

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



1417387

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

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Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Socket, Axial screw connection, 690 V, 40 A, 2.5 mm<sup>2</sup> ... 10 mm<sup>2</sup>, application: Power

## Commercial data

Item number	1417387
Packing unit	2 pc
Minimum order quantity	2 pc
Sales key	BF7ACE
Product key	BF7ACE
Catalog page	Page 573 (C-2-2019)
GTIN	4055626112688
Weight per piece (including packing)	27.8 g
Weight per piece (excluding packing)	24.95 g
Customs tariff number	85366990
Country of origin	PL

## 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)

### Mounting

Assembly instructions	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	WAF 2

### Product properties

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

### Insulation characteristics

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Overvoltage category	III
Degree of pollution	3

## Connection data

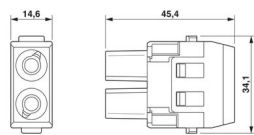
### Connection technology

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

### Conductor connection

Conductor cross section	2.5 mm <sup>2</sup> ... 10 mm <sup>2</sup> (The cross section specification refers to the geometric cross section of the cable used)
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 mm <sup>2</sup> ... 10 mm <sup>2</sup> )
Stripping length of the individual wire	9 mm (with an outside conductor diameter up to 4.8 mm) 11 mm (with an outside conductor diameter up to 6.5 mm)

## Dimensions

Dimensional drawing	
Width	34.2 mm
Height	33.5 mm
Length	14.6 mm

### Mechanical characteristics

Contact diameter	4 mm
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## 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)	8 kV
Rated surge voltage	8 kV
Rated current	40 A

## Mechanical properties

### Mechanical data

Insertion/withdrawal cycles	≥ 500
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## Material specifications

Flammability rating according to UL 94	V0
Contact material	Copper alloy

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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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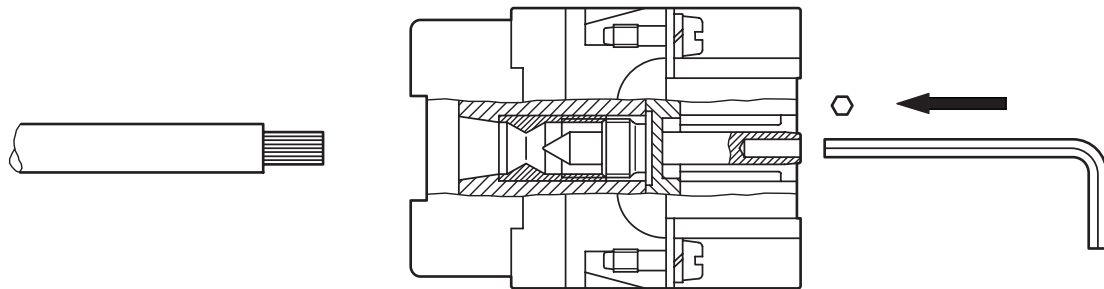
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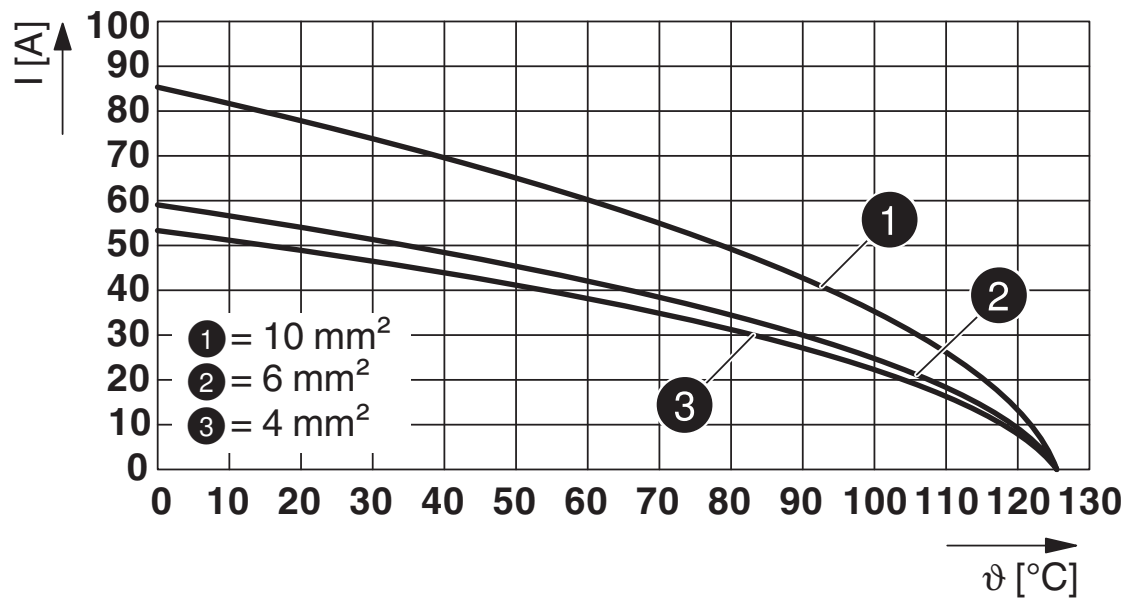
## Drawings

