

**3/2-way; Sub-Base Version, Universal Function****Advantages/Benefits**

- ▶ **Universal function**
- ▶ **Separating diaphragm isolates solenoid system from operating fluid**
- ▶ **Low inventory levels**
- ▶ **Operational reliability**
- ▶ **Long service life, even in non-lube conditions**
- ▶ **Insensitive to contaminated fluids**
- ▶ **Lockable manual override standard**
- ▶ **With electrical feedback signalling (optional)**

**Design/Function**

The direct-acting 3-way solenoid valve has a pivoted armature as the switching method. This unique valve hermetically isolates the actuator from the fluid. Making it less sensitive to contaminated fluids than a plunger-type system and provides a long service life, even in unlubricated applications. The solenoid epoxy encapsulation efficiently dissipates the heat generated by the fluid.

- Direct-acting
- Body materials: brass or stainless steel
- Fast-acting
- Insensitive to abrasive, slightly contaminated fluids
- Sub-base connection for manifold mounting

**Applications**

Neutral gases and liquids  
 Aggressive fluids  
 Demineralized water  
 Vacuum  
 Unlubricated compressed air  
 Water and gas analysis  
 Dryer systems  
 Pharmaceutical industry  
 Food processing

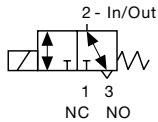
**Burkert Contromatic USA**  
 2602 McGaw Avenue  
 Irvine, CA 92614  
 Tel. 949.223.3100  
 Fax 949.223.3198  
[www.burkert-usa.com](http://www.burkert-usa.com)

**Burkert Contromatic Inc.**  
 760 Pacific Road, Unit 3  
 Oakville, Ontario, Canada L6L 6M5  
 Tel. 905.847.5566  
 Fax 905.847.9006  
[www.burkert.ca](http://www.burkert.ca)

## Technical Data

## Circuit Function

T 3/2-way valve,  
Universal function



## Body Material

Body and seat brass or 316L stainless steel

## Specifications

Orifice	C <sub>v</sub>	Q <sub>Nn</sub> -Value <sup>1)</sup> Air <sup>2)</sup>	Pressure Range	Pressure Range Vacuum Version E	Weight
[inch]		[SCFM]	[PSI]	[PSI]	[lbs]
5/64	0.11	108	0-170		.88

<sup>1)</sup> Flow rate reduced by 20% with direct current operation

<sup>2)</sup> Measured with 85 PSI upstream pressure and 14 PSI pressure drop across the valve at 68°F.

All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure.

## Operating Data (Valve)

## Seal Materials / Fluids Handled / Temp.-Range

NBR	Neutral fluids, e.g. compressed air, town gas, water, hydraulic oil, oils and fats without additives	32°F to 194°F
EPDM	Oils and fat-free fluids, e.g. hot water alkaline washing and bleaching lyes	-22°F to 194°F
FPM	Hot air, oxygen, per-solutions, hot oils with additives	-10°F to 194°F

For more detailed information please refer to resistance chart (Leaflet-No. 1896009).

Max. ambient temperature 131°F

Max. viscosity 37 cSt

Response times opening AC: 8-15 ms, DC: 10-20 ms  
closing AC: 8-15 ms, DC: 10-20 ms

Times measured at outlet A, from switching on until pressure rise to 90% / pressure drops to 10% at a max. working pressure of 85 PSI.

