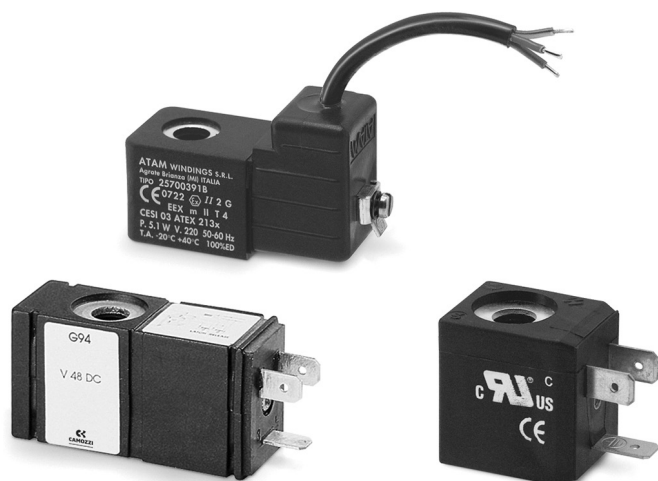


# Solenoids

## 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



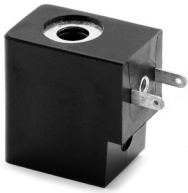
The mechanical part of the tube in the solenoid valves Series A, 3, 4, 9 and NA allows the mounting of various types of solenoids.

- » Mod. GP...: in compliance with industrial standard (9.4mm) 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 incorporated memory 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...: explosion-proof solenoids suitable for potentially explosive ambients (ATEX, IECEx).

### GENERAL DATA

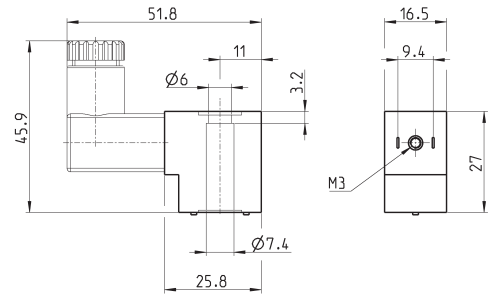
	U7... / G7... / G93	A8...	B...	H8...
<b>Wire insulation</b>	class F (155° C)	class H (180° C)	class H (200° C)	class H (200° C)
<b>Protection class</b>	IP54 - DIN 40050	IP54 - DIN 40050	IP54 - DIN 40050	IP64
	IP65 (with connector Mod. 122-800 and Mod. 122-800EX)	IP65 (with connector Mod. 124-800)	IP65 (with connector Mod. 124-800)	
<b>Operation</b>	ED 100%	ED 100%	ED 100%	ED 100%
<b>Tolerance V AC</b>	-15% / +10%	-15% / +10%	±10%	-
<b>Tolerance V DC</b>	±10%	±10%	±5%	-

**Solenoids Mod. GP...**



Electrical connection: bipolar  
Norm: industrial standard (9.4 mm)

Solenoid material: PA



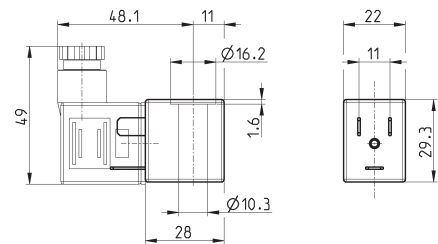
Mod.	Solenoid voltage	Power absorption
GP7	12 V DC	3 W
GP7	24 V DC	3 W

**Solenoids Mod. B7...**



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

Solenoid material: PA-MXD6

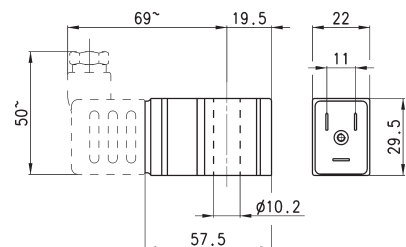


Mod.	Solenoid voltage	Power absorption
B7B	24 V - 50/60 Hz	9 VA
B7D	110 V - 50/60 Hz	9 VA
B7E	230 V - 50/60 Hz	9 VA
B7H	24 V - 50/60 Hz	4 VA
B72	12 V - DC	10 W
B73	24 V - DC	10 W
B74	24 V - DC	7 W

