**Product data sheet**

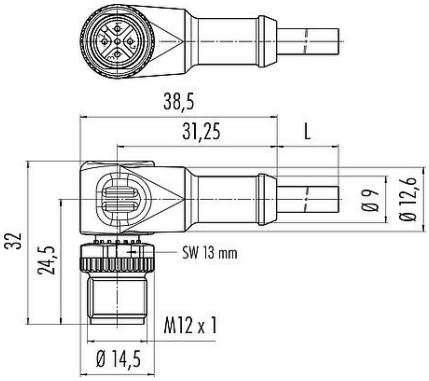
# Automation technology - Data transmission

| | |
|---|---|
| Product description | **M12 Male angled connector, Contacts: 3, unshielded, moulded on the cable, IP68/IP69K, UL 2238, PVC, grey, 3 x 0.34 mm², 2 m** |
| Area | **M12-B** |
| Coding | **B-coded** |
| Series | **766** |
| Part no. | **77 4427 0000 20003-0200** |

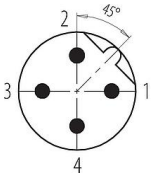
## Illustration (may vary)



## Scale drawing




## Contact arrangement (Plug-in side)




1 braun/*brown*
2 nicht konfektioniert/*not assembled*
3 blau/*blue*
4 schwarz/*black*

## 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 20003-0200 |
| 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.) |

**Product data sheet**

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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) | 111.8 |
| 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 | 4.5 mm |
| Cross section | 3 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 |

**Product data sheet**

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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 -> 5 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 |

**Product data sheet**

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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).