16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications



6605/6606

2/2- and 3/2-Way; Orifice 0.6 mm

Dead volume free design on request

Compact size

Hermetic isolation of fluid from the actuator

High back-pressure rating

Body materials: PEEK, PVDF, ETFE

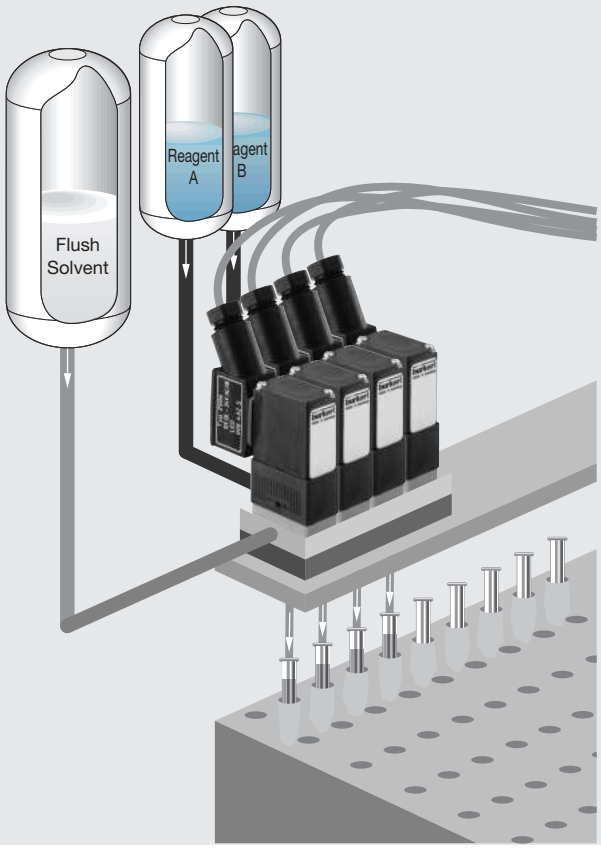
Flow diagnosis on request

The 6605/6606 analytical solenoid valves combine all state of the art features in a compact design. With high reliability, virtually no heat transfer between fluid and coil, minimized dead volume and Burkert's expertise in supplying customized solutions, these valves are a perfect fit even for the most demanding applications.

Process Specification

Nominal voltage	12, 24 V/DC 110 - 120 V/UC 230 - 240 V/UC
Voltage tolerance	± 10%
Power consumption	3.4 W at 12, 24 V/DC 4 W at 110 - 120, 230 - 240 V/DC
Duty cycle	100% continuously rated
Cycling rate	Approx. 300 c.p.m.
Protection class	• IP 65 with leads or cable plug 2506 • IP 67 with round plug • IP 40 with rectangular plug
Electrical connection	(see dimensions)
Pressure range max.	Vacuum to 2 bar (see specifications)
Materials	
Body	PEEK for sub-base body PVDF for G 1/8, NPT 1/8 and tube connection body ETFE for UNF body
Seal	FFKM (SIMRIZ Perfluorelastomer)
Fluids	Aromatics, ethers, esters, ketones, solvents (PEEK body only)
Temperatures	
Fluid	0°C up to +50°C
Ambient	Max. +55°C
Max. viscosity	Approx. 21 mm^2/s
Response time	Approx. 20 ms
Internal volume	
G1/8, NPT1/8	85 µl
Sub-base	68 µl
UNF 1/4-28	30 µl (2/2), 55 µl (3/2)
On request	< 5 µl

Applications:
- Medical technology
- Biotechnology
- Analytical instruments
- Disinfectants and solvents
- Strong acids and bases, oxidizing solutions



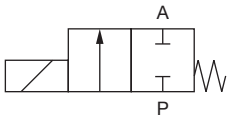
bürkert Fluid Control Systems

16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications

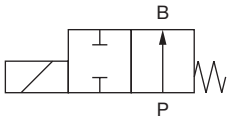
Technical Data — Type 6605: 2/2-way — Type 6606: 3/2-way

