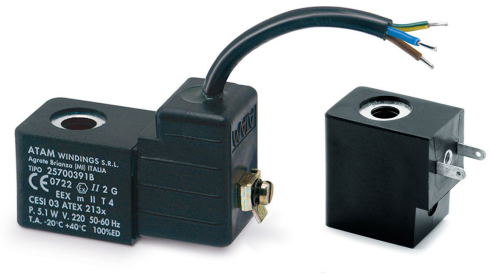
SOLENOIDS

GP... - B7... - G93 - U7... - U7...EX - G7... - A8... - B8... - H8... - B9...

Version A and B
Connections according to industrial standard
and to DIN EN 175 301-803 standards



- Mod. GP...: in compliance with industrial standard (9,4 mm) and designed to be mounted only on Series AP proportional valves, size 16 mm
- Mod. B...: to be used only with Series CFB solenoid valves (2/1.30)
- Mod. G93: special solenoids with latching for pulsed operation
- Mod. U7...: standard solenoids are certified by UL as Recognized Component for USA and Canada. Solenoids Mod. U7 are available also with ATEX certification
- Mod. H8...: explosionproof solenoids suitable for potentially explosive ambients (ATEX, IECEx)

The mechanical part of the tube in the solenoid valves Series A, 3, 4, 9 and NA allows the mounting of various types of solenoids.

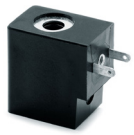
General Data

	U7... / G7... / G93	A8... / G8...	B...	H8...
Wire insulation	class F (155° C)	class H (180° C)	class H (200° C)	class H (200° C)
Protection class	IP54 - DIN 40050 IP65 (with connector Mod. 124-800)	IP54 - DIN 40050 IP65 (with connector Mod. 124-800)	IP54 - DIN 40050 IP65 (with connector Mod. 124-800)	IP64
Operation	ED 100%	ED 100%	ED 100%	ED 100%
Tolerance V AC	-15% / +10%	-15% / +10%	±10%	-
Tolerance V DC	±10%	±10%	±5%	-

SOLENOIDS

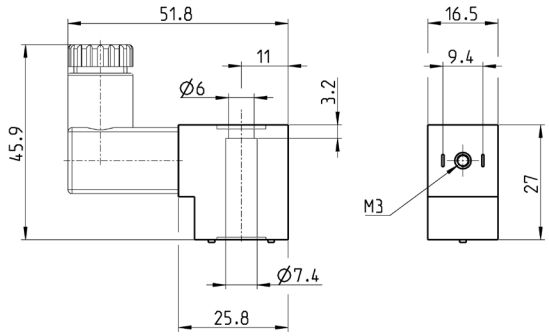
GP... - B7... - G93 - U7... - U7...EX - G7... - A8... - B8... - H8... - B9... - DIMENSIONS

Solenoids Mod. GP...



Electrical connection: bipolar
Norm: industrial standard (9,4 mm)

Solenoid material: PA

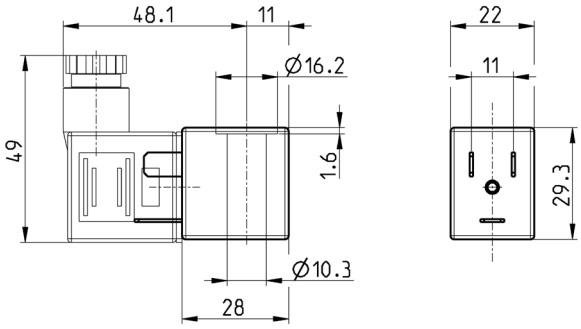


Mod.	Solenoid voltage	Power absorption
GPH	12 V DC	3 W
GP7	24 V DC	3 W

Solenoids Mod. B7...

Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-B

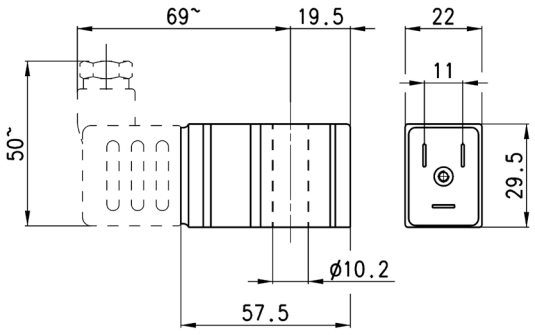
Solenoid material: PA-MXD6



Mod.	Solenoid voltage	Power absorption
B7B	24 V - 50/60 Hz	9 VA
B7D	110 V - 50/60 Hz	9 VA
B7E	230 V - 50/60 Hz	9 VA
B7H	24 V - 50/60 Hz	4 VA
B72	12 V - DC	10 W
B721	12 V - DC	14 W
B73	24 V - DC	10 W
B731	24 V - DC	14 W
B74	24 V - DC	7 W

Solenoids Mod. G93 (with latching)

Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-B
Voltage tolerance: ± 10%
Pulsed operation (see description)



Mod.	Voltage	Minimum inpulse latch/release	Consumption latch/release
G92	12 V DC	18 ms - 10 ms	200 mA - 160 mA
G93	24 V DC	18 ms - 10 ms	100 mA - 80 mA

Description of solenoids Mod. G9...

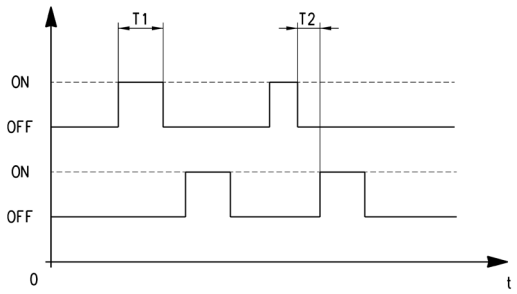
Solenoids Mod. G9... can be replaced on all other Series A solenoid valves or pilots allowing to change the valve functioning from:

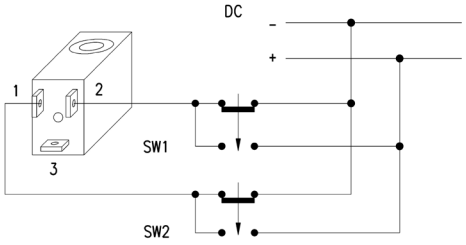
- Unstable functioning system (spring return) to:
- stable functioning system (with latching)

The stable functioning has the following advantages:

- With an impulse of about 20 ms after which the valve always remains in the controlled position.
- The valve remains in the controlled position (opened or closed) even if there is no power.
- When normally opened valves should be used, it is not necessary to use valves with special mechanical parts as a NC valve becomes a NO valve just by changing the control impulse sequence.
- The impulse control system facilitates the utilization with electronic circuits. The minimum required impulse for the function is 20 ms; if, for circuit reasons, the impulse last for a longer period, there is no danger of heating.
- Magnet attraction command = Actuation SW1
- Magnet release command = Actuation SW2

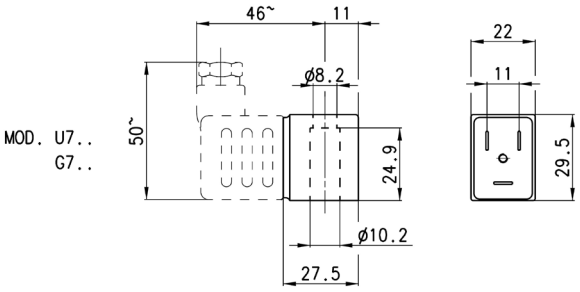
If the solenoids are mounted in batteries, a magnetic scheme type G90/L should be used.
To facilitate the cabling a special connector is available, which contains a circuit which realises the inversion of the power supply to the solenoid, indispensable for the PLC command, 122-892 P with common positive or 122-893 N with common negative.

