Advantages/Benefits

PTB01 ATEX 2175

► Simple design,

► II 2G EEx-ia-IIC T6 approved

robust and frictionless

► Long service life, under absolute non-lube

DN 0.6 mm; 0 - 8 bar; BURKERT sub-base; flow rate: 8.5 l/min



conditions Compact size

- ▶ PLC-compatible; low power and high drop-out voltage
- Suitable for technical vacuum

Design/Function

The valve consists of a plastic body, a frictionless rocker armature with spring and a DC coil. A stainless steel plate hermetically isolates the fluid from the actuator.

The innovative rocker alternately opens or closes two connections when switched. All 3/2 circuit functions can be achieved by pressuring or exhausting a further outlet connection via them. The deenergized position is spring set.

The simple design ensures that the valves can be switched with a minimal rocker movement combining low wear under absolute non-lube conditions.

The external surfaces of the valve are smooth preventing dirt particles from adhering.

The valves can be driven by a PLC with their low power consumption .

A manual override allows easy maintenance and commissioning of the valve.

Applications

Fluids

- Lubricated, non-lubricated dry air
- Neutral gases
- For technical vacuum

Applications

- Direct-acting single valve
- Pilot valve
- Actuator control
- Logic control circuits
- Manifold assembly







Technical Data

Circuit Functions

Symbol

3/2-way valve, when de-energized, port A exhausted



Specifications

Version: C Status: RL (released I freigegeben I validé) printed: 30.06.2006

Z

DTS 1000011047

Orifice DN	Flow QNn-value air2)	Manifold	Pressure range ¹⁾	Weight	Electr.
[mm]	P→A	B→R	[bar]	[g]	power consumption [W]
[]	BURKERT	BURKERT	[Sai]	[9]	[]
0.6	8.5	9.5	0 - 8	60	0.5

 $^{^{1)}}$ All pressures quoted are gauge pressures with respect to the prevailing atmospheric pressure. $^{2)}$ Measured with 6 bar upstream pressure and 1 bar pressure drop across the valve at +20 °C.

Valve specification Body material PA (polyamide) Seal material **FKM** Isolating plate between stainless steel body and coil Fluids lubricated, unlubricated, dry air, neutral gases, for technical vacuum Max. viscosity approx. 21 mm²/s Ambient temperature -10 up to +55 °C -10 up to +55 °C Fluid temperature Port connection BURKERT-interface with connection through the bottom Response times3) Opening 70 ms Closing 70 ms ³⁾ The response times of a 3/2-way valve are determined using an end volume of approx. 1 cm³. The times are measured at outlet A

Nominal voltage	24 V DC (power supply)		
Voltage tolerance	±10 %		
Power consumption	0.5 W (optimum operating current > 29 mA)		
Drop-out voltage (for switching rocker)	at least 0.15 x voltage nominal (under the regulations VDE 0580)		
Electr. control	PLC-controllable		
Cycling rate	600 c.p.m.		
Duty cycle	100% continuously rated		
Rating	IP 65 with cable plug		
Type of protection	II 2G EEx ia IIC T6		

Electr. connection Standard:

Solenoid specification

connectors according DIN EN 175301-803 on top (do not use connectors with

LED or circuitry)

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Power supply only from certified intrinsically safe circuits with following max. values:

Max. safety voltage	U = 35 V
Max. safety current	I = 0.9 A
Consumption of energy	P = 0.7 W

Electrical specifications

(T5)(ambient temp. +60 °C) for block mounting

Consumption of energy for single mounting

(ambient temp. +70 °C)

P = 0.8 W (T5)

Installation/Accessories

Installation as required, but preferably with solenoid system

from switching on until pressure rise to 90% /pressure drops to 10%.

Delay time: Time from electrical switching on until the beginning of the pressure change.

upright

Manifolding with common pressure supply max. 12 valves on

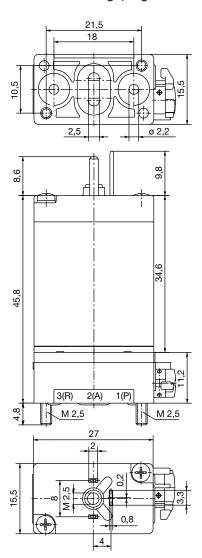
special manifolds (as

accessory)

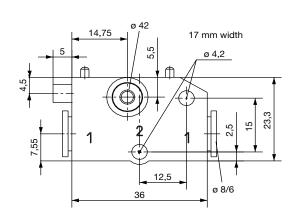
Coil spacing 16,5 mm

Dimensions [mm]

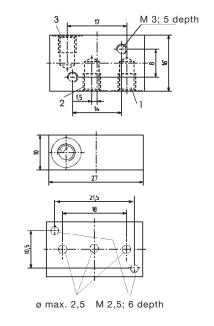
Type 6106 with Burkert-flange, tag connectors above



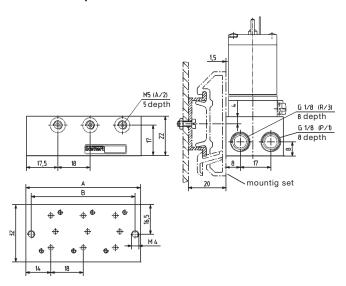
Module for plug-in coupling



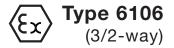
Single manifold for Burkert sub-base



Multiple manifold for Burkert sub-base



Direct-acting rocker Solenoid Valve, sub-base mounting 16 mm wide



Ordering Chart (Other Versions on Request)

Version with tag connector on top, polyamide body and FKM-seal. Supply package includes 2 mounting screws M2.5 x 16; **without cable plug** (see accessories)

Circuit-	DN	Q _{Nn} -value air		Pressure	Port-	Min.	Inner	Item-No.
function					connection	current	resistance	
	[mm]	[l/min]	[l/min]	[bar]	interface	[mA]	[Ω] @ 20°C	
		1→2	2→3		to			
С	0.6	8.5	9.5	0 - 8	BURKERT	29	320	139 272 D

Accessory Ordering Chart

Unit	Characteristics	Item-No.
Cable plug Type 2506	no wiring, 0–250 V	008 353 P
Single manifold BURKERT	width 16 mm, port connection M5	623 873 V
Single manifold BURKERT	width 16 mm, port connection G1/8	634 917 L

Manifolds Ordering Chart					
Multiple manifolds (material: aluminium);					
for Burkert-sub-base;	coil spacing 18 mm				

Manifold	А	В	Item-No.
	[mm]	[mm]	
2 Station	46	40	629 500 J
3 Station	64	58	629 169 R
4 Station	82	76	629 501 F
5 Station	100	94	629 502 G
6 Station	118	112	629 503 H
7 Station	136	130	629 504 A
8 Station	154	148	629 505 B
9 Station	172	166	629 890 H
10 Station	190	184	629 919 H
11 Station	208	202	007 110 X
12 Station	226	220	629 920 E
Connection	n kit	629 254 N	
DIN-rail			
TS 35 x 7,5	5 mm		
Blanking p	late	629 327 F	