

Direct acting solenoid valves

Series PL

2/2-way - Normally Open (NO)

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

3/2-way - Universal (UNI)



- » Application sectors:
 - Industrial Automation
 - Life Science
 - Transportation
- » Mounting on a single base (M5 connections) or on manifold (M5 or fittings Ø3 and Ø4)

Please note that all Series PL solenoid valves are supplied with direct current (DC). To operate in alternating current (AC), it is necessary to use the connector with bridge rectifier Mod. 125-900.

Series PL solenoid valves are available in the normally closed, normally open and universal versions. They can be mounted on single sub-bases or manifolds.

GENERAL DATA

TECHNICAL FEATURES

| | |
|-----------------------------|---|
| Function | 2/2 NO - 3/2 NC - 3/2 NO - 3/2 UNI |
| Operation | direct acting poppet type |
| Pneumatic connections | on subbase |
| Orifice diameter | 0.8 ... 1.6 mm |
| Flow coefficient kv (l/min) | 0.30 ... 0.62 |
| Operating pressure | 0 ÷ 3.5 ... 10 bar |
| Operating temperature | 0 ÷ 50 °C (FKM) / -50 ÷ 50 °C (low temperature NBR on demand) |
| Media | filtered air class [5:4:4] according to ISO 8573-1:2010 (max oil viscosity 32 cSt), inert gas |
| Response time | ON <10 ms - OFF <15 ms |
| Manual override | mono/bistable - PBT 3/2 versions only |
| Installation | in any position |

MATERIALS IN CONTACT WITH THE MEDIUM

| | |
|----------------|------------------------------|
| Body | brass - PBT - PPS |
| Seals | FKM - NBR - EPDM (on demand) |
| Internal parts | brass - stainless steel |

ELECTRICAL FEATURES

| | |
|-----------------------|---|
| Voltage | 6 ... 110 V DC - other voltages on demand |
| Voltage tolerance | ±10% |
| Power consumption | 1.2 ... 3 W |
| Duty cycle | ED 100% |
| Electrical connection | industry standard connector (9.4 mm) |
| Protection class | IP65 with connector |

Special versions available on demand

CODING EXAMPLE

| | | | | | | | | | | | |
|-----------|----------|-----------|----------|----------|----------|----------|----------|-----------|----------|----------|--|
| PL | 0 | 00 | - | 3 | 0 | 3 | - | PL | 2 | 3 | |
|-----------|----------|-----------|----------|----------|----------|----------|----------|-----------|----------|----------|--|

