

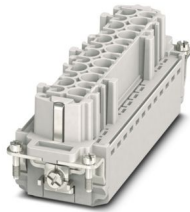
# HC-HV10-I-PT-F - Contact insert



1407745

<https://www.phoenixcontact.com/us/products/1407745>

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Contact insert, number of positions: 10+2+PE, size: B24, power contacts: 10, control contacts: 2, number of connections per position: 1, Socket, Push-in connection, 690 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

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1407745       |
| Packing unit                         | 1 pc          |
| Minimum order quantity               | 1 pc          |
| Sales key                            | BF61          |
| Product key                          | AF7ABG        |
| GTIN                                 | 4046356777506 |
| Weight per piece (including packing) | 98 g          |
| Weight per piece (excluding packing) | 90 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 |
|---------------|-------------------------------------------------------------------------------------------|

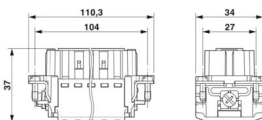
### Product properties

|                                    |                                              |
|------------------------------------|----------------------------------------------|
| Product type                       | Contact insert with a fixed no. of positions |
| Series                             | HC-HV                                        |
| Application                        | Power                                        |
| Type                               | B24<br>B48                                   |
| Number of positions                | 12                                           |
| Connection profile                 | 10+2+PE                                      |
| Number of connections per position | 1                                            |
| No. of power contacts              | 10                                           |
| No. of control contacts            | 2                                            |

### Insulation characteristics

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

### Dimensions

|                                 |                                                                                      |
|---------------------------------|--------------------------------------------------------------------------------------|
| Dimensional drawing             |  |
| Width                           | 34 mm                                                                                |
| Height                          | 34.6 mm                                                                              |
| Length                          | 111 mm                                                                               |
| Drill hole distance, horizontal | 104 mm                                                                               |

### Mechanical characteristics

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

### Connection data

#### Connection technology

|                                    |                                                                              |
|------------------------------------|------------------------------------------------------------------------------|
| Connection technology              | Push-in connection (power contacts)<br>Push-in connection (control contacts) |
| Number of connections per position | 1                                                                            |

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## Conductor connection

|                              |                                                                          |
|------------------------------|--------------------------------------------------------------------------|
| Conductor cross section      | 0.14 mm² ... 2.5 mm²                                                     |
|                              | 0.14 mm² ... 2.5 mm² (control contacts)                                  |
| Connection cross section AWG | 26 ... 14 (power contacts)                                               |
|                              | 26 ... 14 (control contacts)                                             |
| Tightening torque            | 0.8 Nm ... 1.2 Nm (PE connection)                                        |
|                              | 0.5 Nm ... 0.8 Nm (Mounting screws for mounting in the HEAVYCON housing) |
| Stripping length             | 8 mm ... 10 mm (power contacts)                                          |
|                              | 8 mm ... 10 mm (control contacts)                                        |

## Electrical properties

|                                |                         |
|--------------------------------|-------------------------|
| Rated voltage (III/2) contacts | 830 V                   |
| Rated voltage (III/3)          | 690 V                   |
| Rated surge voltage (III/2)    | 8 kV                    |
| Rated surge voltage (III/3)    | 6 kV                    |
| Rated surge voltage            | 8 kV (power contacts)   |
|                                | 6 kV (control contacts) |
| Rated current                  | 16 A                    |
|                                | 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 carrier material                     | PC           |
| Material of contact surface, power contact   | Ag           |
| Material of contact surface, control contact | Ag           |
| 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

