

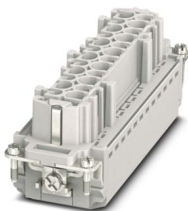
# HC-B24-I-PT-F - Contact insert



1407735

<https://www.phoenixcontact.com/us/products/1407735>

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Contact insert, number of positions: 24+PE, size: B24, number of connections per position: 1, Socket, Push-in connection, 500 V, 16 A, 0.14 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>, application: Power

## Your advantages

- Easy installation without tools, even when mounted, with push-in connection technology
- Shortest installation time compared to other connection technologies
- Quick and effortless wiring, in particular when space is tight
- Automatic cabling with robots possible
- Safe wiring and operation with color-coded actuators
- Shock and vibration-resistant in accordance with DIN EN 61373
- Cost-effective and fast coding with plastic profiles
- Test pick-off for 2 mm test plug

## Commercial data

|                                      |                     |
|--------------------------------------|---------------------|
| Item number                          | 1407735             |
| Packing unit                         | 1 pc                |
| Minimum order quantity               | 1 pc                |
| Sales key                            | BF61                |
| Product key                          | BF7ABC              |
| Catalog page                         | Page 547 (C-2-2019) |
| GTIN                                 | 4046356777704       |
| Weight per piece (including packing) | 115 g               |
| Weight per piece (excluding packing) | 115 g               |
| Customs tariff number                | 85366990            |
| Country of origin                    | CN                  |

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## Technical data

### Notes

|         |  |
|---------|--|
| General | only use flexible conductors with ferrules                     |
| General | Connectors may be operated only when there is no load/voltage. |

### 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-B   |
| Application                        | Power  |
| Type                               | B24  |
|                                    | B48  |
| Number of positions                | 24   |
| Connection profile                 | 24+PE  |
| Contact numbering                  | 1 - 24                                       |
| Number of connections per position | 1  |
| Contact material type              | rolled                                       |

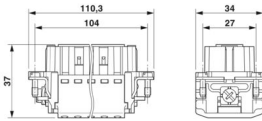
### Data management status

|                  |    |
|------------------|----|
| Article revision | 08 |
|------------------|----|

### Insulation characteristics

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

### Dimensions

|                                 |  |
|---------------------------------|--|
| Dimensional drawing             |  |
| Width                           | 34 mm  |
| Height                          | 37 mm  |
| Length                          | 111 mm   |
| Drill hole distance, horizontal | 104 mm   |
| Drill hole distance, vertical   | 27 mm  |

### Mechanical characteristics

|                  |        |
|------------------|--------|
| Contact diameter | 2.5 mm |
|------------------|--------|

### Connection data

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## Connection technology

|                                    |                    |
|------------------------------------|--------------------|
| Connection technology              | Push-in connection |
| Number of connections per position | 1                  |

## 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             | 8 mm ... 10 mm  |

## Electrical properties

|                       |                       |
|-----------------------|-----------------------|
| Rated voltage (III/3) | 500 V                 |
| Rated surge voltage   | 6 kV                  |
| Rated current         | 16 A (power contacts) |
| 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/Sn (tarnish protection)  |
| 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 (including heating up of contacts) |
|---------------------------------|--|

