Miniature Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 200

2/2-Way, Direct-acting, G1/8

Advantages/Benefits

- **FPM or EPDM Separating diaphragm isolates solenoid system from operating fluid**
- **Compact design**
- **Specific testing and cleaning available**
- **Short response time**
- **Electrical connection: DIN-plug or leads**
- **Body material: Stainless steel**

Design/Function

Type 200 is a direct-acting plunger-type solenoid valve normally closed by spring action (circuit function A).

A diaphragm isolates the fluid from the solenoid system.

When energized, the solenoid armature is drawn against a spring to open the valve.

The solenoid epoxy encapsulation efficiently dissipates the heat generated by the coil.

Specific testing and cleaning and low power versions are available according to application requirements.

Applications

- Laboratory instruments
- Small-scale instrument
- Gas control instruments
- Shut-off, dosing, filling, ventilating
- Welding technology
- Difficult and slightly aggressive media

bürkert
Easy Fluid Control Systems

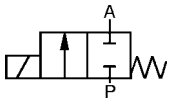
Miniature Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 200

Technical Data

Circuit Function

A 2/2-way valve, normally closed



Operating Data (Valve)

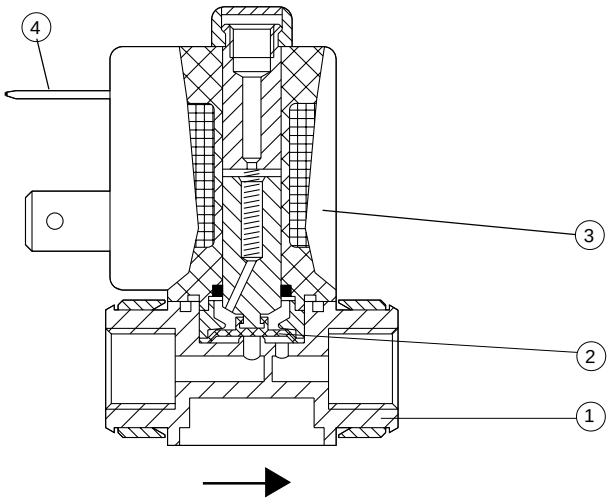
Pressure range max.	0-2 bar (see specifications)
Port connection	Threaded port G 1/8" (M5, subbase on request)
Orifice	DN 1.2 - 2.4 mm >DN 2.4 mm on request.
Fluid	Difficult and slightly aggressive media. Suitable for techn. vacuum.
Medium temperature max.	–10 to +70 °C
Max. ambient temperature	+55 °C
Max. viscosity	21 mm^2/s
Response times	
opening	5-18 ms
closing	ca. 8 ms
Installation	as required, but preferably with solenoid system upright

Operating Data (Actuator)

Operating voltages	AC 24, 110, 230 V/50 Hz, DC 12, 24 V/=
Voltage tolerance	±10 %
Power consumption	AC inrush: 9 VA; AC hold: 6 VA/4 W; DC: 4 W[1)]
Duty cycle	100% continuously rated
Duty cycle for multiple manifolds	60% for manifold mounting (30 min) or use 2W-version (on request)
Cycling rate	up to 1 000 c.p.m.
Protection class with cable plug	IP 65
Electr. connection	Delivery standard: Cable plug DIN 43 650 B, 0-250 V. Flying leads 300 mm length

[1)] Power consumption DC 2 W on request

Materials



1	Valve body:	Stainless steel
2	Isolating diaphragm:	FPM (Viton), EPDM
3	Coil body:	Epoxy
4	Cable plug:	PA (Polyamide)

Miniature Solenoid Valve with Isolating Diaphragm for Analytical Applications

Type 200

Specifications - Ordering Chart (Other Versions on Request)

Normally closed

Stainless steel valve body, cable plug DIN 43 650 form B

Port connection	Orifice [mm]	Kv-Value (water) [m³/h]	Pressure Range[1] (AC) [bar]	(DC) [bar]	Seal material	Weight [kg]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC	24/DC	110/50	230/50
G 1/8	1.2	0.045	0-2.0	0-2.0	EPDM	0.12	136 445 Q	136 447 J	--- ---	--- ---
G 1/8	1.2	0.045	0-2.0	0-2.0	FPM	0.12	136 464 K	136 466 M	--- ---	--- ---
G 1/8	1.6	0.06	0-1.5	0-1.5	EPDM	0.10	136 449 U	045 956 Y	136 460 T	136 461 Q
G 1/8	1.6	0.06	0-1.5	0-1.5	FPM	0.10	136 468 X	136 470 V	136 480 Q	136 481 D
G 1/8	2.0	0.11	0-1.0	0-1.0	EPDM	0.12	136 452 P	136 454 R	136 462 R	136 463 J
G 1/8	2.0	0.11	0-1.0	0-1.0	FPM	0.12	136 472 K	136 474 M	136 482 E	136 483 F
G 1/8	2.4	0.13	0-1.0	0-1.0	EPDM	0.09	136 456 K	136 458 V	--- ---	--- ---
G 1/8	2.4	0.13	0-1.0	0-1.0	FPM	0.09	136 476 P	136 478 Z	--- ---	--- ---