Circuit Function

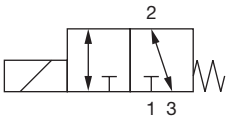
A 2/2-way valve, direct acting normally closed



B 2/2-way valve, direct acting normally open



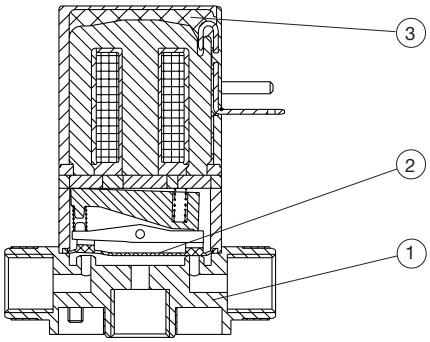
T 3/2-way valve, direct acting, universal function, any flow direction (mixing or distributing versions)



Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h] 2/2-way	Kv-Value (water) [m³/h] 3/2-way	Q_{Nn}-Value (air) [l/min] 2/2-way	Q_{Nn}-Value (air) [l/min] 3/2-way	Pressure range [bar]	Back pressure [bar] 2/2-way	Response time [ms]	Weight [g]
G1/8, NPT1/8	1.6	0.060	0.047	65	42	Vac. - 2	2	25	65
Flange	1.6	0.039	0.032	65	42	Vac. - 2	2	25	56
UNF1/4-28	1.5	0.039	0.025	65	42	Vac. - 2	1	25	63
Tube	1.6	0.039	0.025	65	42	Vac. - 2	1	25	60

Flow rate: Kv-value water [m³/h]
Measured at +20°C, 1 bar pressure to atmosphere
Pressure ranges [bar]
Measured as overpressure to the atmospheric pressure
Response times [ms]
Measured at valve outlet at 2 bar and +20°C
Opening Pressure rise from 0 to 90%
Closing Pressure drop from 100 to 10%

Materials



1 Valve body: PEEK, PVDF or ETFE
2 Diaphragm: FFKM (SIMRIZ)
3 Coil body: PA (Polyamide)

Ordering-Information Accessories

Accessory	Description	Item-No.
Rectangular plug 5.08 mm	3 m cable	133 486 F
	300 mm leads	644 068 N
	single contacts for manifold mounting	644 067 D

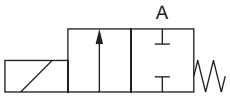
Additional Accessories on request:
- Multivalve manifolds
- Flow diagnostics
- Fittings and tubes

16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications

Specifications - Ordering Chart (Other Versions on Request)

Circuit Function A

2/2-way valve, direct acting
normally closed



PVDF Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	leads, 500mm	0.062	–	137 749 H	–
G 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	rect. plug	0.062	–	139 146 X	–
G 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	cab. plug 2506	0.062	–	137 746 W	137 748 G
NPT 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	leads, 500mm	0.065	137 753 V	137 754 W	–
NPT 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	cab. plug 2506	0.065	–	137 750 E	–
Tube	1.6	0.039	42	Vac. - 2	1	FFKM	leads, 500mm	0.057	137 763 X	137 764 Y	–
Tube	1.6	0.039	42	Vac. - 2	1	FFKM	rect. plug	0.057	–	139 147 Y	–
Tube	1.6	0.039	42	Vac. - 2	1	FFKM	cab. plug 2506	0.057	137 762 W	137 760 G	–

ETFE Valve Body

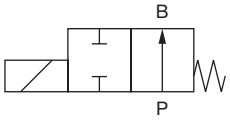
Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	leads, 500mm	0.063	137 758 A	137 759 B	–
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	cab. plug 2506	0.063	–	142 863 Z	–
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	rect. plug	0.063	–	137 755 X	–