| | | | | | | | | | | | |
|-----------|--|--|--|--|--|--|--|--|--|--|--|
| PL | SERIES | | | | | | | | | | |
| 0 | BODY DESIGN 0 = single sub-base (M5 only) or interface 1 = manifold - valves single side 2 = manifold - valves double side | | | | | | | | | | |
| 00 | NUMBER OF POSITIONS 00 = ISO 15218 or Series PD interface 01 = single base (M5 only) 02 ÷ 99 = manifold number of positions | | | | | | | | | | |
| 3 | NUMBER OF WAYS - FUNCTIONS 0 = manifolds or single base 9 = 2/2-way - NO A = 2/2-way - NO electric part revolved by 180° 3 = 3/2-way - NC 5 = 3/2-way - NC electric part revolved by 180° 4 = 3/2-way - NO 6 = 3/2-way - NO electric part revolved by 180° B = 3/2-way - NO IN-LINE* C = 3/2-way - NO IN-LINE* electric part revolved by 180° 7 = 3/2-way - UNI 8 = 3/2-way - UNI electric part revolved by 180° | | | | | | | | | | |
| 0 | VALVE PORTS 0 = ISO 15218 interface - 3/2-way B = series PD interface - 2/2-way MANIFOLD PORTS for P - PL - PN - W Series 2 = M5 thread - front outlets 3 = tube Ø 3 mm fittings - front outlets 4 = tube Ø 4 mm fittings - front outlets 6 = M5 thread - front outlets 7 = tube Ø 3 mm fittings - bottom outlets 8 = tube Ø 4 mm fittings - bottom outlets | | | | | | | | | | |
| 3 | ORIFICE DIAMETER B = Ø 0.8 mm 1 = Ø 1.1 mm 3 = Ø 1.5 mm (NC version with pressure 4 ÷ 8 bar only) 5 = Ø 1.5 mm 6 = Ø 1.5 mm (NC version with pressure 0 ÷ 3.5 bar only) 7 = Ø 1.6 mm | | | | | | | | | | |
| PL | MATERIALS PL = PBT body - FKM poppet seal - NBR other seals PF = PBT body - FKM seals SF = PPS body - FKM seals ST = PPS body - Low Temperature NBR seals (on demand) BF = nickel-plated brass body - FKM seals | | | | | | | | | | |
| 2 | ELECTRICAL CONNECTION 2 = industrial standard form C (9.4 mm) | | | | | | | | | | |
| 3 | VOLTAGE - POWER CONSUMPTION - OVERMOULDING MATERIAL 4 = 6 V DC - 1.2 W - PA 5 = 12 V DC - 1.2 W - PA 6 = 24 V DC - 1.2 W - PA 1 = 6 V DC - 2.7 W - PA 2 = 12 V DC - 2.7 W - PA 3 = 24 V DC - 2.7 W - PA 7 = 6 V DC - 1.2 W - PPS 8 = 12 V DC - 1.2 W - PPS 9 = 24 V DC - 1.2 W - PPS A = 6 V DC - 2.2 W - PPS B = 12 V DC - 2.2 W - PPS C = 24 V DC - 2.2 W - PPS H = 110 V DC - 3 W - PPS (can be combined with all PPS models) | | | | | | | | | | |
| | FIXING = fixing screws for metal P = fixing screws for plastics | | | | | | | | | | |
| | MANUAL OVERRIDE = not required or not applicable T = mono/bistable (push/turn type) | | | | | | | | | | |
| | OPTIONS = standard OX1 = for use with oxygen (non volatile residual less than 550 mg/m ²) | | | | | | | | | | |

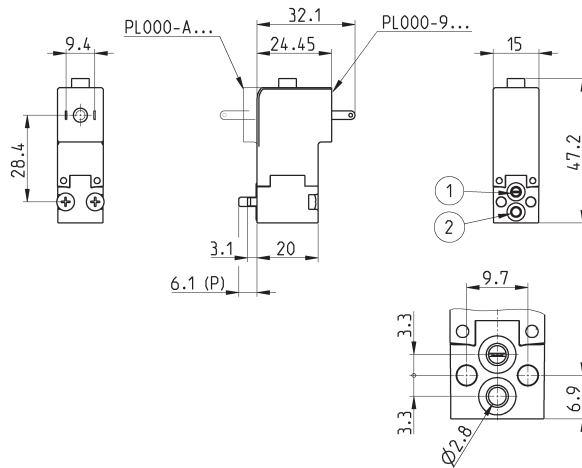
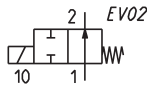
* 3/2 NO IN-LINE version: the position of the ports 1 - 2 - 3 is identical to 3/2 NC version

Series PL solenoid valve - 2/2-way NO - series PD interface



Supplied with:
 2x O-Rings
 2x M3x20 screws for mounting on metal
 or
 2x Ø3x23 screws for mounting on plastic
 (opt. P)

* add
 - VOLTAGE
 - FIXING
 (see CODING EXAMPLE)



| Mod. | Function | Orifice Ø (mm) | kv (l/min) | Min+max pressure (bar) | Body material | Seals material | Manual override | Power (W) | Symbol |
|----------------|----------|----------------|------------|------------------------|---------------|----------------|-----------------|-----------|--------|
| PL000-9B7-PF2* | 2/2 NO | 1,6 | 0,62 | 0 ÷ 6,5 | PBT | FKM | no | 2,7 | EV02 |
| PL000-9B7-BF2* | 2/2 NO | 1,6 | 0,62 | 0 ÷ 6,5 | brass | FKM | no | 2,7 | EV02 |