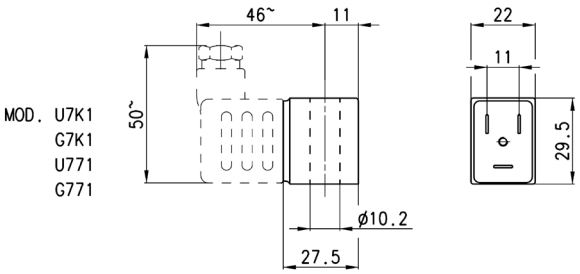




Solenoids Mod. U7... / U7*EX and Mod. G7...

Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-B
Solenoid material: U7* = PET; G7* = PA
To order the ATEX version of Mod. U7 (not available for Mod. U7F, U7K1 with voltage 125V 50/60Hz) it is necessary to add EX at the end of the code.
Mod. U7*EX marked:
II 3G Ex nA IIC T4 Gc X IP65
II 3D Ex tc IIIC 130°C Dc X



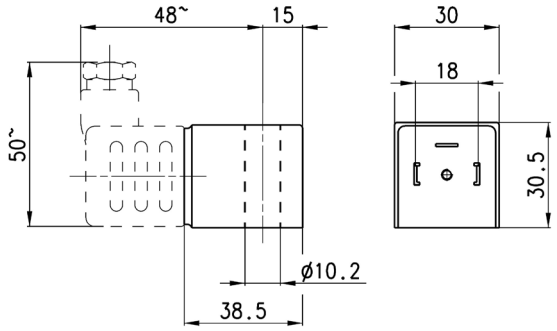


Mod.	Sol. volt. (1)	Pow. abs. (1)	Sol. volt. (2)	Pow. abs. (2)	Sol. volt. (3)	Pow. abs. (3)
U7H	12 V DC	3,1 W	24V - 50/60 Hz	3,5 VA		
G7H	12 V DC	3,1 W	24V - 50/60Hz	3,5 VA		
U7K	110V - 50/60Hz	3,8 VA	125V - 50/60Hz	5,5 VA	72 V DC	4,8 W
U7K1	110V - 50/60Hz	5,8 VA	125V - 50/60Hz	8,3 VA	72 V DC	5,6 W
G7K	110V - 50/60Hz	3,8 VA	125V - 50/60Hz	5,5 VA	72 V DC	4,8 W
G7K1	110V - 50/60Hz	5,8 VA	125V - 50/60Hz	8,3 VA	72 V DC	5,6 W
U7J	230V - 50/60Hz	3,5 VA	240V - 50/60Hz	4 VA		
G7J	230V - 50/60Hz	3,5 VA	240V - 50/60Hz	4 VA		
U79	48 V DC	3,1 W				
G79	48 V DC	3,1 W				
U710	110 V DC	3,2 W				
G710	110 V DC	3,2 W				
U77	24 V DC	3,1 W	48V - 50/60Hz	3,8 VA		
U771	24 V DC	3,1 W	48V - 50/60Hz	3,8 VA		
G77	24 V DC	3,1 W	48V - 50/60Hz	3,8 VA		
G771	24 V DC	3,1 W	48V - 50/60Hz	3,8 VA		
U7F	380V - 50/60Hz	7 VA				
U72	12 V DC	5 W				
G72	12 V DC	5 W				
U73	24 V DC	5 W				
G73	24 V DC	5 W				

Sol. volt. = Solenoid voltage
Pow. abs. = Power absorption
Mod. U7K1, G7K1, U771 and G771 are to be used only with sol. valves series A, NO in line.

Solenoids Mod. A8...

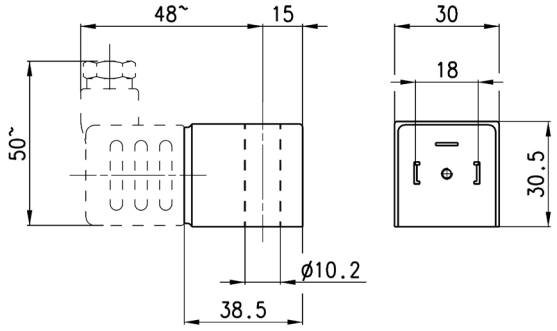
Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-A



Mod.	Solenoid voltage	Power absorption
A8B	24V - 50/60Hz	5VA
A8D	110V - 50/60Hz	5VA
A8E	220V - 50/60Hz	5VA
A83	24V DC	4W

Solenoids Mod. G8...

Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-A

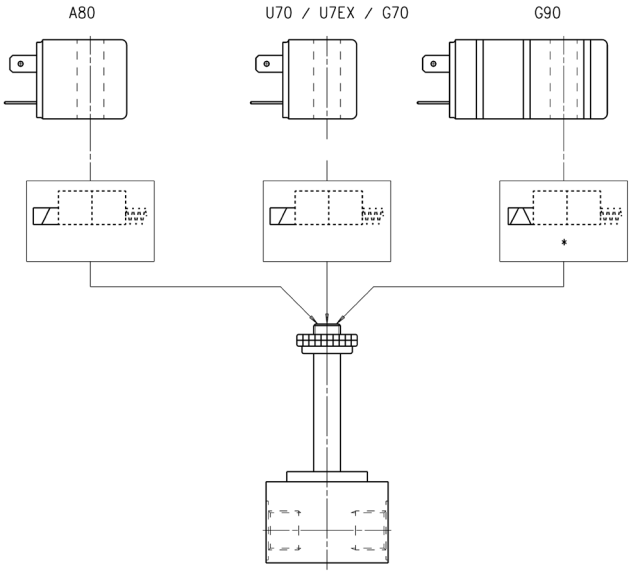


	Solenoid voltage	Power absorption
G83	24V DC	4W

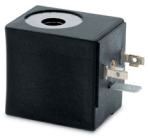
Solenoids for solenoid valves Series A, 3, 4, 9 and NA

All solenoids presented can be mounted on the following solenoid valves: Series A, 3, 4, 9, NA.

For the tightening of the solenoids' nut we recommend to do it manually, avoiding the use of any equipment.



Solenoids Mod. B8...

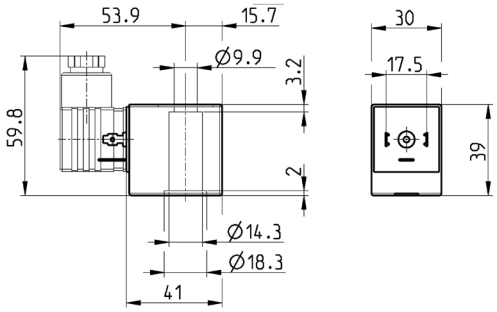


Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-A

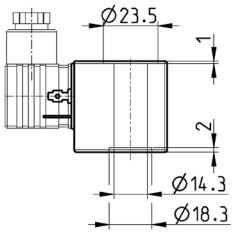
Solenoid material: PA-MXD6

Mod.	Solenoid voltage	Power absorption
B8B	24 V - 50 Hz	15 VA
B8BK	24 V - 50 Hz	15 VA
B8D	110 V - 50/60 Hz	15 VA
B8DK	110 V - 50/60 Hz	15 VA
B8E	220/230 V - 50/60 Hz	15 VA
B8EK	230 V - 50/60 Hz	15 VA
B8F	220/230 V - 50/60 Hz	21 VA
B8FK	220/230 V - 50/60 Hz	21 VA
B82	12 V - DC	19 W
B82K	12 V - DC	19 W
B83	24 V - DC	19 W
B83K	24 V - DC	19 W

B8...



B8...K



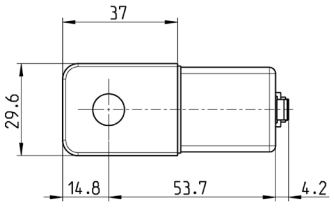
Solenoid Mod. H8... for potentially explosive ambients

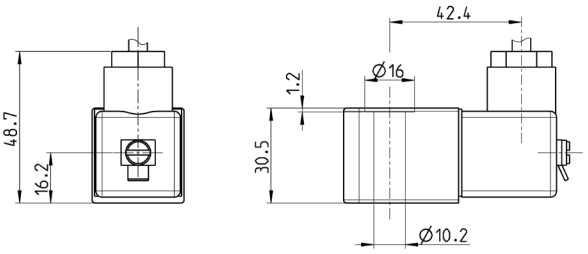
Certification in compliance with EN 60079-0 EN 60079-18
ATEX:
II 2G Ex mb IIC T4 Gb
II 2D Ex mb IIIC T135°C Db
I M2 Ex mb I Mb
INERIS 06ATEX0002X

IECEx:
Ex mb IIC T4 Gb
Ex mb IIIC T135°C Db
Ex mb I Mb
IECEx INE 15.0053X

For Series NA use plate mod. NA54- PC.

