 % (max. residual ripple 10 %)
Power consumption	<1 W in holding position, Max. 12 W (depending on motor control)
Duty cycle	Up to 100 % (depending on fluid and ambient temperature)
Port connection	G ½, G ¾, G 1, NPT ½, NPT ¾, NPT 1
Typical control data[2]	
Hysteresis	<5 %
Repeatability	<1 % FS
Sensitivity	<1 % FS
Span	1:100
Protection class	IP50
Installation	As required, preferably with actuator upright
Status display	LED (details: see manual)
Weight	~ 800 g (DN8)…1500 g (DN25)

1) Pressure data [bar]: Overpressure with respect to atmospheric pressure
2) Characteristic data of control behaviour depends on process conditions.

Dimensions [mm]



Version	A	B	C	D	E
MS	NPT ½	137.95	77	92.5	58
	G ½	137.95			58
	NPT ¾	147.01			80
	G ¾	147.01			80
	NPT 1	156.35			95
	G 1	156.35			95
VA	NPT ½	141.55	77	92.5	58
	G ½	141.55			58
	NPT ¾	151.35			80
	G ½	151.35			80
	NPT 1	161.15			95
	G 1	161.15			95

Options

- Further versions see data sheet or on request

Accessories

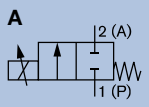
Article	Article no.
M12 socket, 8 pin with 2 m ready to use cable	919061
M12 socket, 8 pin with 2 m ready to use cable shielded cable	918991
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1.25 A, NEC Class 2 (UL 1310)	772438
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 1 A	772361
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 2 A	772362
Power supply Type 1573 for rail mounting, 100…240 V AC/ 24 V DC, 4 A	772363
Buffer module Type 1573 for safety positon when power failure	773440
For positioner and process controller versions	
M12 plug, 5 pin with 2 m ready to use cable shielded cable	559177
büS adapter, M12 socket, 8 pin to M12 plug, 5 pin (for büS stick connection)[1)]	773286
büS-Stick Set 1 (incl. power supply, büS-Stick, termination resistor, Y-connector, cable, …)	772426
büS-Stick Set 2 (incl. büS-Stick, termination resistor, Y-connector, cable)	772551
Software Bürkert Communicator	Download from www.burkert.com

1) The büS-Stick contained in büS-Stick-Set 1 and 2 is connected via a 5 pin M12 cable. Therefore an adapter for 8 pin M12 connector of the valve is necessary.
Please note that the valve must be supplied with power during the connection of the parameterization interface. In büS-Stick-Set 1 a corresponding power supply is included.

2/2 way proportional valve for low differential pressures

6024

- Direct-acting, normally closed
- DN8...DN12
- G ½ or G ¾



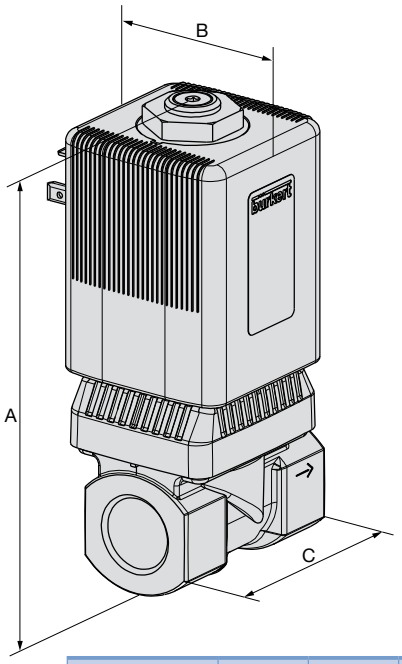
The direct-acting proportional valve ,Type 6024, works as an electro-magnetically actuated control valve with relatively high flow rates at low operating pressures. The valve is normally closed.

Technical data

Body material	Brass, stainless steel
Sealing material	FKM, others on request
Media technical vacuum	Neutral gasses, liquids
Medium temperature	-10 °C...+90 °C
Ambient temperature	Max. +55 °C
Viscosity	Max. 21 mm^2/s
Operating voltage	24 V DC
Power consumption	Max. 18 W
Duty cycle	100 % continuously rated
Port connection	G ½, G ¾ (NPT ½ and NPT ¾ on request)
Electrical connection	Tag connector acc. to DIN EN 175301-803 Form A, (cable plug Type 2508 (will be replaced with Type 2518) or Type 8605 pluggable control electronics not included)
Mounting position	Any, preferably with drive at top
Typical control data[3]	
Hysteresis	< 7 %
Repeatability	< 0.5 % of F.S.
Sensitivity	< 0.5 % of F.S.
Turn-down ratio	1:25
K_{VS} value[2]	1.4...2.8 m^3/h
Max. operating pressure[1]	0.1...0.7 bar (depending on DN)
Protection class	IP65 with plug-in module or cable plug on valve

1) Pressure data [bar]: Overpressure with respect to atmospheric pressure
2) K_{VS} value [m^3/h]: max. flow capacity for water
3) Characteristic data of control behaviour depends on process conditions

