

1417407

<https://www.phoenixcontact.com/us/products/1417407>

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Contact insert module, number of positions: 2, power contacts: 2, control contacts: 0, Socket, Crimp connection, 2900 V/5000 V, 16 A, 0.5 mm<sup>2</sup> ... 4 mm<sup>2</sup>, application: High-voltage

Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1417407       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF62          |
| Product key                          | AF7ACE        |
| GTIN                                 | 4055626112725 |
| Weight per piece (including packing) | 64.4 g        |
| Weight per piece (excluding packing) | 55.2 g        |
| Customs tariff number                | 85389099      |
| Country of origin                    | PL            |

## Technical data

### Notes

|         |                                                                                                                                                               |
|---------|---------------------------------------------------------------------------------------------------------------------------------------------------------------|
| General | For HEAVYCON housing type B6 to B48, HC-M-B...MF-... hinged module carrier frame required, CK2,5-ED... imp contacts, crimp contacts not supplied as standard. |
| General | Connectors may be operated only when there is no load/voltage.                                                                                                |

### Mounting

|               |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                             |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Assembly note | <p>To ensure correct use, installation in housing with IP54 protection or better is required</p> <p>Assembly procedure:</p> <ul style="list-style-type: none"> <li>- Strip wire 9.5 mm,</li> <li>- connect the stripped part of the wire through the locking sleeve (for wire diameter &gt; 3.2 mm),</li> <li>- crimp wire (with protracted locking sleeve) with CK2.5...ED crimp contact,</li> <li>- lock the locking sleeve with the crimp contact together with the module's insulating body.</li> </ul> |
|---------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

### Product properties

|                         |                        |
|-------------------------|------------------------|
| Product type            | Modular contact insert |
| Series                  | HC-M-HV                |
| Application             | High-voltage           |
| Number of positions     | 2                      |
| Connection profile      | 2                      |
| Contact numbering       | I, II                  |
| Number of module slots  | 2                      |
| No. of power contacts   | 2                      |
| No. of control contacts | 0                      |
| Contact material type   | turned                 |

#### Insulation characteristics

|                      |     |
|----------------------|-----|
| Overvoltage category | III |
| Degree of pollution  | 3   |

### Connection data

#### Connection technology

|                       |                  |
|-----------------------|------------------|
| Connection technology | Crimp connection |
|-----------------------|------------------|

#### Conductor connection

|                                         |                   |
|-----------------------------------------|-------------------|
| Conductor cross section                 | 0.5 mm² ... 4 mm² |
| Connection cross section AWG            | 20 ... 12         |
| Stripping length of the individual wire | 9.5 mm            |

### Dimensions

# HC-M-02-CT-F-HV-16 - Contact insert module



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## Dimensional drawing



|        |         |
|--------|---------|
| Width  | 34.1 mm |
| Height | 64.3 mm |
| Length | 29.3 mm |

## Mechanical characteristics

|                        |        |
|------------------------|--------|
| Minimum housing height | 72 mm  |
| Contact diameter       | 2.5 mm |

## Electrical properties

|                                  |                              |
|----------------------------------|------------------------------|
| Rated voltage (III/3)            | 2900 V (Conductor-PE)        |
|                                  | 5000 V (Conductor-Conductor) |
| Rated voltage for power contacts | 2900/5000 V                  |
| Rated surge voltage              | 15 kV                        |
| Rated current                    | 16 A                         |
| SCCR                             | 5 kA (UL 2237)               |

## Mechanical properties

### Mechanical data

|                             |       |
|-----------------------------|-------|
| Insertion/withdrawal cycles | ≥ 500 |
|-----------------------------|-------|

## Material specifications

|                                        |                       |
|----------------------------------------|-----------------------|
| Flammability rating according to UL 94 | V0                    |
| Contact material                       | Copper alloy          |
| Contact surface material               | Ag (alternatively Au) |
| Contact carrier material               | PC                    |
| Standards/regulations                  | PC                    |

## Environmental and real-life conditions

### Ambient conditions

|                                 |                   |
|---------------------------------|-------------------|
| Ambient temperature (operation) | -40 °C ... 125 °C |
|---------------------------------|-------------------|

