

# 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 o Ø4 tube)

Series PL directly operated mini-solenoid valves are available in the NO version and can be mounted on single bases or on 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 FEATURES	
Function	2/2 NO - 3/2 NC - 3/2 NO - 3/2 UNI
Operation	direct acting poppet type
Pneumatic connection	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)
Fluid	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 FEATURES	
Voltage	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 EXAMPLE

CODING EXAMPLE

PL	0	00	-	3	0	3	-	PL
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 - bottom 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-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)abbinabile con tutti i modelli in PPS)							
	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/m³)							

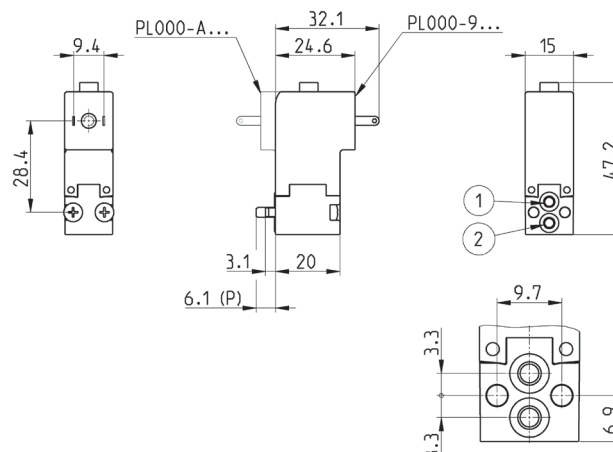
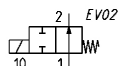
## DIRECT ACTING SOLENOID VALVES

### SERIES PL - DIMENSIONAL CHARACTERISTICS

#### 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
PL000-9B7-BF2*	2/2 NO	1,6	0,62	0 ÷ 6,5	brass	FKM	no	2,7	EV02

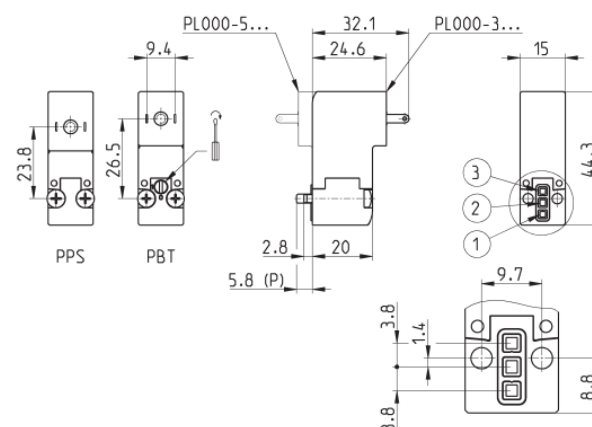
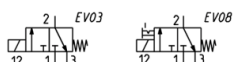
\* add  
- VOLTAGE  
- FIXING (see CODING EXAMPLE)

#### 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

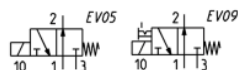
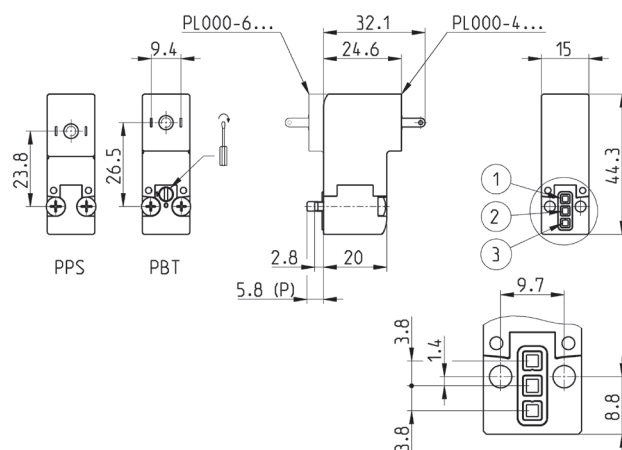
### SERIES PL - DIMENSIONAL CHARACTERISTICS

#### 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
PL000-401-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
PL000-405-SF2*	3/2 NO	1,5	0,42	0 ÷ 6,5	PPS	FKM	no	2,2	EV05

