

# K-7E-M23 M9/2,0-D03/M23 F8 - Connector in molded plastic on both sides



1620412

<https://www.phoenixcontact.com/us/products/1620412>

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Connector in molded plastic on both sides, application: Power, series: KSF, M23-Socket, Straight, plastic molded, number of positions: 4+3+PE, type of locking: Screw locking mechanism, on M23-Pin, Straight, plastic molded, number of positions: 4+3+PE, cable length: 2 m, shielded: yes, color of outer sheath: orange RAL 2003, this item is expected to be lead-free from Q1 2027 in accordance with RoHS II without exception 6c (Pb < 0.1%), a lead-free alternative is possible on request in advance

## Your advantages

- Our standard: robust halogen-free PUR cable
- Simple and safe: 100% electrically tested and assembled ready for use
- Designs with preassembled cables on one or both sides
- High flexibility: customer-specific assemblies and cable lengths can be supplied

## Commercial data

Item number	1620412
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB34
Product key	ABRDEG
GTIN	4046356831697
Weight per piece (including packing)	890 g
Weight per piece (excluding packing)	776.276 g
Customs tariff number	85444290
Country of origin	DE

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## Technical data

### Notes

Notes on operation	Observe derating curve.
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### Safety note

Safety note	WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.
	<ul style="list-style-type: none"><li>• WARNING: Commission properly functioning products only. The products must be regularly inspected for damage. Decommission defective products immediately. Replace damaged products. Repairs are not possible.</li></ul>
	<ul style="list-style-type: none"><li>• WARNING: Only electrically qualified personnel may install and operate the product. They must observe the following safety notes. The qualified personnel must be familiar with the basics of electrical engineering. They must be able to recognize and prevent danger. The relevant symbol on the packaging indicates that only personnel familiar with electrical engineering are allowed to install and operate the product.</li></ul>
	<ul style="list-style-type: none"><li>• The products are suitable for applications in plant, controller, and electrical device engineering.</li></ul>
	<ul style="list-style-type: none"><li>• When operating the connectors in outdoor applications, they must be separately protected against environmental influences.</li></ul>
	<ul style="list-style-type: none"><li>• Assembled products may not be manipulated or improperly opened.</li></ul>
	<ul style="list-style-type: none"><li>• Only use mating connectors that are specified in the technical data of the standards listed (e.g. the ones listed in the product accessories online at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a>).</li></ul>
	<ul style="list-style-type: none"><li>• When using the product in direct connection with third-party manufacturers, the user is responsible.</li></ul>
	<ul style="list-style-type: none"><li>• For operating voltages &gt; 50 V AC, conductive connector housings must be grounded</li></ul>
	<ul style="list-style-type: none"><li>• Ensure that the protective or functional ground has been properly connected.</li></ul>
	<ul style="list-style-type: none"><li>• VDE 0100/1.97 § 411.1.3.2 and DIN EN 60 204/11.98 § 14.1.3 are applicable when combining several circuits in a cable and/or connector</li></ul>
	<ul style="list-style-type: none"><li>• Only use tools recommended by Phoenix Contact</li></ul>
	<ul style="list-style-type: none"><li>• The installation notes/Design In documents online on the download page at <a href="https://www.phoenixcontact.com/products">phoenixcontact.com/products</a> must be observed for this product.</li></ul>
	<ul style="list-style-type: none"><li>• Operate the connector only when it is fully plugged in and interlocked.</li></ul>
<ul style="list-style-type: none"><li>• Ensure that when laying the cable, the tensile load on the connectors does not exceed the upper limit specified in the standards.</li></ul>	
<ul style="list-style-type: none"><li>• Observe the minimum bending radius of the cable. Lay the cable without twisting it.</li></ul>	
<ul style="list-style-type: none"><li>• The connector warms up in normal operation. Depending on the</li></ul>	

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ambient conditions, the surface of the connector can continue to warm up. In this case, the user is responsible for posting warnings (e.g. DIN EN ISO 13732-1:2008-12).