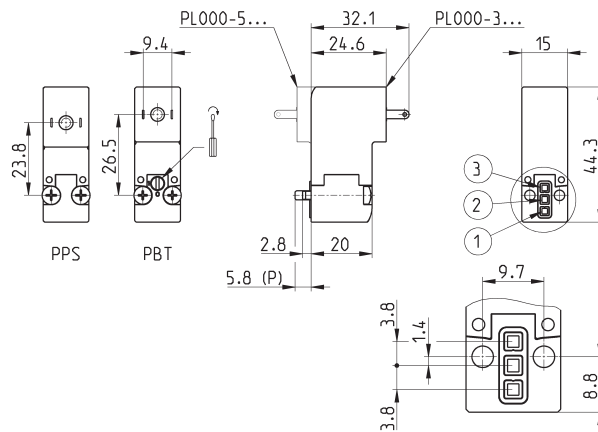
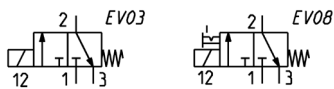
Series PL solenoid valve - 3/2-way NC



Supplied with:
 1x interface seal
 2x M3x20 screws for mounting on metal
 or
 2x Ø3x23 screws for mounting on plastic
 (opt. P)

Also available ST models for
 T amb. -50 ÷ 50 °C with NBR seals.

* add
 - VOLTAGE
 - FIXING
 (see CODING EXAMPLE)



| Mod. | Function | Orifice Ø (mm) | kv (l/min) | Min+max pressure (bar) | Body material | Seals material | Manual override | Power (W) | Symbol |
|-----------------|----------|----------------|------------|------------------------|---------------|----------------|-----------------|-----------|--------|
| PL000-30B-PF2* | 3/2 NC | 0,8 | 0,30 | 0 ÷ 10 | PBT | FKM | no | 1,2 | EV03 |
| PL000-30B-SF2* | 3/2 NC | 0,8 | 0,30 | 0 ÷ 10 | PPS | FKM | no | 1,2 | EV03 |
| PL000-301-PF2* | 3/2 NC | 1,1 | 0,34 | 0 ÷ 7 | PBT | FKM | no | 2,7 | EV03 |
| PL000-301-PF2*T | 3/2 NC | 1,1 | 0,34 | 0 ÷ 7 | PBT | FKM | mono/bistable | 2,7 | EV08 |
| PL000-301-SF2* | 3/2 NC | 1,1 | 0,34 | 0 ÷ 8 | PPS | FKM | no | 2,2 | EV03 |
| PL000-303-PL2* | 3/2 NC | 1,5 | 0,47 | 4 ÷ 8 | PBT | FKM+NBR | no | 2,7 | EV03 |
| PL000-303-PF2*T | 3/2 NC | 1,5 | 0,47 | 4 ÷ 8 | PBT | FKM | mono/bistable | 2,7 | EV08 |
| PL000-306-PL2* | 3/2 NC | 1,5 | 0,47 | 0 ÷ 3.5 | PBT | FKM+NBR | no | 2,7 | EV03 |
| PL000-306-PF2*T | 3/2 NC | 1,5 | 0,47 | 0 ÷ 3.5 | PBT | FKM | mono/bistable | 2,7 | EV08 |

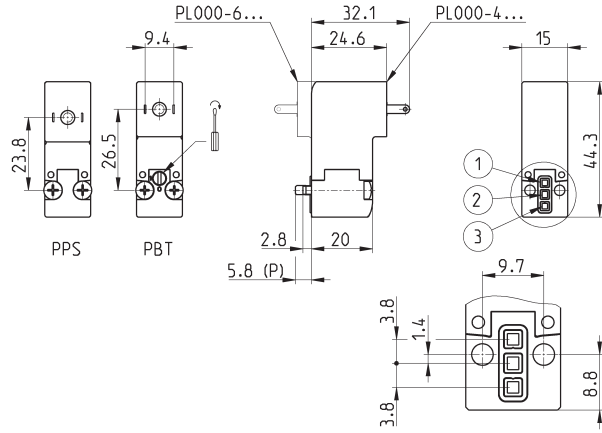
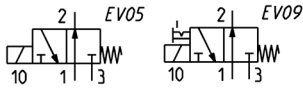
Series PL solenoid valve - 3/2-way NO



Supplied with:
1x interface seal
2x M3x20 screws for mounting on metal
or
2x Ø3x23 screws for mounting on plastic
(opt. P)

Also available ST models for
T amb. -50 ÷ 50 °C with NBR seals.