[1] Pressure range against arrow direction = 0-0.3 bar

Stainless steel valve body, coil with two flying leads, 300 mm length

Port connection	Orifice [mm]	Kv-Value (water) [m³/h]	Pressure Range[1] (AC) [bar]	(DC) [bar]	Seal material	Weight [kg]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC	24/DC	110/50	230/50
G 1/8	1.2	0.045	0-2.0	0-2.0	EPDM	0.12	136 446 R	136 448 T	--- ---	--- ---
G 1/8	1.2	0.045	0-2.0	0-2.0	FPM	0.12	136 465 L	136 467 N	--- ---	--- ---
G 1/8	1.6	0.06	0-1.5	0-1.5	EPDM	0.10	136 450 Z	136 451 N	--- ---	--- ---
G 1/8	1.6	0.06	0-1.5	0-1.5	FPM	0.10	136 469 Y	136 471 J	--- ---	--- ---
G 1/8	2.0	0.11	0-1.0	0-1.0	EPDM	0.12	136 453 Q	136 455 J	--- ---	--- ---
G 1/8	2.0	0.11	0-1.0	0-1.0	FPM	0.12	136 473 L	136 475 N	--- ---	--- ---
G 1/8	2.4	0.13	0-1.0	0-1.0	EPDM	0.09	136 457 L	136 459 W	--- ---	--- ---
G 1/8	2.4	0.13	0-1.0	0-1.0	FPM	0.09	136 477 Q	136 479 S	--- ---	--- ---

[1] Pressure range against arrow direction = 0-0.3 bar

Options

- PTFE/EPDM diaphragm
- Sub-base versions for manifold mounting
- Specific clean and testing
- AC coils
- DN 1.2 mm (up to 2 bar)

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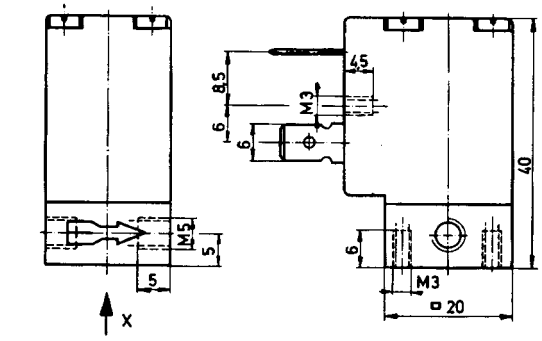
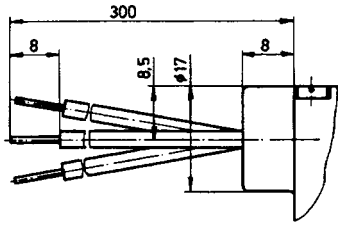
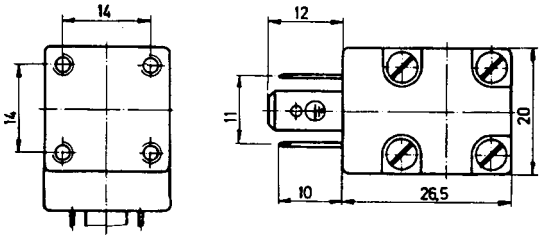
Dimensions Solenoid Valve [mm]





Please note for G 1/8 port connection:

Body length 25 mm, overall height 48 mm,
M5 connection is retained at R port

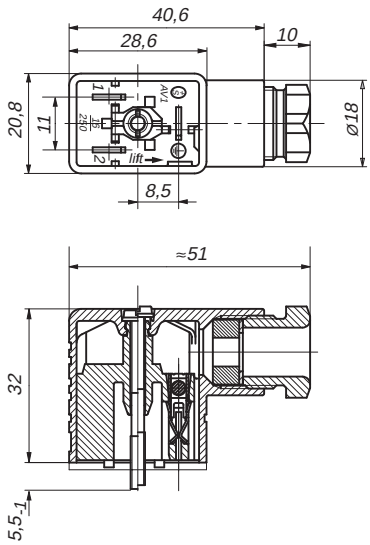


Technical Data Cable Plug

Body material	PA (polyamide)
Contact material	brass, tinned
Cable outlet	vertically to the plug bottom
Isolation between cable plug and coil	gasket (NBR)
Temperature range	-30˚C ... +90˚C
Cable diameter	4.5 ... 7 mm
Electr. connection	terminal screws max. 1,5 mm²
Poles	2pole + protective earth
Nominal voltage	0–250 V (Standard)
Isolation group	3
Rating	IP 65
Max. continuous current	16 A without wiring
Contact resistance	≤ 4 mΩ
Options	LED display Rectifier Varistor

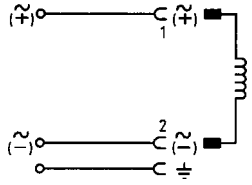
Cable plug type 2507

Dimensions Cable Plug [mm]



Wiring Diagrams/Connection Specifications

Standard



0–250 V AC/DC **Item-No.: 423 845 R**