## Operating Data (Actuator)

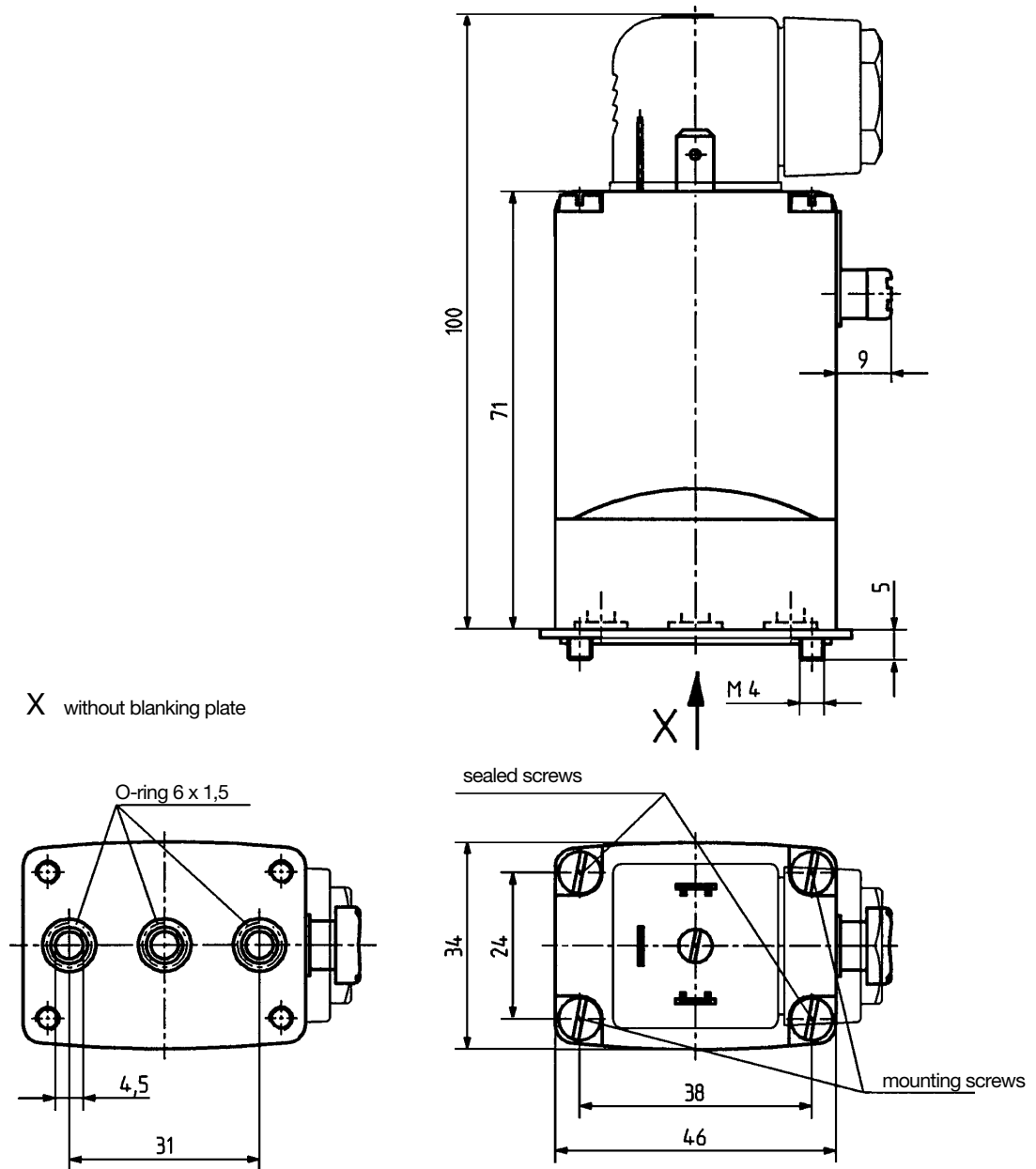
Operating voltages	24, 110, 220, 240 V/50 Hz, 24 VDC (other voltages on request)
Voltage tolerance	±10%
Power consumption	AC 30 VA (inrush), 5 VA/8 W (hold) DC 8 W
Duty cycle	100% continuously rated. Use reduced switch-on time for manifold installation, depending on operating conditions.
Cycling rate	approx. 1000 c.p.m.
Rating with cable plug	NEMA 4 (IP 65)

## Installation / Accessories

Installation	as required, but preferably with solenoid system upright
Electr. connection	cable plug for 7 mm ø (supplied as standard)