Dimensions [mm]



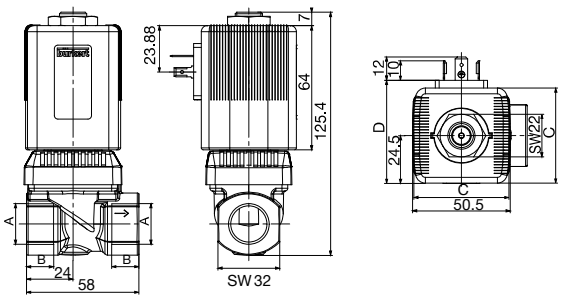
Body material	A	B	C
Brass	125.4	49	58
Stainless steel	125	49	65

Options

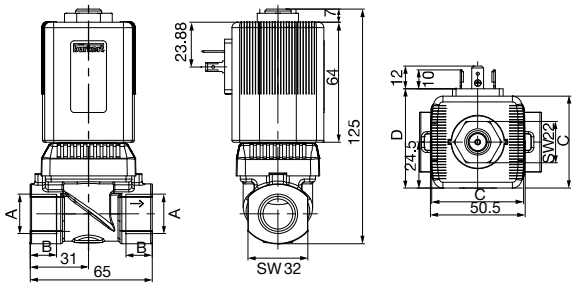
- Oxygen version
- Further versions see data sheet or on request

Dimensions [mm]

Brass body

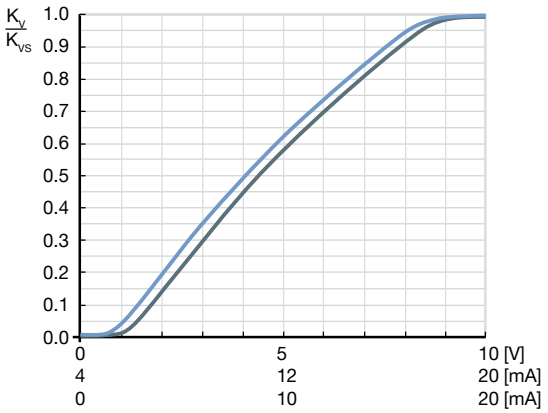


Stainless steel body



A	B	C	D	Coil size
G ½	14	49	53	8 (49 mm coil)
NPT ½ (on request)	14	49	53	8 (49 mm coil)
G ¾	16	49	53	8 (49 mm coil)
NPT ¾ (on request)	16	49	53	8 (49 mm coil)

Characteristics of a proportional valve



Advice for valve sizing

In continuous flow applications, the choice of an appropriate valve size is much more important than with on/off valves. The optimum size should be selected such that the resulting flow in the system is not unnecessarily reduced by the valve. However, a sufficient part of the pressure drop should be taken across the valve even when it is fully opened.

Recommended value: Δpvalve > 30 % of total pressure drop within the system

Otherwise, the ideal, linear valve curve characteristic is changed.
If the differential pressure (difference between inlet and outlet pressure) exceeds half the value of the nominal pressure, the characteristics may change.
For that reason take advantage of Bürkert competent engineering services during the planning phase!

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_V value water [m/h][1]	Q_{Nn} value [l/min][2]	Max. operating pressure [bar][3]	Power consumption [W]	Max. Coil current [mA]	Article no. brass body	Article no. stainless steel body
FKM Seal									
A 2/2 way direct-acting, solenoid proportional control valve	G ½	8	1.4	1500	0.7	18	580	150401	–
	G ¾	8	1.4	1500	0.7	18	580	150427	–
	G ½	10	2	2150	0.4	18	580	150402	150404
	G ¾	10	2	2150	0.4	18	580	150428	150429
	G ½	12	2.8	3020	0.2	18	580	150425	150426
	G ¾	12	2.8	3020	0.2	18	580	150406	150408

1) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve.
2) Q_{Nn} value: Flow rate value for air with inlet pressure of 6 bar, 1 bar pressure differential and +20 °C.
3) Pressure values [bar]: Overpressure with respect to atmospheric pressure

Accessories

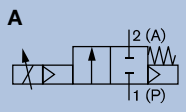
Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A - see Type 2508 ▸		
without circuitry (standard), without cable	0…250 V AC/DC	008376
without circuitry (standard), 3 m cable	0…250 V AC/DC	783573

Note: The valves are delivered without control electronics, see **Type 8605 ▸**

Servo-assisted 2-way high-flow solenoid control valve

6223

- Control valve for continuous control of liquids
- Low hysteresis and high repeatability
- Control with PWM signal
- Servo-assisted, tight closing valve



The valve, Type 6223, can be used to control the flow of large amounts of liquids. Low hysteresis, high repeatability and good response sensitivity guarantee good positioning behaviour. The valve closes tight. The push-over coil is easy to replace.

