

# SF-7EP1N8AWA00 - Device connector front mounting



1605589

<https://www.phoenixcontact.com/us/products/1605589>

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Device connector front mounting, application: Power, straight, for standard and SPEEDCON interlock, M23, number of positions: 4+3+PE, contact connection type: Pin, Axial O-ring, shielded: yes, flange dimensions: 26 mm x 26 mm, number of positions: 8, connection method: Crimp connection, series: SF, This product is in the process of being discontinued. This product must no longer be considered for new projects. Please contact your sales representative for alternatives. Alternative products: 1628777

## Your advantages

- Consistent EMC protection for reliable connection solutions in the industrial environment
- Crimping connection: vibration- and temperature-resistant assembly

## Commercial data

Item number	1605589
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	AB32
Product key	ABRBFL
GTIN	4046356182218
Weight per piece (including packing)	48.5 g
Weight per piece (excluding packing)	33.912 g
Customs tariff number	85366990
Country of origin	DE

## Technical data

### Notes

Order information:	Order crimp contacts 4 x Ø 1 mm, 4 x Ø 2 mm separately
Note on application	Series SF connectors are not compatible with series M23 PRO and must not be combined.
General	Compatible with mating connectors with SPEEDCON or M23 standard knurled nuts

### Safety note

Safety note	<p>WARNING: The connectors may not be plugged in or disconnected under load. Ignoring the warning or improper use may damage persons and/or property.</p>
	<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</li> </ul>	

1605589

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	cable without twisting it.
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	<ul style="list-style-type: none"> <li>The connector warms up in normal operation. Depending on the 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).</li> </ul>
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## Mounting

Mounting type	Front mounting/square flange (4x Ø 3.2 mm)
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## Product properties

Product type	Circular connectors (device side)
Series	SF
Application	Power
Number of positions	8
Connection profile	4+3+PE
Shielded	yes
Coding	N
Thread type	M23

## Dimensions

### Housing

Flange dimensions	26 mm x 26 mm
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## Material specifications

Material Housing	GD-Zn
Material Rotating parts	CuZn
Material Housing surface	Ni
Material Insulating body	PA 6.6
Material Seal	FPM (O-ring)
Flammability rating according to UL 94	V0
Seal material	FPM

## Electrical properties

### Contact: Contact group 1

Contact diameter	2 mm
Nominal current $I_N$	30 A
Nominal voltage $U_N$	630 V
Overvoltage category	III
Degree of pollution	3
Rated surge voltage	6 kV

### Contact: Contact group 2

Contact diameter	1 mm
Nominal current $I_N$	9 A
Nominal voltage $U_N$	250 V

# SF-7EP1N8AWA00 - Device connector front mounting



1605589

<https://www.phoenixcontact.com/us/products/1605589>

Overvoltage category	III
Degree of pollution	3
Rated surge voltage	4 kV

## Connection data

### Conductor connection

Connection method	Crimp connection
Contact connection type	Pin

## Connector

Type	straight
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### Connection 1