**Solenoids Mod. G93 (with memory)**



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



Mod.	Voltage	Minimum impulse latch/release	Consumption latch/release
G93	24 V DC	18 ms - 10 ms	168 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:

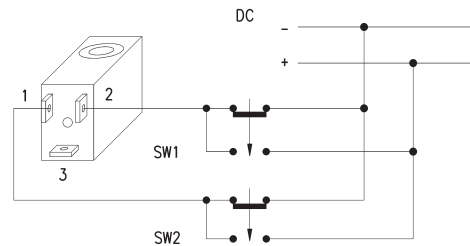
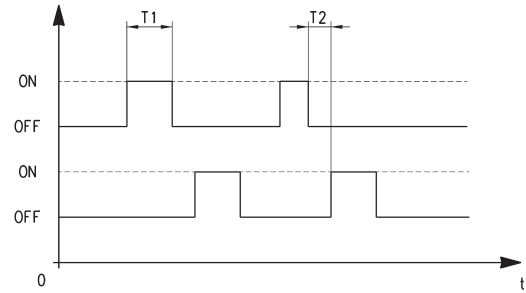
- unstable functioning system (spring return)
- to:
- stable functioning system (memory)

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.

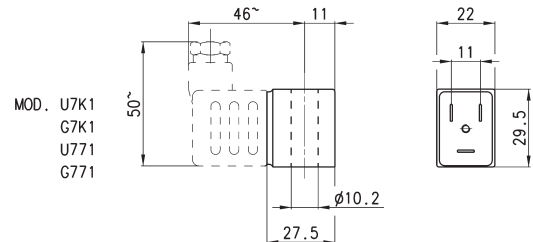
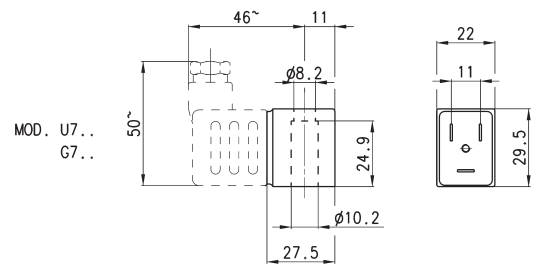


SOLENOIDS

### 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				

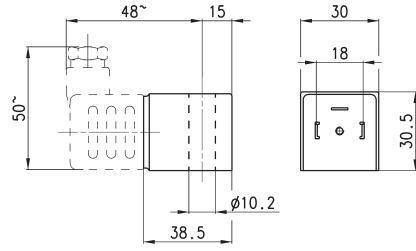
Notes to the table:  
 Sol. volt. = Solenoid voltage  
 Pow. abs. = Power absorption

