

# HC-DD24-I-CT-M - Contact insert



1584033

<https://www.phoenixcontact.com/us/products/1584033>

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Contact insert, number of positions: 24+PE, size: B6, number of connections per position: 1, Pin, Crimp connection, 250 V, 10 A, 0.14 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>, application: Signal

## Your advantages

- Can be used in rail vehicles, satisfy DIN EN 45545-2 with requirement sets R22, R23, and R24 in hazard levels HL1, HL2, and HL3.
- Shock and vibration-resistant in accordance with DIN EN 61373

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1584033       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF61          |
| Product key                          | AF7ABF        |
| GTIN                                 | 4046356133340 |
| Weight per piece (including packing) | 37.5 g        |
| Weight per piece (excluding packing) | 37.2 g        |
| Customs tariff number                | 85389099      |
| Country of origin                    | CN            |

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## Technical data

### Notes

|         |                                                                                                                       |
|---------|-----------------------------------------------------------------------------------------------------------------------|
| General | For housing HC-B6                                                                                                     |
| General | Connectors may be operated only when there is no load/voltage.                                                        |
| General | It is imperative that guide pins (HC-CST) and sockets (HC-CBU) are used to prevent tip collision due to misalignment. |

### Mounting

|               |                                                                                           |
|---------------|-------------------------------------------------------------------------------------------|
| Assembly note | To ensure correct use, installation in housing with IP54 protection or better is required |
|---------------|-------------------------------------------------------------------------------------------|

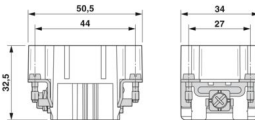
### Product properties

|                                    |                                              |
|------------------------------------|----------------------------------------------|
| Product type                       | Contact insert with a fixed no. of positions |
| Series                             | HC-DD                                        |
| Application                        | Signal                                       |
| Type                               | B6                                           |
| Number of positions                | 24                                           |
| Connection profile                 | 24+PE                                        |
| Contact numbering                  | 1 - 24                                       |
| Number of connections per position | 1                                            |
| Contact material type              | turned                                       |
|                                    | rolled                                       |

### Insulation characteristics

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

### Dimensions

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Width                           | 34 mm                                                                                |
| Height                          | 32.5 mm                                                                              |
| Length                          | 50.5 mm                                                                              |
| Drill hole distance, horizontal | 44 mm                                                                                |
| Drill hole distance, vertical   | 27 mm                                                                                |

### Mechanical characteristics

|                        |        |
|------------------------|--------|
| Minimum housing height | 72 mm  |
| Contact diameter       | 1.6 mm |

### Connection data

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## Connection technology

|                                    |                  |
|------------------------------------|------------------|
| Connection technology              | Crimp connection |
| Number of connections per position | 1                |
| Connection in acc. with standard   | IEC / EN         |

## Conductor connection

|                                         |                                                                                                               |
|-----------------------------------------|---------------------------------------------------------------------------------------------------------------|
| Conductor cross section                 | 0.14 mm² ... 2.5 mm²                                                                                          |
| Connection cross section AWG            | 26 ... 14                                                                                                     |
| Tightening torque                       | 0.8 Nm ... 1.2 Nm (PE connection)<br>0.5 Nm ... 0.8 Nm (Mounting screws for mounting in the HEAVYCON housing) |
| Stripping length of the individual wire | 8 mm (0.14 mm² ... 1.5 mm²)                                                                                   |
|                                         | 6 mm (2.5 mm²)                                                                                                |

## Electrical properties

|                       |                |
|-----------------------|----------------|
| Rated voltage (III/3) | 250 V          |
| Rated surge voltage   | 4 kV           |
| Rated current         | 10 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 (including heating up of contacts) |
|---------------------------------|------------------------------------------------------|

## Standards and regulations

|                                        |                            |
|----------------------------------------|----------------------------|
| Constructional and testing regulations | DIN VDE 0627/86            |
|                                        | DIN VDE 0110/02.79         |
|                                        | DIN VDE 0110-1/04.97       |
|                                        | IEC 60664-1, DIN IEC 60512 |
|                                        | IEC 60352                  |
| Tests                                  | DIN VDE 0627/86            |
|                                        | DIN VDE 0110/02.79         |
|                                        | DIN VDE 0110-1/04.97       |

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|                       |                                                                                                                         |
|-----------------------|-------------------------------------------------------------------------------------------------------------------------|
|                       | IEC 60664-1, DIN IEC 60512                                                                                              |
|                       | IEC 60352                                                                                                               |
| 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-DD24-I-CT-M - Contact insert

