

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
- Can be mounted on a single base (M5 connections) or on manifold (M5 connections or fittings for Ø3 or Ø4 tube).

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

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.

General Data

Technical characteristics	
Function	2/2 NO - 3/2 NC - 3/2 NO - 3/2 UNI
Operation	Direct acting poppet type
Connection	On subbase
Orifice diameter	0.8 ... 3.5 mm
Flow coefficient Kv	0.3 ... 2.0
Operating pressure	0 ÷ 0.15 ... 10 bar
Operating temperature [°C]	0 ÷ 50 °C (FKM) / -40 ÷ 50 °C (low temperature NBR on demand)
Medium	Filtered air, class [5:4:4] according to ISO 8573-1 (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 characteristics	
Voltage output	6 ... 110 V DC - other voltages on demand
Voltage tolerance	±10%
Power consumption	1.2 ... 2.7 W
Duty cycle	ED 100%
Electrical connection	Industrial standard connector (9.4 mm)
Protection class	IP65 with connector

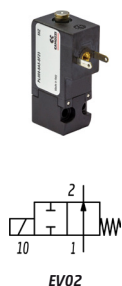
Special versions available on demand

DIRECT ACTING SOLENOID VALVES

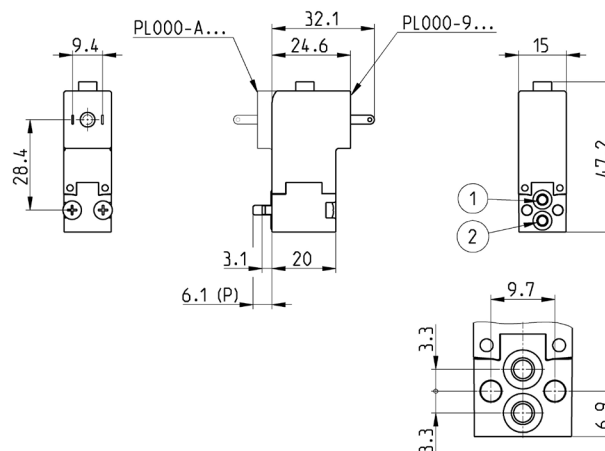
SERIES PL - CODING EXAMPLES

Coding example

PL	0	00	-	3	0	3	-	PL	2	3
PL	SERIES									
0	BODY DESIGN 0 = without sub-base/manifolds or with single sub-base 1 = manifold - valves single side 2 = manifold - valves double side									
00	NUMBER OF POSITIONS 00 = without sub-base/manifolds 01 = single sub-base 02 ÷ 98 = manifold number of positions (single max 86 positions – double max 98 positions)									
3	NUMBER OF WAYS - FUNCTIONS 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 = interface - 2/2-way SINGLE SUB-BASE CONNECTIONS 1 = G1/8 thread (only for 2/2-way functions) 2 = M5 thread (only for 3/2-way functions) MANIFOLD PORTS for P - PL - PN - W Series 02 = M5 thread - front outlets 03 = tube Ø 3 mm fittings - front outlets 04 = tube Ø 4 mm fittings - front outlets 06 = M5 thread - bottom outlets 07 = tube Ø 3 mm fittings - bottom outlets 08 = 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 F = Ø 3.5 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-planted brass body - FKM seals									
2	ELECTRICAL CONNECTION 2 = industrial standard connection (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 E = 48 V DC - 2.2 W - PPS F = 72 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)									
	USE WITH OXYGEN: = Not suitable for use with oxygen OX1 = for use with oxygen - cleanliness level according to ASTM G93-03 Standard Level E									