PEEK Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
Sub-base	1.6	0.039	42	Vac. - 2	2	FFKM	leads, 500mm	0.053	137 744 U	137 745 V	–
Sub-base	1.6	0.039	42	Vac. - 2	2	FFKM	rect. plug	0.053	–	139 145 W	–
Sub-base	1.6	0.039	42	Vac. - 2	2	FFKM	cab. plug 2506	0.053	137 743 T	137 741 Z	–

Circuit Function B

2/2-way valve, direct acting
normally open



PVDF Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	cab. plug 2506	0.062	–	137 747 X	–
NPT 1/8	1.6	0.060	65	Vac. - 2	2	FFKM	cab. plug 2506	0.065	–	137 751 T	–
Tube	1.6	0.039	42	Vac. - 2	1	FFKM	cab. plug 2506	0.057	–	137 761 V	–

ETFE Valve Body

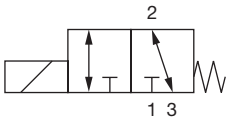
Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	cab. plug 2506	0.063	–	137 756 Y	–

PEEK Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
Sub-base	1.6	0.039	42	Vac. - 2	2	FFKM	cab. plug 2506	0.053	–	137 742 S	–

Circuit Function T

3/2-way valve, direct acting,
universal function, any flow direction



PVDF Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
G 1/8	1.6	0.047	51	Vac. - 2	2	FFKM	leads, 500mm	0.062	–	137 771 X	–
G 1/8	1.6	0.047	51	Vac. - 2	2	FFKM	rect. plug	0.062	–	139 149 A	–
G 1/8	1.6	0.047	51	Vac. - 2	2	FFKM	cab. plug 2506	0.062	–	137 769 D	137 770 A
NPT 1/8	1.6	0.047	51	Vac. - 2	2	FFKM	leads, 500mm	0.065	137 774 S	137 775 T	–
NPT 1/8	1.6	0.047	51	Vac. - 2	2	FFKM	cab. plug 2506	0.065	–	137 772 Y	–
Tube	1.6	0.025	27	Vac. - 2	1	FFKM	leads, 500mm	0.057	137 782 K	137 783 L	–
Tube	1.6	0.025	27	Vac. - 2	1	FFKM	rect. plug	0.057	–	139 150 F	–
Tube	1.6	0.025	27	Vac. - 2	1	FFKM	cab. plug 2506	0.057	137 781 J	137 780 V	–

ETFE Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
UNF 1/4-28	1.5	0.050	27	Vac. - 2	2	FFKM	leads, 500mm	0.063	137 778 E	137 779 F	–
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	cab. plug 2506	0.063	–	137 776 U	–
UNF 1/4-28	1.5	0.039	42	Vac. - 2	2	FFKM	rect. plug	0.063	–	142 864 S	–