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

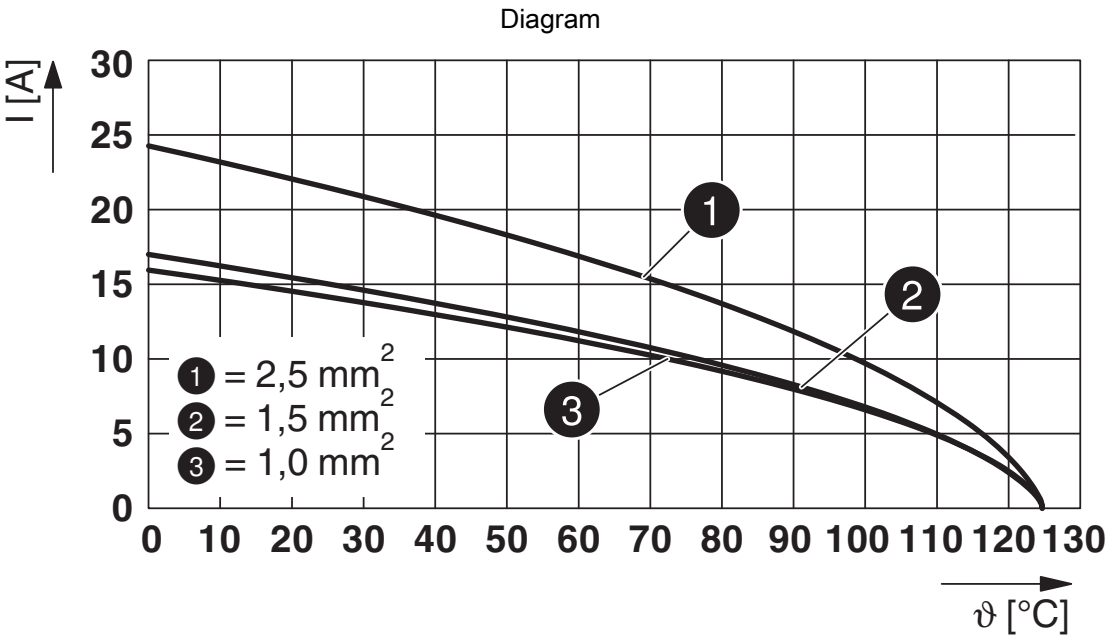
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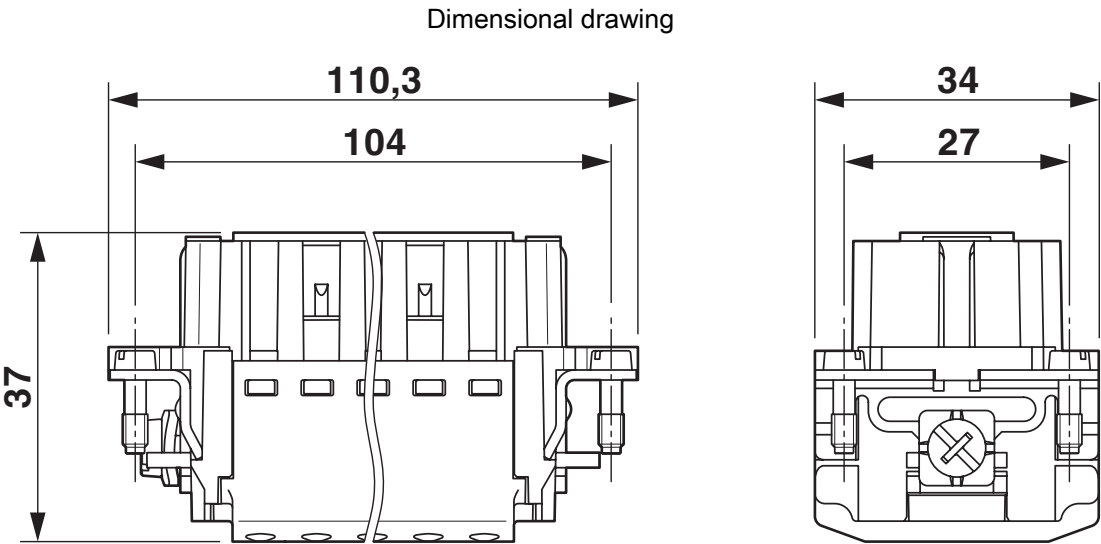
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Drawings



Derating diagram



Dimensional drawing

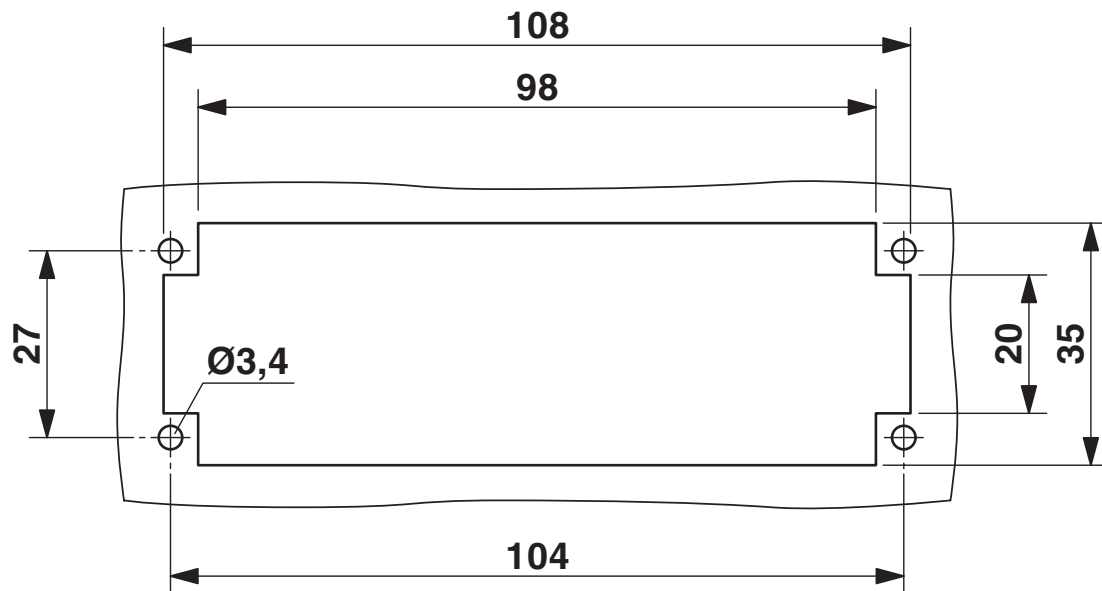
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Dimensional drawing