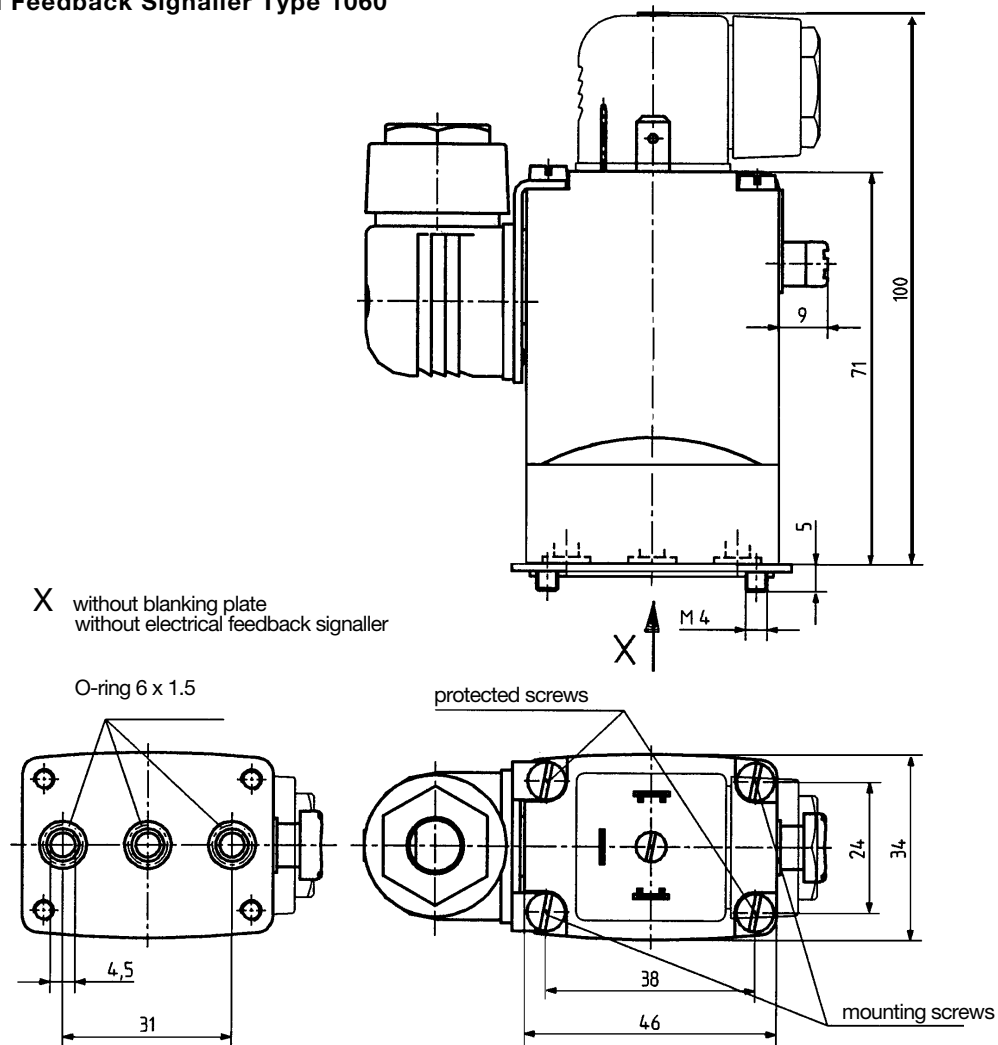
## Dimensions in mm

### Standard Version



## Dimensions in mm

## Valve with Electrical Feedback Signaller Type 1060



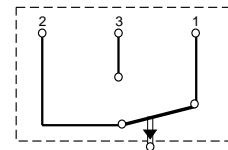
## Technical Data Electrical Feedback Signaller Type 1060

Microswitch  
Switching load

1 changeover contact  
250 V /≈ non-inductive or  
induct. load max. 5A  
incandescent  
filament load 0.5A  
250 V/= non-inductive load  
0.25A  
induct. load 0.02A  
incandescent  
filament load 0.02A

Wiring diagram

1 Common terminal  
2 Normally closed terminal  
3 Normally open terminal



Rating

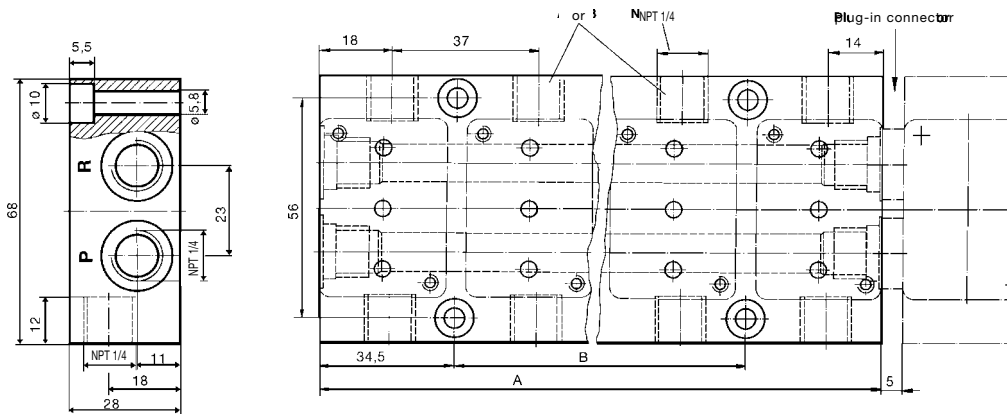
NEMA 4 (IP 65)