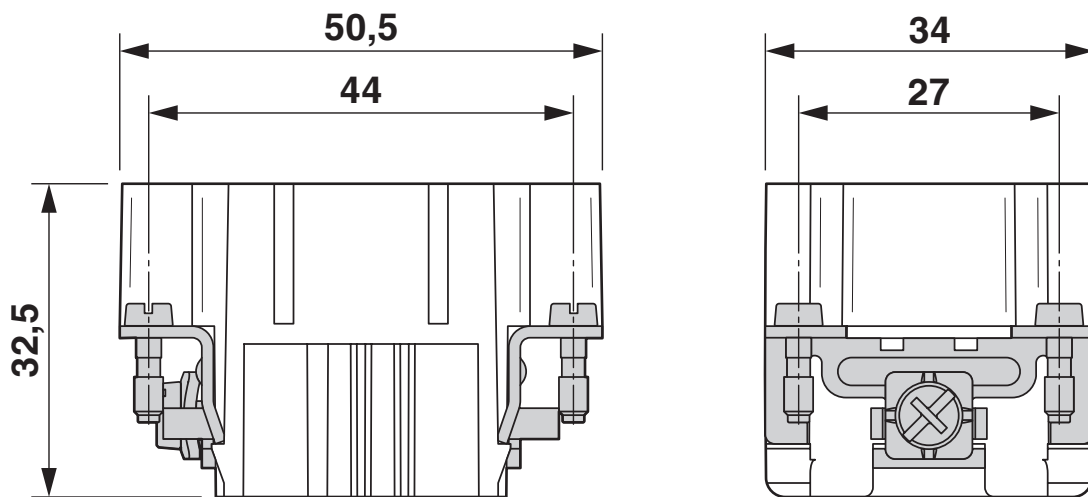
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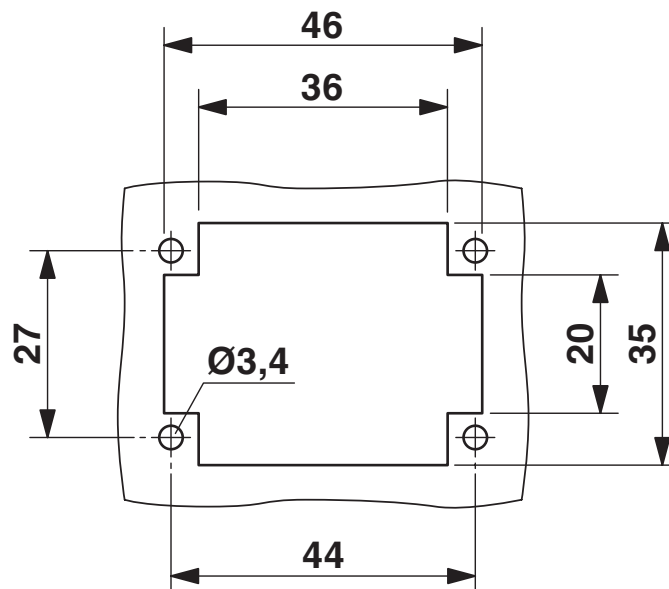
## Drawings

Dimensional drawing



Male insert

Dimensional drawing



Mounting cutout when used without housing

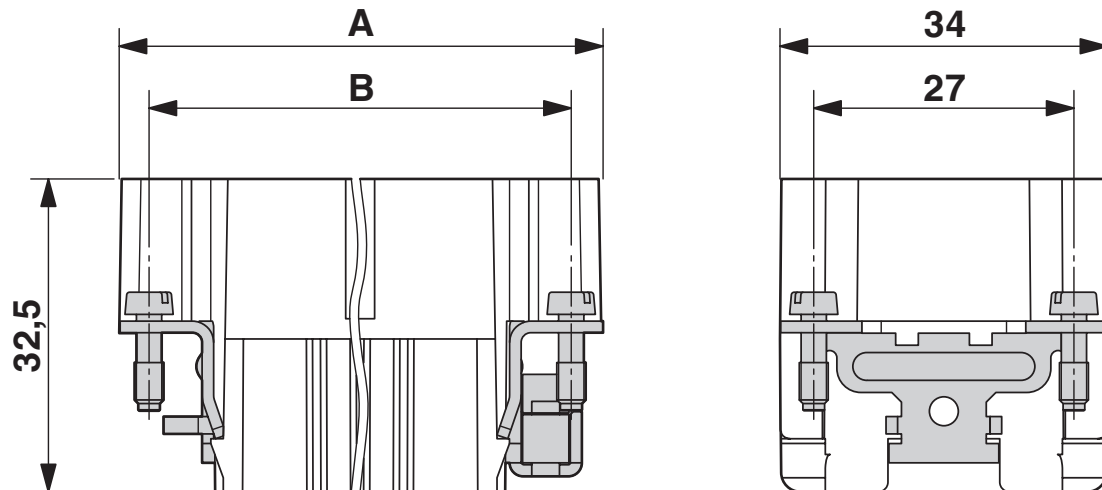
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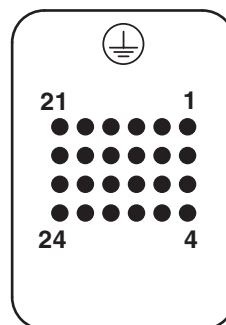
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Dimensional drawing

