

## M12 male 90° A-cod. / MSUD valve plug BI-11mm

PUR 3x0.75 gy UL/CSA+robot+drag ch. 1m

**MSUD** 

Form BI (11 mm) - M12, male 90° 24 V AC  $\pm 20\%$  / DC  $\pm 25\%$ 

LED and suppression

Further cable lengths on request.

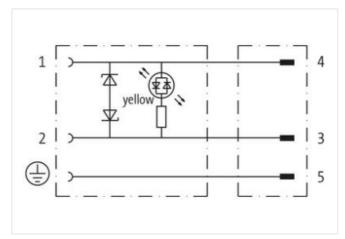
Plastic housings with good resistance against chemicals and oils.

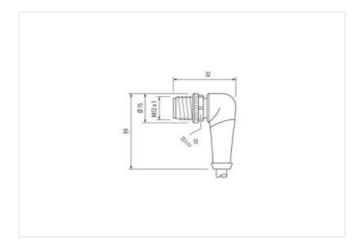
The resistance to aggressive media should be individually tested for your application. Further details on request.

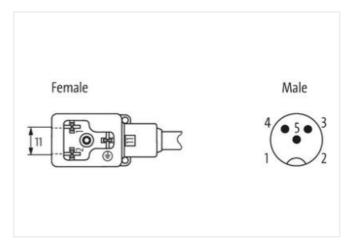
## **Link to Product**

## Illustration











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Product may differ from Image



