Product data sheet

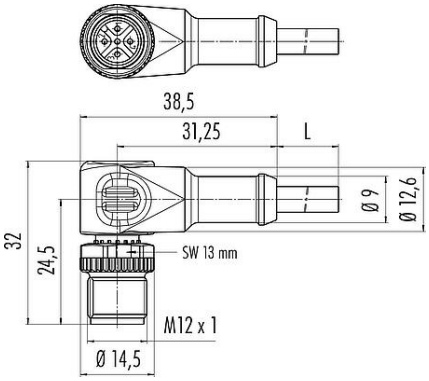
Automation technology - Data transmission

Product description	**M12 Male angled connector, Contacts: 4, unshielded, moulded on the cable, IP68/IP69K, UL 2238, PVC, grey, 4 x 0.34 mm², 2 m**
Area	**M12-B**
Coding	**B-coded**
Series	**766**
Part no.	**77 4427 0000 20004-0200**

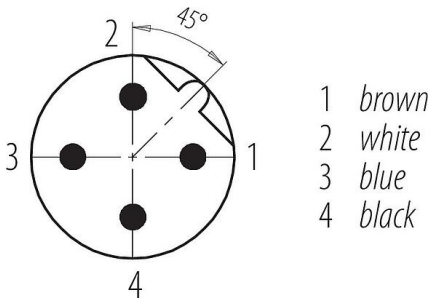
Illustration (may vary)



Scale drawing



Contact arrangement (Plug-in side)



Cable length tolerance

cable length	tolerance
≥ 0,10 m	+ 0,03 m
≥ 0,20 m	+ 0,04 m
≥ 0,50 m	+ 0,07 m
≥ 1,00 m	+ 0,10 m
≥ 2,00 m	+ 0,15 m
≥ 5,00 m	+ 0,20 m
≥ 10,0 m	+ 0,25 m
≥ 20,0 m	+ 0,35 m

Technical data

General features

Part no.	77 4427 0000 20004-0200
Connector design	Male angled connector
Type standard	DIN EN 61076-2-101
Coding	B-coded
Cable length	2 m (Standard 2 m and 5 m. Other lengths are available on request.)

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Version	Connector pin angled
Connector locking system	screw
Termination	moulded on the cable
Degree of protection	IP68/IP69K
Connection cross-section	0.34 mm² / AWG 22
Temperature range from/to	-25 °C / 90 °C
Mechanical operation	> 100 Mating cycles
Weight (g)	153.14
Customs tariff number	85444290
Country of Origin	DE

Electrical parameters

Rated voltage	250 V
Rated impulse voltage	2500 V
Rated current	4.0 A
Insulation resistance	> 10^{8} Ω
Pollution degree	3
Overvoltage category	II
Insulating material group	II
EMC compliance	unshielded

Material

Housing material	PUR
Contact body material	PUR
Contact material	CuZn (brass)
Contact plating	Au (gold)
Locking material	Zinc die-cast nickel-plated
REACH SVHC	None (No pollutants)
SCIP number	SCIP-number not available

Cable data - Structure of the cable

Cable diameter	4.8 mm
Cross section	4 x 0.34 mm²
Sheath material	PVC
Single-lead insulation	PVC
Single-lead structure	42 x 0.10 mm
Cable color	grey

Cable data - Electrical properties

Conductor resistance	57 Ω/Km (20°C)

Cable data - Mechanical properties

Bending radius, fixed cable	≥ 5 x Ø

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Bending radius, moving cable	≥ 10 x Ø
Bending cycles	> 2 million
Permitted acceleration	max. 5 m/s² + 1 m/s²
Travel distance, horizontal	5 m/s² -> 5 m
Travel distance, vertical	5 m/s² -> 2 m
Travel speed	≤ 200 m/min (5 m horizontal distance)

Cable data - Thermal properties

Temperature range cable in move from/to	-5 °C / 105 °C
Temperature range cable fixed from/to	-40 °C / 105 °C

Cable data - Other features

Halogen free	no

Authorization/approvals

Approvals	UL 2238

Classifications

eCl@ss 11.1	27-06-03-11
ETIM 9.0	EC002638

Declarations of conformity

Low Voltage Directive	EN 60529:1991 | EN 60204-1:2018
RoHS Directive	EN IEC 63000:2018

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Security notices

The connector must not be plugged or unplugged under load. Non-observance and improper use can result in personal injury.

The connectors have been developed for applications in plant engineering, control and electrical equipment construction. The user is responsible for checking whether the connectors can also be used in other areas of application.

To protect against unintentional opening of the connector, the thread between the housing and the connector head must be secured with a suitable cyanoacrylate adhesive when used in circuits with voltages dangerous to the touch. This does not apply to connectors used in SELV and PELV circuits according to IEC 61140 (EN 61140, VDE 0140-1).

Connectors which are used in circuits with voltages dangerous to the touch may only be installed and used by, or under the supervision of, persons with electrical engineering training, taking into account the applicable regulations and standards.

The user must take suitable safety precautions to ensure that the connector cannot be accidentally disconnected.

Plug connectors with enclosure protection IP67 and IP68 are not suitable for use under water. When used outdoors, the plug connectors must be protected separately against corrosion. For further information on the IP protection classes, please refer to the "Technical Information" download centre.

Please observe the pollution degree and the overvoltage category. For further information, please refer to the download center "Technical Information".

To lock the cable connector with the device connector, the threaded ring is tightened "hand-tight" (approx. 60 cNm).