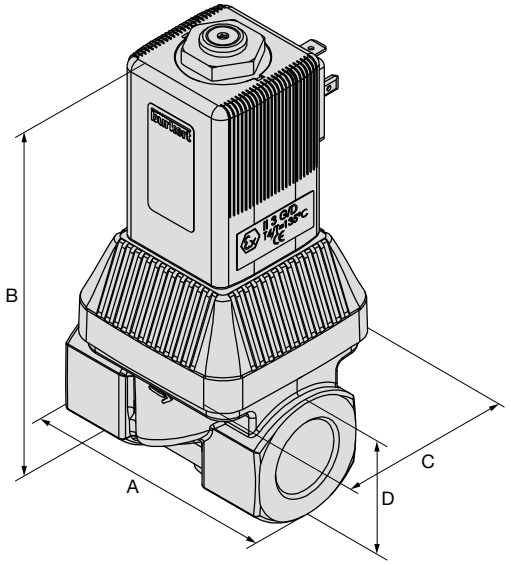
Technical data

Orifice	DN10, DN13 and DN20
Body material	Brass, stainless steel on request
Seal material	FKM, others on request
Media	Neutral liquids
Media temperature	-10 °C…+90 °C
Ambient temperature	Max. +55 °C
Port connection	G ⅜, G ½, G ¾, G 1
Viscosity	Max. 21 mm²/s
Operating voltage	24 V DC
Power consumption	See ordering chart
Duty cycle	Continuous rating 100 %
Electrical connection	Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN EN 175301-803 Form A
Protection class	IP65 with plug-on module or with cable plug on the valve
Installation	As required, preferably with actuator in upright position
Hysteresis	<5 %
Repeatability	<1 % FS
Sensitivity	<1 % FS
Settling time (90 %)	<200 ms
Span	1:10

Options

- Further versions see data sheet or on request

Dimensions [mm]



DN	A	B	C	D		
10	50	85.4	37.5	G ⅜	NPT ⅜	Rc ⅜
				G ½	NPT ½	Rc ½
13	58/65[1)]	103.8	44.5	G ½	NPT ½	Rc ½
	65	108.3		G ¾	NPT ¾	Rc ¾
20	80	142.1	66	G ¾	NPT ¾	Rc ¾
	80	148.1		G 1	NPT ½	Rc 1

1) MS/VA

Ordering chart

Circuit function	Port connection	Orifice [mm]	K_{VS} value water [m³/h][1]	Q_{Nn} value [l/min][2]	Pressure range [bar][3]	Max. coil current [mA]	Power consumption [W]	Article no.
A 2/2 way servo-controlled, solenoid proportional control valve	G ⅜	10	1.4	1510	0.5…10	300	8	134229
	G ½		1.4	1510	0.5…10	300	8	134230
	G ½	13	2.5	2700	0.5…10	330	10	132202
	G ¾		2.5	2700	0.5…10	330	10	282985
	G ¾	20	5.0	5400	0.5…10	530	15	222478
	G 1		5.0	5400	0.5…10	530	15	222477

1) K_{VS} value: Flow rate value for water, measured at +20 °C and 1 bar pressure differential over a fully opened valve
2) Q_{Nn} value: Flow rate value for air with inlet pressure of 6 bar[1], 1 bar pressure differential and +20 °C
3) Pressure data [bar]: Overpressure with respect to atmospheric pressure; if the differential pressure over the valve exceeds 5 bar the characteristics may change.

Please note that the valves are delivered without control electronics unit and cable plug (see accessories below).

Accessories

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced with Type 2518) acc. to DIN 175301-803 Form A – see Type 2508 ▶		
without circuitry (standard), without cable	0…250 V AC/DC	008376
without circuitry (standard), 3 m cable	0…250 V AC/DC	783573

Note: The valves are delivered without control electronics, see **Type 8605** ▶

Overview for Control Electronics for Electromagnetic Proportional Valves

Note: The following product overview does not show the complete product range of this catalogue. A complete overview can be found **here** ▸

Overview Control Electronics

Type	Function	Versions	Signals	Operating voltage	Max. power consumption	Valve outlet	Software features
8605 ▸	Digital PWM control	DIN-rail, valve mounting	- Setpoint input (0…5 V, 0…10 V, 0…20 mA, 4…20 mA) - PWM output (80 Hz…6 kHz)	12, 24 V DC	1 W (without valve)	Max. 2 A (PWM)	- Valve adjustment (frequency, min./max. opening) - Zero cutoff - Temperature compensation - Ramp function - Down-/Upload of the parameterization
8611 ▸	Digital PI controller, continuous, 2-point, 3-point and on/off control	Fitting, wall, switch cabinet, DIN-rail or valve mounting	- Setpoint input (0…10 V, 4…20 mA) - Actual value output (4…20 mA) - Sensor input (0…10 V, 4…20 mA, frequency, PT100), e.g. for pressure, temperature or flow rate - Binary input - Binary output - Outputs (continuous, discontinuous signal)	24 V DC	2 W (without valve)	Max. 1 A (PWM)	- Controller parameterization - Valve adjustment (proportional valves selectable) - Sensor setting (all Bürkert flow sensors stored) - Configuration of the switching signals - Scaling of setpoint and actual value - Code protection