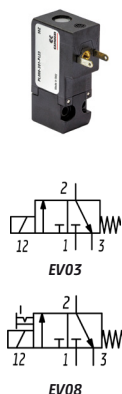
Series PL solenoid valve - 2/2-way NO


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



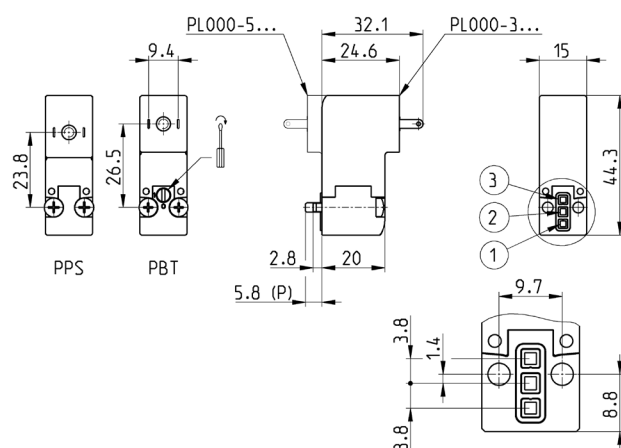
Mod.	Function	Orifice Ø (mm)	Kv (l/min)	Min÷max pressure (bar)	Body material	Seals material	Manual override	Power (W)	Symbol
PL000-9B7-PF2*	2/2 NO	1,6	0,62	0 ÷ 6,5	PBT	FKM	no	2,7	EV02
PL000-9BF-BF2*	2/2 NO	3,5	2,0	0 ÷ 0,15	PBT	FKM	no	1,2	EV02

* add
 - VOLTAGE
 - FIXING (see CODING EXAMPLE)

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.

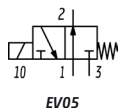


Mod.	Function	Orifice Ø (mm)	Kv (l/min)	Min÷max pressure (bar)	Body material	Seals material	Manual override	Power (W)	Symbol
PL000-30B-PF2*	3/2 NC	0,8	0,30	0 ÷ 10	PBT	FKM	no	1,2	EV03
PL000-30B-SF2*	3/2 NC	0,8	0,30	0 ÷ 10	PPS	FKM	no	1,2	EV03
PL000-301-PF2*	3/2 NC	1,1	0,34	0 ÷ 7	PBT	FKM	no	2,7	EV03
PL000-301-PF2*T	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

* add
 - VOLTAGE
 - FIXING (see CODING EXAMPLE)

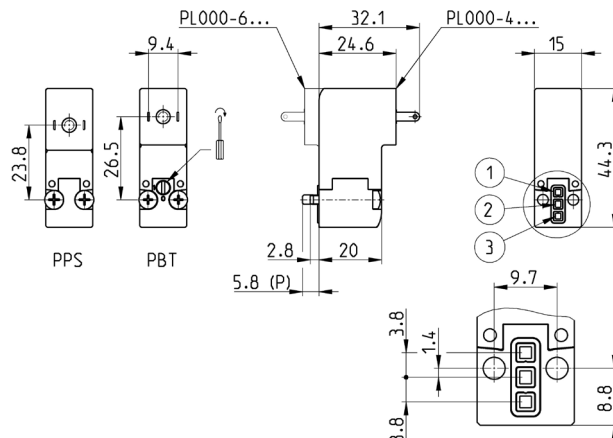
DIRECT ACTING SOLENOID VALVES
SERIES PL - DIMENSIONS

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)

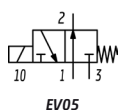
Also available ST models for
T amb. -50 ÷ 50 °C with NBR seals.



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
PL000-40I-PF2*	3/2 NO	1,1	0,34	0 ÷ 7	PBT	FKM	no	2,7	EV05
PL000-40I-PF2*T	3/2 NO	1,1	0,34	0 ÷ 7	PBT	FKM	mono/bistable	2,7	EV09
PL000-40I-SF2*	3/2 NO	1,1	0,34	0 ÷ 7	PPS	FKM	no	2,2	EV05
PL000-40S-PF2*	3/2 NO	1,5	0,42	0 ÷ 6	PBT	FKM	no	2,7	EV05
PL000-40S-PF2*T	3/2 NO	1,5	0,42	0 ÷ 6	PBT	FKM	mono/bistable	2,7	EV09
PL000-40S-SF2*	3/2 NO	1,5	0,42	0 ÷ 6	PPS	FKM	no	2,2	EV05