### 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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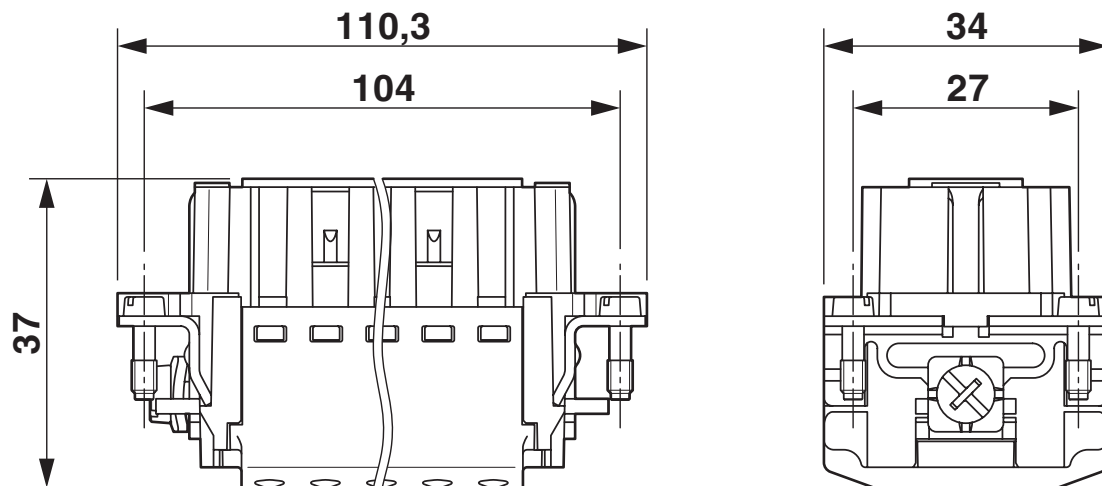
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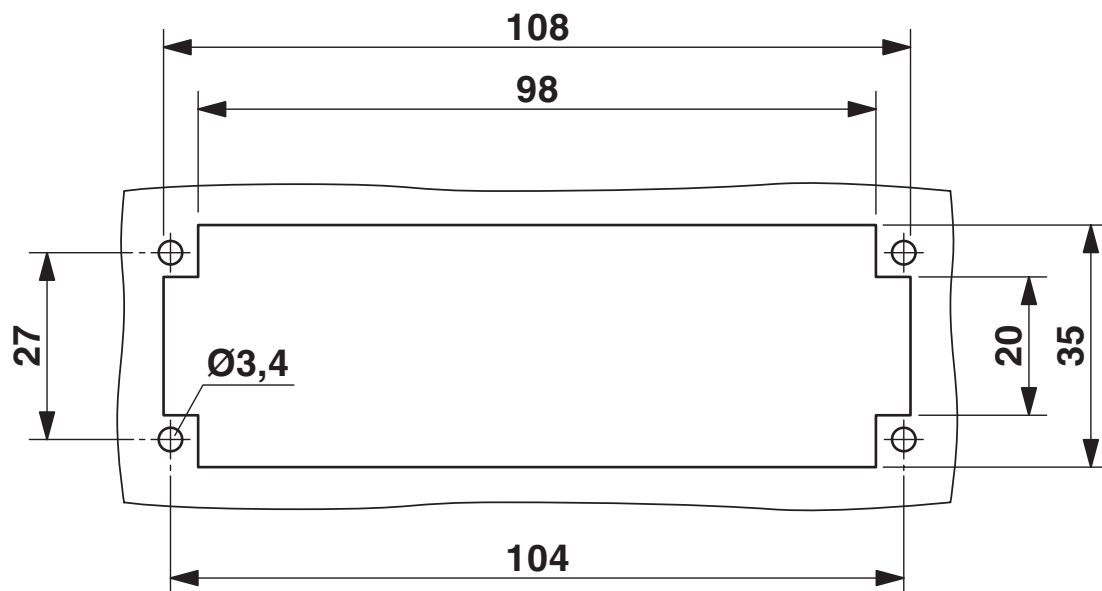
## Drawings

