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# DIRECT ACTING SOLENOID VALVES SERIES K8 - K8X

2/2-way - Normally Closed (NC) and Normally Open (NO) 3/2-way - Normally Closed (NC) and Normally Open (NO) 3/2-way - Universal (UNI)



- Compact design
- High performances
- Manifold mounting
- Long life
- Version for use with oxygen available

Thanks to their particular design these valves can be used in applications where very compact solutions are required as well as high performances.

Series K8 is used to control actuators or very small devices and it is suitable for portable equipments thanks to low power consumption, reduced weight and dimensions.

The universal (UNI) version enables to mix two different gaseous fluids or to select the path of the gaseous fluid in the pneumatic circuit.

#### **General Data**

TECHNICAL FEATURES	
Function	2/2 NC - 3/2 NC - 2/2 NO - 3/2 NO - 3/2 UNI
Operation	Direct acting poppet type
Pneumatic connections	Cartridge seat in manifold/barb fittings for tube 4/2 - 4/2,5 - 5/3 mm
Orifice diameter	0,5 0,7 mm
Flow coefficient kv (l/min)	0.08 0,15
Operating pressure	-1 + 3 7 bar
Operating temperature	0 ÷ 50 °C
Fluid	Filtered compressed air, unlubricated, according to ISO 8573-1:2010 class [3:4:3], inert gas
Response time when discharging (ISO 12238)	ON <10 ms - OFF <10 ms
Installation	In any position
MATERIALS IN CONTACT WITH THE MEDIUM	
Body	Brass - stainless steel - PBT
Seals	FKM
Internal parts	Stainless steel - enamelled copper
ELECTRICAL FEATURES	
Voltage	3 24 V DC - other voltages on demand
Voltage tolerance	±10%
Power consumption	0,6 W
Duty cycle	ED 100%
Electrical connection	2 pins 0,5 x 0,5 pitch 4 mm - JST connector with 300 mm flying leads
Protection class	IP00

Special versions available on demand.

VALVES AND SOLENOID VALVES

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#### DIRECT ACTING SOLENOID VALVES SERIES K8 - K8X - CODING EXAMPLES

# Coding example

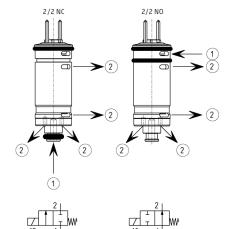
K8	0 00 - 3 0 3 - K
K8	SERIES
0	VALVE VERSION 0 = Cartridge valve X = Cartridge valve with PBT body
00	BODY DESIGN 00 = Cartridge valve without body 1A = Valve with PBT body and barb fittings for tube Ø4/2 mm 1B = Valve with PBT body and barb fittings for tube Ø4/2.5 mm 1C = Valve with PBT body and barb fittings for tube Ø5/3 mm
3	NUMBER OF WAYS - FUNCTIONS   3 = 3/2-way - NC   4 = 3/2-way - NO   5 = 2/2-way - NC   7 = 3/2-way - UNI
0	SEALS MATERIAL 0 = FKM
3	ORIFICE DIAMETER 3 = Ø0,5 mm (max pressure 7 bar) 5 = Ø0,7 mm 6 = Ø0,5 mm (max pressure 4 bar)
К	MATERIALS K = Brass orifice
2	ELECTRICAL CONNECTION 2 = Pins - pitch 4 mm 3 = JST connector with 300 mm flying leads
3	VOLTAGE - POWER CONSUMPTION 1 = 6 V DC - 0,6 W 5 = 5 V DC - 0,6 W 2 = 12 V DC - 0,6 W 6 = 3 V DC - 0,6 W 3 = 24 V DC - 0,6 W
	USE WITH OXYGEN: = Not suitable for use with oxygen OX1 = for use with oxygen - cleanliness level according to ASTM 693-03 Standard Level E