Thread M3 Degree of protection (EN IEC 60529) IP66K, IP67  Side 2  Tightening torque 0,6 Nm Thread M12 x 1 Degree of protection (EN IEC 60529) IP66K, IP67  Commercial data  ECLASS-6.0 27279218  ECLASS-7.0 27279218  ECLASS-8.0 27279218  ECLASS-9.0 27060311  ECLASS-9.0 27060312  ECLASS-10.1 27060312  ECLASS-11.1 27060312  ECLASS-12.0 27060312  ECLASS-10.1 27060312  ECLASS-1	Cable length	1 m
Thread M3 Degree of protection (EN IEC 60529) IP66K, IP67  Side 2  Tightening torque 0,6 Nm Thread M12 x 1 Degree of protection (EN IEC 60529) IP66K, IP67  Commercial data  ECLASS-6.0 27279218 ECLASS-7.0 27279218 ECLASS-8.0 27279218 ECLASS-9.0 27060311 ECLASS-9.0 27060312 ECLASS-10.1 27060312 ECLASS-11.1 27060312 ECLASS-12.0 27060312 ECLASS-12.0 27060312 ECLASS-13.0 ECO01855 CUSTON 4048879609852 Packaging unit 1  Electrical data  Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC min. 19,2 V  Operating voltage AC min. 18 V  Operating voltage DC min. 18 V  Operating voltage DC min. 18 V	Side 1	
Degree of protection (EN IEC 60529)         IP66K, IP67           Side 2         Tightening torque         0,6 Nm           Thread         M12 x 1           Degree of protection (EN IEC 60529)         IP66K, IP67           Commercial data           ECLASS-6.0         27279218           ECLASS-7.0         27279218           ECLASS-8.0         27279218           ECLASS-9.0         27060311           ECLASS-10.1         27060312           ECLASS-11.1         27060312           ECLASS-12.0         27060312           ETIM-5.0         EC001855           Customs tariff number         85444290           GTIN         4048879609852           Packaging unit         1           Electrical data         Capacity CX         20 ms           Electrical data   Supply         Operating voltage AC         24 V           Operating voltage AC max.         28,8 V           Operating voltage DC min.         18 V           Operating voltage DC min.         18 V           Operating voltage DC min.         30 V	Tightening torque	0,4 Nm
Side 2           Tightening torque         0,6 Nm           Thread         M12 x 1           Degree of protection (EN IEC 60529)         IP66K, IP67           Commercial data           ECLASS-6.0         27279218           ECLASS-7.0         27279218           ECLASS-8.0         27279218           ECLASS-9.0         27060311           ECLASS-9.0         27060312           ECLASS-10.1         27060312           ECLASS-11.1         27060312           ECLASS-12.0         27060312           ECLASS-10.1         27060312           ECLASS-10.1         27060312           ECLASS-10.1         27060312           ECLASS-10.0         EC001855           customs tariff number         8544290           GTIN         4048879609852           Packaging unit         1           Electrical data         Electrical data           Capacity CX         20 ms           Electrical data   Suppty           Operating voltage AC min.         19.2 V           Operating voltage AC min.         19.2 V           Operating voltage AC min.         19.2 V           Operating voltage AC min.         18 V           Op	Thread	M3
Tightening torque 0.6 Nm  Thread M12 x 1  Degree of protection (EN IEC 60529) IP66K, IP67  Commercial data  ECLASS-6.0 27279218  ECLASS-7.0 2729218  ECLASS-9.0 27060311  ECLASS-9.0 27060312  ECLASS-10.1 27060312  ECLASS-11.1 27060312  ECLASS-12.0 27060312  ECLASS-12.0 27060312  ECLASS-12.0 12060312  ECLASS-12.0 12060312  ECLASS-12.0 27060312  ECLASS-12.0 27060311  ECLASS-12.0 2706031  ECLASS-12.0 2706031	Degree of protection (EN IEC 60529)	IP66K, IP67
Thread M12 x 1  Degree of protection (EN IEC 60529) IP66K, IP67  Commercial data  ECLASS-6.0 27279218  ECLASS-7.0 27279218  ECLASS-8.0 27279218  ECLASS-9.0 27060311  ECLASS-10.1 27060312  ECLASS-11.1 27060312  ECLASS-11.1 27060312  ECLASS-12.0 27060312  ETIM-5.0 EC001855  customs tariff number 85444290  GTIN 4048879609852  Packaging unit 1  Electrical data  Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC max. 28,8 V  Operating voltage AC max. 28,8 V  Operating voltage DC min. 18 V  Operating voltage DC min. 18 V  Operating voltage DC max. 30 V	Side 2	
Degree of protection (EN IEC 60529)         IP66K, IP67           Commercial data         ECLASS-6.0         27279218           ECLASS-7.0         27279218         ECLASS-8.0         ECLASS-9.0           ECLASS-9.0         27060311         ECLASS-9.0         ECLASS-10.1         ECLASS-10.1         ECLASS-11.1         27060312           ECLASS-12.0         27060312         ECLASS-12.0         EC001855           customs tariff number         85444290         ECTIM-5.0         EC001855           customs tariff number         85444290         ECTIM-5.0         ECOMPARE CONTROLL           GTIN         4048879609852         Packaging unit         1           Electrical data         Electrical data         Electrical data           Operating vOltage AC         24 V           Operating voltage AC min.         19.2 V           Operating voltage AC min.         19.2 V           Operating voltage DC min.         18 V           Operating voltage DC min.         18 V           Operating voltage DC min.         30 V	Tightening torque	0,6 Nm
Commercial data           ECLASS-6.0         27279218           ECLASS-7.0         27279218           ECLASS-8.0         27279218           ECLASS-9.0         27060311           ECLASS-10.1         27060312           ECLASS-11.1         27060312           ECLASS-12.0         27060312           ETIM-5.0         ECO01855           customs tariff number         85444290           GTIN         4048879609852           Packaging unit         1           Electrical data           Capacity CX         20 ms           Electrical data   Supply           Operating voltage AC         24 V           Operating voltage AC max.         28,8 V           Operating voltage DC max.         30 V	Thread	M12 x 1
ECLASS-6.0 27279218 ECLASS-7.0 2779218 ECLASS-8.0 27279218 ECLASS-9.0 27060311 ECLASS-10.1 27060312 ECLASS-11.1 27060312 ECLASS-12.0 27060312 ECLASS-12.0 27060312 ECLASS-12.0 ECO01855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC mix. 30 V	Degree of protection (EN IEC 60529)	IP66K, IP67
ECLASS-7.0 27279218  ECLASS-8.0 27279218  ECLASS-9.0 27060311  ECLASS-10.1 27060312  ECLASS-11.1 27060312  ECLASS-12.0 27060312  ETIM-5.0 EC01855  customs tariff number 85444290  GTIN 4048879609852  Packaging unit 1  Electrical data  Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC min. 19,2 V  Operating voltage AC max. 28,8 V  Operating voltage DC max. 30 V	Commercial data	
ECLASS-8.0 27279218  ECLASS-9.0 27060311  ECLASS-10.1 27060312  ECLASS-11.1 27060312  ECLASS-12.0 27060312  ETIM-5.0 EC01855 customs tariff number 85444290  GTIN 4048879609852  Packaging unit 1  Electrical data  Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC min. 19,2 V  Operating voltage AC max. 28,8 V  Operating voltage DC min. 18 V  Operating voltage DC min. 18 V  Operating voltage DC min. 18 V  Operating voltage DC max. 30 V	ECLASS-6.0	27279218
ECLASS-9.0 27060311 ECLASS-10.1 27060312 ECLASS-11.1 27060312 ECLASS-12.0 27060312 ETIM-5.0 EC001855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC min. 19,2 V  Operating voltage AC max. 28,8 V  Operating voltage DC min. 18 V  Operating voltage DC min. 18 V  Operating voltage DC min. 30 V	ECLASS-7.0	27279218
ECLASS-10.1 27060312 ECLASS-11.1 27060312 ECLASS-12.0 27060312 ETIM-5.0 EC001855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC min. 18 V Operating voltage DC min. 30 V	ECLASS-8.0	27279218
ECLASS-12.0 27060312 ETIM-5.0 EC001855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC min. 18 V Operating voltage DC min. 30 V	ECLASS-9.0	27060311
ECLASS-12.0 27060312 ETIM-5.0 EC001855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC 24 V Operating voltage AC max. 28,8 V Operating voltage DC min. 18 V Operating voltage DC min. 30 V	ECLASS-10.1	27060312
ETIM-5.0 EC001855 customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC in in 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC max. 30 V	ECLASS-11.1	27060312
Customs tariff number 85444290 GTIN 4048879609852 Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC 24 V Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC max. 30 V	ECLASS-12.0	27060312
Fackaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC in in. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	ETIM-5.0	EC001855
Packaging unit 1  Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC 24 V Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC 24 V Operating voltage DC min. 18 V Operating voltage DC min. 30 V	customs tariff number	85444290
Electrical data Capacity CX 20 ms  Electrical data   Supply Operating voltage AC 24 V Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC 24 V Operating voltage DC 34 V Operating voltage DC 35 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	GTIN	4048879609852
Capacity CX 20 ms  Electrical data   Supply  Operating voltage AC 24 V  Operating voltage AC min. 19,2 V  Operating voltage AC max. 28,8 V  Operating voltage DC 24 V  Operating voltage DC 34 V  Operating voltage DC min. 18 V  Operating voltage DC max. 30 V	Packaging unit	1
Electrical data   Supply  Operating voltage AC 24 V  Operating voltage AC min. 19,2 V  Operating voltage AC max. 28,8 V  Operating voltage DC 24 V  Operating voltage DC min. 18 V  Operating voltage DC max. 30 V	Electrical data	
Operating voltage AC 24 V Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC 24 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	Capacity CX	20 ms
Operating voltage AC min. 19,2 V Operating voltage AC max. 28,8 V Operating voltage DC 24 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	Electrical data   Supply	
Operating voltage AC max. 28,8 V Operating voltage DC 24 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	Operating voltage AC	24 V
Operating voltage DC 24 V Operating voltage DC min. 18 V Operating voltage DC max. 30 V	Operating voltage AC min.	19,2 V
Operating voltage DC min. 18 V Operating voltage DC max. 30 V	Operating voltage AC max.	28,8 V
Operating voltage DC max. 30 V	Operating voltage DC	24 V
	Operating voltage DC min.	18 V
Cut-off peak voltage max. 55 V	Operating voltage DC max.	30 V
	Cut-off peak voltage max.	55 V