PWM Control Electronics for Solenoid Control Valves

8605

- Programmable digital electronics
- Converts an analog input signal to a PWM output signal
- Adjustable PWM frequency
- Cable plug and DIN rail version

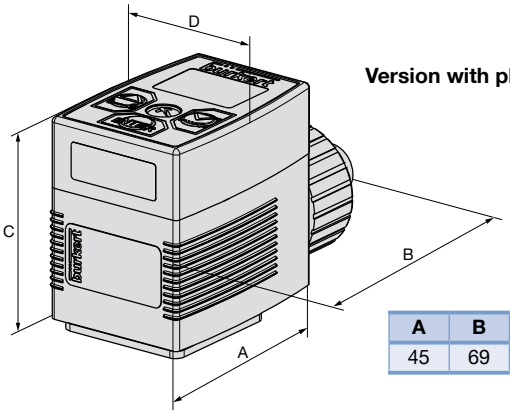
The digital control electronics, Type 8605, serves to operate valves in the power range from 40…2000 mA. The electronics converts an external standard signal into a pulse-width modulated (PWM) signal with which the opening of the valve and hence a fluidic output parameter (e.g. flow rate) can be infinitely varied. An internal current control with the duty cycle factor of the PWM signal as control variable ensures that every value of the input signal, irrespective of the thermal condition of the coil, is unambiguously assigned a given value of the effective coil current.
Compared to DC operation of solenoid control valves the PWM operation improves, among others, their sensitivity and hysteresis. A display and operating keys allow the electronics to be easily adapted to a particular solenoid control valve and to the concrete conditions of an application.

Technical data

Operating voltage	12 V DC or 24 V DC
Voltage tolerance	±10 %
Residual ripple	<5 %
Power consumption	Approx. 1 W (without valve)
Output current (valve)	Max. 2 A
Ambient temperature	-10 °C…60 °C
Input signal	0…20 mA, 4…20 mA or 0…5 V, 0…10 V (configurable)
Input impedance	<200 Ω (with current input) >20 kΩ (with voltage input)
Output signal for valve control	PWM signal – frequency adjustable from 80 Hz to 6 kHz
Ramp function	Time variable from 0…10 sec.
Version	Cable plug for direct installation (with PG or M12 connection) DIN-rail version (DIN EN 50022)
Protection class	Cable plug – IP65 DIN-rail – IP40
Housing material	Cable plug – Polyamide / PC DIN-rail – Polyamide / PBT

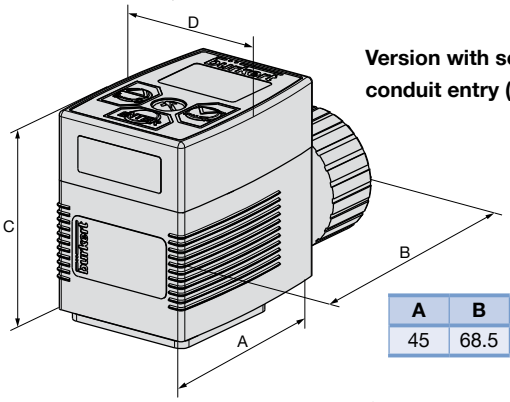
Dimensions [mm]

Version with plug M12



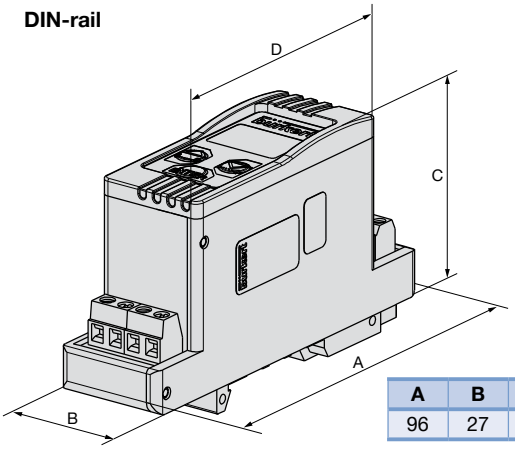
A	B	C	D
45	69	41.5	32.4

Version with screwed conduit entry (PG)



A	B	C	D
45	68.5	41.5	32.4

DIN-rail

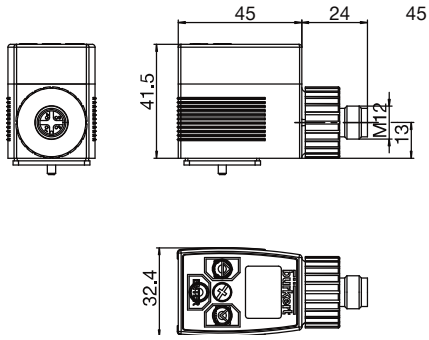


A	B	C	D
96	27	48.3	66

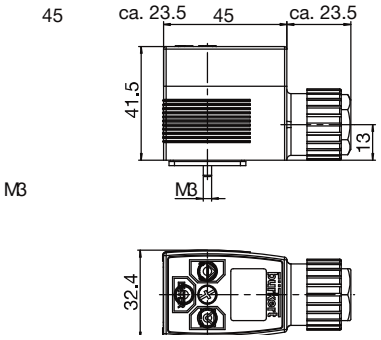
Dimensions [mm]