Dimensional drawing



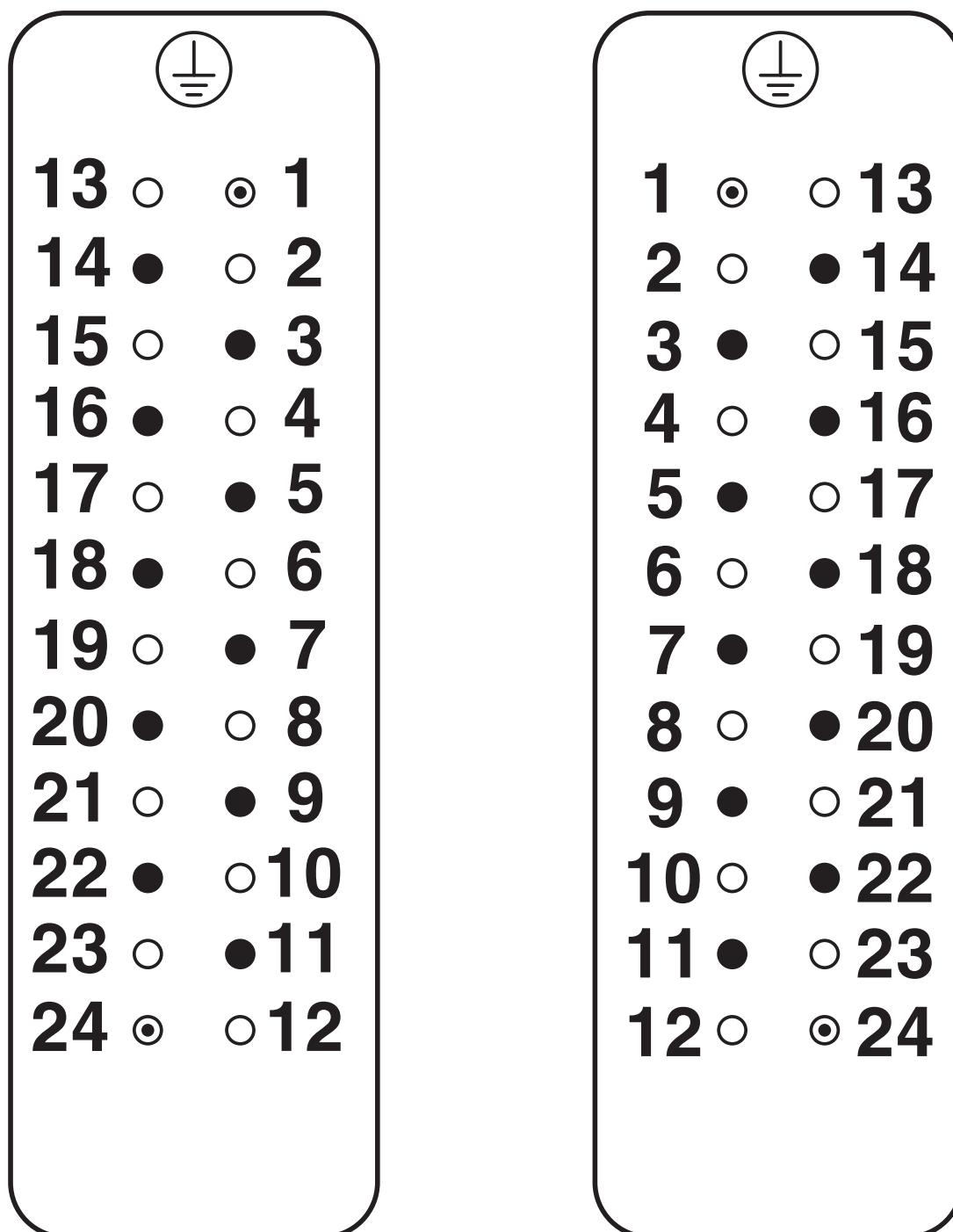
Dimensional drawing

Dimensional drawing



Mounting cutout when used without housing

Schematic diagram

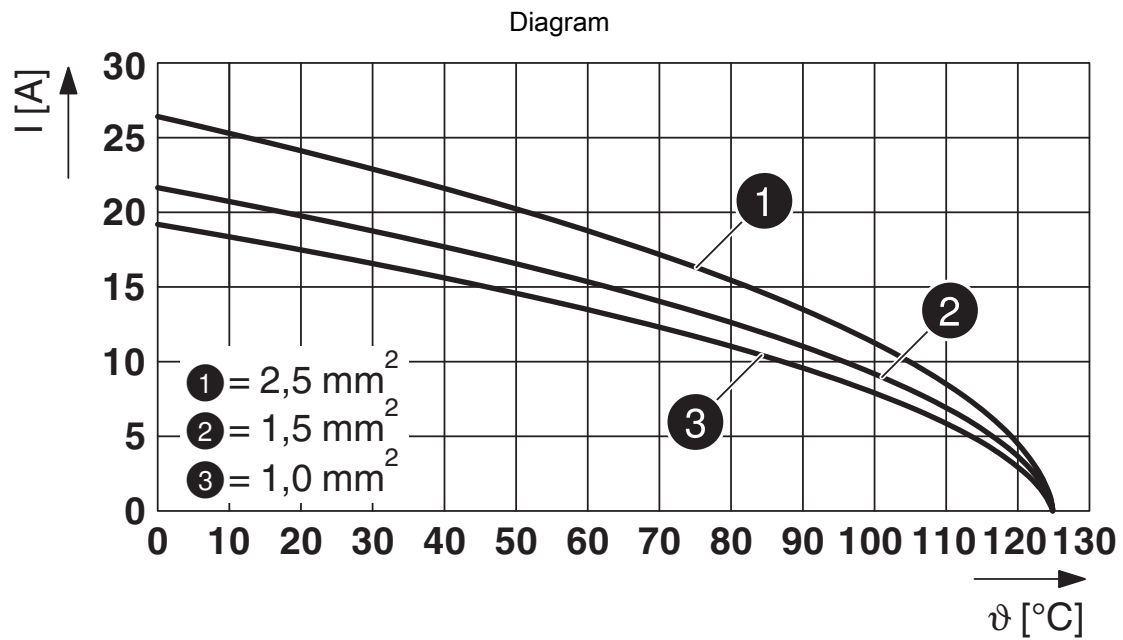


View termination side

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Derating diagram

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## Approvals

To download certificates, visit the product detail page: <https://www.phoenixcontact.com/us/products/1407745>

### DNV

Approval ID: TAE000037S



### CSA

Approval ID: 013631\_0\_000

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 15 A                  | - 14              | -                           |



### UL Recognized

Approval ID: E118976

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 20 A                  | - 14              | -                           |



### cULus Recognized

Approval ID: E468743

|       | Nominal voltage $U_N$ | Nominal current $I_N$ | Cross section AWG | Cross section $\text{mm}^2$ |
|-------|-----------------------|-----------------------|-------------------|-----------------------------|
| keine |                       |                       |                   |                             |
|       | 600 V                 | 20 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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