## Product properties

Product type	Signal and power cable
Application	Power

## Connector

### Connector specifications

Type	Straight, plastic molded
Thread type	M23
Type of locking	Screw locking mechanism
Degree of protection	IP67, when in locked state
No. of pos.	4+3+PE
Direction of rotation	Standard
Contact switching type	Socket
Insertion/withdrawal cycles	50
Contact resistance	< 0.3 mΩ
Voltage	630 V
Overvoltage category	III
Degree of pollution	3
Rated surge voltage	6 kV
Ambient temperature (operation)	-40 °C ... 105 °C

### Connector specifications (second page)

Type	Straight, plastic molded
Housing material	Die-cast zinc
Thread type	M23
Degree of protection	IP67, when in locked state
No. of pos.	4+3+PE
Direction of rotation	Standard
Contact switching type	Pin
Insertion/withdrawal cycles	50
Contact resistance	< 0.3 mΩ
Voltage	630 V
Overvoltage category	III
Degree of pollution	3
Rated surge voltage	6 kV
Ambient temperature (operation)	-40 °C ... 105 °C

## Cable/line

Cable length	2 m
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## Cable specifications

Cable type	PSLC11Y-J
Shielded	yes
Cable structure	4 x 2.5 mm <sup>2</sup> + 2 x 2 x 1.0 mm <sup>2</sup> StC
External cable diameter	13.50 mm ±0.4 mm
Outer sheath, material	PUR
Material wire insulation	TPM
External sheath, color	orange RAL 2003
Nominal voltage, cable	1000 V
Test voltage	4 kV (2 kV signal)
Smallest bending radius, movable installation	135 mm
Max. bending cycles	10000000
Bending radius	135 mm
Traversing path	6 m
Acceleration	5 m/s <sup>2</sup>
Ambient temperature (operation) for fixed installation	-40 °C ... 80 °C
Ambient temperature (operation) for flexible installation	-20 °C ... 60 °C
Special properties	Flexible cable conduit capable
Flame resistance	IEC 332-1
Halogen-free	DIN VDE 0472

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## Drawings

Dimensional drawing



On the female side

Dimensional drawing



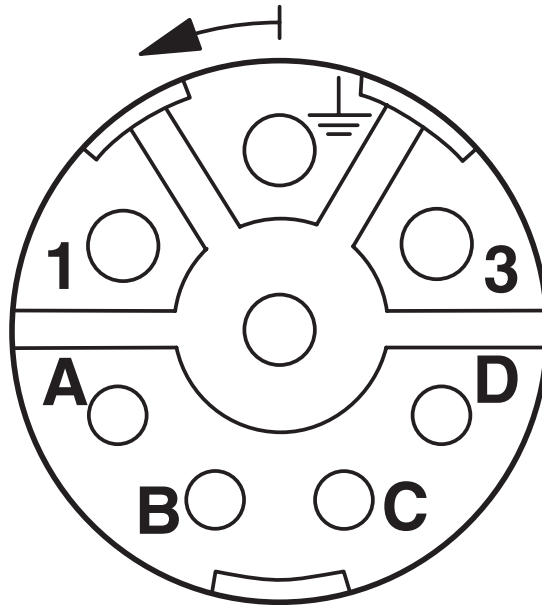
Pin side

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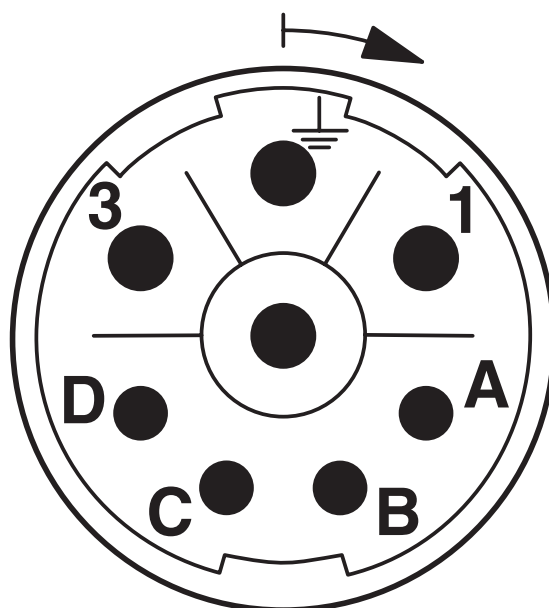
<https://www.phoenixcontact.com/us/products/1620412>