* add
- VOLTAGE
- FIXING
(see CODING EXAMPLE)



| Mod. | Function | Orifice Ø (mm) | kv (l/min) | Min÷max pressure (bar) | Body material | Seals material | Manual override | Power (W) | Symbol |
|-----------------|----------|----------------|------------|------------------------|---------------|----------------|-----------------|-----------|--------|
| PL000-40B-PF2* | 3/2 NO | 0,8 | 0,30 | 0 ÷ 10 | PBT | FKM | no | 1,2 | EV05 |
| PL000-40B-SF2* | 3/2 NO | 0,8 | 0,30 | 0 ÷ 10 | PPS | FKM | no | 1,2 | EV05 |
| PL000-401-PF2* | 3/2 NO | 1,1 | 0,34 | 0 ÷ 7 | PBT | FKM | no | 2,7 | EV05 |
| PL000-401-PF2*T | 3/2 NO | 1,1 | 0,34 | 0 ÷ 7 | PBT | FKM | mono/bistable | 2,7 | EV09 |
| PL000-401-SF2* | 3/2 NO | 1,1 | 0,34 | 0 ÷ 7 | PPS | FKM | no | 2,2 | EV05 |
| PL000-405-PF2* | 3/2 NO | 1,5 | 0,42 | 0 ÷ 6 | PBT | FKM | no | 2,7 | EV05 |
| PL000-405-PF2*T | 3/2 NO | 1,5 | 0,42 | 0 ÷ 6 | PBT | FKM | mono/bistable | 2,7 | EV09 |
| PL000-405-SF2* | 3/2 NO | 1,5 | 0,42 | 0 ÷ 6 | PPS | FKM | no | 2,2 | EV05 |

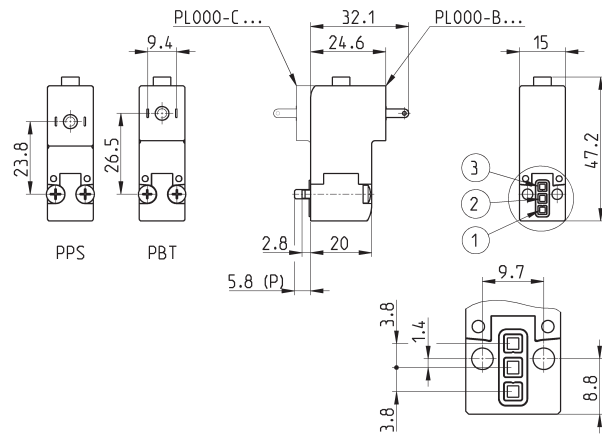
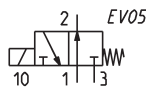
Series PL solenoid valve - 3/2-way NO IN-LINE



Supplied with:
1x interface seal
2x M3x20 screws for mounting on metal
or
2x Ø3x23 screws for mounting on plastic
(opt. P)

Also available ST models for
T amb. -50 ÷ 50 °C with NBR seals.

* add
- VOLTAGE
- FIXING
(see CODING EXAMPLE)



| Mod. | Function | Orifice Ø (mm) | kv (l/min) | Min÷max pressure (bar) | Body material | Seals material | Manual override | Power (W) | Symbol |
|----------------|----------------|----------------|------------|------------------------|---------------|----------------|-----------------|-----------|--------|
| PL000-B01-PF2* | 3/2 NO IN-LINE | 1,1 | 0,34 | 0 ÷ 7 | PBT | FKM | no | 2,7 | EV05 |
| PL000-B01-SF2* | 3/2 NO IN-LINE | 1,1 | 0,34 | 0 ÷ 7 | PPS | FKM | no | 2,2 | EV05 |

