

MSUD valve plug BI-11mm with cable

PUR 3x0.75 gy UL/CSA+robot+drag ch. 7.5m

MSUD Form BI (11 mm) 24 V AC/DC ±25% LED

Further cable lengths on request.

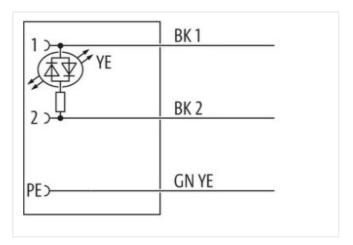
Plastic housings with good resistance against chemicals and oils.

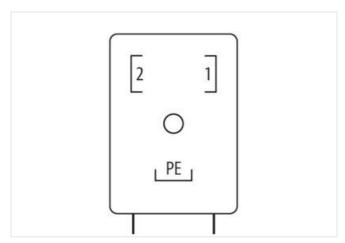
The resistance to aggressive media should be individually tested for your application. Further details on request.

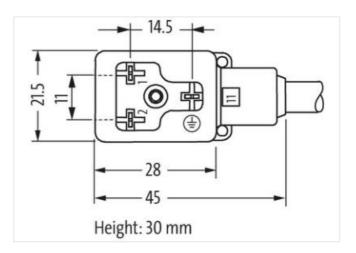
Link to Product

Illustration









Product may differ from Image









Cable length

7,5 m

Side 1

Tightening torque 0,4 Nm

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: 2024-06-26



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Mounting method	inserted, screwed
Family construction form	MSUD BI
Thread	M3
Material	PBT
Degree of protection (EN IEC 60529)	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	4048879660235
Packaging unit	1
Electrical data Supply	
Operating voltage AC	24 V
Operating voltage AC min.	18 V
Operating voltage AC max.	30 V
Operating voltage DC	24 V
Operating voltage DC min.	18 V
Operating voltage DC max.	30 V
Current operating per contact max.	4 A
Installation Connection	
Mounting set	M3
Device protection Electrical	
Additional condition protection degree	inserted, screwed
Pollution Degree	3
Rated surge voltage	0,8 kV
Mechanical data Material data	
Coating of fitting	verzinkt
Color housing Material housing	black
Material nousing Material screw connection	Plastic Steel
	<u> </u>
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 bending radius	Attention: Observe the permissible bending radii when laying cables, as the IP protection class can be endangered by excessive bending forces.
Installation Cable	
wire arrangement	black 1, black 2, green-yellow
	256
Cable identification	200
Cable Type	5

