

# HC-M-02-AT-M-16 - Contact insert module



1417297

<https://www.phoenixcontact.com/ca/products/1417297>

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Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Pin, Axial screw connection, 690 V, 70 A, 4 mm<sup>2</sup> ... 25 mm<sup>2</sup>, application: Power

## Your advantages

- Plug module is shock proof

## Commercial data

Item number	1417297
Packing unit	1 pc
Minimum order quantity	1 pc
Sales key	BF27
Product key	BF7ACE
Catalog page	Page 573 (C-2-2019)
GTIN	4055626112404
Weight per piece (including packing)	31.75 g
Weight per piece (excluding packing)	31.75 g
Customs tariff number	85366990
Country of origin	PL

## Technical data

### Notes

General	For HEAVYCON HC-B6 to B48 housing, HC-M-MHR... hinged retaining frame required, axial connection for 2.5 mm Allen key
General	Connectors may be operated only when there is no load/voltage.
General	The axial screw connection must be established using a 2.5 mm Allen key (for stranded conductors only)

### Mounting

Assembly note	To ensure correct use, installation in housing with IP54 protection or better is required
	<p><b>Note regarding axial connection technology:</b></p> <p>Only for stranded wires. The specified conductor cross sections refer to the geometric cross section of the cable used. Cables with a geometric cross section which deviates significantly from the nominal cable cross section must be checked before use.</p> <p>The axial connection technology connection space is designed for fine strand cables according to VDE 0295 Class 5. Deviating cable structures (e.g., Class 6 cables) must be checked before use.</p> <p><b>Assembly instructions</b></p> <p>Before assembly, ensure that the tapered screw is fully loosened (chamber is open). Cables must not be twisted. The wires must be pushed into the contact chamber as far as they will go (until the insulation touches the contact). Hold the wires in position and tighten using an Allen key. The used wire end must be cut off before reconnection. The terminal screw must only be retightened once to prevent the litz wires from breaking. To prevent damage to the contact, the wire/cable must be mechanically held at an appropriate distance from the connection point (e.g., when used in a plate cut out). For notes on correct execution, see DIN VDE 0100-520:2003-06. Unused connections must be tightened with maximum torque.</p>
Hexagonal socket	SW2,5

### Product properties

Product type	Modular contact insert
Series	HC-M-02
Application	Power
Number of positions	2
Connection profile	2
Contact numbering	1 - 2
Number of module slots	1
No. of power contacts	2
No. of control contacts	0

### Insulation characteristics

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Overvoltage category	III
Degree of pollution	3

## Connection data

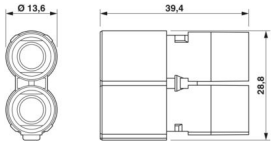
### Connection technology

Connection technology	Axial screw connection
Connection in acc. with standard	IEC / EN

### Conductor connection

Conductor cross section	4 mm <sup>2</sup> ... 25 mm <sup>2</sup> (The cross section specification refers to the geometric cross section of the cable used)
Connection cross section AWG	16 ... 4
Tightening torque	2 Nm (4 ... 6 mm <sup>2</sup> ) 3 Nm (10 mm <sup>2</sup> ... 25 mm <sup>2</sup> )
Stripping length of the individual wire	11 mm (with an outside conductor diameter up to 7 mm) 15 mm (with an outside conductor diameter up to 10.5 mm)

## Dimensions

Dimensional drawing	
Width	34.2 mm
Height	45 mm
Length	14.6 mm

### Mechanical characteristics

Minimum housing height	72 mm
Contact diameter	6 mm

## Electrical properties

Rated voltage (III/2) contacts	1000 V
Rated voltage (III/3)	690 V
Rated surge voltage (III/2)	8 kV
Rated surge voltage (III/3)	6 kV
Rated surge voltage	6 kV
Rated current	70 A

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	≥ 500
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## Material specifications