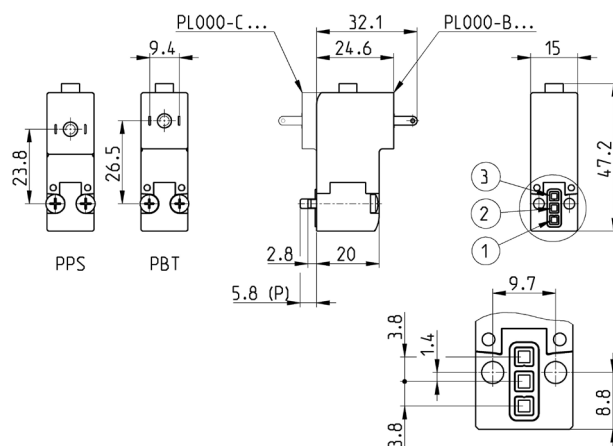
* add
- VOLTAGE
- FIXING (see CODING EXAMPLE)

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.



Mod.	Function	Orifice Ø (mm)	Kv (l/min)	Min+max pressure (bar)	Body material	Seals material	Manual override	Power (W)	Symbol
PL000-B0I-PF2*	3/2 NO IN-LINE	1,1	0,34	0 ÷ 7	PBT	FKM	no	2,7	EV05
PL000-B0I-SF2*	3/2 NO IN-LINE	1,1	0,34	0 ÷ 7	PPS	FKM	no	2,2	EV05

* add
- VOLTAGE
- FIXING (see CODING EXAMPLE)

DIRECT ACTING SOLENOID VALVES

SERIES PL - DIMENSIONS

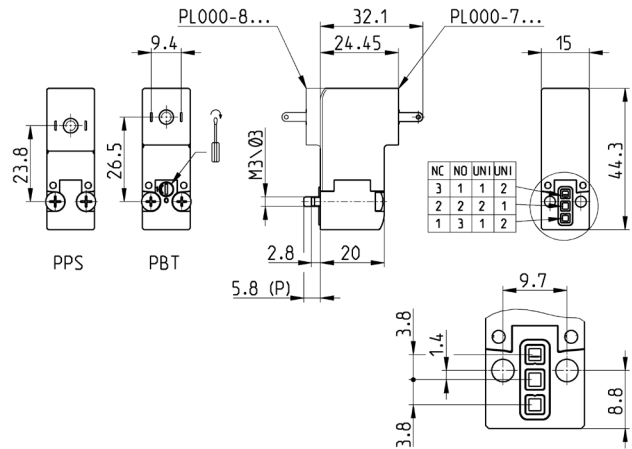
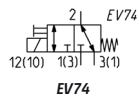
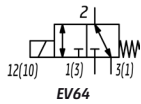
Series PL solenoid valve - 3/2-way UNI



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



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

* add
 - VOLTAGE
 - FIXING (see CODING EXAMPLE)

DIRECT ACTING SOLENOID VALVES
SERIES PL - ACCESSORIES

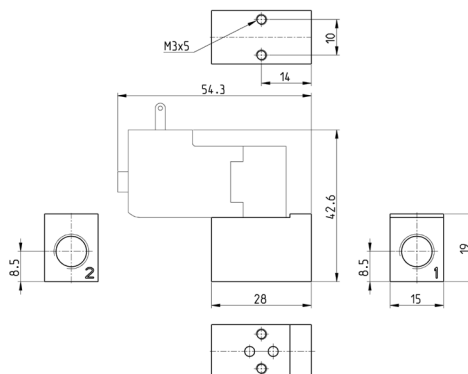
Single sub-base for 15mm size 2 way interface



Single sub-base suitable for 2-way solenoid valves
Use solenoid valves with fixing screws for metal
(see codification page)

