

Product data sheet

Automation technology - Data transmission

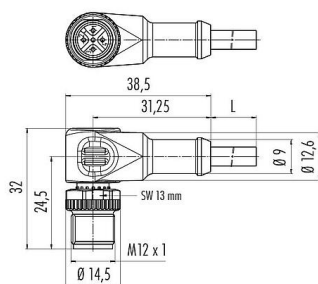


Product description	M12 Male angled connector, Contacts: 5, unshielded, moulded on the cable, IP68, UL, PUR, black, 5 x 0.34 mm², 2 m
Area	M12-B
Part no.	77 4427 0000 50005-0200

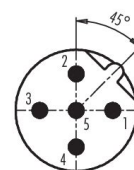
Illustration



Scale drawing



Contact arrangement (Plug-in side)



- 1 braun/brown
- 2 weiß/white
- 3 blau/blue
- 4 schwarz/black
- 5 grau/grey

Technical data

General features

Part no.	77 4427 0000 50005-0200
Connector design	Male angled connector
Type standard	DIN EN 61076-2-101
Cable length	2 m (Standard 2 m and 5 m. Other lengths are available on request.)
Version	Connector pin angled
Connector locking system	screw
Termination	moulded on the cable
Degree of protection	IP68
Cross-sectional area	0.34 mm ² / AWG 22
Temperature range from/to	-25 °C / 90 °C
Mechanical operation	> 100 Mating cycles
Weight (g)	84.00
Customs tariff number	85444290
Country of Origin	DE

Electrical parameters

Rated voltage	60 V
Rated impulse voltage	1500 V
Rated current	4.0 A
Insulation resistance	> 10 ⁸ Ω
Pollution degree	3
Overvoltage category	II
Insulating material group	II
EMC compliance	unshielded

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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

Authorization/approvals

Approvals	UL
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Classifications

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

Declarations of conformity

Low Voltage Directive	2014/35/EU (EN 60529:1991;EN 60204-1:2018)
RoHS Directive	2011/65/EU (EN 50581:2012)

Cable data - Structure of the cable

Cable diameter	5.0 mm
Cross section	5 x 0.34 mm ²
Sheath material	PUR
Single-lead insulation	PP9Y halogen-free
Single-lead structure	42 x 0.10 mm
Cable color	black

Cable data - Electrical properties

Conductor resistance	60 Ω/Km (20°C)
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Cable data - Mechanical properties

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

Cable data - Thermal properties

Temperature range cable in move from/to	-25 °C / 90 °C
Temperature range cable fixed from/to	-50 °C / 90 °C

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Cable data - Other features

Halogen free	yes
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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.

Plug connectors with enclosure protection IP67 and IP68 are not suitable for use under water. For further information on the IP protection classes, please refer to the "Technical Information" download centre.

DECLARATION FROM THE MANUFACTURER

For part no.: 77 4427 0000 50005-0200

04/05/2024

With regard to the

Regulation (EC) No 1907/2006 of the European Parliament and of the Council of 18 December 2006 concerning the Registration, Evaluation, Authorisation and Restriction of Chemicals (REACH), establishing a European Chemicals Agency, amending Directive 1999/45/EC and repealing Council Regulation (EEC) No 793/93 and Commission Regulation (EC) No 1488/94 as well as Council Directive 76/769/EEC and Commission Directives 91/155/EEC, 93/67/EEC, 93/105/EC and 2000/21/EC.

With the REACH regulation, the EU has created a uniform system for the Registration, Evaluation, Authorisation and restriction of CHEMicals – or REACH. The purpose of this regulation is to ensure a high level of protection of human health and the environment.

Franz Binder GmbH & Co. Elektrische Bauelemente KG hereby confirms that it acts as a downstream user (producer of products) according to the aforementioned regulation.

We obtain all raw materials and/or preparations, from which the connectors are made, from suppliers who have already registered or pre-registered all substances, including those present in the preparations. The products supplied by the company are not subject to registration.

With regard to Article 33(1) of the REACH regulation, Franz Binder GmbH & Co. Elektrische Bauelemente KG complies with its information obligations:

An up-to-date candidate list (candidate list of substances of very high concern for authorisation, as of 23/01/2024 see: <https://echa.europa.eu/de/candidate-list-table>) in accordance with Article 59 (1, 10) of the regulation (EC) No 1907/2006 (REACH) has been published.

The aforementioned article includes the following substances from the up-to-date candidate list in concentrations of more than 0,1 percent by mass:

- None (No pollutants)

Please refer any questions to our Product Compliance Team:

Product-Compliance@binder-connector.de

DECLARATION FROM THE MANUFACTURER

For part no.: 77 4427 0000 50005-0200

04/05/2024

With regard to the

**COMMISSION DELEGATED DIRECTIVE (EU) 2015/863
of 31 March 2015**

**amending Annex II to Directive 2011/65/EU of the European Parliament and of the Council as regards
the list of restricted substances**

Directive 2011/65/EU stipulates provisions on the restriction of the use of hazardous substances in electrical and electronic equipment (EEE) with a view to contributing to the protection of human health and the environment, including the environmentally sound recovery and disposal of EEE waste.