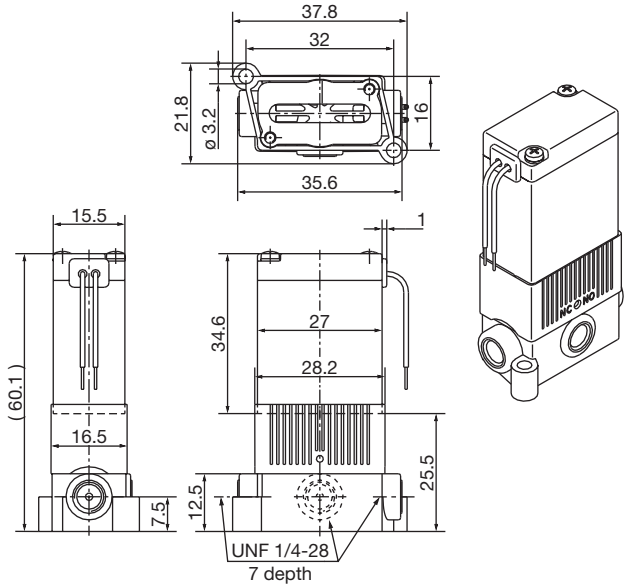
PEEK Valve Body

Port connection	Orifice DN [mm]	Kv-Value (water) [m³/h]	QNn-Value (air) [l/min]	Pressure range [bar]	Back pressure [bar]	Seal material	Electrical connection	Weight [kg]	Item-No. Voltage / Frequency [V/Hz] 12/DC[1]	24/DC[1]	230/DC/AC[2]
Sub-base	1.6	0.032	34	Vac. - 2	2	FFKM	leads, 500mm	0.053	137 767 T	137 768 C	–
Sub-base	1.6	0.032	34	Vac. - 2	2	FFKM	rect. plug	0.053	–	139 148 H	–
Sub-base	1.6	0.032	34	Vac. - 2	2	FFKM	cab. plug 2506	0.053	137 766 S	137 765 Z	–

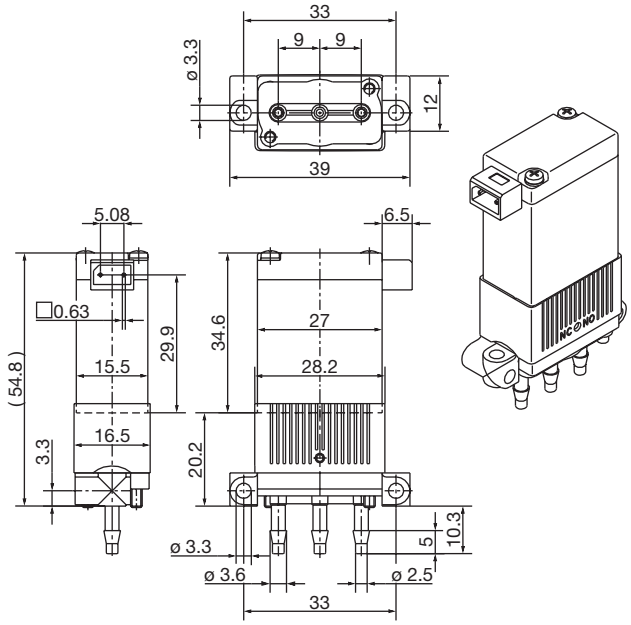
[1] Side tag connector, [2] Top tag connector, universal coil (AC/DC) with integrated rectifier

16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications

UNF 1/4-28 Body with Flying Leads - Dimensions [mm]

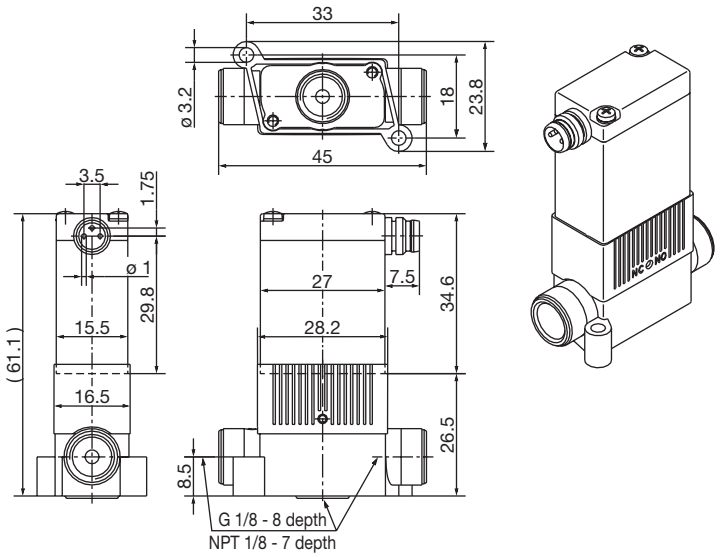


Tube Connection Body with Side Plug - Dimensions [mm]

