

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

**Burkert Contromatic USA**  
2602 McGaw Avenue  
Irvine, CA 92614  
Tel. 949.223.3100  
Fax 949.223.3198  
www.burkert-usa.com

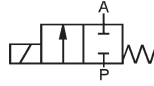
**Burkert Contromatic Inc.**  
760 Pacific Road, Unit 3  
Oakville, Ontario, Canada  
L6L 6M5  
Tel. 905.847.5566  
Fax 905.847.9006

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Fluid Control Systems

## Technical Data

### Circuit Function

A 2/2-way valve,  
normally closed



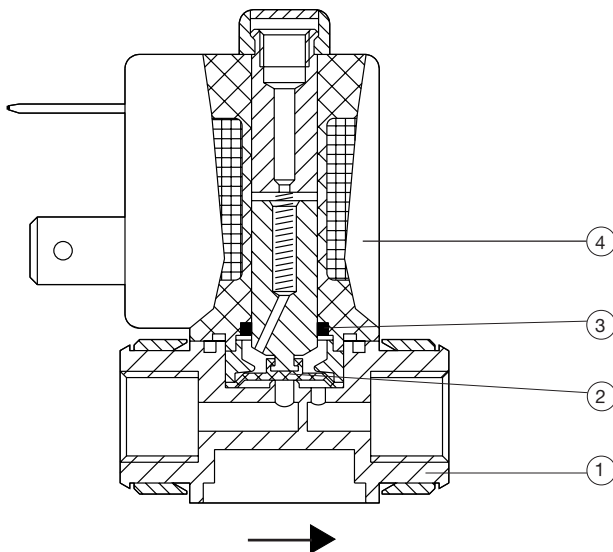
### Operating Data (Valve)

Pressure range max.	0-22 PSI (see specifications)
Port connection	NPT 1/8", UNF 1/4-28
Orifice	1/16" - 3/32" 0-28 PSI on request.
Fluid	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 <sup>2</sup> /s
Response times	
opening	approx. 20 ms
closing	approx. 20 ms
Installation	as required, but preferably with solenoid system upright

### Operating Data (Actuator)

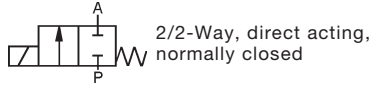
Operating voltages	DC 12, 24 VDC (others on request)
Voltage tolerance	±10 %
Power consumption	4 W
Duty cycle	100% continuously rated
Cycling rate	up to 300 c.p.m.
Protection class with cable plug	NEMA 4 (IP 65)
Electrical connection	Delivery standard: Cable plug DIN 43 650 Form B, 0-250 V. Flying leads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

## Materials



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

## Specifications - Ordering Chart (Other Versions on Request)



### ETFE valve body, cable plug DIN 43 650 form B

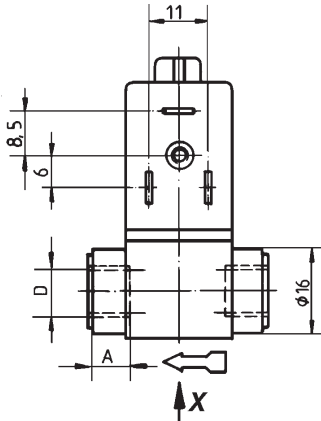
Port connection	Orifice [in]	C <sub>v</sub>	SCFM (air) <sup>1)</sup>	Pressure Range (in arrow direction) [PSI]	Pressure Range (against arrow direct.) [PSI]	Seal Material	Electrical Connection	Weight [oz]	ITEM - No.	
									Voltage / Frequency [V/Hz]	
									12/DC	24/DC
NPT 1/8	1/16	0.07	2.47	0-20	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

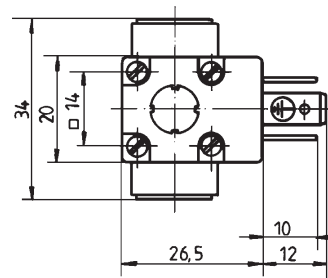
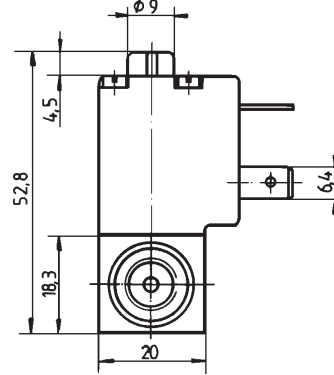
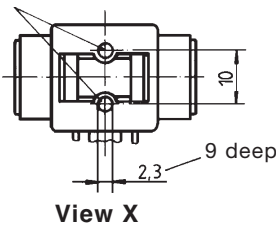
Port connection	Orifice [in]	C <sub>v</sub>	SCFM (air) <sup>1)</sup>	Pressure Range (in arrow direction) [PSI]	Pressure Range (against arrow direct.) [PSI]	Seal Material	Electrical Connection	Weight [oz]	ITEM - No.	
									Voltage / Frequency [V/Hz]	
									12/DC	24/DC
NPT 1/8	1/16	0.07	2.47	0-20	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

<sup>1)</sup> Measured at 68°F with 85 PSI upstream pressure and 14 PSI pressure drop across valve

## Dimensions [mm]



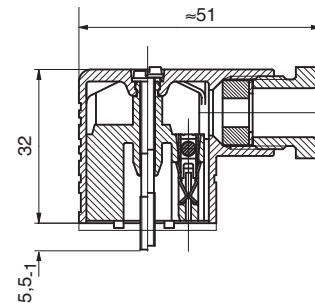
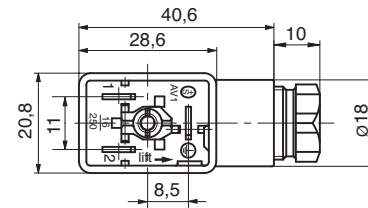
Use sheet metal screws BZ 2.9 x... DIN 7971-A2 for mounting



## Technical Data Cable Plug

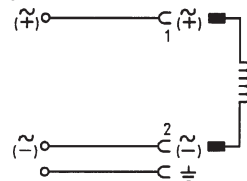
Body material	PA (polyamide)
Contact material	Brass, tinned
Cable outlet	Vertically to the plug bottom
Isolation between cable plug and coil	Gasket (NBR)
Temperature range	-22°F to 194°F
Cable diameter	11/64" to 9/32"
Electr. connection	terminal screws max. 1.587 mm <sup>2</sup>
Poles	2 pole + ground
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

## Dimensions Cable Plug [mm]



## Wiring Diagrams/Connection Specifications

### Standard



0-250 V AC/DC

Item-No.: 423 845 R

