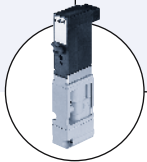
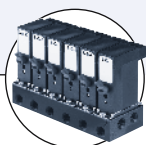


Type 6144 can be combined with...



Type 6524

Servo-assisted pneumatic valve



Type 6144

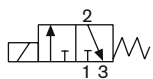
Multiple manifolds (e.g. 6 valves)

Type 6144 is a direct-action 3/2-way solenoid valve designed for neutral gases and liquids. Through the movement between the 2 end positions, the switching element (flipper) seals one of the two opposing valve seats and connects the other to the working port. This movement is caused by the solenoids magnetic field pushing a permanent magnet that is fixed to the flipper element. In addition to its exceptional performance characteristics, the flipper principle is especially marked by its very low switching noise and its low wear level.

Furthermore, integrated medium separation enables use above and beyond pneumatic applications.

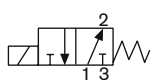
Depending on the case of operation, various flange connections are available that are suitable for both individual and block mounting. Installation advice: The valve must have a minimum distance of 5 mm from other ferromagnetic materials in order to avoid malfunctioning during operating conditions.

Circuit function C



3/2-way valve, direct acting, de-energized port 2 exhausted

Circuit function D



3/2-way valve, direct acting, de-energized port 2 pressurized

3/2-way Flipper Solenoid Valve

- Direct-acting
- 0 to 10 bar
- Low power consumption
- Sub-base connection
- 10mm width per station
- Standard, Ex ia Version

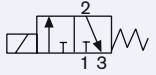
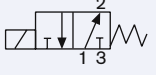
Technical data	
Body material	PPS (Polyphenylsulfide)
Seal material	FKM
Media	Compressed air lubricated, oil-free or dry; neutral gases and liquids (5µm filtering); technical vacuum
Media temperature	0 to +55°C
Ambient temperature	0 to +55°C
Port connection	· Bürkert flange · Lateral flange
Electrical connection	Rectangular plug as standard; on request: · Circular plug M8x1 · Flying lead 0.2 mm ² , 300 mm · Connector with raster 5.08 mm
Type of protection	without II 2G Ex ia IIC T4 T5 T6 PTB01 ATEX 2048 IECEX PTB 07.0063
Operating voltage	24V/DC ¹⁾ 12V/DC ¹⁾ on request
Voltage tolerance	±10% ²⁾
Nominal power	0.8W
Switching function	Monostabile Bistabile (impulse) on request
Duty cycle	100% continuous rating
Installation	As required, preferably with actuator upright; 5mm minimum distance to ferromagnetic materials
Insulation class	3 acc. VDE 0580
Protection class	IP 40
Cycling rate	ca. 1000/min
Electrical control	with SPS possible
Response times	Measurement at the valve outlet, at 20°C and 6 bar inlet pressure, according to DIN ISO 12238: Open (Pressure rise 0 to 10%) ca. 8 ms (Standard) ca. 14 ms (Ex version) Close (Pressure rise 100 to 90%) ca. 10 ms (Standard) ca. 18 ms (Ex version)

¹⁾ Battery voltage; observe polarity as shown on top of the valve

²⁾ Max. allowed ripple

Ordering chart, standard version (other versions on request)

All valves with rectangular plug, mounting screws and flange seal; without plug connection (see Accessories)

Circuit function	Port connection	Orifice [mm]	QnN value 1-2 air [l/min] ¹⁾	QnN value 2-3 air [l/min] ¹⁾	Pressure range ²⁾ [bar]	Manual override	Voltage [V]	Nominal power [W]	Item no.
 3/2-way valve NC	Bürkert flange	0.6	7.0	8.5	0-10 ³⁾	with	24	0.8	181367
	lateral flange		6.0	7.5					175682
 3/2-way valve NO	Bürkert flange	0.6	7.0	8.5	0-10	with	24	0.8	175653
	lateral flange		6.0	7.5					179098

¹⁾ QnN value air [l/min]: Measurement with +20°C, 6 bar pressure on the valve input and 1 bar pressure differential

²⁾ Pressure values [bar]: Measured as overpressure to the atmospheric pressure

³⁾ Vacuum up to 10 bar on request

Mounting screws for Bürkert flange: M1.6x5 for Lateral flange: M1.6x20

i Further versions on request



Electrical connection

2 flying leads, circular plug or connector



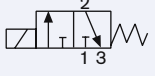
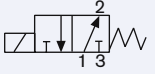
Circuit functions