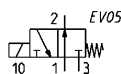
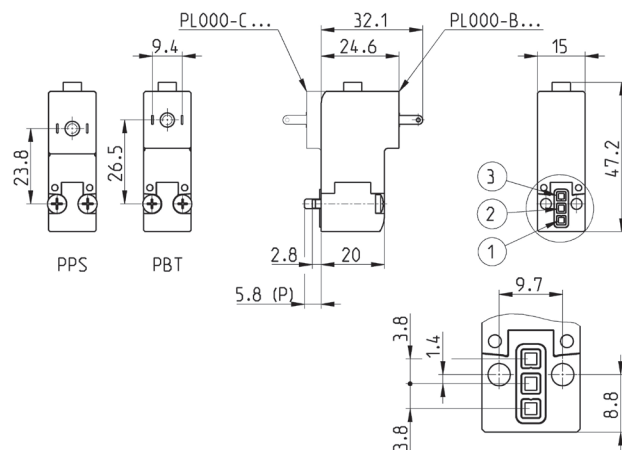
\* add  
- VOLTAGE  
- FIXING (see CODING EXAMPLE)

#### 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-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

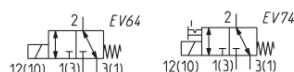
\* add  
- VOLTAGE  
- FIXING (see CODING EXAMPLE)

## SERIES PL - DIMENSIONAL CHARACTERISTICS

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

Technical drawing of the PL000-8... and PL000-7... components. The drawing shows two views of the components: a side view and a top view. The side view shows the PL000-8... component with dimensions 23.8, 26.5, 9.4, 32.1, 24.45, 15, 44.3, 2.8, 20, 5.8 (P), and M3x0.3. The top view shows the PL000-7... component with dimensions 9.7, 8.8, 3.8, 1.4, and 8.8. A table of dimensions is provided for the PL000-7... component.

NC	NO	UNI	LINI
3	1	1	2
2	2	2	1
1	3	1	2



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

## VALVES AND SOLENOID VALVES

## DIRECT ACTING SOLENOID VALVES

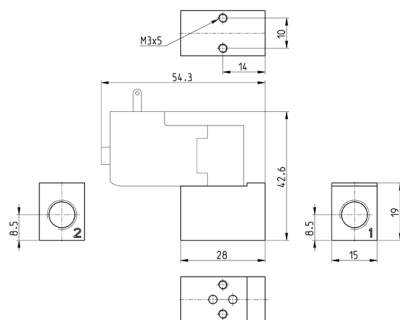
### SERIES PL - ACCESSORIES

### Single sub-base for 15mm size 2 way interface



Single sub-base suitable  
for 2-way solenoid valves  
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



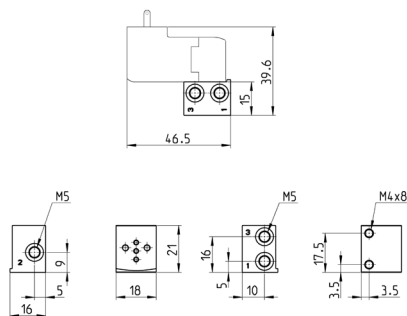
Mod.
PDA01-1/8

### 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



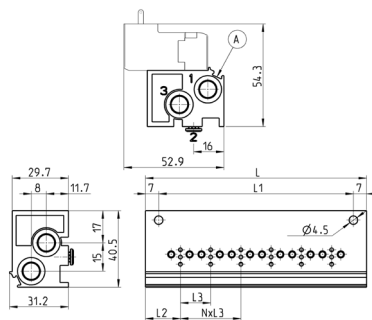
Mod.
P001-02

### 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



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

## DIRECT ACTING SOLENOID VALVES

### SERIES PL - ACCESSORIES

#### Manifold - double side valve - frontal outlets

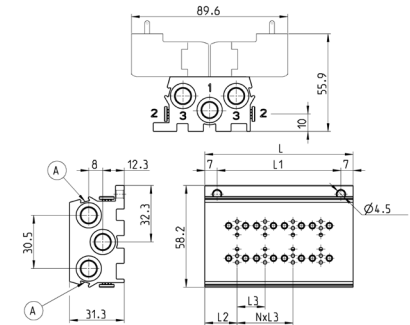
Can be fixed through DIN 46277/3 guide with the accessory PCF-E520.