Connection

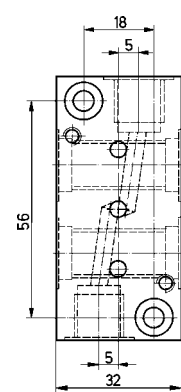
solder connections, cable  
entry sealed by gland with  
cable grip to suit cable  
ø 5-9 mm

## Dimensions in mm

### Multiple Manifold



### Single Manifold



Manifold for	2 valves	3 valves	4 valves	5 valves	6 valves	7 valves	8 valves
Overall length A	69	106	143	180	217	254	291
Hole spacing B	-	37	74	111	148	185	222

## Ordering Code for Manifolds and Accessories

### Ordering Code for Multiple Light Alloy Manifolds

Description	Order-No.
2 Station Manifold	006 110 W
3 Station Manifold	613 706 C
4 Station Manifold	006 111 K
5 Station Manifold	613 704 A
6 Station Manifold	613 703 H

### Accessories

Specification	Order-No.
O-ring connector nipple	005 049 F
O-ring connector nipple without drill hole	006 049 G
Blanking plug with seal NPT 1/4	US 00667
Lock for manual override, through	013 372 W
Blanking plate	005 625 V

## Ordering Chart for Manifold Versions (Other Versions on Request)

Circuit Functions	Orifice	C <sub>v</sub> <sup>1)</sup>	Port Connection	Pressure Range [PSI]	Body Material	Seal Material	Voltage <sup>2)</sup>	Electrical Classifications <sup>3)</sup>	Item Number
C	5/64"	.13	Manifold	0-170	Brass	FPM	24 DC	—	450 831 S
	5/64"	.13	Manifold	0-170	Brass	FPM	24 DC	UL/FM	453 029 Y
	5/64"	.13	Manifold	0-170	Brass	FPM	24 DC	Haz-Ex	US 03707
	5/64"	.13	Manifold	0-170	Brass	FPM	120/60	UL/FM	453 027 N
	5/64"	.13	Manifold	0-170	Brass	FPM	120/60	Haz-Ex	US 03709
	5/32"	.17	Manifold	0-140	Brass	FPM	24 DC	—	450 829 G
	5/64"	.17	Manifold	0-140	Brass	FPM	24 DC	UL/FM	453 266 A
	5/64"	.17	Manifold	0-140	Brass	FPM	24 DC	Haz-Ex	455 307 E
	1/8"	.17	Manifold	0-140	Brass	FPM	120/60	UL/FM	453 270 J
	1/8"	.17	Manifold	0-140	Brass	FPM	120/60	Haz-Ex	455 256 A
T	1/8"	.13	Manifold	0-170	Brass	FPM	24 DC	—	454 385 T
	1/8"	.13	Manifold	0-170	Brass	FPM	24 DC	UL/FM	453 035 N
	1/8"	.27	Manifold	0-85	Brass	FPM	24 DC	—	455 541 Y
	1/8"	.27	Manifold	0-85	Brass	FPM	120/60	UL/FM	451 927 P

## Ordering Chart for Electrical Feedback Versions

Circuit Functions	Orifice	C <sub>v</sub> <sup>1)</sup>	Port Connection	Pressure Range [PSI]	Body Material	Seal Material	Voltage <sup>2)</sup>	Electrical Classifications <sup>3)</sup>	Item Number
T	5/64"	.13	Manifold	0-145	Brass	FPM	24 DC	—	124 983 G
	5/64"	.13	Manifold	0-145	Brass	EPDM	24 DC	—	453 988 M

## Notes:

- 1) C<sub>v</sub> reduced 20% with DC current operation.
- 2) 120/56 suitable for 50Hz or 60 Hz power.
- 3)
  - U.L. is a U.L. listed valve per U.L. Standard Groups a, B, C, and D.
  - FM is FM approved for Haz Location, CL I Div 2, Groups A, B, C, and D.
  - Valve comes with electrical plug if no electrical class is given.
- 4) Vacuum versions available on request.