Material: anodized aluminium
Connections: G1/8 threads

Mod.
PDA01-1/8



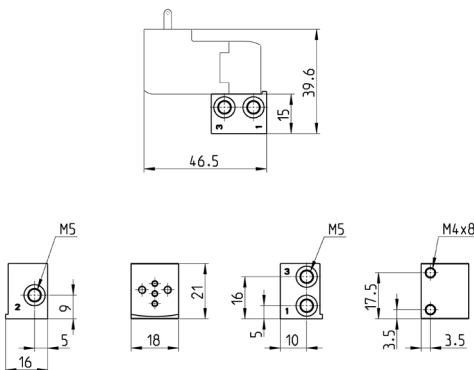
Single sub-base for 3-way solenoid valve size 15 mm



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

Material: anodized aluminium
Connections: M5 threads

Mod.
P001-02

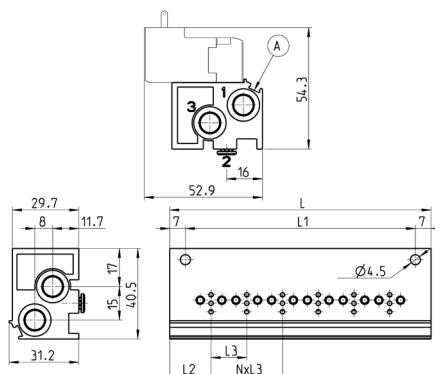


Manifold - single side valve - bottom outlets



Manifold suitable for 3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)

Material: anodized aluminium



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

* Add manifold ports (see Coding example)

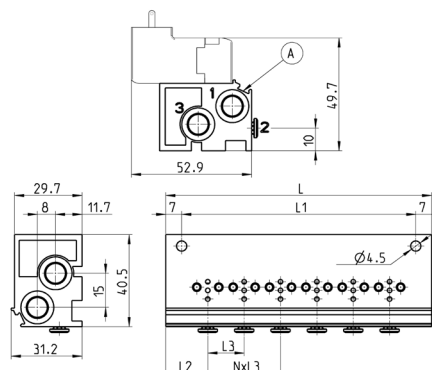
Manifold - single side valve - frontal outlets

Manifold suitable for 3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)



Material: anodized aluminium

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



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

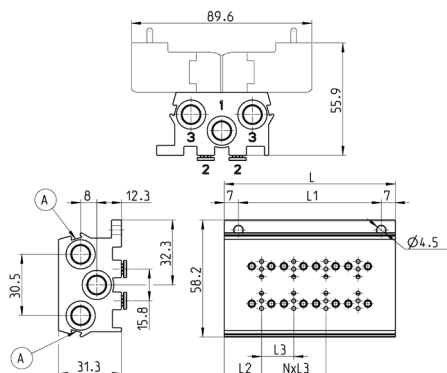
* Add manifold ports (see Coding example)

Manifold - double side valve - bottom outlets

Manifold suitable for 3-way solenoid valve
Use solenoid valves with screws for mounting on metal (see coding)



Material: anodized aluminium



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

* Add manifold ports (see Coding example)

DIRECT ACTING SOLENOID VALVES

SERIES PL - ACCESSORIES

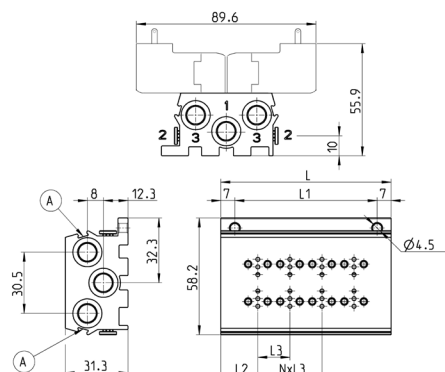
Manifold - double side valve - frontal outlets



Material: anodized aluminium

Manifold suitable for 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.