Mounting cutout when used without housing

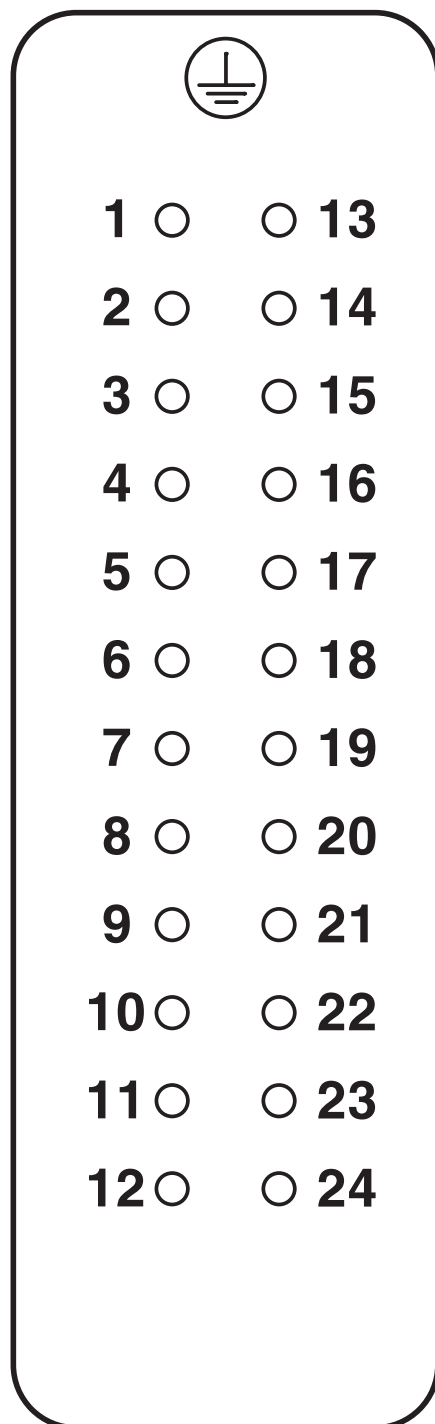
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Schematic diagram



Connector pin assignment, connection side

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1407735>

### 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                 | 10 A                  | - 14              | -                           |



### UL Recognized

Approval ID: E118976

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 600 V                 | 13 A                  | - 14              | -                           |



### EAC

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



### cULus Recognized

Approval ID: E468743

|  | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|--|-----------------------|-----------------------|-------------------|-----------------------------|
|  | 600 V                 | 13 A                  | - 14              | -                           |

# HC-B24-I-PT-F - Contact insert



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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-11.0 | 27440205 |
| ECLASS-12.0 | 27440205 |
| ECLASS-13.0 | 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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## Accessories

### CP-HC - Coding profile

1686478

<https://www.phoenixcontact.com/us/products/1686478>



Coding profile, 4 coding profiles per strip, for insertion in coding keyways

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### HC-CB - Coding bolt

1772722

<https://www.phoenixcontact.com/us/products/1772722>



Coding pin, prevents mismating of up to six connectors with an identical number of positions

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## HC-CST - Coding element

1676857

<https://www.phoenixcontact.com/us/products/1676857>



Coding peg for coding up to 16 connectors

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## HC-CBU - Coding element

1676860

<https://www.phoenixcontact.com/us/products/1676860>



Coding socket for coding up to 16 connectors

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<https://www.phoenixcontact.com/us/products/1407735>