Flammability rating according to UL 94	V0
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Contact material	Copper alloy
Contact surface material	Ag
Contact carrier material	PC
Standards/regulations	PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)

## Environmental and real-life conditions

### Ambient conditions

Ambient temperature (operation)	-40 °C ... 125 °C
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## Standards and regulations

### Testing

Standards/regulations	PC: Fire protection in rail vehicles - requirement sets R22, R23, and R24 acc. to DIN EN 45545-2 (Risk level HL1 - HL3)
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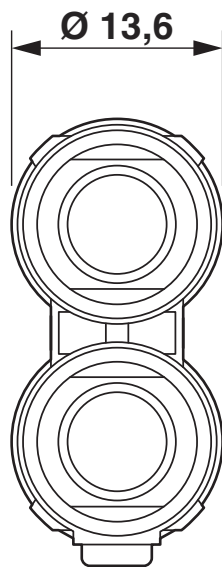
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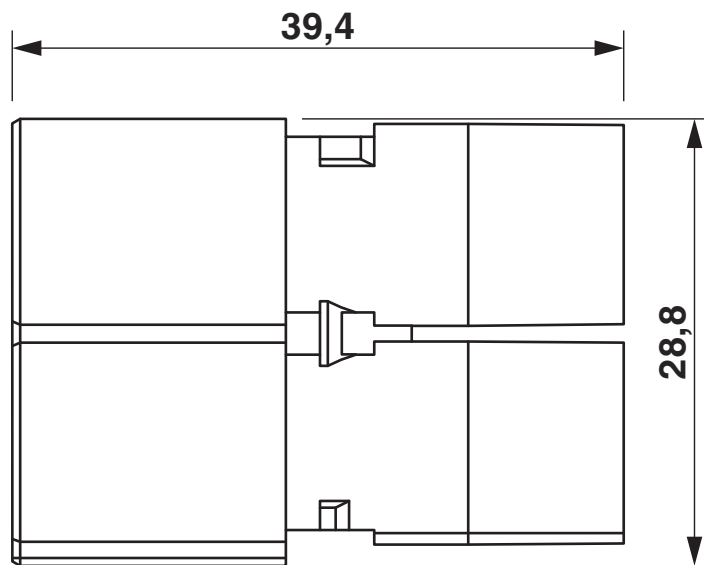
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## Drawings



Pin module

Dimensional drawing



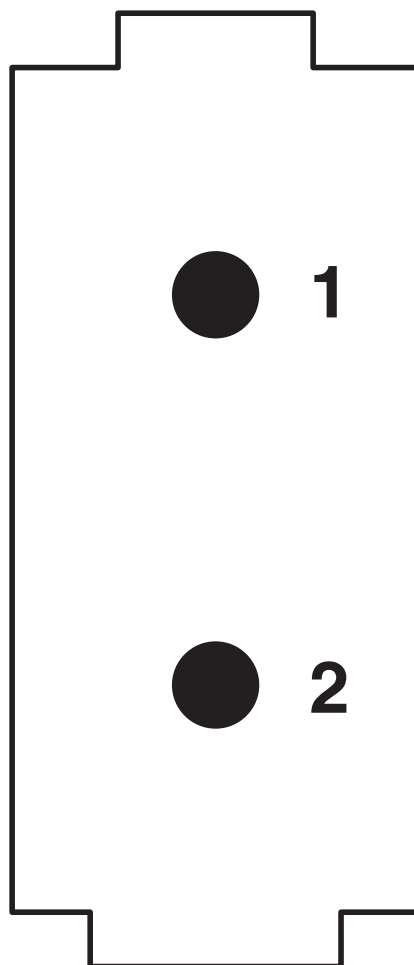
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Schematic diagram