Schematic diagram



Axial connection (2 mm Allen key)

Diagram



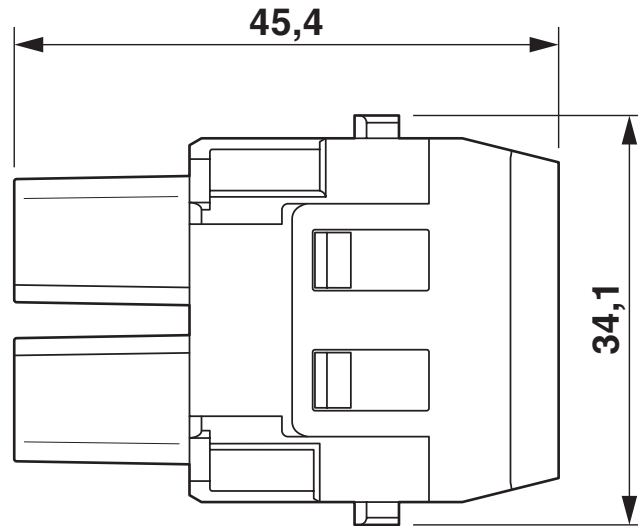
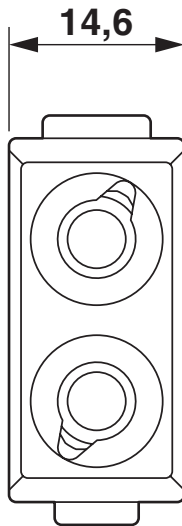
Derating diagram

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Dimensional drawing



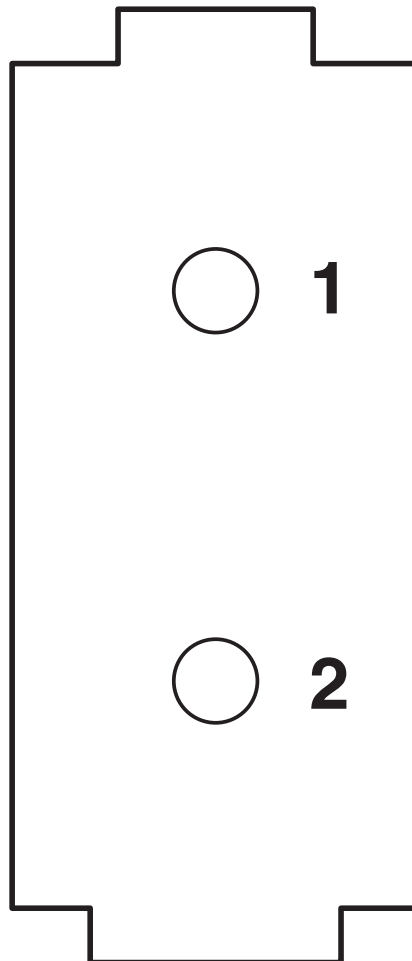
Female insert

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Schematic diagram



Connector pin assignment

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/gb/products/1417387>

### 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.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	55 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

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

### HC-CBU-MOD - Coding element

1636130

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



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

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### HC-CST-MOD - Coding element

1636127

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



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

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

1182085

<https://www.phoenixcontact.com/gb/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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## HC-M-B10-MFH-B - Module carrier frame

1182088

<https://www.phoenixcontact.com/gb/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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## HC-M-B16-MFH-B - Module carrier frame

1182090

<https://www.phoenixcontact.com/gb/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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## HC-M-B24-MFH-B - Module carrier frame

1182094

<https://www.phoenixcontact.com/gb/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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## HC-M-B06-MFH-H - Module carrier frame

1182087

<https://www.phoenixcontact.com/gb/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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## HC-M-B10-MFH-H - Module carrier frame

1182089

<https://www.phoenixcontact.com/gb/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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## HC-M-B16-MFH-H - Module carrier frame

1182093

<https://www.phoenixcontact.com/gb/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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## HC-M-B24-MFH-H - Module carrier frame

1182095

<https://www.phoenixcontact.com/gb/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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## HC-M-02-AT-M-10 - Contact insert module

1417389

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



Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Pin, Axial screw connection, 690 V, 40 A, 2.5 mm<sup>2</sup> ... 10 mm<sup>2</sup>, application: Power

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

1200300

<https://www.phoenixcontact.com/gb/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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## TSD-M 3NM - Torque screwdriver

1212225

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



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

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## SF-THEX 2-100 - Screwdriver

1212637

<https://www.phoenixcontact.com/gb/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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