Series PL solenoid valve - 3/2-way UNI

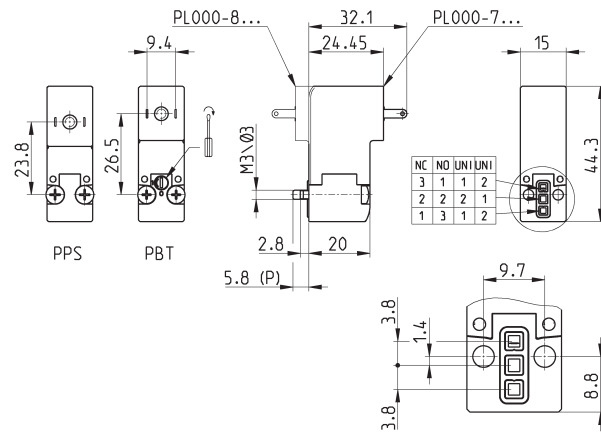
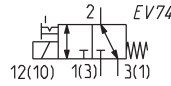
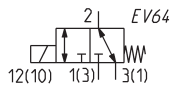


Supplied with:
 1x interface seal
 2x M3x20 screws for mounting on metal
 or
 2x Ø3x23 screws for mounting on plastic
 (opt. P)

Also available models for T amb.
 -50 ÷ 50 °C with NBR seals

Vacuum operation with max. pressure
 reduction

* add
 - VOLTAGE
 - FIXING
 (see CODING EXAMPLE)



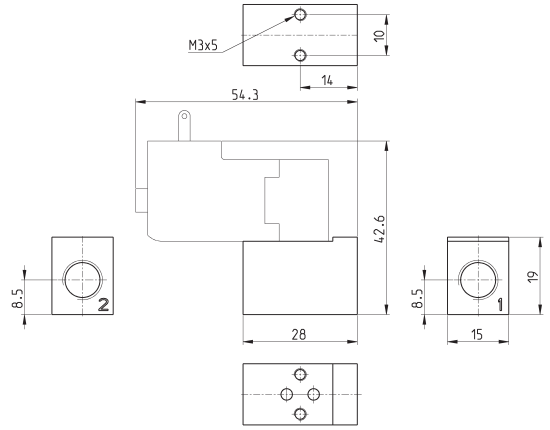
| Mod. | Function | Orifice Ø (mm) | kv (l/min) | Min÷max pressure (bar) | Body material | Seals material | Manual override | Power (W) | Symbol |
|-----------------|----------|-------------------|---------------|---------------------------|------------------|-------------------|--------------------|--------------|--------|
| PL000-705-PF2* | 3/2 UNI | 1,5 | 0,42 | 0 ÷ 3,5 [-1 ÷ 2,5] | PBT | FKM | no | 2,7 | EV64 |
| PL000-705-PF2*T | 3/2 UNI | 1,5 | 0,42 | 0 ÷ 3,5 [-1 ÷ 2,5] | PBT | FKM | mono/bistable | 2,7 | EV74 |
| PL000-705-SF2* | 3/2 UNI | 1,5 | 0,42 | 0 ÷ 3,5 [-1 ÷ 2,5] | PPS | FKM | no | 2,2 | EV64 |

Single sub-base for 15mm size 2 way interface



Single sub-base suitable for 2-way solenoid valves Series PD and PL models PD000-2A..., PL000-9B...
Use solenoid valves with fixing screws for metal (see codification page)

Material: anodized aluminium
Connections: G1/8 threads



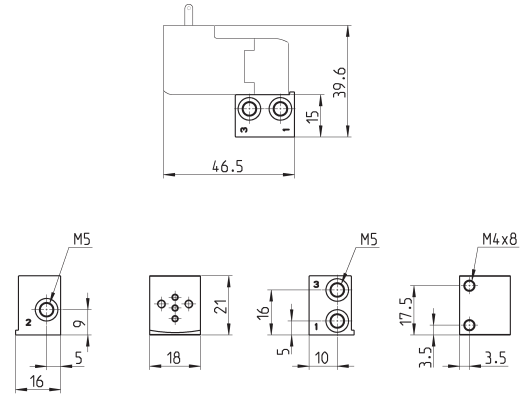
Mod.
PDA01-1/8

Single sub-base for 3-way solenoid valve size 15 mm



Single sub-base suitable for Series P - PL - PN - W 3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Material: anodized aluminium
Connections: M5 threads