Circuit function A and B

Ordering chart, Ex version

Approval acc. to II 2G Ex ia IIC T4 T5 T6 PTB01 ATEX 2048 and IECx PTB 07.0063

All valves with rectangular plug, mounting screws and flange seal; without plug connection (see Accessories)

Circuit function	Port connection	Orifice [mm]	QnN value 1-2 air [l/min] ¹⁾	QnN value 2-3 air [l/min] ¹⁾	Pressure range ²⁾ [bar]	Manual override	Voltage [V]	Minimum holding current [mA]	Item no.
 3/2-way valve NC	Bürkert Flange	0.6	7	8.5	0-7	with	24	29	175 657
	Bürkert Flange		7	8.5				23	175 656
 3/2-way valve NO	Bürkert Flange	0.6	7	8.5	0-7	with	24	29	183 550

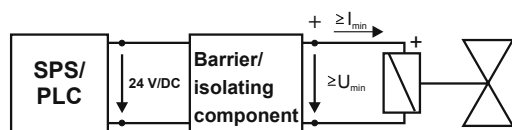
¹⁾ QnN value air [l/min]: Measurement with +20°C, 6 bar pressure on the valve input and 1 bar pressure differential

²⁾ Pressure values [bar]: Measured as overpressure to the atmospheric pressure

³⁾ Vacuum up to 10 bar on request

Mounting screws for Bürkert flange: M1.6x5 for Lateral flange: M1.6x20

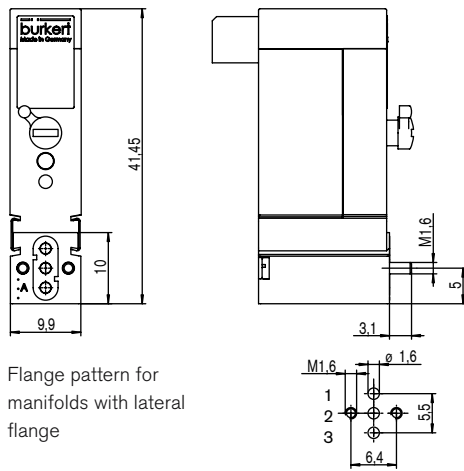
Electrical data:



Functional values for valve switching function at 0 °C to +55°C	Permitted maximum values/ value pairs acc. to operating instructions
Min. holding current: 29mA	U _i 35V
Nominal coil resistance 320Ω ±4%	I _i 0.9A
Min. Holding current: 23mA	
Nominal coil resistance 510Ω ±4%	

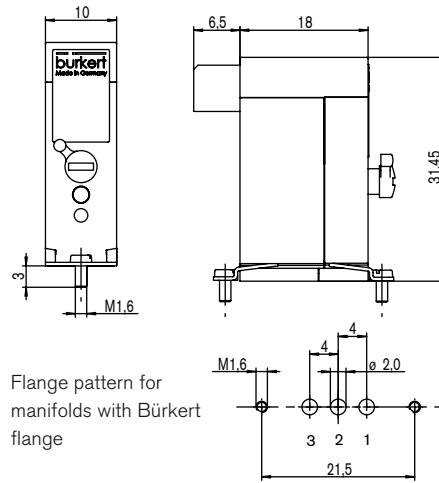
Dimensions [mm]

Type 6144 with lateral flange



Flange pattern for manifolds with lateral flange

Type 6144 with Bürkert flange



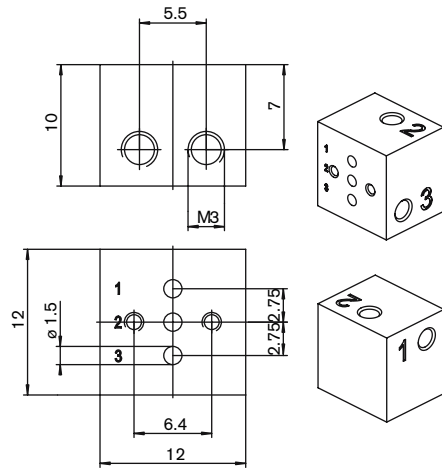
Flange pattern for manifolds with Bürkert flange

The valve can optionally be delivered with manual override on the left or right hand side (standard: opposite the electrical connection).