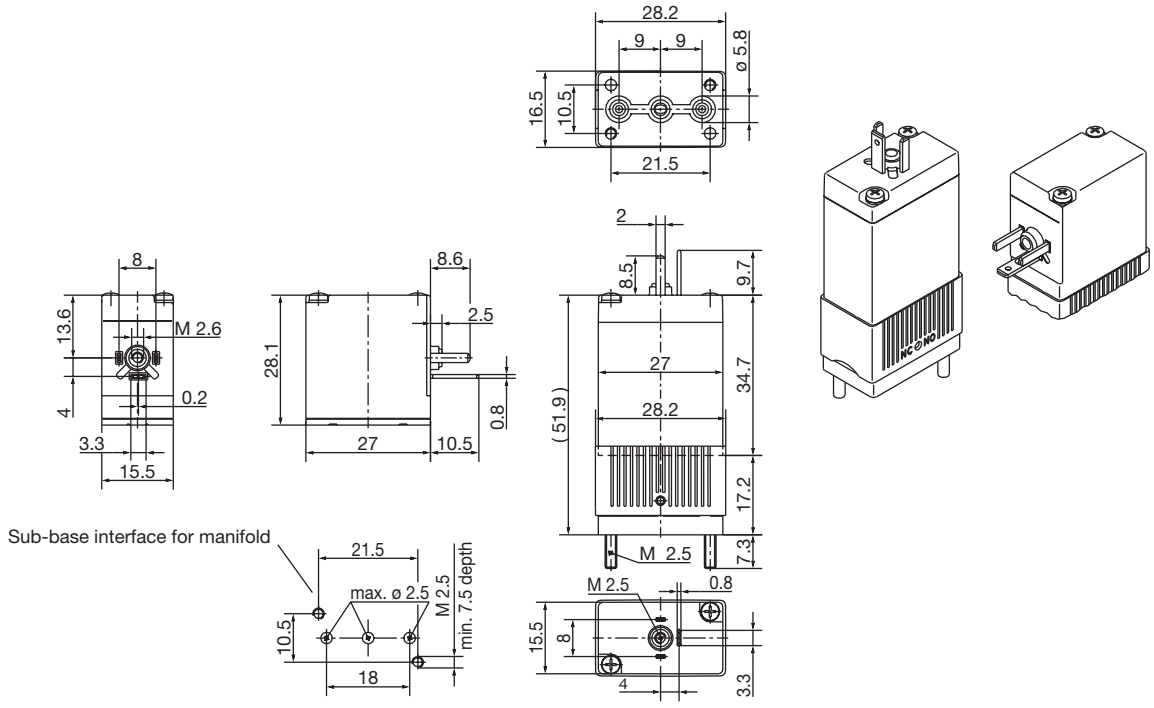


16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications

G 1/8 (NPT 1/8) Body with Round Plug - Dimensions [mm]



Sub-base Connection Body with Top or Side Plug - Dimensions [mm]



16 mm Miniature Rocker Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 2505 - Rectangular Cable Plug

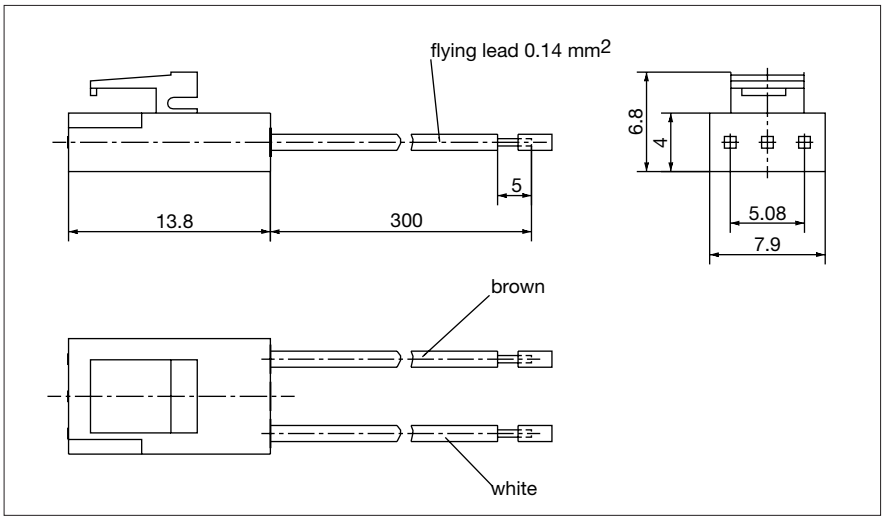
Technical Data

Protection class	IP 40
Operating voltage	24 V
Power consumption	3 W
Operating temperature	0-50 °C

