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

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)
The UL-listed valve for Hazardous Locations is suitable for the fluids air, inert gas, water and gasoline.

For Hazardous Locations Div. 1 (T6 rated)
Max. Ambient Temperature 104 °F (40 °C)
Max. Fluid Temperature 140 °F (60 °C)

For Intrinsically Safe Apparatus for use in Class I, II and III, Division 1 Hazardous Locations (T6 rated)
Max. Ambient Temperature 140 °F (60 °C)
Max. Fluid Temperature 140 °F (60 °C)

For Hazardous Locations Div. 2 and Ordinary Locations:
See Table 1.

Pressure Range:
Maximum inlet pressure see label on valve.

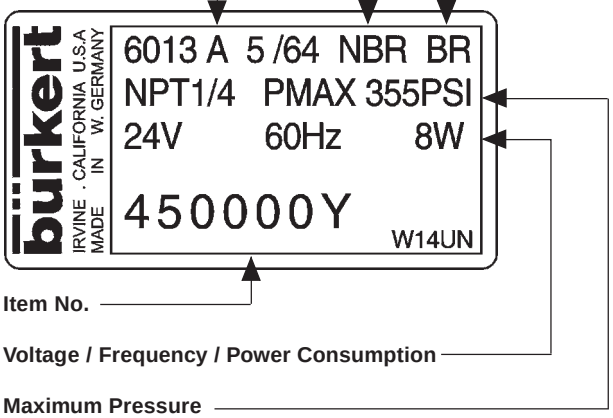
Installation:
Before installing valve ensure that piping etc. is free of foreign matter (metal shavings, pipe sealing materials, welding scale etc.). Installation as required but preferable with coil uppermost. Installation in this position tends to prevent foreign matter remaining in core tube (increased life). Do not put any loads on coil unit.

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. Letters on valve body indicate pressure port, exhaust and outlet of the valve.

Marking (example):

Body Material
BR = Brass
SS = Stainless Steel
Seal Material
EPDM = EPDM
NBR = NBR
FKM = FKM

Circuit function
A = Normally closed



Item No.

Voltage / Frequency / Power Consumption

Maximum Pressure

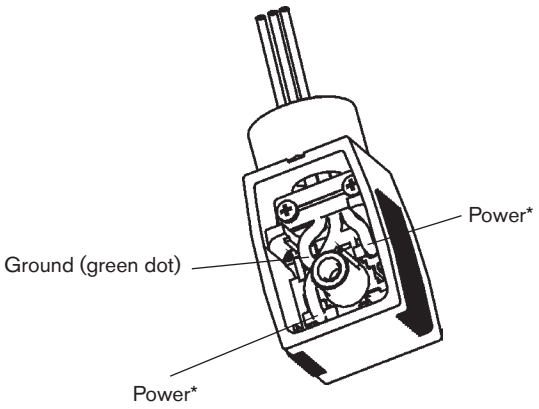
Approvals
The valve is either approved as
General Purpose valve for Hazardous Locations
Class I, Division 1, Group A, B, C, D
Class II, Division 1, Group E, F, G
Class III, Division 1 and 2
Operating Temperature T 4
or
General Purpose valve for Hazardous Locations
Class I, Division 1, Group A, B, C, D
Class II, Division 1, Group E, F, G
Class III, Division 1 and 2
Operating Temperature T 6
or
Intrinsically Safe Apparatus for Hazardous Locations
Class I, Division 1, Group A, B, C, D
Class II, Division 1, Group E, F, G
Class III, Division 1
Operating Temperature T 6
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 4
UL listed for General Purpose
CSA approved for General Purpose
See label on the valve.

Table 1		Seal Materials	Seat / O-ring	
Fluid	**Temperatures [°F]**	Buna "N" NBR	Ethylene Propylene (EPDM)	FKM
Air	Fluid Temp.	+ 14 to + 194	- 40 to + 266	+ 14 to + 266
	Ambient	+ 14 to + 130	+ 14 to + 130	+ 14 to + 130
Water	Fluid Temp.	+ 32 to + 194	+ 32 to + 212	+ 32 to + 212
	Ambient	+ 32 to + 130	+ 32 to + 130	+ 32 to +130
Neutral gas	Fluid Temp.	+ 14 to + 194	- 40 to + 266	+ 14 to + 266
	Ambient	+ 14 to + 130	+ 14 to + 130	+ 14 to + 130
Light oil	Fluid Temp.	+ 14 to + 194		+ 14 to + 266
	Ambient	+ 14 to + 130		+ 14 to + 130

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Wiring Diagram

Electrical Connection Type 2509



* Orientation is not important

Electrical Connection:
Ensure supply voltage/frequency corresponds with that on label.
Voltage tolerance is ± 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, YSYI2).
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 abstracted. 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 avoid.

Specifications subject to change without notice.

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

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bürkert

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