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

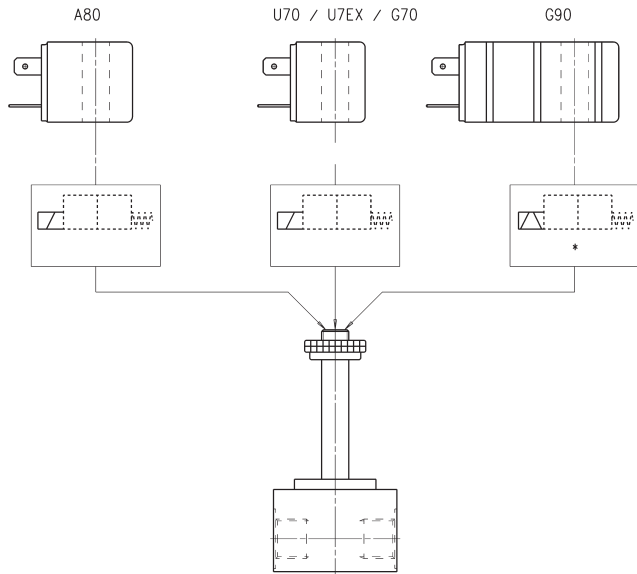


Mod.	Solenoid voltage	Power absorption
A8B	24V - 50/60Hz	5VA
A8D	110V - 50/60Hz	5VA
A8E	220V - 50/60Hz	5VA
A8S	24V DC	4W

**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

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



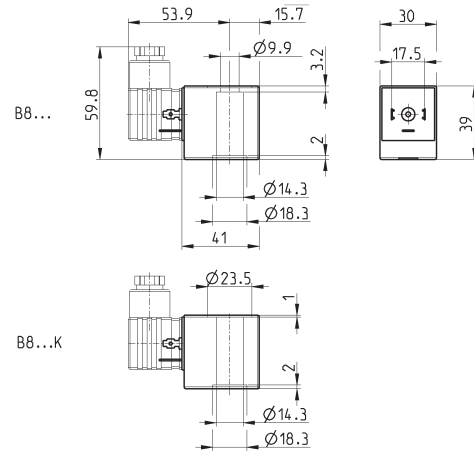
## Solenoids Mod. B8...



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

Solenoid material: PA-MXD6

The B8\*K models can be used only with some solenoid valves Series CFB (Mod. CFB-D1..., 2/2 NO).  
Further details in the dedicated section 1.30.



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
B8Z	12 V - DC	19 W
B8ZK	12 V - DC	19 W
B83	24 V - DC	19 W
B83K	24 V - DC	19 W

## Solenoid Mod. H8.. for potentially explosive ambients



Certification in compliance with  
EN 60079-0 EN 60079-18

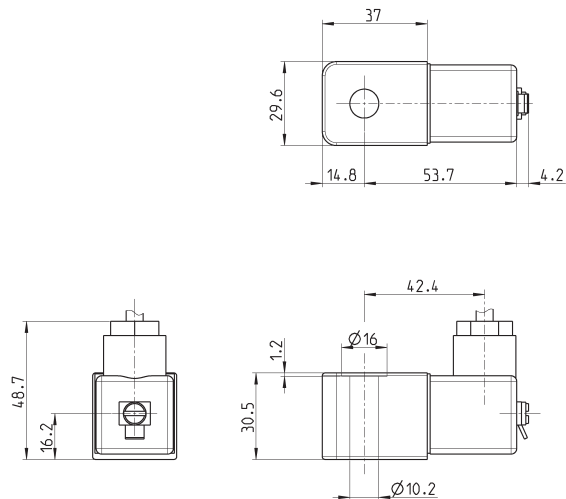
ATEX :

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.



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

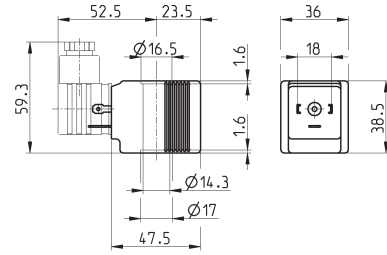
Temperature class/Max surface temperature: T4/135°C  
Environment temperature: -20°C + 40°C  
Connection: tripolar cable 3 m (other lengths on request)  
Incapsulating material: self-extinguishing PA.

