

# Contact insert module - HC-M-02-AT-F-10



1417387

<https://www.phoenixcontact.com/pc/products/1417387>

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Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Socket, Axial screw connection, 830 V, 40 A, 2.5 mm<sup>2</sup> ... 10 mm<sup>2</sup>, application: Power

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# Contact insert module - HC-M-02-AT-F-10



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## Commercial Data

Item number	1417387
Packing unit	2 pc
Minimum order quantity	2 pc
Product Key	BF7ACE
Catalog Page	Page 573 (C-2-2019)
GTIN	4055626112688
Weight per Piece (including packing)	28.2 g
Weight per Piece (excluding packing)	24.95 g
Customs tariff number	85366990
Country of origin	PL

# Contact insert module - HC-M-02-AT-F-10



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## Technical Data

### Notes

General	For HEAVYCON HC-B6 to B48 housing, snap-in module frame required, axial connection for 2 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 mm Allen key (for stranded conductors only)

### Product properties

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

### Insulation characteristics

Overvoltage category	III
Degree of pollution	3

### Connection data

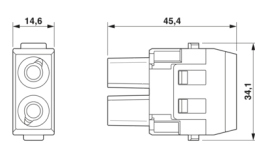
#### Connection technology

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

#### Conductor connection

Connection cross section AWG	12 ... 10
Tightening torque	1.5 Nm (2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> )
	2 Nm (6 ... 10 mm <sup>2</sup> )
Stripping length of the individual wire	5 mm +1 mm (2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> )
	8 mm +1 mm (4 mm <sup>2</sup> )
	11 mm +1 mm (10 mm <sup>2</sup> )

### Dimensions

Dimensional drawing	
Width	34.2 mm
Height	33.5 mm

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Length	14.6 mm
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## Mechanical characteristics

Contact diameter	4 mm
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## Electrical properties

Rated voltage (III/2) contacts	1000 V
Rated voltage (III/3)	830 V
Rated surge voltage (III/2)	8 kV
Rated surge voltage (III/3)	8 kV
Rated surge voltage	8 kV
Rated current	40 A

## Material specifications

Color	light grey
Flammability rating according to UL 94	V0
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)

## Connector

Insertion/withdrawal cycles	≥ 500
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## Cable / line

### Cable structure

Wire diameter including insulation	6 mm (6 mm <sup>2</sup> )
	10.5 mm (8 mm <sup>2</sup> )
	4 mm (2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> )
Stripping length of the individual wire	5 mm +1 mm (2.5 mm <sup>2</sup> ... 4 mm <sup>2</sup> )
	8 mm +1 mm (4 mm <sup>2</sup> )
	11 mm +1 mm (10 mm <sup>2</sup> )

## Mounting

Assembly instructions	To ensure correct use, installation in housing with IP54 protection or better is required
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	<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	WAF 2

## 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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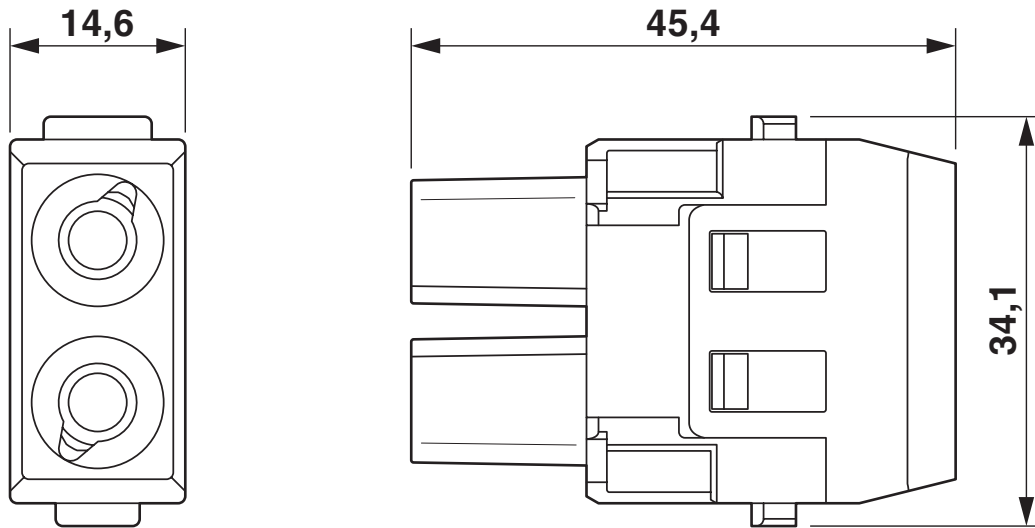
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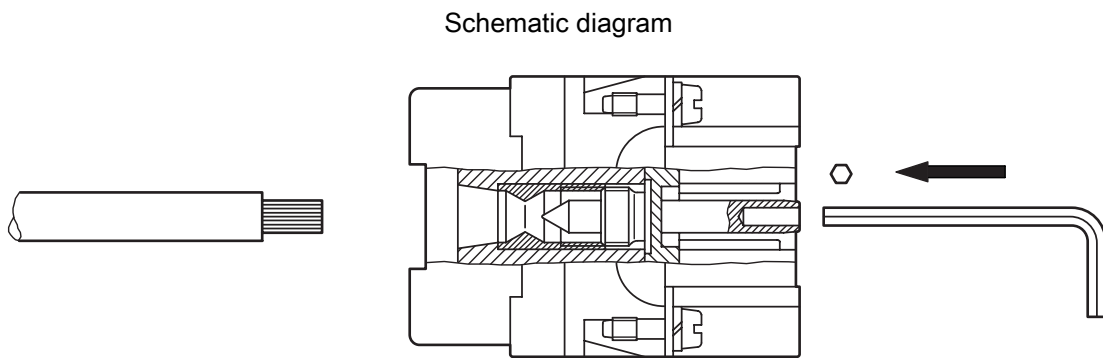
<https://www.phoenixcontact.com/pc/products/1417387>