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Current operating per contact max.	4 A
Current consumption max.	12 mA
Diagnostics	
Status indication LED	yellow
Device protection   Electrical	
Additional condition protection degree	inserted, screwed
Rated surge voltage	0.8 kV
	0,0 114
Mechanical data   Material data	
Color housing	black
Material housing	Plastic
Mechanical data   Mounting data	
Mounting method	inserted, screwed
Environmental characteristics   Climatic	
Operating temperature min.	-25 °C
Operating temperature max.	85 °C
Additional condition temperature range	depending on cable quality
Installation   Cable	
Cable identification	256
Cable Type	5
Printing color of wire insulation	white (isolation black)
Jacket Color	gray
Type of Certificate	cURus
Amount stranding	1
Stranding	3 wires twisted
wire arrangement	black 1, black 2, green-yellow
No. of bending cycles (C-track)	10 Mio. @ 25 °C
Cable weigth	48,4 g/m
Material jacket	PUR
Shore hardness jacket	58 ± 3 Shore D
Freedom from ingredients (jacket)	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Outer-diameter (jacket)	5,2 mm
Tolerance outer diameter (sheath)	± 5 %
Material wire insulation	PP
Amount wires	3
Outer diameter insulation	1,7 mm
Outer diameter tolerance core insulation	± 5 %
Shore hardness wire insulation	74 ± 3 Shore D
Ingredient freeness wire insulation	lead-free, cadmium-free, CFC-free, halogen-free, silicone-free
Printing color of wire insulation	white (isolation black)
Amount strands (wire)	42
Diameter of single wires	0,15 mm
Conductor crosssection (wire)	0,75 mm <sup>2</sup>
Material conductor wire	Stranded copper wire, bare
Conductor type (wire)	strand class 6
Traversing distance (C-track)	5 m @ 25 °C   horizontal
Current load capacity (standard)	to DIN VDE 0298-4
Current load capacity min. wire	12 A
Electrical resistance line constant wire	26 Ω/km @ 20 °C
Nominal voltage power AC max.	300 V
Nominal voltage power AC max.  Power frequency withstand voltage power (wire - jacket)  AC withstand voltage power (wire - wire)	300 V 2,5 kV @ 60 s 2,5 kV @ 60 s

The information in this Product-PDF has been compiled with the utmost care. Liability for the correctness completeness and topicality of the information is restricted to gross negligence. Version: 2024-04-24



Min. operating temperature (static)	-40 °C
Max. operating temperature (fixed)	80 °C / 90 °C @ 10000 h Operation
Operating temperature min. (dynamic)	-25 °C
Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
Flame resistance	UL 1581 § 1100 FT2   IEC 60332-2-2   UL 1581 § 1090
chemical resistance	Good, application-related testing
Gasoline resistance	Good, application-related testing
Oil resistance	Good, application-related testing   DIN EN 60811-404
Bending radius (fixed)	5 x Outer diameter
Bending radius (dynamic)	10 x Outer diameter
No. of torsion cycles	1 Mio.
Torsion speed	35 cycles/min
Torsion stress	± 360 °/m