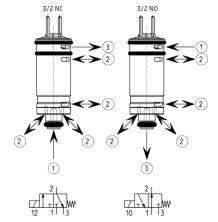
# Available functions

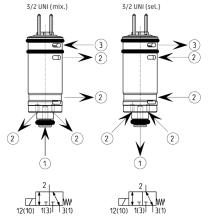
2/2 NC 2/2 NO

3/2 NC 3/2 NO

#### 3/2 UNI (mix.) 3/2 UNI (set.)







NO.	Description	NO.	Description	NO.	Description	NO.	Description
1	Inlet	1	Inlet	1	Inlet A	1	Outlet A
2	Outlet	2	Outlet	2	Outlet	2	Inlet
		3	Exhaust	3	Inlet B	3	Outlet B

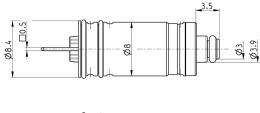
#### DIRECT ACTING SOLENOID VALVES SERIES K8 - K8X - DIMENSIONS

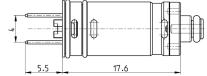


# Solenoid valve K8 - Cartridge version









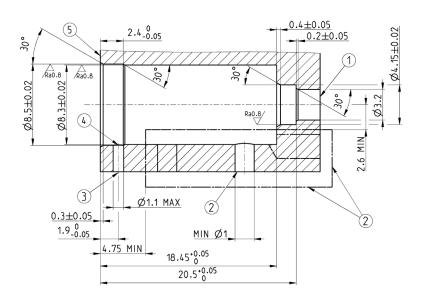
Mod.	Function	Orifice Ø (mm)	Kv (l/min)	Min÷max pressure (bar)
K8000-503-K2*	2/2 NC	0,5	0,08	1÷7
K8000-506-K2*	2/2 NC	0,5	0,08	-1 ÷ 4
K8000-505-K2*	2/2 NC	0,7	0,15	-1 ÷ 3
K8000-603-K2*	2/2 NO	0,6	0,10	1 ÷ 7
K8000-606-K2*	2/2 NO	0,6	0,10	-1 ÷ 4
K8000-303-K2*	3/2 NC	0,5	0,08	1 ÷ 7
K8000-306-K2*	3/2 NC	0,5	0,08	-1 ÷ 4
K8000-305-K2*	3/2 NC	0,7	0,15	-1÷3
K8000-403-K2*	3/2 NO	0,6	0,10	1 ÷ 7
K8000-406-K2*	3/2 NO	0,6	0,10	-1 ÷ 4
K8000-405-K2*	3/2 NO	0,6	0,10	1 ÷ 7
K8000-703-K2*	3/2 UNI	0,5	0,08	0 ÷ 3
K8000-705-K2*	3/2 UNI	0,7	0,15	-1÷2

\* add - VOLTAGE

(see CODING EXAMPLE)

# Series K8 solenoid valve - Valve seat dimensions for manifolds

LEGEND 1 = Port 1 2 = Port 2 3 = Port 3 4 = Free from burrs 5 = Surface to be aligned with the upper surface of the valve reinforcement



Function	2/2 NC	2/2 NO	3/2 NC	3/2 NO	3/2 UNI (mix.)	3/2 UNI (sel.)
Port 1	Inlet	-	Inlet	Exhaust	Inlet A	Outlet A
Port 2	Outlet	Outlet	Outlet	Outlet	Outlet	Inlet
Port 3	-	Inlet	Exhaust	Inlet	Inlet B	Outlet B