## Drawings

Dimensional drawing



Female insert



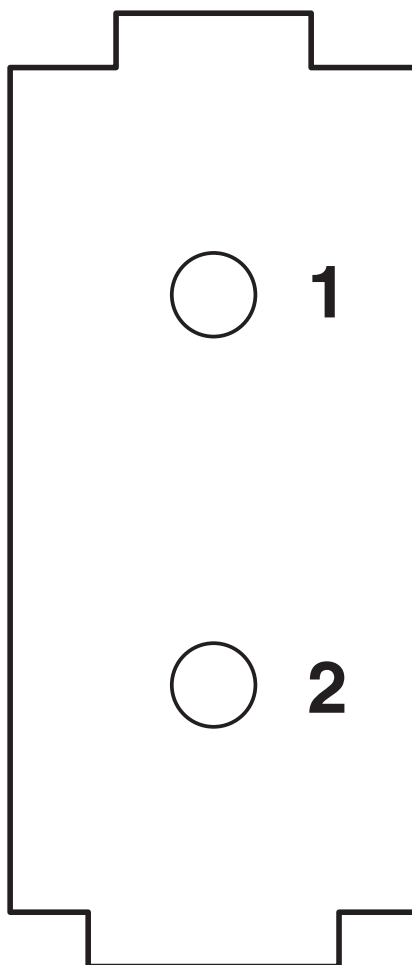
Axial connection (2 mm Allen key)

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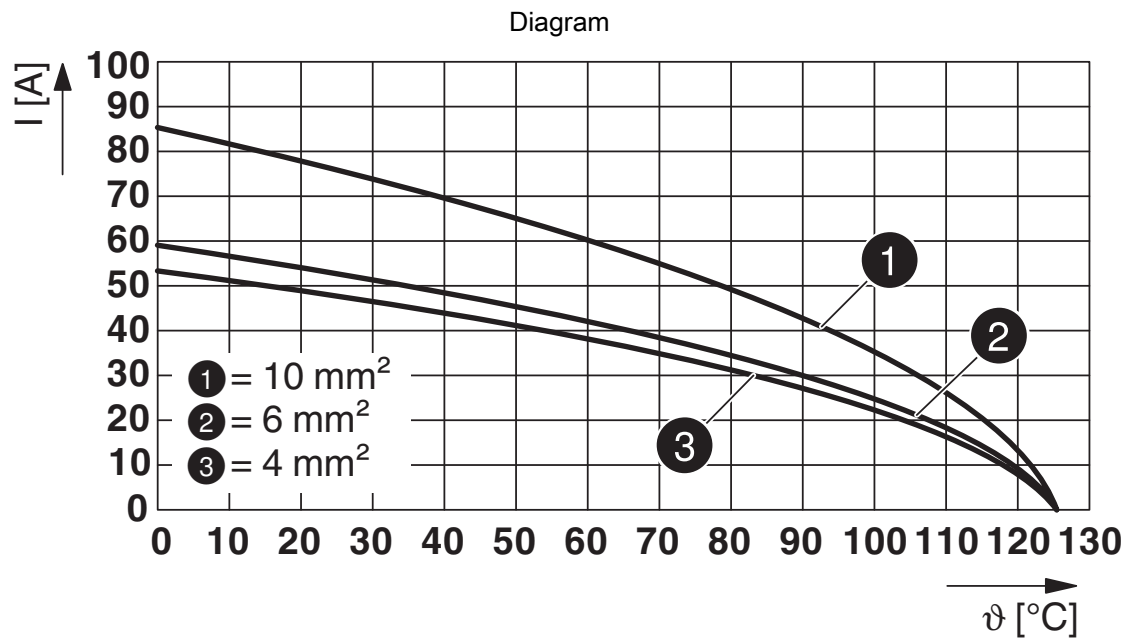
Schematic diagram