Temperature class/Max surface temperature: T4/135°C.
Environment temperature: -20°C + 40°C.
Connection: tripolar cable 3 m (other lenghts on request).
Incapsulating material: self-extinguishing PA.



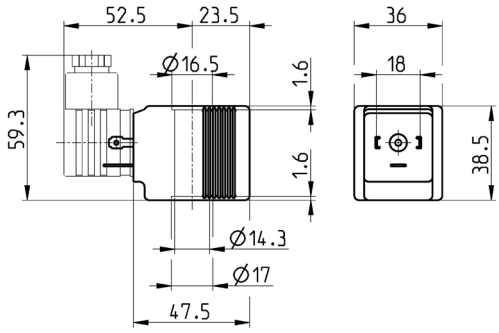


Mod.	Solenoid voltage	Power absorption
H83I	24 V - DC	5,3 W
H8BI	24 V - 50/60 Hz	5,3 W
H8CI	48 V - 50/60 Hz	5,3 W
H8DI	110 V - 50/60 Hz	5,3 W
H8EI	230 V - 50/60 Hz	5,3 W

Solenoids Mod. B9...

Electrical connection: bipolar plus earth
Norm: DIN EN 175 301-803-A

Solenoid material: PA-MXD6

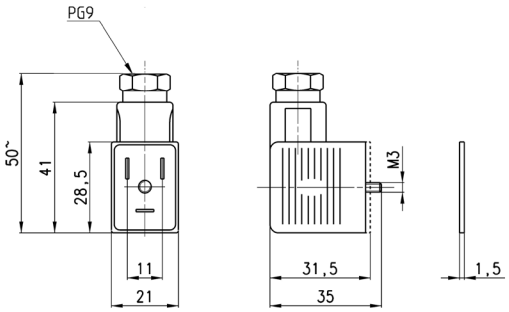


Mod.	Solenoid voltage	Power absorption
B9B	24 V - 50 Hz	29 VA
B9D	110 V - 50/60 Hz	29 VA
B9E	230 V - 50 Hz	29 VA
B93	24 V - DC	30 W

Connectors Mod. 122-... DIN EN 175 301-803-B

For solenoids Mod. U7/U7*EX, G7 and B7

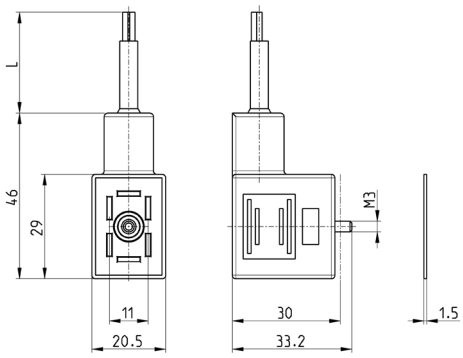
Mod. 122-800EX: for ATEX certified solenoids mod. U7*EX, with antiscrewing off screw mod. TORX.



Mod.	Description	Colour	Working voltage	Cable gland	Tightening torque
122-601	Connector, diode + Led	Transparent	24 V DC	PG9	0,5 Nm
122-701	Connector, varistor + Led	Transparent	24 V AC/DC	PG9	0,5 Nm
122-702	Connector, varistor + Led	Transparent	110 V AC/DC	PG9	0,5 Nm
122-703	Connector, varistor + Led	Transparent	230 V AC/DC	PG9	0,5 Nm
122-800	Connector, without electronics	Black	-	PG9	0,5 Nm
122-800EX	Connector, without electronics	Black	-	PG9	0,5 Nm
122-800UL	Connector, without electronics	Black	-	PG9	0,5 Nm

