

Design:

2-way solenoid valve, direct acting, normally closed (Circuit function A), normally open (Circuit function B).

3-way solenoid valve, direct acting, normally closed (Circuit function C), normally open (Circuit function D), mixer function (Circuit function E) or diverter function (Circuit function F).

Seal Materials and Fluids handled:

See Table 1.

Fluid and Ambient Temperature:

For Hazardous Locations Div. 1 (T4 rated)

Max. Ambient Temperature 104 °F (40 °C)

Max. Fluid Temperature 194 °F (90 °C)

For Hazardous Locations Div. 2 and Ordinary Locations:

See Table 1.

Pressure Range:

Maximum inlet pressure see label on valve.

Type 0330: PTFE tape is recommended for sealing ports.

Mounting is accomplished by means of four M4 x 8 mm tapped holes located on the valve underside.

Type 0331: Ports A (B) are coded on side of body. For common pressure, align "A(B)" markings on valve and manifold. Valve operation C and D valves can be mounted on the same manifold but the manual override buttons will point in opposite directions. To remove valve from manifold loosen only the two unsealed screws. Manifolds can be connected together with nipples. Blanking plugs, Order No. 0315-1016, should be screwed into the unused ports. Manifolds can be fixed in position using M5 screws.

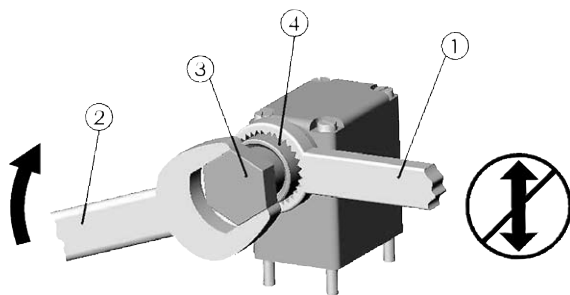
Manual override:

The manual override can be retained in position if, after depressing the button, it is turned in a clockwise direction.

Assembly instructions:

The conduit connector on the coil (4) must be supported against torque during the assembly using appropriate tools (1) (i.e. pliers, gripper...) (for example a gripper).

While tightening for example a fitting (3) into the conduit connector attention must be paid to the fact that a max. torque of 20Nm (177lbf in) is not exceeded.



Marking (example):

Body Material

BR = Brass

SS = Stainless Steel

Seal Material

EPDM = EPDM

NBR = NBR

FKM = FKM

Circuit Function

A = 2-way - Normally Closed

B = 2-way - Normally Open

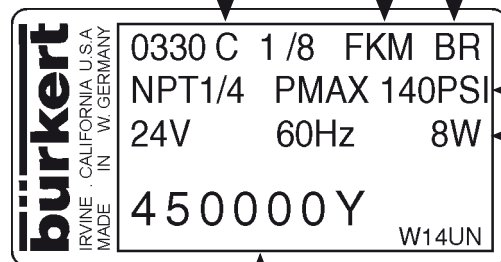
C = 3-way - Normally Closed

D = 3-way - Normally Open

E = Mixer Function

F = Diverter Function

**Voltage 12V or 24V
UL / UR valid with
class 2 power supply only**



Recorder No.

Voltage / Frequency / Power Consumption

Maximum Pressure

Approvals

The valve is FM/CSA approved as

Explosion Proof valve for Hazardous Locations

Class I, Division 1, Group A, B, C, D

Class II, Division 1, Group E, F, G

Class III, Division 1 and 2

Operating Temperature T 4

or FM approved as

Nonincendive for Hazardous Locations

Class I, Division 2, Group A, B, C, D

Class II, Division 2, Group F, G

Class III, Division 1 and 2

Operating Temperature T 4A

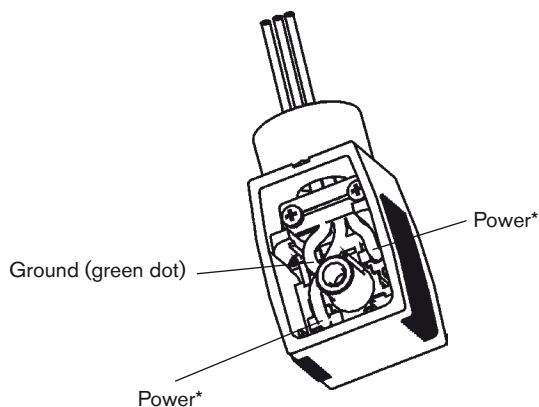
CSA approved for Ordinary Locations

UL Recognized and UL Listed for General

Purpose and Fire Protection Services.

See label on the valve.

Fluid	Temperatures [°F]	Seal materials		
		NBR	EPDM	FKM
Air	Fluid	+ 32 to + 176	- 22 to + 194	+ 32 to + 194
	Ambient	+ 32 to + 131	+ 14 to + 131	+ 32 to + 131
Water	Fluid	+ 41 to + 176	+ 41 to + 194	+ 41 to + 194
	Ambient	+ 32 to + 131	+ 14 to + 131	+ 32 to + 131
Neutral gas	Fluid	+ 32 to + 176	- 22 to + 194	+ 32 to + 194
	Ambient	+ 32 to + 131	+ 14 to + 131	+ 32 to + 131
Light oil	Fluid	+ 32 to + 140		+ 32 to + 140
	Ambient	+ 32 to + 131		+ 32 to + 131
LP-gas	Fluid	+ 32 to + 140		+ 32 to + 140
	Ambient	+ 32 to + 131		+ 32 to + 131

Wiring Diagram**Electrical Connection Type 2509**

* Orientation is not important

Electrical Connection:

Ensure supply voltage/frequency corresponds with that on label.

Voltage tolerance is $\pm 10\%$.

Available Electrical Connections see "Marking".

Wiring diagram see above.

For this product to be considered UL-listed and CSA approved for General Purpose and FM approved for Hazardous Locations Division 2, it must be in conjunction with the type 2509 cable plug connector (Electrically Operated Valves Parts, YSY12).

The connector and gasket must be assembled to the valve with the screw provided after the connection of the wire leads. This valve and connector assembly is delivered together and is to be used as one unit.

For valves to be used in Intrinsically Safe Applications the positive pole is identified by a "+" on the pin or wire No. 1 has to be connected to the "+".

See Control Drawing for the Rules of Interconnection.

Warning:

All valves to be used in Intrinsically Safe Applications must be clearly marked as Intrinsically Safe Apparatus.

Trouble-Shooting:

Check port connections, minimum operating pressure differential if required and supply voltage. Ensure pilot hole in piston is clear and pilot bore in the valve outlet is not obstructed. If core does not pull in, check for short circuit, coil burn-out or foreign matter impeding core movement. A jammed or missing core causes the coil to overheat in the case of AC supply.

Warning:

These products are designed to operate in a wide variety of applications, it is the user's responsibility to select a model that is appropriate for the application. This product is designed to be installed only by suitably qualified and trained personnel. Specifications should not be exceeded under any circumstances.

The torque for the terminal screw on type 2509 is 0,5 Nm (4,4 lbf-in.).

Changes made to this product will render any applicable warranty null and void.

Specifications subject to change without notice.

Any questions? Please call Bürkert Contromatic Technical Service at (949) 223 31 00.

Germany

Contact address:

Bürkert Fluid Control Systems
Sales Center
Chr.-Bürkert-Str. 13-17
D-74653 Ingelfingen
Tel. + 49 (0) 7940 - 10 91 111
Fax + 49 (0) 7940 - 10 91 448
E-mail: info@de.buerkert.com

International

Contact addresses can be found on the Internet at:

www.burkert.com → Bürkert → Company → Locations