## 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) |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|

# HC-M-02-CT-F-HV-16 - Contact insert module

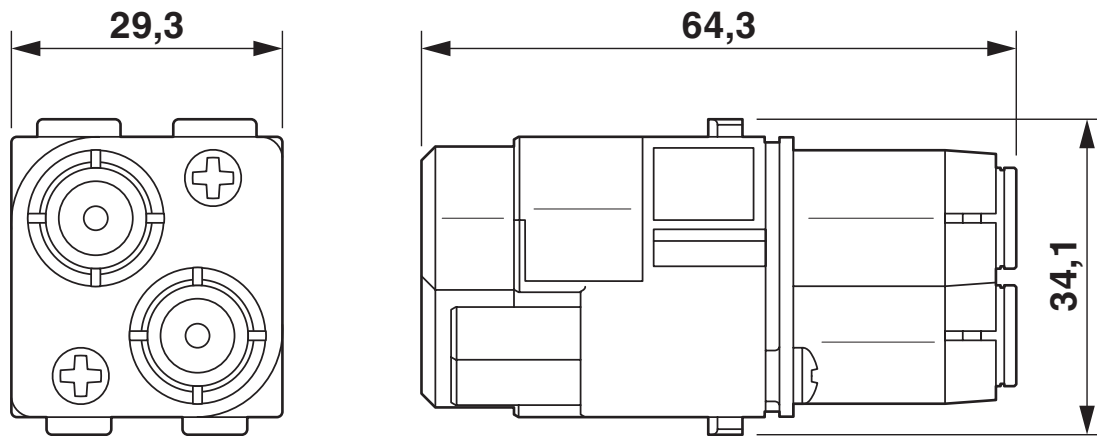


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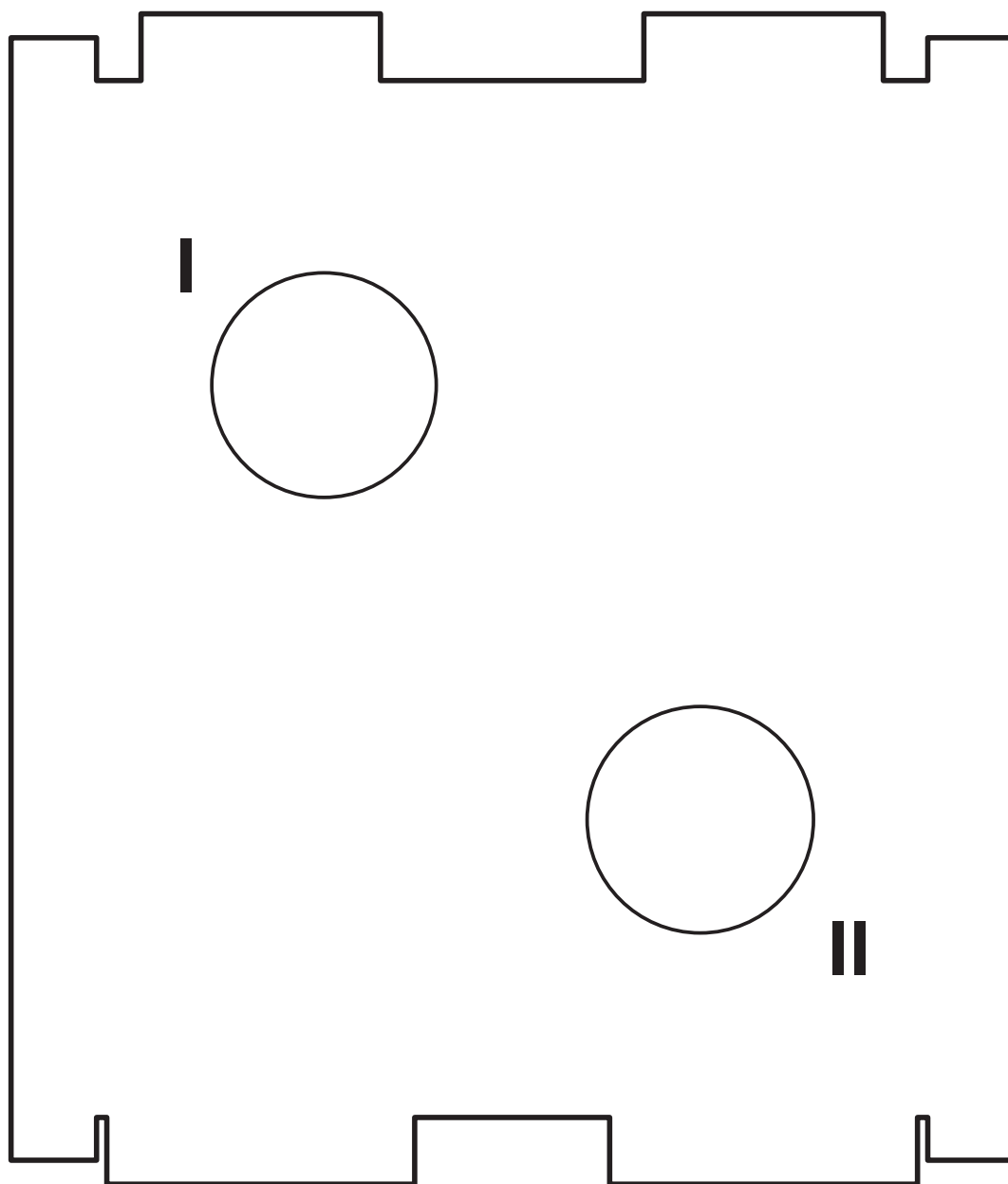
<https://www.phoenixcontact.com/us/products/1417407>