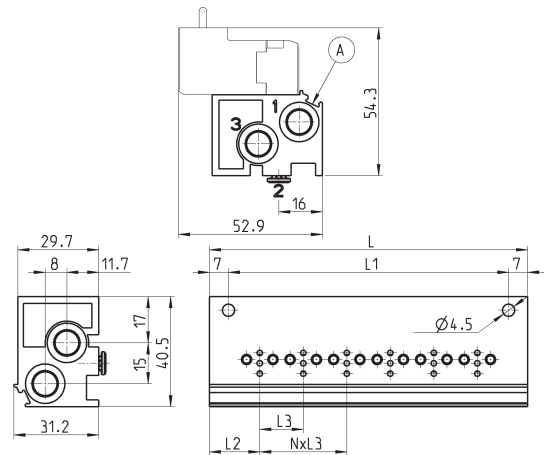
Mod.
P001-02

Single manifold with rear outlets



Manifold suitable for Series P - PL - PN - W 3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Material: anodized aluminium

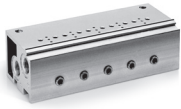


| DIMENSIONS | | | | | | | |
|------------|-----------|-----|-----|------|----|-------|-------|
| Mod. | Positions | L | L1 | L2 | L3 | 1 (P) | 3 (R) |
| P102-0* | 2 | 53 | 39 | 18,5 | 16 | G1/8 | G1/8 |
| P103-0* | 3 | 69 | 55 | 18,5 | 16 | G1/8 | G1/8 |
| P104-0* | 4 | 85 | 71 | 18,5 | 16 | G1/8 | G1/8 |
| P105-0* | 5 | 101 | 87 | 18,5 | 16 | G1/8 | G1/8 |
| P106-0* | 6 | 117 | 103 | 18,5 | 16 | G1/8 | G1/8 |

* add
- MANIFOLD PORTS
(see CODING EXAMPLE)

A = groove for identification label

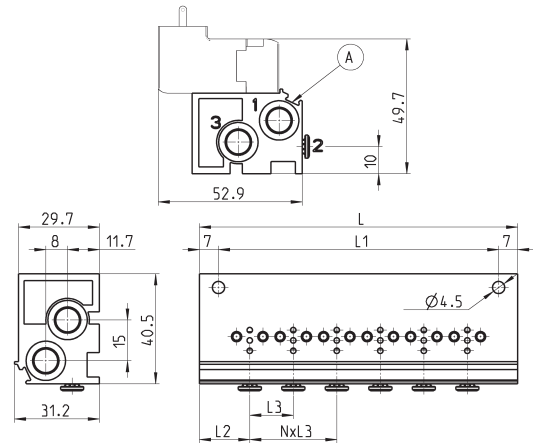
Manifold - single side valve - frontal outlets



Manifold suitable for Series P - PL - PN - W
3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Can be fixed through DIN 46277/3 guide with the accessory PCF-E520.

Material: anodized aluminium



| DIMENSIONS | | | | | | | |
|------------|-----------|-----|-----|------|----|-------|-------|
| Mod. | Positions | L | L1 | L2 | L3 | 1 (P) | 3 (R) |
| P102-0* | 2 | 53 | 39 | 18,5 | 16 | G1/8 | G1/8 |
| P103-0* | 3 | 69 | 55 | 18,5 | 16 | G1/8 | G1/8 |
| P104-0* | 4 | 85 | 71 | 18,5 | 16 | G1/8 | G1/8 |
| P105-0* | 5 | 101 | 87 | 18,5 | 16 | G1/8 | G1/8 |
| P106-0* | 6 | 117 | 103 | 18,5 | 16 | G1/8 | G1/8 |

* add
- MANIFOLD PORTS
(see CODING EXAMPLE)

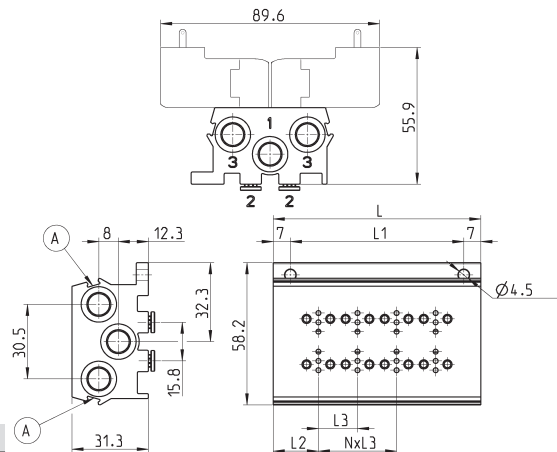
A = groove for identification label

Manifold - double side valve - bottom outlets



Manifold suitable for Series P - PL - PN - W
3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Material: anodized aluminium