Head design	Pin
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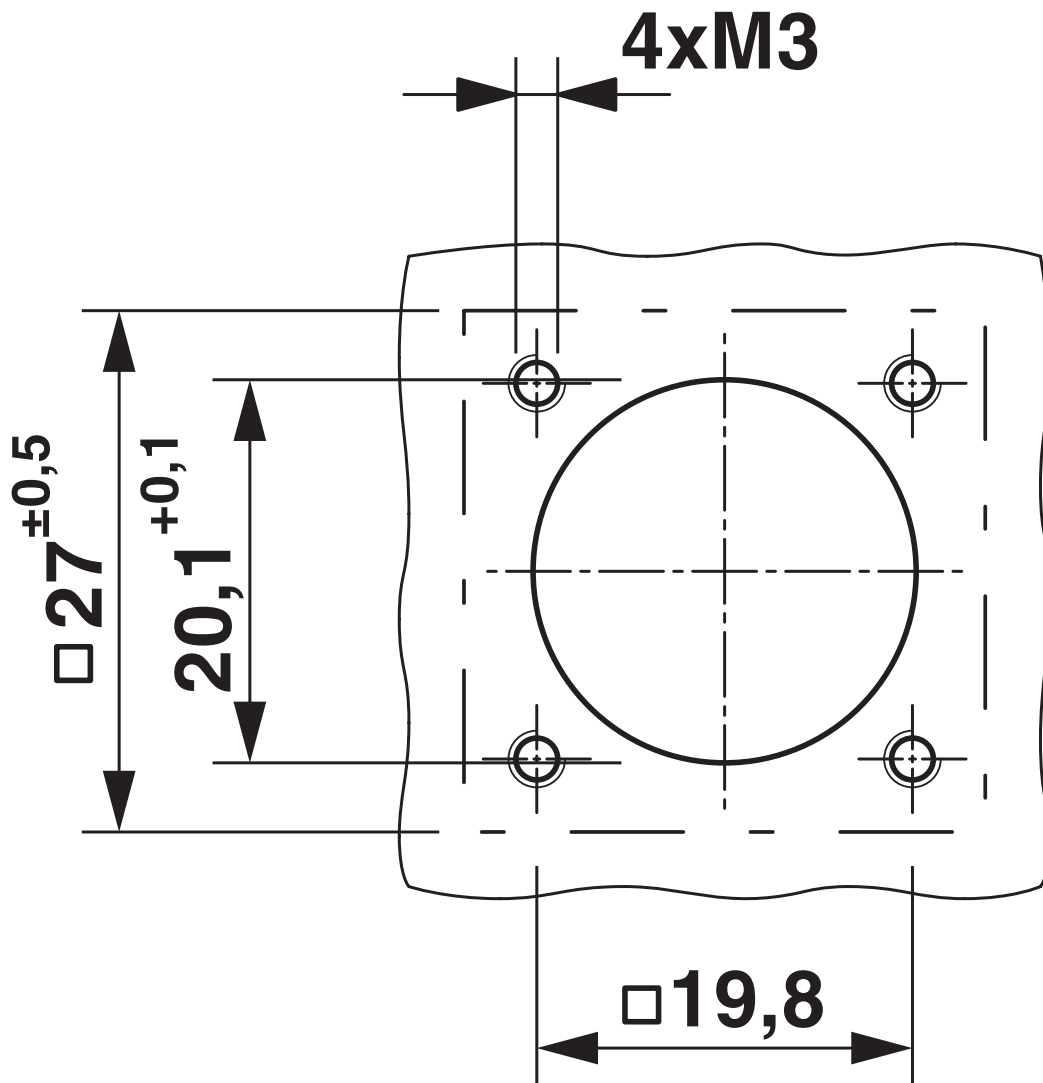
## Environmental and real-life conditions

### Ambient conditions

Degree of protection	IP67
Ambient temperature (operation)	-40 °C ... 125 °C
Altitude	3000 m