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

Material: anodized  
aluminium

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 - single side valve - frontal outlets

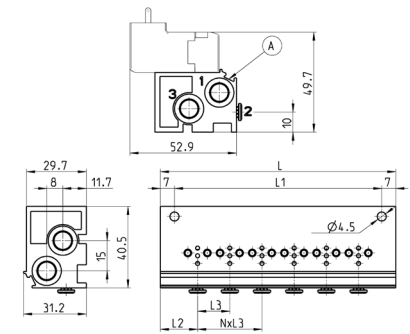
Can be fixed through DIN 46277/3 guide with the accessory PCF-E520.



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

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

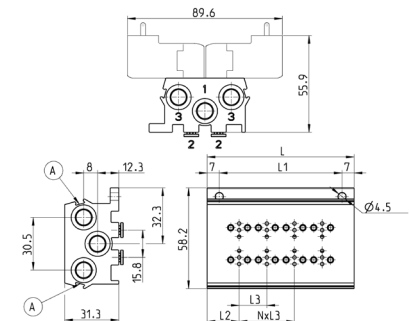
#### Manifold - double side valve - bottom outlets



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

Material: anodized  
aluminium

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)

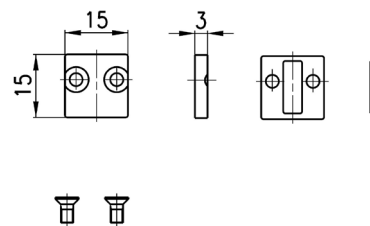
A = groove for identification label

**DIRECT ACTING SOLENOID VALVES**  
**SERIES PL - ACCESSORIES**

**Position valve cap**



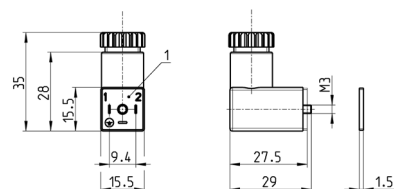
Supplied with:  
1x position valve cap  
1x interface seal  
2x screws



Mod.
P000-TP

1 = 90° adjustable connector

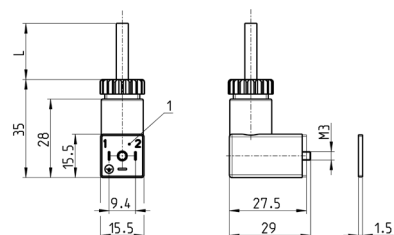
**Connectors Mod. 125 industrial std. 9,4 mm**



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

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

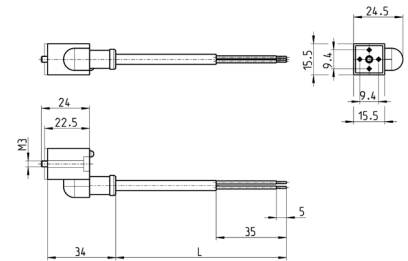


Mod.	Description	Colour	Working voltage	Cable length (L)	Cable gland	Tightening torque
125-501-2	moulded cable with diode + Led	black	10/50 V DC	2000 mm	-	0,3 Nm
125-550-1	moulded cable, without electronics	black	-	1000 mm	-	0,3 Nm
125-601-2	pre-wired cable, diode + Led	transparent	10/50 V DC	2000 mm	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

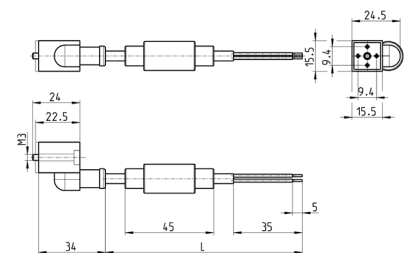


## Connectors Mod. 125 industrial std. 9,4 mm in-line cable



Mod.	Description	Colour	Working voltage	Cable length (L)	Cable gland	Tightening torque
<b>125-503-2</b>	in-line moulded cable, with diode + Led	black	24 V DC	2000 mm	-	0,3 Nm
<b>125-503-5</b>	in-line moulded cable, with diode + Led	black	24 V DC	5000 mm	-	0,3 Nm
<b>125-553-2</b>	in-line moulded cable, without electronics	black	-	2000 mm	-	0,3 Nm
<b>125-553-5</b>	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
<b>125-903-2</b>	in-line moulded cable with voltage rectifier	black	6 V - 230 V AC/DC	2000 mm	-	0,3 Nm
<b>125-903-5</b>	in-line moulded cable with voltage rectifier	black	6 V - 230 V AC/DC	5000 mm	-	0,3 Nm