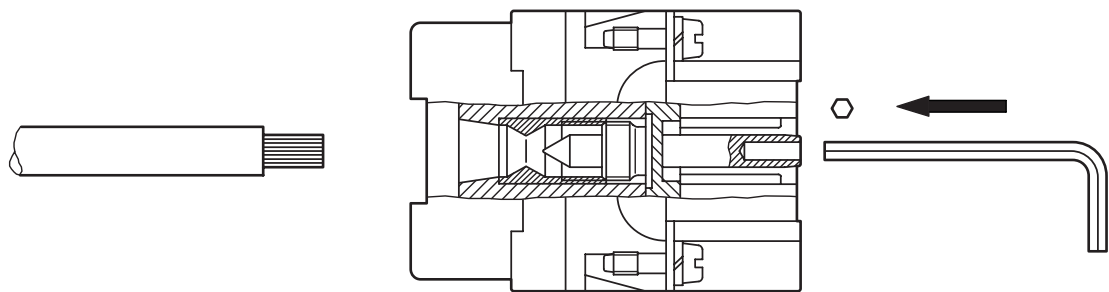
Connector pin assignment, connection side

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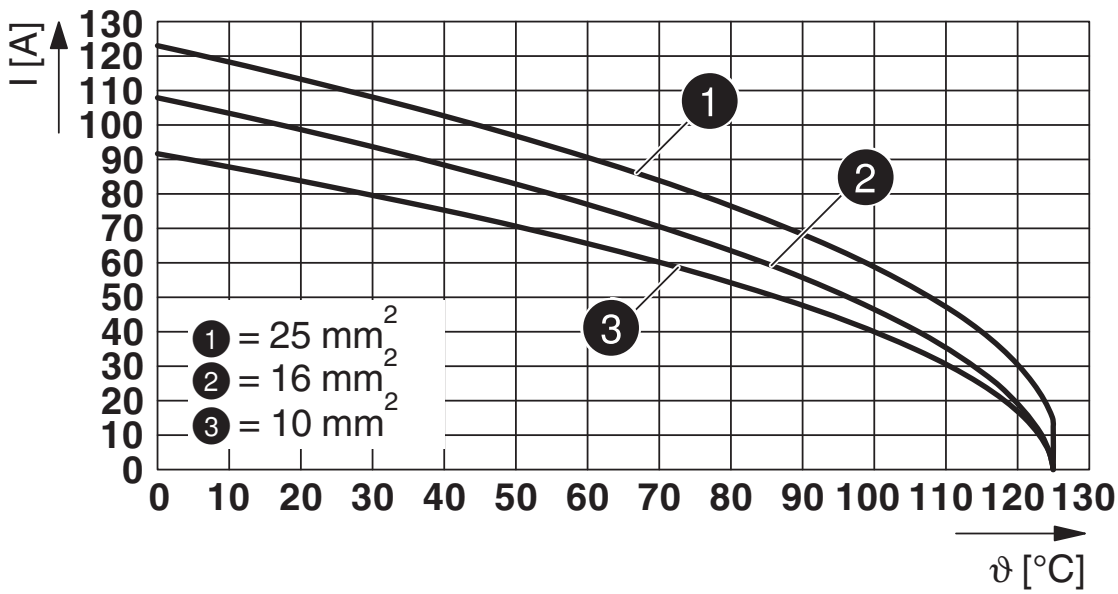
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Schematic diagram



Axial screw connection

Diagram



Derating diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/ca/products/1417297>

### DNV

Approval ID: TAE000037S



### CSA

Approval ID: 13631

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	600 V	54 A	- 6	-



### UL Recognized

Approval ID: E118976

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	600 V	69 A	- 6	-



### EAC

Approval ID: RU C-DE.BL08.B.00511



### UL Recognized

Approval ID: E468743

	Nominal voltage $U_N$	Nominal current $I_N$	Cross section AWG	Cross section $\text{mm}^2$
	600 V	69 A	-	-



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## Classifications

### ECLASS

ECLASS-11.0	27440217
ECLASS-12.0	27440217
ECLASS-13.0	27440217

### ETIM

ETIM 9.0	EC000438
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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
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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