## HC-B-PE-PT - Adapter

1054672

<https://www.phoenixcontact.com/us/products/1054672>



PE adapter with PT connection, for 1 PE connection, for HC-B / HC-BB / HC-DD / HC-D40 / HC-D64 contact inserts

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## HC-B-2PE-PT - PE multiplier

1054675

<https://www.phoenixcontact.com/us/products/1054675>



PE adapter with PT connection, for 2 PE connections, for HC-B / HC-BB / HC-DD / HC-D40 / HC-D64 contact inserts

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1407735

<https://www.phoenixcontact.com/us/products/1407735>



## HC-B-3PE - PE multiplier

1644326

<https://www.phoenixcontact.com/us/products/1644326>

PE multiplier, for 3 PE connections, for HC-B / HC-BB / HC-DD / HC-D40 / HC-D64 contact inserts



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## HC-B-PES - Screw

1604997

<https://www.phoenixcontact.com/us/products/1604997>

PE screw, for contact inserts HC-B / HC-BB / HC-DD / HC-D40 / HC-D64



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## HC-B-ZG - Strain relief clamp

1685327

<https://www.phoenixcontact.com/us/products/1685327>



Strain relief clamps contact inserts of series: B-, BB-, D 40, D 64, DD and HV, straight cable exit

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## HC-B-ZS - Strain relief clamp

1685330

<https://www.phoenixcontact.com/us/products/1685330>



Strain relief clamps contact inserts of series: B-, BB-, D 40, D 64, DD and HV, lateral cable exit

# HC-B24-I-PT-F - Contact insert

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<https://www.phoenixcontact.com/us/products/1407735>



## HC-CIF-B24-HFWL-PL - DIN rail mounting frame

1424337

<https://www.phoenixcontact.com/us/products/1424337>

DIN rail mounting frame, design: B24, for contact inserts, Top frame



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## HC-B 24-ANDOCK - Docking frame

1586141

<https://www.phoenixcontact.com/us/products/1586141>

Docking frame for racks, for contact inserts of B24 type, with four M5 flat headed screws, rack balance x/y axis  $\pm 1.5$  mm



# HC-B24-I-PT-F - Contact insert

1407735

<https://www.phoenixcontact.com/us/products/1407735>



## HC-CIF-B06-24-BFAFL-PL - DIN rail mounting frame

1424338

<https://www.phoenixcontact.com/us/products/1424338>



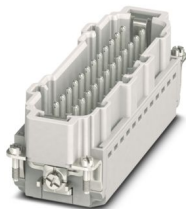
DIN rail mounting frame, design: B6 - B24, for contact inserts, Base frame

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## HC-B24-I-PT-M - Contact insert

1407736

<https://www.phoenixcontact.com/us/products/1407736>



Contact insert, number of positions: 24+PE, size: B24, number of connections per position: 1, Pin, Push-in connection, 500 V, 16 A, 0.14 mm<sup>2</sup> ... 2.5 mm<sup>2</sup>, application: Power



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<https://www.phoenixcontact.com/us/products/1407735>



## CRIMPFOX 6 - Crimping pliers

1212034

<https://www.phoenixcontact.com/us/products/1212034>



Crimping pliers, for ferrules without insulating collar according to DIN 46228 Part 1 and ferrules with insulating collar according to DIN 46228 Part 4, 0.25 mm<sup>2</sup> ... 6.0 mm<sup>2</sup>, lateral entry, trapezoidal crimp

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## CRIMPFOX CENTRUS 10S - Crimping pliers

1213154

<https://www.phoenixcontact.com/us/products/1213154>



Crimping pliers, for uninsulated and insulated ferrules, DIN 46228 Part 1 and 4, from 0.14 mm<sup>2</sup> ... 10 mm<sup>2</sup>, also for TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, lateral insertion, equipped with fall protection

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## CRIMPFOX CENTRUS 6S - Crimping pliers

1213144

<https://www.phoenixcontact.com/us/products/1213144>



Crimping pliers, for uninsulated and insulated ferrules, DIN 46228 Part 1 and 4, from 0.14 mm<sup>2</sup> ... 6 mm<sup>2</sup>, also for TWIN ferrules up to 2 x 4 mm<sup>2</sup>, automatic cross section adjustment, lateral insertion, equipped with fall protection

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