Connector pin assignment

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Derating diagram



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## Approvals

**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

45 A

- 8

-



**UL Recognized**

Approval ID: E118976

Nominal Voltage  $U_N$

Nominal Current  $I_N$

Cross Section AWG

Cross Section  $\text{mm}^2$

600 V

55 A

- 8

-



**EAC**

Approval ID: RU C-DE.AI30.B.01102



**EAC**

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

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## Classifications

### ECLASS

ECLASS-9.0	27440217
ECLASS-10.0.1	27440217
ECLASS-11.0	27440217

### ETIM

ETIM 8.0	EC000438
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### UNSPSC

UNSPSC 21.0	39121400
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## Environmental Product Compliance

REACH SVHC	Lead 7439-92-1
China RoHS	Environmentally Friendly Use Period = 50 years
	For information on hazardous substances, refer to the manufacturer's declaration available under "Downloads"

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## Accessories

### Screwdriver

Screwdriver - SF-THEX 2-100 - 1212637

<https://www.phoenixcontact.com/pc/products/1212637>



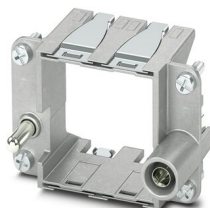
T-handle screwdriver, for Allen screws, hexagonal (with chamfer), size: hex 2 x 100 mm, ergonomically shaped handle, matt chrome-plated

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### Module carrier frame

Module carrier frame - HC-M-B06-MFH-B - 1182085

<https://www.phoenixcontact.com/pc/products/1182085>



Module carrier frame, size: B6, type : for the panel mounting side (a, b, c, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame

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## Module carrier frame

Module carrier frame - HC-M-B10-MFH-B - 1182088

<https://www.phoenixcontact.com/pc/products/1182088>



Module carrier frame, size: B10, type : for the panel mounting side (a, b, c, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame

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## Module carrier frame

Module carrier frame - HC-M-B16-MFH-B - 1182090

<https://www.phoenixcontact.com/pc/products/1182090>



Module carrier frame, size: B16, type : for the panel mounting side (a, b, c, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame

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## Module carrier frame

Module carrier frame - HC-M-B24-MFH-B - 1182094

<https://www.phoenixcontact.com/pc/products/1182094>

Module carrier frame, size: B24, type : for the panel mounting side (a, b, c, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame



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## Module carrier frame

Module carrier frame - HC-M-B06-MFH-H - 1182087

<https://www.phoenixcontact.com/pc/products/1182087>

Module carrier frame, size: B6, type : for the sleeve side (A, B, C, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame



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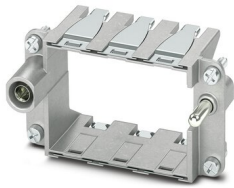
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## Module carrier frame

Module carrier frame - HC-M-B10-MFH-H - 1182089

<https://www.phoenixcontact.com/pc/products/1182089>



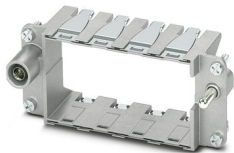
Module carrier frame, size: B10, type : for the sleeve side (A, B, C, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame

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## Module carrier frame

Module carrier frame - HC-M-B16-MFH-H - 1182093

<https://www.phoenixcontact.com/pc/products/1182093>



Module carrier frame, size: B16, type : for the sleeve side (A, B, C, ...), 4 mm<sup>2</sup> ... 6 mm<sup>2</sup>, application: Module carrier frame

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## Module carrier frame

Module carrier frame - HC-M-B24-MFH-H - 1182095

<https://www.phoenixcontact.com/pc/products/1182095>

Module carrier frame, size: B24, type : for the sleeve side (A, B, C, ...), 4 mm<sup>2</sup> ...  
6 mm<sup>2</sup>, application: Module carrier frame



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## Screw insert

Screw insert - SF-BIT-HEX 2-89 S - 1200300

<https://www.phoenixcontact.com/pc/products/1200300>

Screw bit, hexagon, E6.3-1/4" drive, size: Hex 2 x 89 mm, hardened, suitable for  
holder according to DIN 3126-F6.3/ISO 1173





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## Torque screwdriver

Torque screwdriver - TSD-M 3NM - 1212225

<https://www.phoenixcontact.com/pc/products/1212225>



Torque screw driver, accuracy as per EN ISO 6789 standard, adjustable from 1.2 - 3 Nm

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## Coding element

Coding element - HC-CBU-MOD - 1636130

<https://www.phoenixcontact.com/pc/products/1636130>



Coding socket for coding up to 16 connectors, for HC Modular

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## Coding element

Coding element - HC-CST-MOD - 1636127

<https://www.phoenixcontact.com/pc/products/1636127>



Coding peg for coding up to 16 connectors, for HC Modular

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## Contact insert module

Contact insert module - HC-M-02-AT-M-10 - 1417389

<https://www.phoenixcontact.com/pc/products/1417389>



Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Pin, Axial screw connection, 830 V, 40 A, 2.5 mm<sup>2</sup> ... 10 mm<sup>2</sup>, application: Power

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