### Solenoids Mod. B9...



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

Solenoid material: PA-MXD6



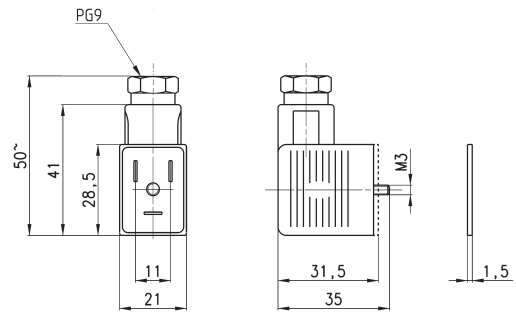
Mod.	Solenoid voltage	Power absorption
B9B	24 V - 50 Hz	29 VA
B9D	110 V - 50/60 Hz	29 VA
B9E	230 V - 50 Hz	29 VA
B92	12 V - DC	30 W
B93	24 V - DC	30 W

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



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

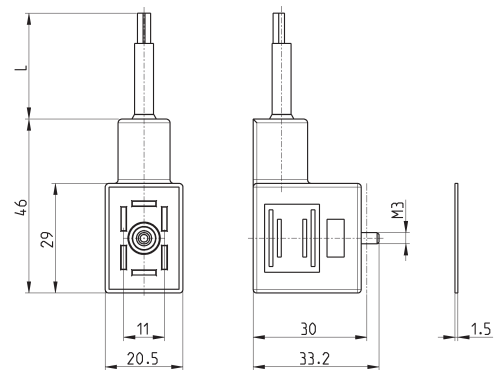
Mod. 122-800EX:  
for ATEX certified solenoids mod. U7\*EX, with anti-screwing off screw mod. TORX.



Mod.	description	colour	working voltage	cable holding	tightening torque
122-601	connector, diode + Led	transparent	10/50 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

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

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

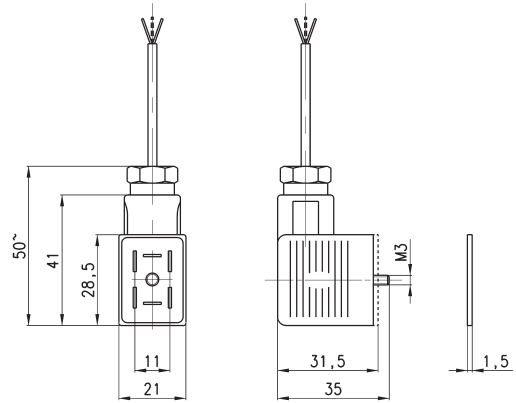


Mod.	description	colour	working voltage	cable length [L]	cable holding	tightening torque
122-571-1	moulded cable, varistor + Led	black	24 V AC/DC	1000 mm	-	0.5 Nm
122-571-2	moulded cable, varistor + Led	black	24 V AC/DC	2000 mm	-	0.5 Nm
122-571-3	moulded cable, varistor + Led	black	24 V AC/DC	3000 mm	-	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



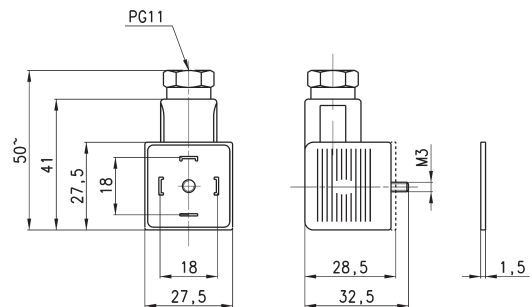
Mod.	description	colour	working voltage	cable length [L]	cable holding	tightening torque
122-892C	pre-wired connector, positive common	transparent	12/24V DC	2000 mm	PG9	0.5 Nm
122-893C	pre-wired connector, negative common	transparent	12/24V DC	2000 mm	PG9	0.5 Nm

## 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 holding	tightening torque
124-800	connector, without electronics	black	-	PG9/PG11	0.5 Nm
124-702	connector, varistor + Led	black	110 V AC/DC	PG9/PG11	0.5 Nm
124-701	connector, varistor + Led	black	24 V AC/DC	PG9/PG11	0.5 Nm
124-703	connector, varistor + Led	black	230 V AC/DC	PG9/PG11	0.5 Nm