Cable plug with operating unit

Ausführung Stecker M12

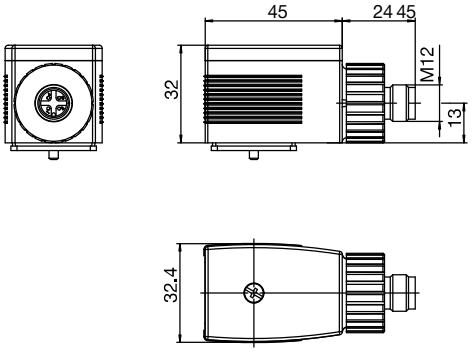


Ausführung PG-Verschraubung

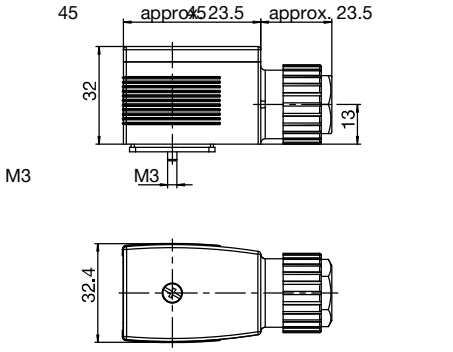


Cable plug without operating unit

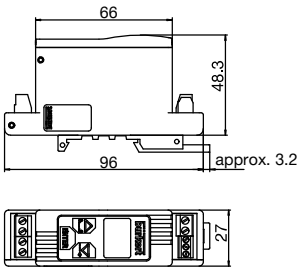
Version plug M12



Version with screwed conduit entry (PG)



DIN-rail



Ordering chart

Version	Max. coil current [mA]	Article no.	2861, 2871 24 V DC	2861, 2871 12 V DC	2863, 2873 24 V DC	2863, 2873 12 V DC	2865, 2875 24 V DC	2865, 2875 12 V DC	2836 24 V DC	6024 24 V DC	6024 12 V DC	6223 24 V DC	6223 12 V DC
Cable plug with PG-connection	200…1000	316530	–	–	x	x	x	–	–	x	–	x	–
Cable plug with M12-connection	200…1000	316528	–	–	x	x	x	–	–	x	–	x	–
Cable plug with PG-connection	500…2000	316529	–	–	–	x	x	x	x	x	x	–	x
Cable plug with M12-connection	500…2000	316526	–	–	–	x	x	x	x	x	x	–	x
Cable plug with PG-connection without control unit	200…1000	316521	–	–	x	x	x	–	–	x	–	x	–
Cable plug with M12-connection without control unit	200…1000	316522	–	–	x	x	x	–	–	x	–	x	–
Cable plug with PG-connection without control unit	500…2000	316523	–	–	–	x	x	x	x	x	x	–	x
Cable plug with M12-connection without control unit	500…2000	316525	–	–	–	x	x	x	x	x	x	–	x
DIN-rail	40…220	316525	x	–	–	–	–	–	–	–	–	–	–
DIN-rail	200…1000	316525	x	x	x	x	x	–	–	x	–	x	–
DIN-rail	500…2000	316525	–	–	–	x	x	x	x	x	x	–	x

Notes:

– With two current ranges possible please choose the lower one

– Successor types: – 2861, 2871 with 2822, 2824
– 2863, 2873 with 2833
– 2865, 2875 with 2835
When using the older type please choose the control electronics indicated for the adequate new type.

Accessories

Version	Article no.
Control unit for plug on module	582878
Right-angle plug M12, 4 pins	784301
M12 connector with 5 m cable, 4 pins	918038
Cover (for control unit without display)	670549

Overview for Cable Plugs

Note: The following product overview does not show the complete product range of this catalogue. A complete overview can be found **here** ▸

Type	Versions	Size	Cable variants available	Protection class	Number of poles
2505 ▸	Standard version without Ex approval	For small 10 mm Bürkert solenoid valves	Yes	IP30	2- and 3-pole
2516 ▸	Standard version without Ex approval	DIN EN 175301-803 Form C	Yes	IP65	3-pole (2 + protective conductors)
2507 ▸	Standard version without Ex approval	DIN EN 175301-803 Form B	No	IP65	3-pole (2 + protective conductors)
2508 ▸	Standard version without Ex approval	DIN EN 175301-803, Form A	Yes	IP65	3-pole (2 + protective conductors) as an option 4-pole (3 + protective conductors)
2509 ▸	Version with UR approval as component	DIN EN 175301-803, Form A	Yes	IP65	3-pole (2 + protective conductors)
2513 ▸	Version according to ATEX Cat. 3 GD	DIN EN 175301-803, Form A	Yes	IP65	4-pole (2 + 2x protective conductors)

Cable Plug 10 mm for Bürkert small solenoid valves

2505

- Installation width 10 mm
- Cable and flying leads version available
- Contact form in grid dimension 2.54
- Locking

Connector with locking lug for contacting Bürkert solenoid valves with rectangular plug connector. These robust and affordable plug connection has established itself in the area of all small Bürkert solenoid valves in the analyst engineering and process pneumatics. As well as strands and cable versions connectors for printed circuit board (PCB) mounting are also available.