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Type of Certificate	Jacket Color	gray
Amount stranding 1 Stranding 3 wires twisted wire arrangement black 1, black 2, groen-yellow Cable weight 48.4 gm Material jacket PUR Shore hardness jacket 58.3 Shore D Freedom from ingredients (jacket) 18.6 de. (a.d.) Toler diameter (jacket) 5.7 mm Toler diameter (jacket) 1.5 % Material vive insulation PP Amount wires 3 Outer diameter (jacket) 1.7 mm Outer diameter (jacket) 1.5 % Shore hardness wire insulation 7.4 ± 3 Shore D Ingredient freeness wire insulation 7.4 ± 3 Shore D Ingredient freeness wire insulation 7.5 mm Printing color of wire insulation white (jackion black) Anount strands (wire) 42 Diameter of single wires 0,15 mm Conductor trype (wire) 3 stranded copper wire, bare Material conductor wire Stranded copper wire, bare Current load capacity (standard) 10 DIN VDE G288 4 Current load capacity (standard) 10 DIN VDE G	Type of Certificate	
Stranding 3 wires twisted		
wire a rangement black 1, black 2, green-yellow Cable weight 48,4 g/m Material jocket PUR Shore hardness jacket 58 ± 3 Shore D Freedom from Imgredients (gacket) Scheen Herdness jacket 58 ± 3 Shore D Freedom from Imgredients (gacket) Scheen Herdness jacket 58 ± 3 Shore D Freedom from Imgredients (gacket) Scheen Herdness jacket 58 ± 3 Shore D Tolerance outer diameter (sheath) 15 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1,7 mm Outer diameter insulation 1,7 mm Outer diameter insulation 74 ± 3 Shore D Ingredient feeness wire insulation Ingredient feeness wire insulation 1,8 mm Miterial conductor wire Printing polor of wire insulation 42 Diameter of single wires Onductor arcsssection (wire) 2,5 mm Conductor rosssection (wire) Stranded copper wire, bare Conductor vipse (wire) Stranded copper wire, bare Conductor vipse (wire) Current load capacity (standard) Uurrent load capacity (standard) Uurrent load capacity (standard) Sch Wei 60 s Power fraquency withstand voltage (wire wire) 2,5 kV Ø 60 s Power fraquency withstand voltage (wire wire) Operating temperature (skatic) Mix. operating temperature (skatic)		3 wires twisted
Cable weight 48.4 g/m Material jacket PUR Shore hardness jacket 58 3 3 Shore D Freedom from ingredients (jacket) lead-free, calmium-free, CFC-free, halogen-free, eilicone-free Outer-diameter (jacket) 5.2 mm Toferance outer dameter (sheath) ± 5 % Material wire insulation PP Amount wires 3 Outer diameter insulation 1,7 mm Outer diameter (sheath) ± 5 % Shore hardness wire insulation ± 5 % Ingredient freeness wire insulation ± 2 % Printing color of wire insulation white (solation black) Anount strands (swire) 42 Diameter of single wires 0,15 mm Conductor by (wire) stranded copper wire, bare Material conductor wire stranded copper wire, bare Conductor by (wire) stranded copper wire, bare Conductor by (wire) stranded copper wire, bare		
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Shore hardness wire insulation 74 ± 3 Shore D Ingredient freeness wire insulation lead-free, cadmium-free, CFC-free, halogen-free, silicone-free		· · · · · · · · · · · · · · · · · · ·
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 mm² 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 (standard) to DIN VDE 0298-4 Current load capacity (standard) 26 \(\Omega \text{km} \) @ 20 °C AC withstand voltage (wire - wire) 2.5 kV @ 60 s Power frequency withstand voltage (wire - \frac{1}{2} \text{ ky} \) 60 s Min. operating temperature (static) 40 °C Max. operating temperature (fixed) 80 °C/90 °C @ 10000 h Operation Operating temperature max. (dynamic) 25 °C Operating temperature max. (dynamic) 40 °C @ 10000 h Operation Gasoline resistance UL 1518 § 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 Oil resistance Good, application-related testing No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Traversing distance (C-track) 5 m @ 25 °C horizontal Traversing distance (C-track) 5 m @ 25 °C horizontal Traversing of tenses 2 ± 360 °/m		
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Amount strands (wire) 42 Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² 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 Okm @ 20 °C AC withstand voltage (wire - wire) 2,5 kV @ 60 s Power frequency withstand voltage (wire - ajacket) 4,5 kV @ 60 s Min. operating temperature (static) -40 °C Max. operating temperature (static) -40 °C Max. operating temperature (mix. (dynamic) 2.5 °C Operating temperature max. (dynamic) 2.5 °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 Oll resistance Good, application-related testing Oll resistance Good, application-related testing Din scittance <td></td> <td><u>-</u></td>		<u>-</u>
Diameter of single wires 0,15 mm Conductor crosssection (wire) 0,75 mm² 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 - iacket) 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 Flame resistance UL 1581 § 1100 FT2 IEC 60332-2-2 UL 1581 § 1990 chemical resistance Good, application-related testing Oil 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 diamet		· · · · · · · · · · · · · · · · · · ·
Conductor crosssection (wire) 0.75 mm² 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 - iacket) 2,5 kV @ 60 s Min. operating temperature (fixed) 80 °C / 90 °C @ 10000 h Operation 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 bending		