ANNEX II

Restricted substances referred to in Article 4(1) and maximum concentration values tolerated by weight in homogeneous materials

Lead (0,1%) mercury (0,1%) cadmium (0,01%) hexavalent chromium (0,1%) polybrominated biphenyls (PBB) (0,1%) polybrominated diphenyl ethers (PBDE) (0,1%) bis(2-ethylhexyl) phthalate (DEHP) (0,1%) butyl benzyl phthalate (BBP) (0,1%) dibutyl phthalate (DBP) (0,1%) diisobutyl phthalate (DIBP) (0,1%)

Franz Binder GmbH & Co. Elektrische Bauelemente KG hereby confirms that it complies with all standard articles of the aforementioned Directive. Our products do not contain any of the specified prohibited substances above the maximum permitted concentrations specified therein, taking into account the exemptions in Annex III of Directive 2011/65/EU.

- Complies with RoHS III without exemption

Please refer any questions to our Product Compliance Team:

Product-Compliance@binder-connector.de

MANUFACTURER'S DECLARATION

For part no.: 77 4427 0000 50005-0200

04/05/2024

with regard to

Declaration of compliance with China RoHS – Components

We herewith declare the compliance of this product with the Chinese marking requirements. This product can be recycled and used safely during its environmentally friendly use period of 50 years. These articles will be sold as components only for manufacturing. According to the Electronic Industry Standard SJ/T 11364-2014 it needs not to be marked with Environmentally Friendly Use Period (EFUP) label. This product should be recycled after its environmental protection use period has expired because it may contain substances or elements as shown in the following table:

Part Name	Hazardous Substance					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent Chromium (Cr(VI))	Polybrominated biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)
Connectors	0	0	0	0	0	0

This table is prepared in accordance with the provisions of SJ/T 11364.

O: Indicates that said hazardous substance contained in all of the homogeneous materials for this part is below the limit requirement of GB/T 26572

X: Indicates that said hazardous substance contained in at least one of the homogeneous materials used for this part is above the limit requirement of GB/T 26572

The table shows where these substances may be found in this Electrical and Electronic Product.

Please refer any questions to our Product Compliance Team:

Product-Compliance@binder-connector.de

EU DECLARATION OF CONFORMITY

Manufacturer	Franz Binder GmbH & Co. Elektrische Bauelemente KG Rötelsstraße 27 D-74172 Neckarsulm
Part no.	77 4427 0000 50005-0200
Product	
Series	M12-B

This product complies with the requirements of the following European Directive:
Directive 2014/35/EU of the European Parliament and of the council of 26 February 2014 on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits (recast).

The following harmonized standards have been applied for conformity assessment:

EN 60529:1991;EN 60204-1:2018

References to standards apply to references to their amendments, if these amendments are listed to the respective directives in the Official Journal of the European Union.

This declaration of conformity is issued under the sole responsibility of the manufacturer.

Neckarsulm, 2020-06-30



i.A. Markus Grimm
Product Compliance Manager

UKCA DECLARATION OF CONFORMITY

Manufacturer	Franz Binder GmbH & Co. Elektrische Bauelemente KG Rötelstraße 27 D-74172 Neckarsulm
Object of the declaration Product	Connector (COC) 77 4427 0000 50005-0200

The object of the declaration described above is in conformity with the relevant UK-Regulations and UK-Guidelines:

The Electrical Equipment (Safety) Regulations 2016
STATUTORY INSTRUMENTS
2016 No. 1101
CONSUMER PROTECTION
HEALTH AND SAFETY

References of standards and/ or technical specifications applied for this declaration of conformity, or parts thereof:

2016 No. 1101: EN 61984:2009

This declaration is issued under the sole responsibility of the manufacturer.

Neckarsulm, 2021-09-17



i.A. Markus Grimm
Product Compliance Manager

EU DECLARATION OF CONFORMITY

Manufacturer	Franz Binder GmbH & Co. Elektrische Bauelemente KG Rötelstraße 27 D-74172 Neckarsulm
Part no.	77 4427 0000 50005-0200
Product	
Series	M12-B

This declaration of conformity is issued under the sole responsibility of the manufacturer.
The object of the declaration described above is in conformity with Directive 2011/65/EU of the European Parliament and of the council of 8 June 2011 on the restriction of the use of certain hazardous substances in electrical and electronic equipment (recast).

The following harmonized standards have been applied for conformity assessment:

EN 50581:2012

References to standards apply to references to their amendments, if these amendments are listed to the respective directives in the Official Journal of the European Union.

Neckarsulm, 2021-07-27



i.A. Markus Grimm
Product Compliance Manager

UKCA DECLARATION OF CONFORMITY

Manufacturer	Franz Binder GmbH & Co. Elektrische Bauelemente KG Rötelstraße 27 D-74172 Neckarsulm
Object of the declaration Product	Connector (COC) 77 4427 0000 50005-0200

The object of the declaration described above is in conformity with the relevant UK-Regulations and UK-Guidelines:

The Restriction of the use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

STATUTORY INSTRUMENTS
2012 No. 3032
ENVIRONMENTAL PROTECTION

References of standards and/ or technical specifications applied for this declaration of conformity, or parts thereof:

2012 No. 3032: EN IEC 63000:2018

This declaration is issued under the sole responsibility of the manufacturer.

Neckarsulm, 2021-09-17



i.A. Markus Grimm
Product Compliance Manager