Technical data

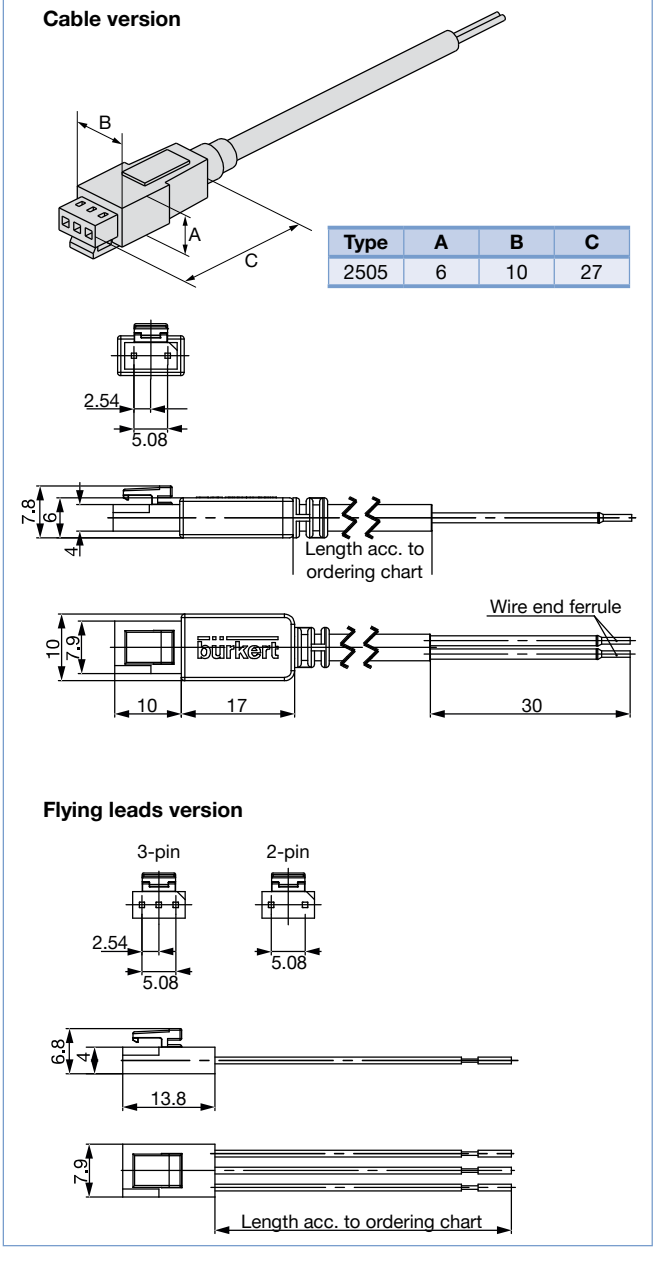
Material	POM and PA
Contact material	Brass gilded
Max. continuous temperature	+80 °C
External cable diameter	4…5 mm (cable version) 1.3…1.5 mm (flying leads version)
Coating material	
cable version	PVC
flying leads version	FEP
Core cross-section	0.25 mm²
Cable outlet	Straight
Locking	Yes
Nominal voltage	Until 60 V DC and 25 V AC (clamp protection voltage according to VDE 0140)
Maximum current rating	1 A
Contact resistance	Approx. 20 mOhm
Cable ends	
Cable version	End ferrule
Flying leads version	Blank
Protection class	
Cable version	IP30
Flying leads version	IP30
Number of terminals	2 or 3 pin

Options

- Further versions see data sheet or on request

Dimensions [mm]

Cable version



Type	A	B	C
2505	6	10	27

Flying leads version

Ordering chart

Description	Cable length	Article no.
2505 cable version, 2 pins Version, coating color grey		
Connector with cable 2 pins	0.5 m	260807
	3.0 m	252572
	5.0 m	255194

Description	Cable length	Article no.
2505 cable version, 3 pin Version, coating color black		
Connector with cable 3 pins	0.5 m	260833
	3.0 m	252573

Description	Core cross section	Flying leads length	Number of terminals	Article no.
Flying leads version				
Connector with single flying leads	0.14 mm^2	300 mm	2	644068
		600 mm	2	162144
		300 mm	3	212968
	0.25 mm^2	300 mm	2	262346
		600 mm	2	262351
		300 mm	3	262350

Description	Mated height	Article no.
Connector for PCB mounting (solder connection)	7 mm	645527
	11 mm	645526

Cable Plug acc. to DIN EN 175301-803 Form B Industrial standard

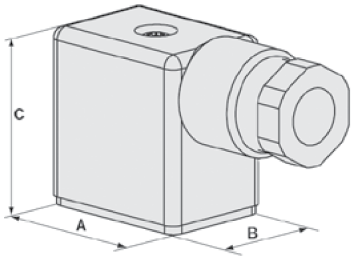
- Also available with LED indicator
- Protection class IP65
- Contact form 11 mm

Plug for the connection of electrical components Form B Industrial standard.

