

## M12 male 0° A-cod. / MSUD valve plug BI-11mm

PUR 3x0.75 bk UL/CSA+robot+drag ch. 1.5m

**MSUD** 

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

LED and suppression

Further cable lengths on request.

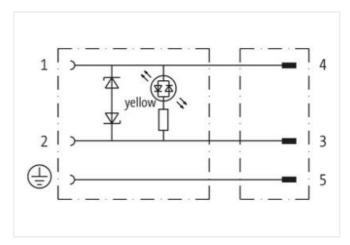
Plastic housings with good resistance against chemicals and oils.

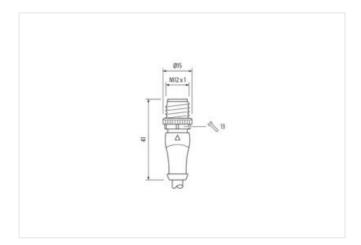
The resistance to aggressive media should be individually tested for your application. Further details on request.

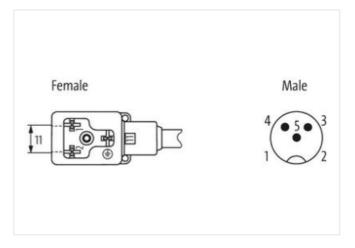
## **Link to Product**

## Illustration



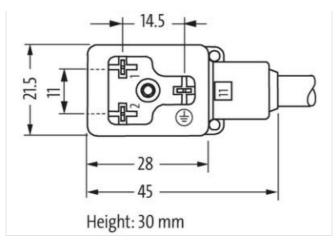








stay connected



Product may differ from Image



Cable length	1,5 m
Side 1	
Tightening torque	0,4 Nm
Family construction form	MSUD
Thread	M3
No. of poles	3
Degree of protection (EN IEC 60529)	IP67
Side 2	
Tightening torque	0,6 Nm
Family construction form	M12
Thread	M12 x 1
suitable for corrugated tube (internal Ø)	10 mm
Coding	A
No. of poles	3
Width across flats	SW13
Degree of protection (EN IEC 60529)	IP67
Commercial data	
ECLASS-6.0	27279218
ECLASS-6.1	27279218
ECLASS-7.0	27279218
ECLASS-8.0	27279218
ECLASS-9.0	27060312
ECLASS-10.1	27060312
ECLASS-11.1	27060312
ECLASS-12.0	27060312
ETIM-5.0	EC001855
customs tariff number	85444290
GTIN	4048879520515
Packaging unit	1
Electrical data	
Capacity CX	20 ms
Electrical data   Supply	



stay connected

Operating voltage AC	041/
	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
Cut-off peak voltage max.	55 V
Current operating per contact max.	4 A
Diagnostics	
Status indication LED	yellow
Device protection   Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
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
Important installation notes	
Note on strain relief	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties
Note on strain relief  Note on bending radius	Protect the connectors by suitable measures from mechanical loads, e.g. by the usage of cable ties.  Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.
Note on bending radius	
Note on bending radius  Conformity	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.
Note on bending radius  Conformity  Product standard	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be
Note on bending radius  Conformity  Product standard  Installation   Cable	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color  Type of Certificate	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color  Type of Certificate  Amount stranding	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color  Type of Certificate  Amount stranding  Stranding	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color  Type of Certificate  Amount stranding  Stranding  wire arrangement	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 2, green-yellow
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track)	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal
Note on bending radius  Conformity  Product standard  Installation   Cable  Cable identification  Cable Type  Jacket Color  Type of Certificate  Amount stranding  Stranding  wire arrangement  Traversing distance (C-track)  Cable weigth	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656  5  black  cURus  1  3 wires twisted  black 2, green-yellow  5 m @ 25 °C   horizontal  48,4 g/m
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656  5  black  cURus  1  3 wires twisted  black 2, green-yellow  5 m @ 25 °C   horizontal  48,4 g/m  PUR
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal  48,4 g/m PUR 58 ± 3 Shore D
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656  5  black  cURus  1  3 wires twisted  black 2, green-yellow  5 m @ 25 °C   horizontal  48,4 g/m  PUR
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket)	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656  5  black cURus  1  3 wires twisted black 1, black 2, green-yellow  5 m @ 25 °C   horizontal  48,4 g/m  PUR  58 ± 3 Shore D  lead-free, cadmium-free, CFC-free, halogen-free, silicone-free  5,2 mm
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath)	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48,4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 %
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48,4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation Amount wires	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48,4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48,4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP 3 1,7 mm
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation Amount wires	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilistecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48.4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP 3 1,7 mm ± 5 %
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation Amount wires Outer diameter tolerance core insulation Shore hardness wire insulation	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilstecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal  48.4 g/m PUR 58 ± 3 Shore D  lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP 3 1,7 mm ± 5 % 74 ± 3 Shore D
Conformity Product standard Installation   Cable Cable identification Cable Type Jacket Color Type of Certificate Amount stranding Stranding wire arrangement Traversing distance (C-track) Cable weigth Material jacket Shore hardness jacket Freedom from ingredients (jacket) Outer-diameter (jacket) Tolerance outer diameter (sheath) Material wire insulation Amount wires Outer diameter insulation Outer diameter tolerance core insulation	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.  DIN EN 61076-2-101 (M12); DIN EN 175301-803 (Ventilistecker)  656 5 black cURus 1 3 wires twisted black 1, black 2, green-yellow 5 m @ 25 °C   horizontal 48.4 g/m PUR 58 ± 3 Shore D lead-free, cadmium-free, CFC-free, halogen-free, silicone-free 5,2 mm ± 5 % PP 3 1,7 mm ± 5 %



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
Nominal voltage AC max.	300 V
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
AC withstand voltage (wire - wire)	2,5 kV @ 60 s
Power frequency withstand voltage (wire - jacket)	2,5 kV @ 60 s
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
UV resistance	DIN EN ISO 4892-2 A
Flame resistance	UL 1581 § 1100 FT2   UL 1581 § 1090   IEC 60332-2-2
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
Travel speed (C-track)	10 Mio. @ 25 °C
No. of torsion cycles	1 Mio.
Torsion stress	± 360 °/m
Torsion speed	35 cycles/min