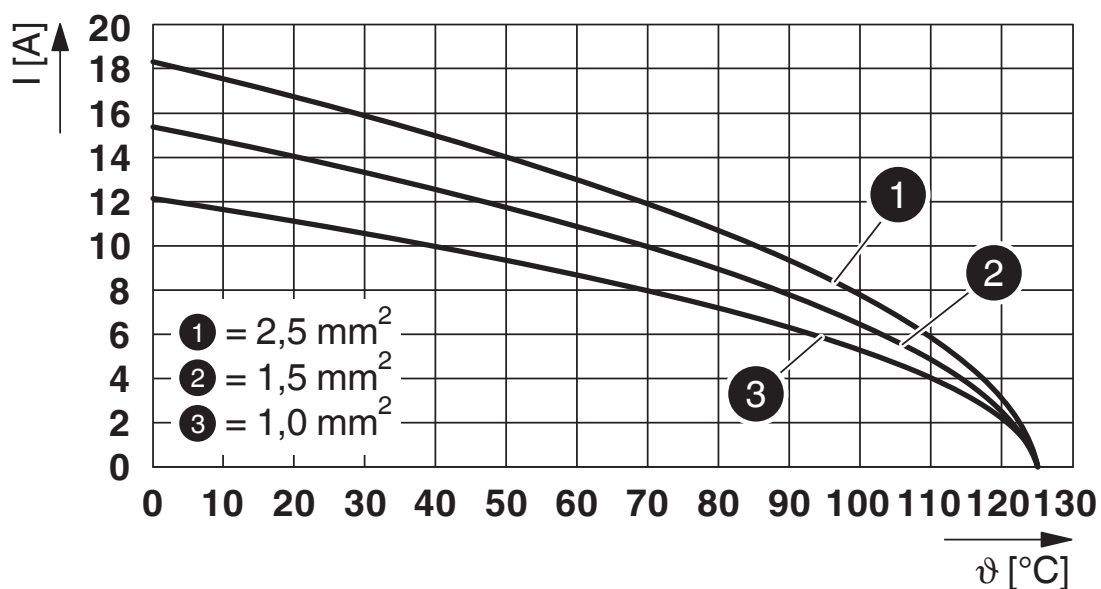


Schematic diagram



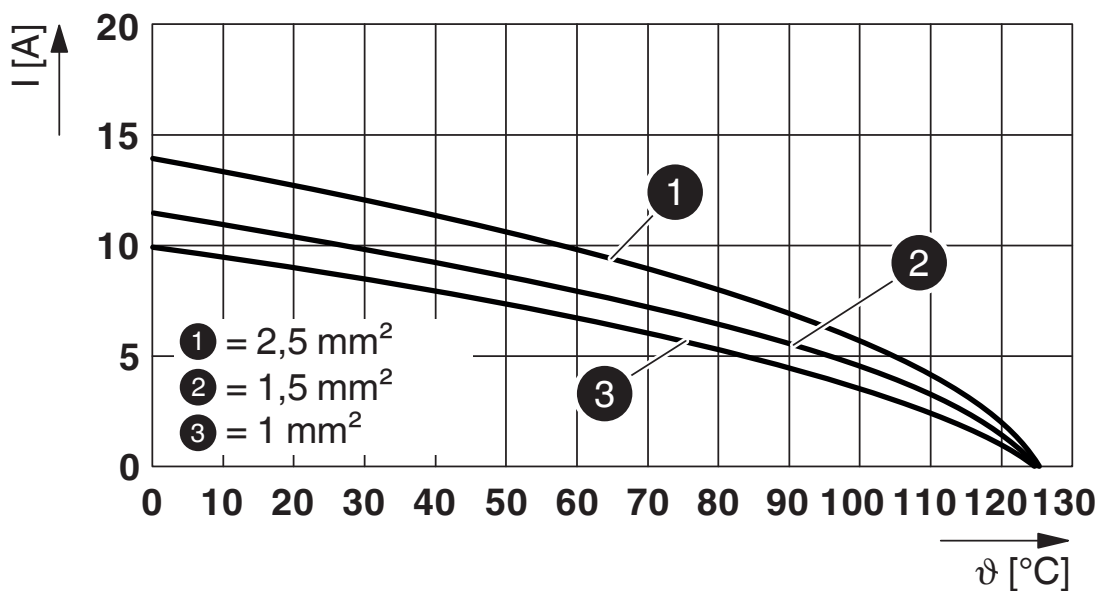
Connector pin assignment, connection side

Diagram



Derating diagram turned contacts

Diagram



Derating diagram rolled contacts

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1584033>

### DNV

Approval ID: TAE000037S



### CSA

Approval ID: 013631\_6233\_01

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 250 V                 | 7 A                   | 26 - 14           | -                           |



### cUL Recognized

Approval ID: E118976

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 250 V                 | 7 A                   | - 14              | -                           |



### UL Recognized

Approval ID: E118976

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 250 V                 | 10 A                  | - 14              | -                           |



### cULus Recognized

Approval ID: E468743

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 250 V                 | 7 A                   | - 14              | -                           |



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27440205 |
| ECLASS-15.0 | 27440205 |

### ETIM

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

### UNSPSC

|             |          |
|-------------|----------|
| UNSPSC 21.0 | 39121500 |
|-------------|----------|

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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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