Technical data

Body material	Polyamide (without LED; black, with LED; transparent)
Contact material	Brass, galvanised silver-plated
Flat seal	NBR
Temperature range	-40…+90 °C
Cable diameter	4.5…7 mm
Cable outlet	Straight
Functional display	LED, colour red
Nominal voltage	0…250 V
Contact resistance	≤ 4 mΩ
Electrical connection	Terminal screws max. 0.75 mm² with circuitry (max. 1.5 mm² without circuitry)
Protection class	IP65
Number of terminals	2 pins + protective earth
Cable glands	PG9
Number of terminals	2 pins + protective earth conductor

Dimensions [mm]



A	B	C
28.6	20.8	32

Ordering chart

Circuitry	Voltage/frequency	Article no. 2507
Without circuitry	0…250 V AC/DC	423845
With LED	24 V AC/DC	423849
	250 V AC/DC	423850
With LED and freewheeling diode	24 V DC	423851

Note: The delivery of a cable plug includes flat gasket and fixing screw made of steel (thick-film passivated).

Cable plug acc. to DIN EN 175301-803 Form A

- Compact and simple to wire
- IP65 / NEMA 4X
- Global Approvals

Type 2509

Type 2513

Type 2508 (will be replaced with Type 2518)

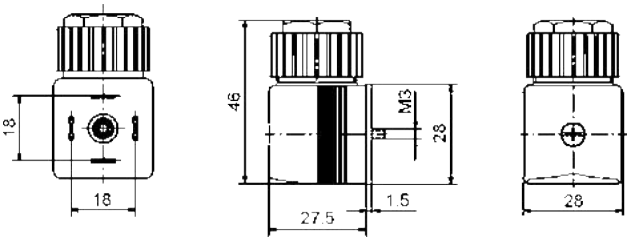
Type 2508 – Standard version without Ex approval
Type 2509 – Version with UR approval as component
Type 2513 – Version according to ATEX Cat. 3 GD

Technical data

Type	**2508** (will be repalced with Type 2518)
Body material	Polyamide, polycarbonate (version with LED)
Contact material	Brass, silver-plated
Max. continuous temp.	+90 °C (-10…+55 °C by version HL, LR and I_N)
Cable diameter	6-7 mm
Cable outlet	Can be rotated through 4×90°
Contact distance	18 mm according to DIN EN 175301-803
Functional display	LED, colour red (optional), yellow with version HL and LR
Electrical connection	Screw terminal, max. 1.5 mm²
Nominal voltage	Depending on version
Contact resistance	5 mΩ (typ.)
Protection class	IP65
Number of terminals Standard Option	 2 pins + protective earth conductor 3 pins + protective earth conductor
Type	**2509**
Body material	PA (polyamide)
Contact material	Copper alloy, silver-plated
Connection thread	NPT ½
Cable outlet	vertically to the plug bottom can be rotated by 4×90°after removal
Cross section area	≤0.118"
Isolation between cable plug and coil	NBR flat seal
Cable diameter	0.029…0.078 inches
Ambient temperature	-10 °C…55 °C (+14 °C…131 °F)
Poles	2 pin + protective ground
Rated voltage	0 to 250 V
Protection class	NEMA 4 (IP65)
Flammability class to UL 94	5 V

Dimensions [mm]

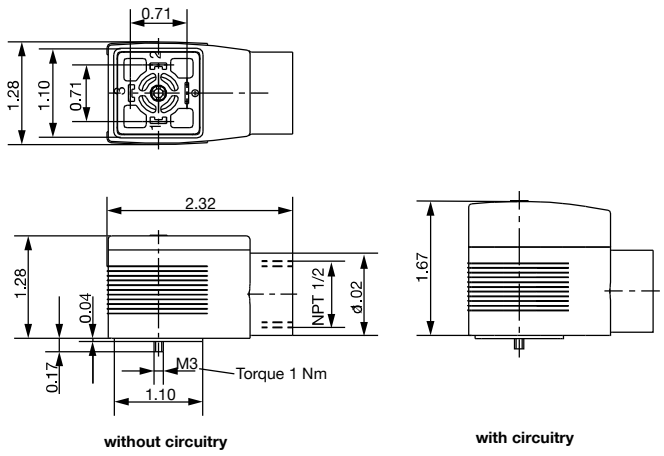
Type 2508 (will be replaced with Type 2518)