Connectors Mod. 122-571 DIN EN 175 301-803-B with cable

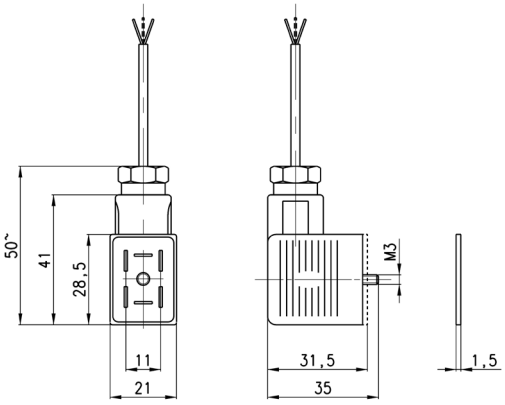
For solenoids Mod. U7, G7 and B7



Mod.	Description	Colour	Working voltage	Cable length [L]	Cable gland	Tightening torque
122-571-1	Moulded cable, varistor + Led	Black	24 V AC/DC	1000 mm	-	0,5 Nm
122-571-2	Moulded cable, varistor + Led	Black	24 V AC/DC	2000 mm	-	0,5 Nm
122-571-3	Moulded cable, varistor + Led	Black	24 V AC/DC	3000 mm	-	0,5 Nm
122-571-5	Moulded cable, varistor + Led	Black	24 V AC/DC	5000 mm	-	0,5 Nm
122-571-10	Moulded cable, varistor + Led	Black	24 V AC/DC	10000 mm	-	0,5 Nm

Connectors Mod. 122-89*C DIN EN 175 301-803-B

For solenoids Mod. G9

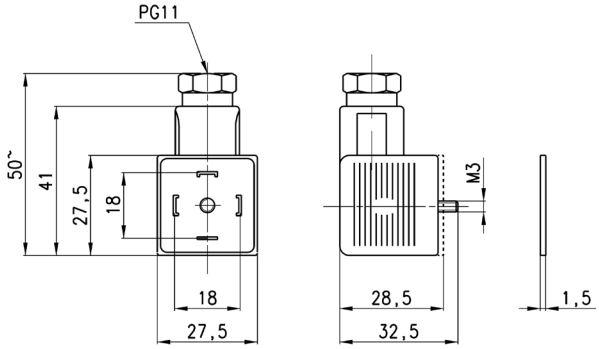


Mod.	Description	Colour	Working voltage	Cable length [L]	Cable gland	Tightening torque
122-892C	Pre-wired connector, positive common	Transparent	12/24V DC	2000 mm	PG9	0,5 Nm
122-893C	Pre-wired connector, negative common	Transparent	12/24V DC	2000 mm	PG9	0,5 Nm

Connector Mod. 124-... DIN EN 175 301-803-A

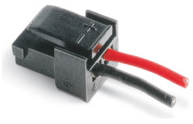
For solenoids Mod. A8 and Mod. B8/B9

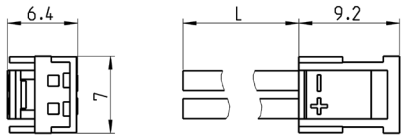
Protection class IP65



Mod.	Description	Colour	Working voltage	Cable gland	Tightening torque
124-701	Connector, varistor + Led	Black	24 V AC/DC	PG9/PG11	0,5 Nm
124-702	Connector, varistor + Led	Black	110 V AC/DC	PG9/PG11	0,5 Nm
124-703	Connector, varistor + Led	Black	230 V AC/DC	PG9/PG11	0,5 Nm
124-800	Connector, without electronics	Black	-	PG9/PG11	0,5 Nm

Connector with flying leads





Mod.	Description	Colour	Cable length [mm]	Cable holding
121-803	Crimped cable	Black	300	Crimping
121-806	Crimped cable	Black	600	Crimping
121-810	Crimped cable	Black	1000	Crimping
121-830	Crimped cable	Black	3000	Crimping