Schematic diagram



Socket pin assignment

Schematic diagram



Pin assignment of pin

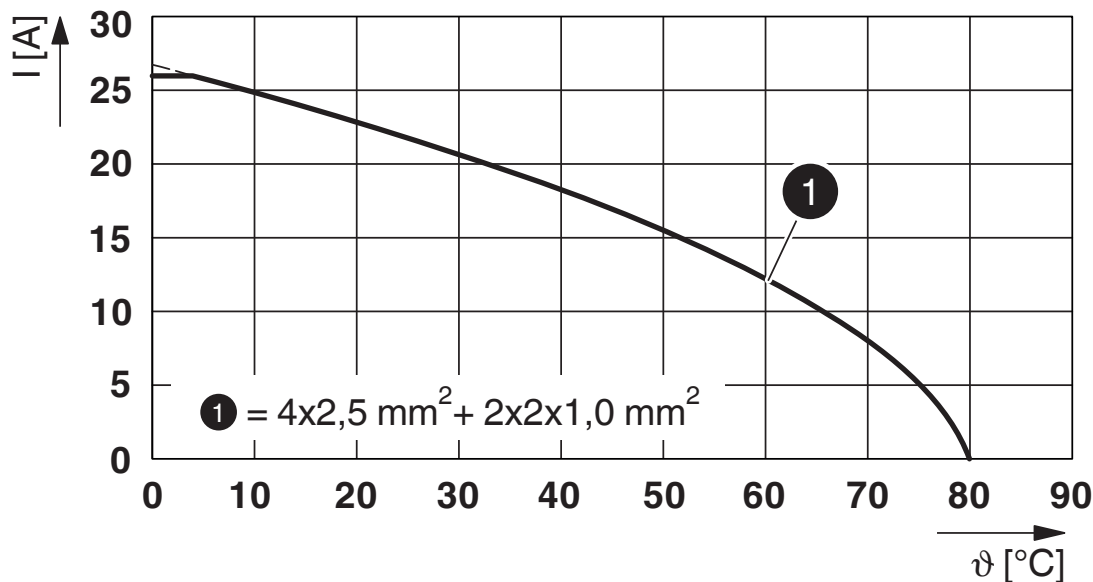
# K-7E-M23 M9/2,0-D03/M23 F8 - Connector in molded plastic on both sides



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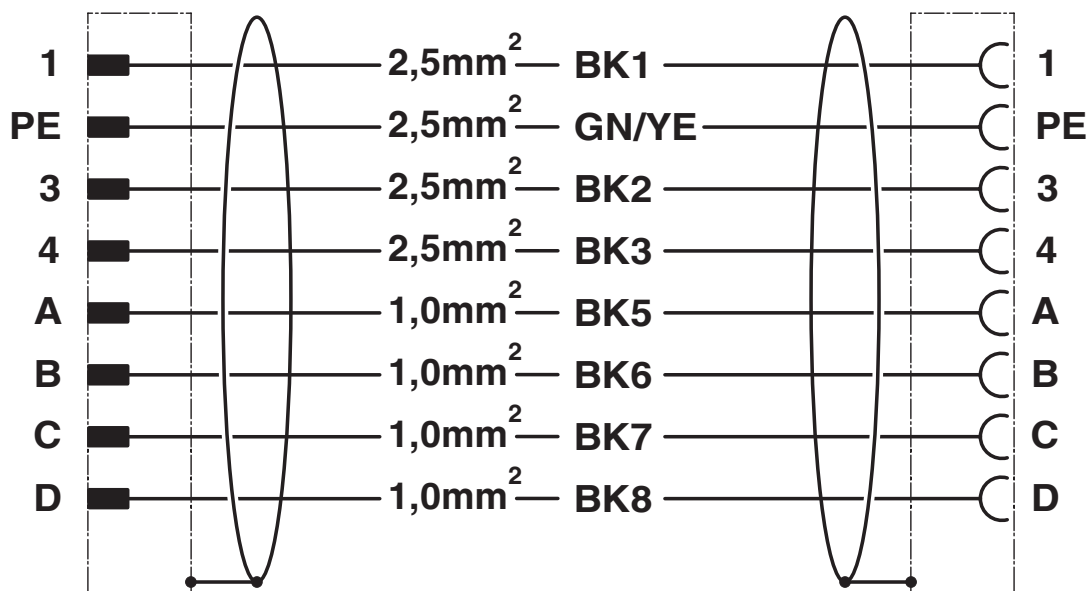
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Diagram



I = current strength, T = ambient temperature

Circuit diagram



Contact assignment of M23 plugs/sockets

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1620412>



**EAC**

Approval ID: B.00286/19

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## Classifications

### ECLASS

ECLASS-13.0	27060106
ECLASS-15.0	27060106

### ETIM

ETIM 10.0	EC003250
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### UNSPSC

UNSPSC 21.0	26121600
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes
Exemption	6(b), 6(c)

### China RoHS

Environment friendly use period (EFUP)	EFUP-50
	An article-related China RoHS declaration table can be found in the download area for the respective article under "Manufacturer declaration". For all articles with EFUP-E, no China RoHS declaration table issued and required.

### EU REACH SVHC

REACH candidate substance (CAS No.)	Lead(CAS: 7439-92-1)
SCIP	7613a253-303d-47d8-8316-8b3565ec72d2

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