Dimensions manifolds [mm]

Single manifold for lateral flange

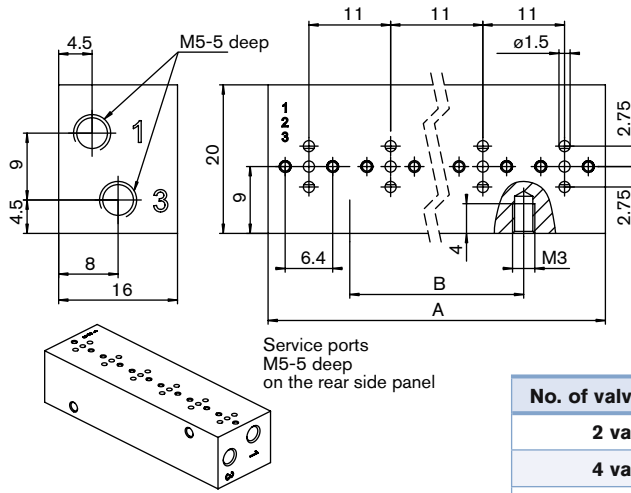
Material: Aluminium



Dimensions manifolds [mm]

Multiple manifolds for lateral flange

Material: Aluminium

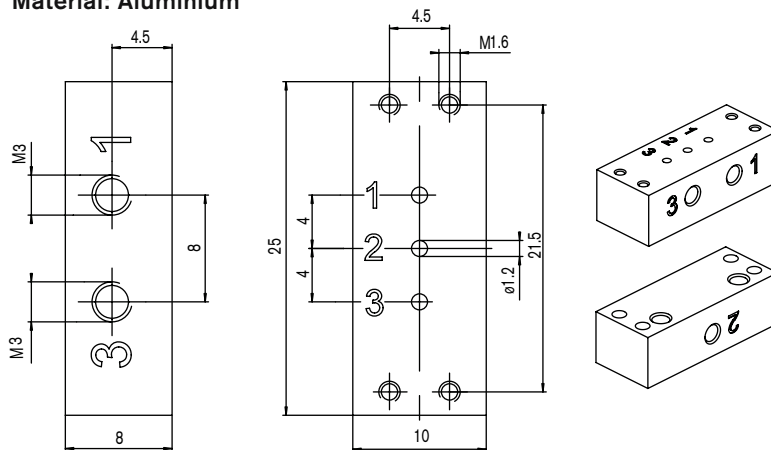


Service ports
M5-5 deep
on the rear side panel

No. of valve modules	A	B
2 valves	22	-
4 valves	44	22
6 valves	66	44

Single manifold for Bürkert flange

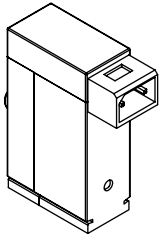
Material: Aluminium



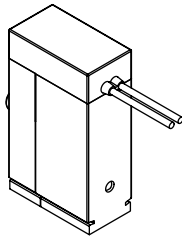
Ordering chart manifolds

Accessory	Characteristics	Item no.
Single manifold	for Bürkert flange, M3	639873
Single manifold	for lateral flange, M3	639234
Manifold 2 valves	for lateral flange, M5	641915
Manifold 4 valves	for lateral flange, M5	641916
Manifold 6 valves	for lateral flange, M5	639235
Blanking plate set	for multiple manifolds angle flange	645513
Push-in fitting	Brass, straight, M3, for 4/2 mm tube	782534
Push-in fitting	Brass, straight, M5, for 4/2 mm tube	787810
Rectangular cable plug	with 3 m cable	133486
Rectangular cable plug	with 300 mm flying leads	644068
Rectangular cable plug	with 2 single contacts	644067

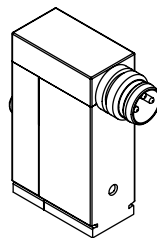
Options for the electrical connection, rectangular plug as standard, other connections on request



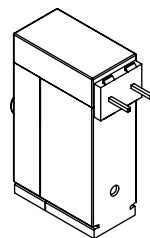
Rectangular plug
Raster 5.08 mm



2 Flying leads
0.2 mm², 300 mm long



Circular connector
M8x1, 3-pins



Connector
Raster 5.08 mm (e.g. for printed board mounting)

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please consult for advice.

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