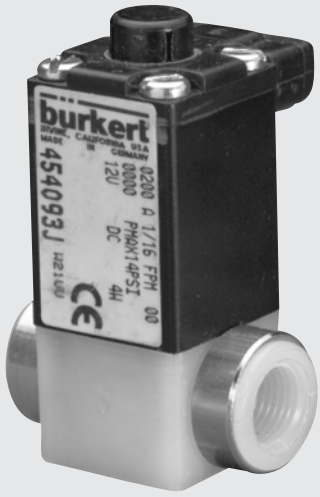
Miniature Solenoid Valve with Isolating Diaphragm

For Analytical Applications

Type 117

2/2-Way, NPT 1/8", UNF 1/4-28



Advantages/Benefits

- **Compact design**
- **Low electrical power consumption**
- **Short response times**
- **Hermetically sealing isolating diaphragm**
- **Body material: ETFE**
- **Non-metallic valve internals**
- **Customized System Solutions**

Design/Function

The Type 117 is a normally-closed direct-acting plunger-type solenoid valve with PTFE-coated diaphragm. The diaphragm isolates the fluid from the solenoid system. When de-energized (in circuit function A) the valve is closed by spring action.

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

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

Applications

- Liquid and gaseous fluids
- Aggressive fluids
- Disinfectants and preserving fluids
- Solvents
- Ultra-pure fluids
- For de-ionized water
- Food processing
- Medical technology

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bürkert
Fluid Control Systems

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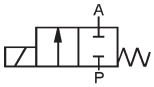
Miniature Solenoid Valve with Isolating Diaphragm
For Analytical Applications

Type 117

Technical Data

Circuit Function

A 2/2-way valve, normally closed



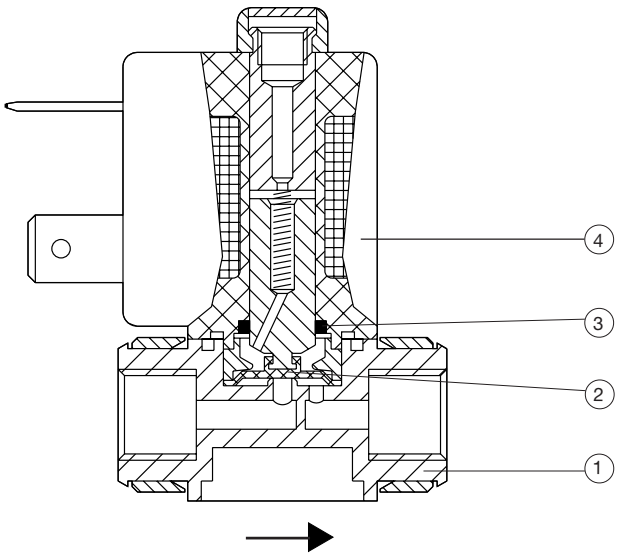
Operating Data (Valve)

Pressure range max.	0-22 PSI (see specifications)
Port connection	NPT 1/8", UNF 1/4-28
Orifice	1/16" - 3/32"
Fluid	0-28 PSI on request. Oxidizing acids and substances, salt solutions, exhaust gas.
Medium temperature max.	+14°F to 158°F
Max. ambient temperature	+131°F
Max. viscosity	.82 in^2/s
Response times	
opening	approx. 20 ms
closing	approx. 20 ms
Installation	as required, but preferably with solenoid system upright

Operating Data (Actuator)

Operating voltages	DC 12, 24 VDC (others on request)
Voltage tolerance	±10 %
Power consumption	4 W
Duty cycle	100% continuously rated
Cycling rate	up to 300 c.p.m.
Protection class with cable plug	NEMA 4 (IP 65)
Electrical connection	Delivery standard: Cable plug DIN 43 650 Form B, 0-250 V. Flying leads 11.8 in. length

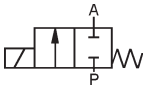
Materials



1	Valve body:	Tefzel (ETFE)
2	Isolating diaphragm:	PTFE
3	O-Rings:	FKM
4	Coil body:	Epoxy

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Specifications - Ordering Chart (Other Versions on Request)



2/2-Way, direct acting, normally closed

ETFE valve body, cable plug DIN 43 650 form B

Port connection	Orifice [in]	C_v	SCFM (air)[1]	Pressure Range (in arrow direction) [PSI]	Pressure Range (against arrow direct.) [PSI]	Seal Material	Electrical Conection	Weight [oz]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC	24/DC
NPT 1/8	1/16	0.07	2.47	0-20	0-4.2	FFKM	cab.plug 2507	4.2	457 434 P	457 436 R
UNF	1/16	0.07	2.47	0-20	0-4.2	FFKM	cab.plug 2507	4.2	457 444 Z	457 446 T
NPT 1/8	5/64	0.11	3.71	0-14	0-4.2	FFKM	cab.plug 2507	4.2	457 438 T	457 440 H
UNF	5/64	0.11	3.71	0-14	0-4.2	FFKM	cab.plug 2507	4.2	--- ---	--- ---
NPT 1/8	3/32	0.12	4.10	0-14	0-4.2	FFKM	cab.plug 2507	4.2	453 525 N	450 008 M
UNF	3/32	0.12	4.10	0-14	0-4.2	FFKM	cab.plug 2507	4.2	457 448 D	457 450 B