A = groove for identification label

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

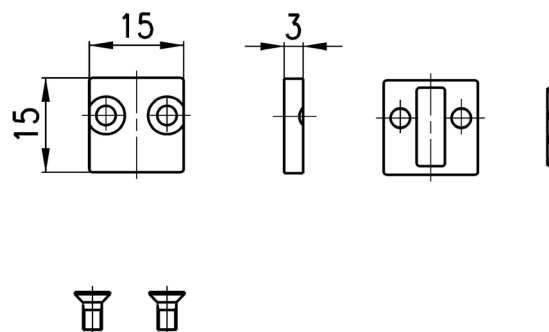
* Add manifold ports (see Coding example)

Position valve cap

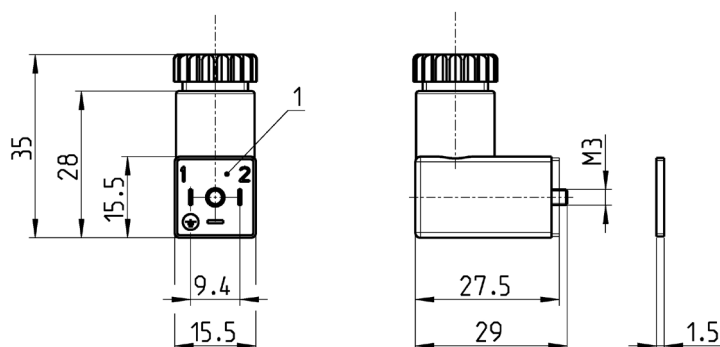


Supplied with:
1x position valve cap
1x interface seal
2x screws

Mod.
P000-TP



Connectors Mod. 125 industrial std. 9,4 mm



1 = 90° adjustable connector

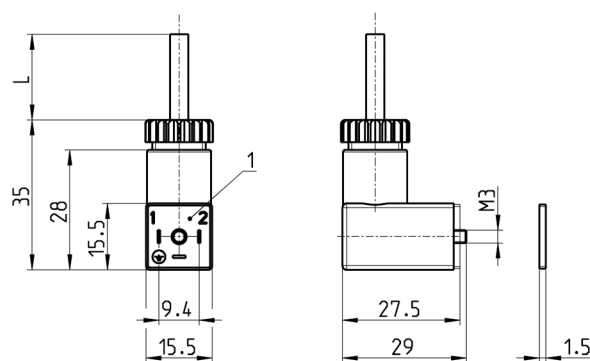
Mod.	Description	Colour	Working voltage	Cable gland	Tightening torque
125-601	Connector, diode + Led	Transparent	10/50 V DC	PG7	0,3 Nm
125-701	Connector, varistor + Led	Transparent	24 V AC/DC	PG7	0,3 Nm
125-800	Connector, without electronics	Black	-	PG7	0,3 Nm

Connectors Mod. 125 industrial std. 9,4 mm with cable



DIN EN 175 301-803-C

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.

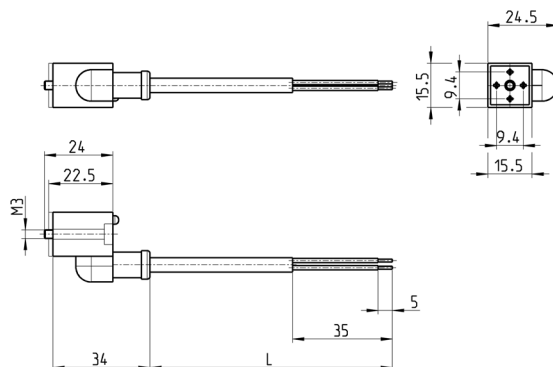


1 = 90° adjustable connector

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

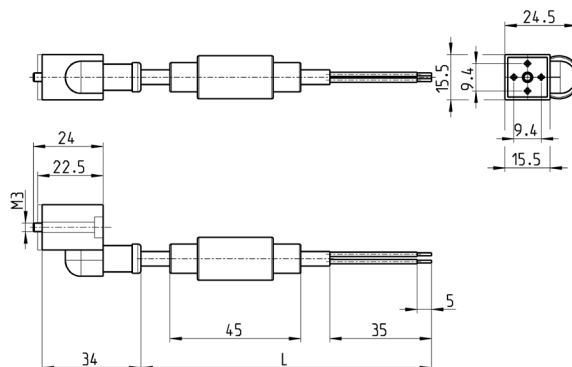
DIRECT ACTING SOLENOID VALVES
SERIES PL - ACCESSORIES

Connectors 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

Connectors Mod. 125 industrial std. 9.4 mm in-line cable and 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