| DIMENSIONS | | | | | | | |
|------------|-----------|-----|-----|------|----|-------|-------|
| Mod. | Positions | L | L1 | L2 | L3 | 1 (P) | 3 (R) |
| P204-0* | 4 | 53 | 39 | 18,5 | 16 | G1/8 | G1/8 |
| P206-0* | 6 | 69 | 55 | 18,5 | 16 | G1/8 | G1/8 |
| P208-0* | 8 | 85 | 71 | 18,5 | 16 | G1/8 | G1/8 |
| P210-0* | 10 | 101 | 87 | 18,5 | 16 | G1/8 | G1/8 |
| P212-0* | 12 | 117 | 103 | 18,5 | 16 | G1/8 | G1/8 |

* add
- MANIFOLD PORTS
(see CODING EXAMPLE)

A = groove for identification label

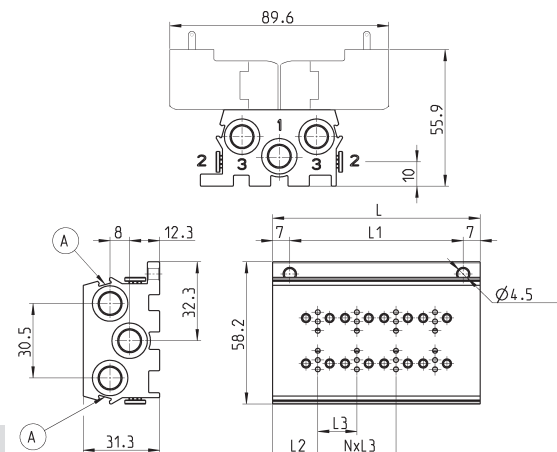
Manifold - double side valve - frontal outlets



Manifold suitable for Series P - PL - PN - W
3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Can be fixed through DIN 46277/3 guide with the accessory PCF-E520.

Material: anodized aluminium



| DIMENSIONS | | | | | | | |
|------------|-----------|-----|-----|------|----|-------|-------|
| Mod. | Positions | L | L1 | L2 | L3 | 1 (P) | 3 (R) |
| P204-0* | 4 | 53 | 39 | 18,5 | 16 | G1/8 | G1/8 |
| P206-0* | 6 | 69 | 55 | 18,5 | 16 | G1/8 | G1/8 |
| P208-0* | 8 | 85 | 71 | 18,5 | 16 | G1/8 | G1/8 |
| P210-0* | 10 | 101 | 87 | 18,5 | 16 | G1/8 | G1/8 |
| P212-0* | 12 | 117 | 103 | 18,5 | 16 | G1/8 | G1/8 |

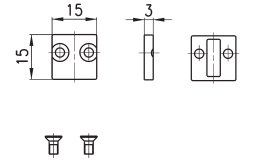
* add
- MANIFOLD PORTS
(see CODING EXAMPLE)

A = groove for identification label

Position valve cap

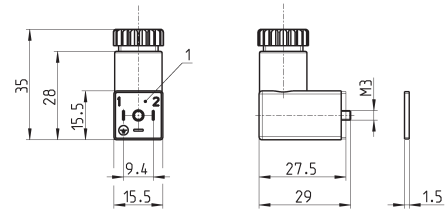


Supplied with:
1x position valve cap
1x interface seal
2x screws



| |
|---------|
| Mod. |
| P000-TP |

Connector Mod. 125-... - industrial std. 9.4 mm



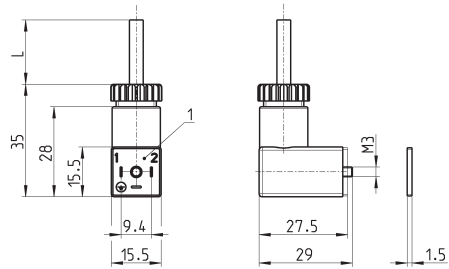
| Mod. | description | colour | working voltage | cable gland | tightening torque |
|---------|--------------------------------|-------------|-----------------|-------------|-------------------|
| 125-601 | connector, diode + Led | transparent | 10/50 V DC | PG7 | 0,3 Nm |
| 125-701 | connector, varistor + Led | transparent | 24 V AC/DC | PG7 | 0,3 Nm |
| 125-800 | connector, without electronics | black | - | PG7 | 0,3 Nm |