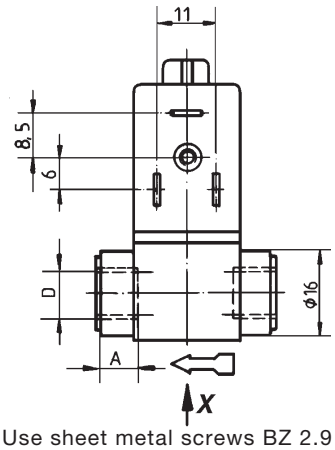
ETFE valve body, coil with two flying leads, 11.8 inch length

Port connection	Orifice [in]	C_v	SCFM (air)[1]	Pressure Range (in arrow direction) [PSI]	Pressure Range (against arrow direct.) [PSI]	Seal Material	Electrical Conection	Weight [oz]	ITEM - No. Voltage / Frequency [V/Hz] 12/DC	24/DC
NPT 1/8	1/16	0.07	2.47	0-20	0-4.2	FFKM	leads 300 mm	4.2	457 435 Q	457 437 J
UNF	1/16	0.07	2.47	0-20	0-4.2	FFKM	leads 300 mm	4.2	457 445 S	457 447 U
NPT 1/8	5/64	0.11	3.71	0-14	0-4.2	FFKM	leads 300 mm	4.2	457 439 U	457 441 W
UNF	5/64	0.11	3.71	0-14	0-4.2	FFKM	leads 300 mm	4.2	--- ---	--- ---
NPT 1/8	3/32	0.12	4.10	0-14	0-4.2	FFKM	leads 300 mm	4.2	457 442 X	457 443 Y
UNF	3/32	0.12	4.10	0-14	0-4.2	FFKM	leads 300 mm	4.2	457 449 E	457 450 B

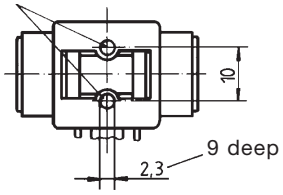
[1] Measured at 68°F with 85 PSI upstream pressure and 14 PSI pressure drop across valve

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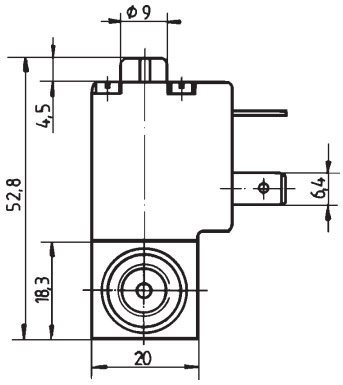
Dimensions [mm]

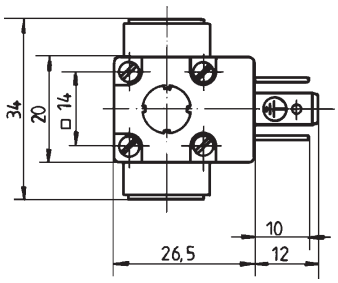


Use sheet metal screws BZ 2.9 x... DIN 7971-A2 for mounting



View X





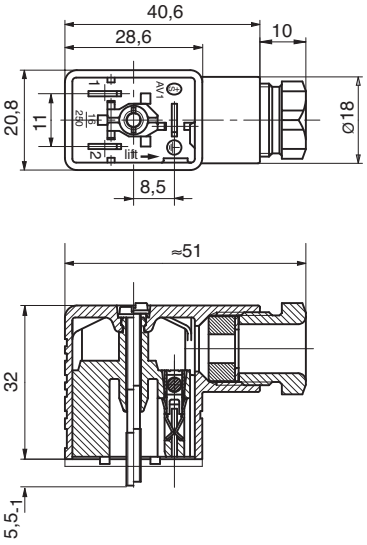
Technical Data Cable Plug

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	-22°F to 194°F
Cable diameter	11/64" to 9/32"
Electr. connection	terminal screws max. 1.587 mm²
Poles	2 pole + ground
Nominal voltage	0–250 V (Standard)
Isolation group	3
Rating	NEMA 4 (IP 65)
Max. continuous current	16 A without wiring
Contact resistance	≤ 4 mΩ
Options	LED display Rectifier Varistor



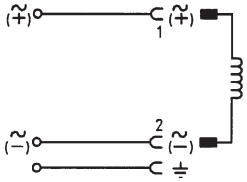
Cable plug Type 2507

Dimensions Cable Plug [mm]



Wiring Diagrams/Connection Specifications

Standard



0–250 V AC/DC **Item-No.: 423 845 R**

In case of special requirements please consult for advice.
We reserve the right to make technical changes without notice.

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