DIRECT ACTING SOLENOID VALVES SERIES K8 - K8X - DIMENSIONS

# Solenoid valve - PBT version body



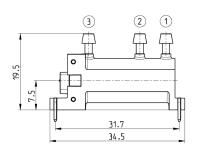
Mod.	Function	Orifice Ø (mm)	Kv (l/min)
K8X1*-503-K3*	2/2 NC	0,5	0,08
K8X1*-506-K3*	2/2 NC	0,5	0,08
K8X1*-505-K3*	2/2 NC	0,7	0,15
K8X1*-603-K3*	2/2 NO	0,6	0,10
K8X1*-606-K3*	2/2 NO	0,6	0,10
K8X1*-303-K3*	3/2 NC	0,5	0,08
K8X1*-306-K3*	3/2 NC	0,5	0,08
K8X1*-305-K3*	3/2 NC	0,7	0,15
K8X1*-403-K3*	3/2 NO	0,6	0,10
K8X1*-406-K3*	3/2 NO	0,6	0,10
K8X1*-405-K3*	3/2 NO	0,6	0,10
K8X1*-703-K3*	3/2 UNI	0,5	0,08
K8X1*-705-K3*	3/2 UNI	0,7	0,15

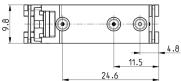
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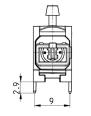
\* add - BODY DESIGN

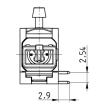
- VOLTAGE (see CODING EXAMPLE)

# Series K8X solenoid valve - Dimensions

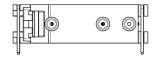








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Min÷max pressure (bar)

1 ÷ 7 -1 ÷ 4 -1 ÷ 3

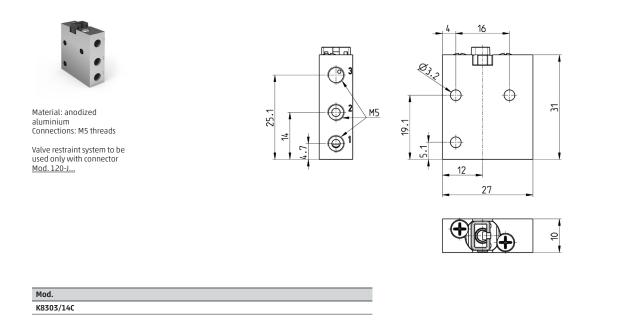
 $1 \div 7$   $-1 \div 4$   $1 \div 7$   $-1 \div 4$   $-1 \div 3$   $1 \div 7$   $-1 \div 4$   $1 \div 7$   $0 \div 3$  $-1 \div 2$ 

Function	2/2 NC	2/2 NO	3/2 NC	3/2 NO	3/2 UNI (mix.)	3/2 UNI (sel.)
Port 1	Inlet	-	Inlet	Exhaust	Inlet A	Outlet A
Port 2	Outlet	Outlet	Outlet	Outlet	Outlet	Inlet
Port 3	-	Inlet	Exhaust	Inlet	Inlet B	Outlet B

#### DIRECT ACTING SOLENOID VALVES SERIES K8 - K8X - ACCESSORIES



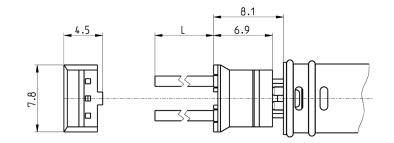
#### Single body for Series K8 solenoid valve



#### Connector with flying leads Mod. 120-J...



Cable section: 0.22 mm<sup>2</sup> Cable external diameter: 1.1 mm Material for the cable insulation: PVC

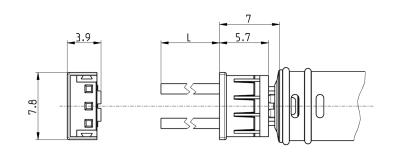


Mod.	Description	Colour	L = cable length (mm)	Cable holding
120-J803	Crimped cable connector J	White	300	Crimping
120-J806	Crimped cable connector J	White	600	Crimping

# Connector with flying leads Mod. 120



Cable section: 0.22 mm<sup>2</sup> Cable external diameter: 1.2 mm Material for the cable insulation: PVC



Mod.	Description	Colour	L = cable length (mm)	Cable holding	
120-803	Crimped cable	White	300	Crimping	
120-806	Crimped cable	White	600	Crimping	