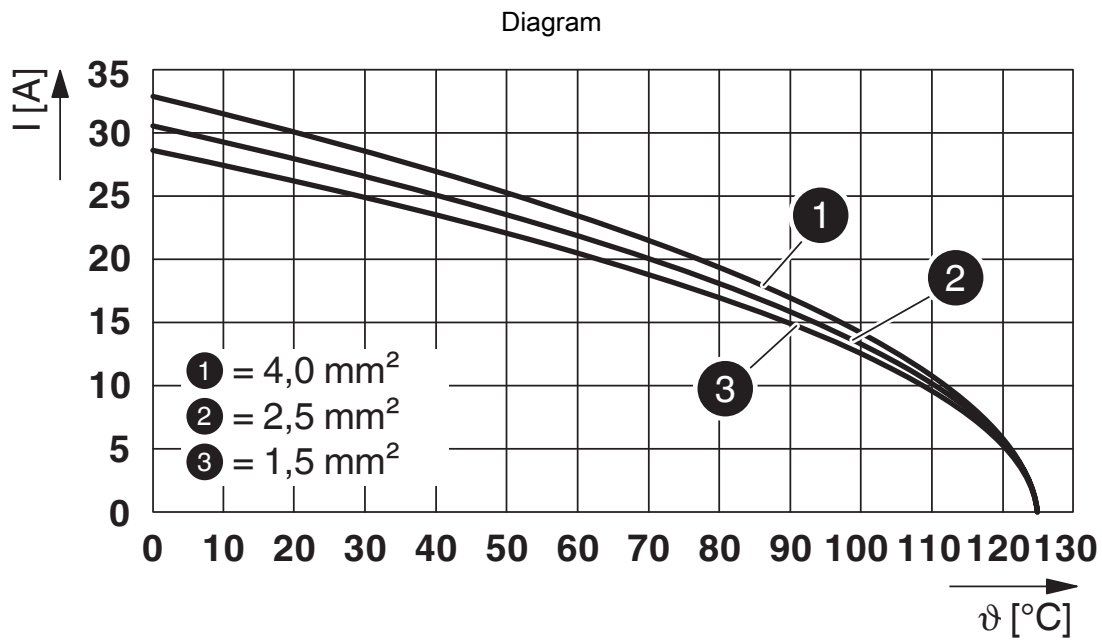
## Drawings

Dimensional drawing



Schematic diagram





Derating diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1417407>

### DNV

Approval ID: TAE000037S



### CSA

Approval ID: 13631

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 24 A                  | - 12              | -                           |



### UL Recognized

Approval ID: E118976

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 28 A                  | - 12              | -                           |



### UL Recognized

Approval ID: E468743

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 28 A                  | -                 | -                           |

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440217 |
| ECLASS-15.0 | 27440217 |

### ETIM

|          |          |
|----------|----------|
| ETIM 9.0 | EC000438 |
|----------|----------|

### 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%               |
| EF3.0 Climate Change                    |                                          |
| CO2e kg                                 | 4.149 kg CO2e                            |

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