1 = 90° adjustable connector

Connector Mod. 125-... - industrial std. 9.4 mm - 90° cable



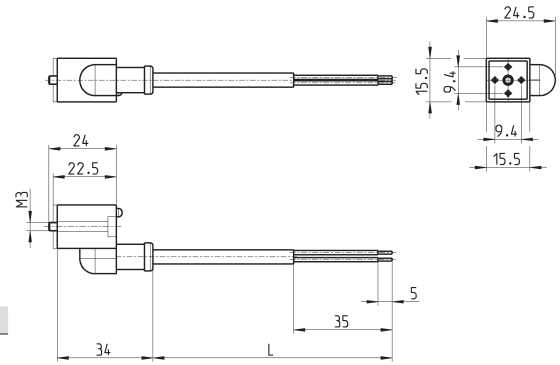
The internal rectifier circuit of the connector Mod. 125-900 allows to use solenoid valves with different AC voltage, even if the voltage indicated on the solenoid valve is DC.



| Mod. | description | colour | working voltage | cable length [L] | cable gland | tightening torque |
|-----------|--|-------------|-------------------|------------------|-------------|-------------------|
| 125-501-2 | moulded cable with diode + Led | black | 10/50 V DC | 2000 mm | - | 0,3 Nm |
| 125-550-1 | moulded cable, without electronics | black | - | 1000 mm | - | 0,3 Nm |
| 125-601-2 | pre-wired cable, diode + Led | transparent | 10/50 V DC | 2000 mm | PG7 | 0,3 Nm |
| 125-571-3 | moulded cable, varistor + Led | black | 24 V AC/DC | 3000 mm | - | 0,3 Nm |
| 125-900 | pre-wired cable with voltage rectifier | black | 6 V - 110 V AC/DC | 2000 mm | PG7 | 0,3 Nm |

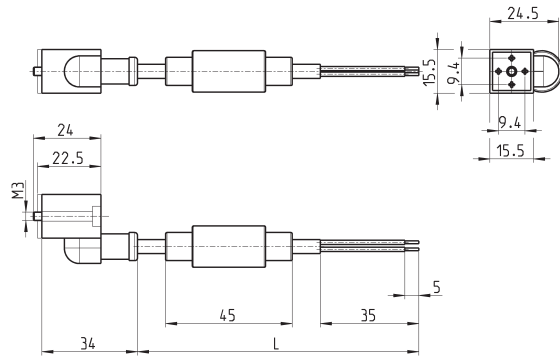
1 = 90° adjustable connector

Connector Mod. 125-... - industrial std. 9.4 mm - in-line cable



| Mod. | description | colour | working voltage | cable length [L] | cable gland | tightening torque |
|-----------|--|--------|-----------------|--------------------|-------------|-------------------|
| 125-503-2 | in-line moulded cable, with diode + Led | black | 24 V DC | 2000 mm | - | 0,3 Nm |
| 125-503-5 | in-line moulded cable, with diode + Led | black | 24 V DC | 5000 mm | - | 0,3 Nm |
| 125-553-2 | in-line moulded cable, without electronics | black | - | 2000 mm | - | 0,3 Nm |
| 125-553-5 | in-line moulded cable, without electronics | black | - | 5000 mm | - | 0,3 Nm |

Conn. Mod. 125-... - ind. std. 9.4 mm - in-line cable+rectifier



| Mod. | description | colour | working voltage | cable length [L] | cable gland | tightening torque |
|-----------|--|--------|-------------------|--------------------|-------------|-------------------|
| 125-903-2 | in-line moulded cable with voltage rectifier | black | 6 V - 230 V AC/DC | 2000 mm | - | 0,3 Nm |
| 125-903-5 | in-line moulded cable with voltage rectifier | black | 6 V - 230 V AC/DC | 5000 mm | - | 0,3 Nm |