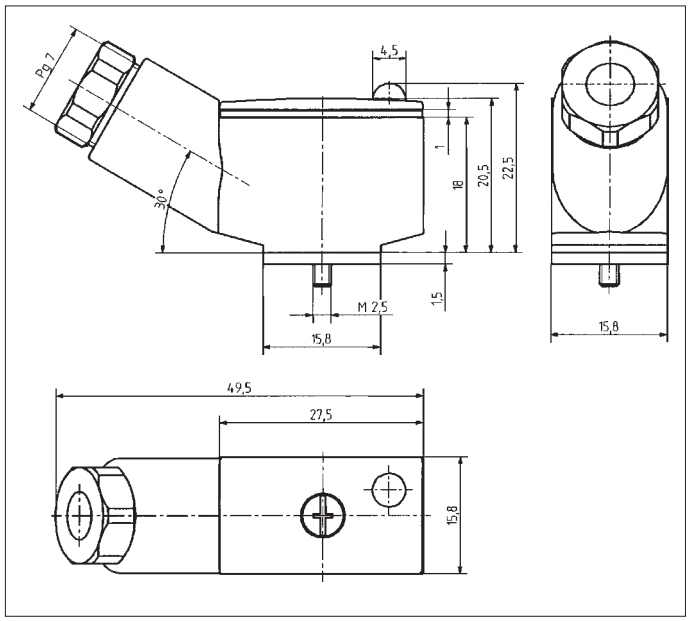
Ordering[1)]	Item-No.
Cable length 300 mm	644 068 N
Cable length 3 m	133 486 F

[1)] Please order separately (no standard delivery)

Dimensions [mm]



Type 2506 - Cable Plug DIN 43650, Form C



Technical Data

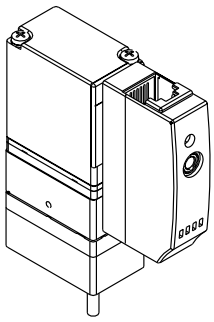
Body material	PA (polyamide)
Contact material	Brass, electro-silverplated
Isolation between cable plug and coil	Gasket 1.5 mm
Continuous limit temp.	+125 °C
Cable diameter	5–6 mm
Electr. connection	Terminal screws Max. 0.75 mm²
Poles	2-pole + protective earth
Nominal voltage	0–250 V

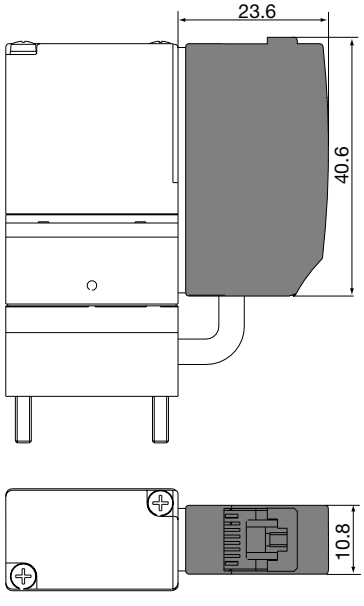
Ordering	Item-No.
Cable plug 2506	008 353 P [2)]

[2)] Standard delivery with the valve

Diagnosis Valve (Available on Request)

- Flow / low flow signal
- Valve position signal
- LEDs and binary outputs
- for 2/2-way and 3/2-way valves





In case of special application requirements, please consult for advice.

We reserve the right to make technical changes without notice.
902-GB/ 3-0182