Type	**2513**
No. of pins	4 pin (2+2x protective conductor)
Body material	Polyamide
Contact material	Brass , silver plated
Circuit	Without
Fixing screw	Stainless steel
Seal	TPU injected, additional NBR*1 (supplied loose)
Cable diameter	5.5…6.5 mm
Cable sheath	PUR
Core insulation	PP
Core cross-section	3×0.75 mm²
Bending radius (moving state)	min. 10x cable diameter
Sheath colour	Black
Core insulation colour	BN,BU,GNYE
Acceptable current load	4 A
Rated voltage	max. 230 V AC/DC
Protection class	IP65 (in locked position)
Ambient temperature	-30 °C to +90 °C
Soiling level	3

Dimensions [mm]

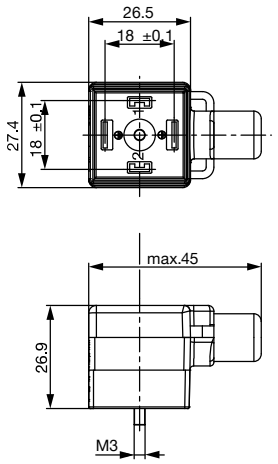
Type 2509



without circuitry

with circuitry

Type 2513



Ordering chart

Description	Voltage	Article no.
Cable plug Type 2508 (will be replaced by 2518) acc. to DIN 175301-803 Form A		
Without circuitry (standard), without cable	0-250 V AC/DC	008376
Without circuitry (standard), 3 m cable	0-250 V AC/DC	783573
With LED	12-24 V AC/DC	008360
With LED	100-120 V AC/DC	008361
With LED	200-240 V AC/DC	008362
With varistor	12-24 V AC/DC	008370
With varistor	100-240 V AC/DC	008372
With LED and varistor	12-24 V AC/DC	008367
With LED and varistor	100-120 V AC/DC	008368
With LED and varistor	200-240 V AC/DC	008369
With rectifier, LED and varistor	12-24 V AC/DC	008363
With pole protection, free wheeling diode and LED	12-24 V DC	008373
With pole protection and free wheeling diode	12-240 V DC	008375
With rectifier and varistor	12-240 V AC/DC	008374
With inverter	12-24 V AC/DC	on request
Cable plug Type 2509 acc. to DIN EN 175301-803 Form A		
Without circuitry (standard)	0-250 V AC/DC	137943
Cable plug Type 2513 acc. to DIN EN 175301-803 Form A		
Cable length, 12000 mm	max. 230 V AC/DC	260893
Cable length, 5000 mm	max. 230 V AC/DC	260892
Cable length, 3000 mm	max. 230 V AC/DC	260891
Cable length, 300 mm	max. 230 V AC/DC	260890

Note: The delivery of a cable plug includes flat gasket and fixing screw made of steel (thick-film passivated).

Cable plug DIN EN 175301-803

- Protection class IP65
- With approvals: UR, CSA, VDE
- Easy to install
- Also available with moulded-on cable connection

Plug-in connection for the connection of electrical components according to DIN EN 175301-803 Form C (previously DIN 43650).

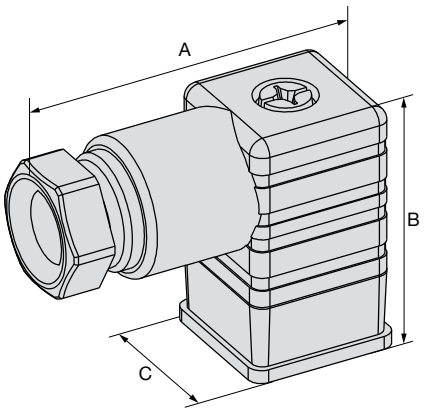
Technical data

Body material	Polyamide
Contact material	Brass
Cable diameter	4.5…6 mm
Temperature range (ambient)	
Plug	-40 °C…+125 °C
Seal	-25 °C…+90 °C
Functional display	LED, colour yellow
Nominal voltage	0…250 V
Maximum current rating	Without circuitry: 6 A With diode: 3 A
Contact resistance	≤10 mΩ
Electrical connection	Terminal screws
Protection class	IP65
Number of terminals	2 pins + protective earth

Options

- Further versions see data sheet or on request

Dimensions [mm]



A	B	C
38	26	15.8

Ordering chart

Voltage	Current rating	Article no. without cable	Article no. with 2 m cable	Article no. with 3 m cable
Without circuitry				
0…250 V AC/DC	max. 6 A	303141	303161	–
With LED				
12…24 V AC/DC	max. 3 A	303145	303162	–
100…120 V AC/DC	max. 3 A	303146	–	–
200…240 V AC/DC	max. 3 A	303147	–	–
With rectifier, varistor and LED				
12…24 V AC/DC	max. 1 A	–	–	303142
100…120 V AC/DC	max. 1 A	–	–	303143
200…240 V AC/DC	max. 1 A	–	–	303144
With LED and varistor				
12…24 V AC/DC	max. 3 A	303148	–	–
100…120 V AC/DC	max. 3 A	303149	–	–
200…240 V AC/DC	max. 3 A	303150	–	–

Note: The delivery of a cable plug includes the flat seal and fixing screw