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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 - giacket) 40 °C 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 Good, application-related testing Gasoline resistance Good, application-related testing Gasoline resistance Good, application-related testing DIN EN 60811-404 Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Bending radius (dynamic) 10 x Outer diameter Traversing distance (C-track) 5 m @ 25 °C horizontal Traversing distance (C-track) 5 m @ 25 °C horizontal Traversing distance (C-track) 1 Mio	Conductor crosssection (wire)	
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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 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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Nominal voltage AC max.	300 V
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 min. (dynamic) -25 °C Operating temperature max. (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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Current load capacity (standard)	to DIN VDE 0298-4
AC withstand voltage (wire - wire) Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) No "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 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 bending cycles (C-track) 10 Mio. @ 25 "C Traversing distance (C-track) 5 m @ 25 "C horizontal Travel speed (C-track) 3,3 m/s @ 25 "C No. of torsion cycles 1 Mio. Torsion stress ± 360 "/m	Current load capacity min. wire	12 A
Power frequency withstand voltage (wire - jacket) Min. operating temperature (static) Max. operating temperature (fixed) Operating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) 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 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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Electrical resistance line constant wire	26 Ω/km @ 20 °C
Jacket) Min. operating temperature (static) Max. operating temperature (fixed) Moverating temperature (fixed) Moverating temperature min. (dynamic) Operating temperature min. (dynamic) Operating temperature max. (dynamic) Operating temperature max. (dynamic) Boverating temperature max. (dynamic) UL 1581 § 1100 FT2 IEC 60332-2-2 UL 1581 § 1090 Chemical resistance Good, application-related testing 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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	AC withstand voltage (wire - wire)	2,5 kV @ 60 s
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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Power frequency withstand voltage (wire - jacket)	2,5 kV @ 60 s
Operating temperature min. (dynamic) Operating temperature max. (dynamic) So °C / 90 °C @ 10000 h Operation 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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Min. operating temperature (static)	-40 °C
Operating temperature max. (dynamic)80 °C / 90 °C @ 10000 h OperationFlame resistanceUL 1581 § 1100 FT2 IEC 60332-2-2 UL 1581 § 1090chemical resistanceGood, application-related testingGasoline resistanceGood, application-related testingOil resistanceGood, application-related testing DIN EN 60811-404Bending radius (fixed)5 x Outer diameterBending radius (dynamic)10 x Outer diameterNo. of bending cycles (C-track)10 Mio. @ 25 °CTraversing distance (C-track)5 m @ 25 °C horizontalTravel speed (C-track)3,3 m/s @ 25 °CNo. of torsion cycles1 Mio.Torsion stress± 360 °/m	Max. operating temperature (fixed)	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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Operating temperature min. (dynamic)	-25 °C
chemical resistanceGood, application-related testingGasoline resistanceGood, application-related testingOil resistanceGood, application-related testing DIN EN 60811-404Bending radius (fixed)5 x Outer diameterBending radius (dynamic)10 x Outer diameterNo. of bending cycles (C-track)10 Mio. @ 25 °CTraversing distance (C-track)5 m @ 25 °C horizontalTravel speed (C-track)3,3 m/s @ 25 °CNo. of torsion cycles1 Mio.Torsion stress± 360 °/m	Operating temperature max. (dynamic)	80 °C / 90 °C @ 10000 h Operation
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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Flame resistance	UL 1581 § 1100 FT2 IEC 60332-2-2 UL 1581 § 1090
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 bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	chemical resistance	Good, application-related testing
Bending radius (fixed) 5 x Outer diameter Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Gasoline resistance	Good, application-related testing
Bending radius (dynamic) 10 x Outer diameter No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Oil resistance	Good, application-related testing DIN EN 60811-404
No. of bending cycles (C-track) 10 Mio. @ 25 °C Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Bending radius (fixed)	5 x Outer diameter
Traversing distance (C-track) 5 m @ 25 °C horizontal Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Bending radius (dynamic)	10 x Outer diameter
Travel speed (C-track) 3,3 m/s @ 25 °C No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	No. of bending cycles (C-track)	10 Mio. @ 25 °C
No. of torsion cycles 1 Mio. Torsion stress ± 360 °/m	Traversing distance (C-track)	5 m @ 25 °C horizontal
Torsion stress ± 360 °/m	Travel speed (C-track)	3,3 m/s @ 25 °C
	No. of torsion cycles	1 Mio.
Torsion speed 35 cycles/min	Torsion stress	± 360 °/m
	Torsion speed	35 cycles/min