Drawings

Dimensional drawing



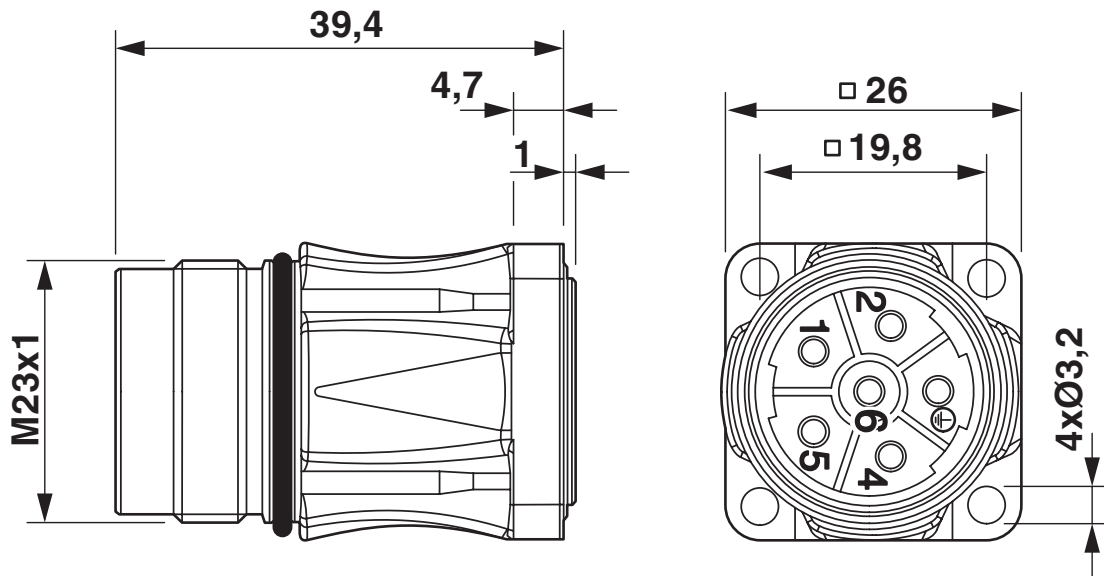
Installation dimensions

# SF-7EP1N8AWA00 - Device connector front mounting

1605589

<https://www.phoenixcontact.com/us/products/1605589>

Dimensional drawing



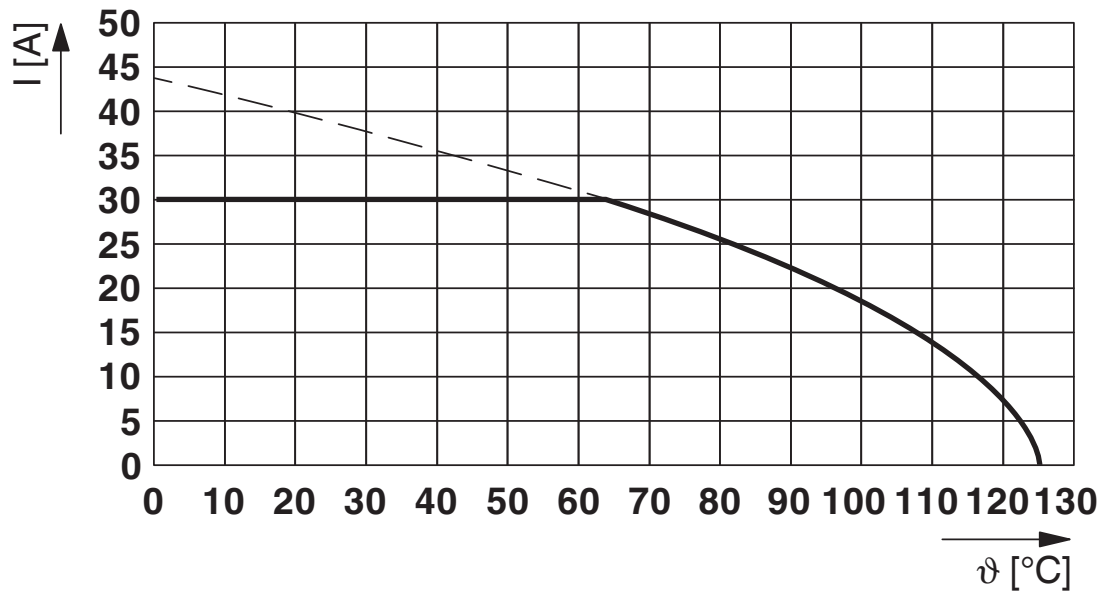
Dimensional drawing

Schematic diagram



Connector pin assignment

Diagram



I = current strength, T = ambient temperature

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1605589

<https://www.phoenixcontact.com/us/products/1605589>

## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1605589>

 <b>cUL Recognized</b> Approval ID: E153698-20041116				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	600 V	18 A	12	-

 <b>UL Recognized</b> Approval ID: E153698-20041116				
	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
keine				
	600 V	27 A	12	-

1605589

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## Classifications

### ECLASS

ECLASS-13.0	27440109
ECLASS-15.0	27440109

### ETIM

ETIM 10.0	EC003569
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental product compliance

### EU RoHS

Fulfills EU RoHS substance requirements	Yes, No exemptions
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### China RoHS

Environment friendly use period (EFUP)	EFUP-E
	No hazardous substances above the limits

### EU REACH SVHC

REACH candidate substance (CAS No.)	No substance above 0.1 wt%
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