

# CBL-SC-24UC/04/25A - Installation contactor



1791380  
<https://www.phoenixcontact.com/us/products/1791380>

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Installation contactor (Hum-free); input voltage: 24 V AC/DC; contact switching type: 4 N/C contacts; rated current: 20 A

## Commercial data

|                                      |               |
|--------------------------------------|---------------|
| Item number                          | 1791380       |
| Packing unit                         | 5 pc          |
| Minimum order quantity               | 5 pc          |
| Sales key                            | C471          |
| Product key                          | DK6411        |
| GTIN                                 | 4067923412613 |
| Weight per piece (including packing) | 272 g         |
| Weight per piece (excluding packing) | 272 g         |
| Customs tariff number                | 85371098      |
| Country of origin                    | SI            |

## Technical data

### Product properties

|              |                        |
|--------------|------------------------|
| Product type | Installation contactor |
|--------------|------------------------|

### Electrical properties

|                                                     |                         |
|-----------------------------------------------------|-------------------------|
| Electrical service life (AC-1, AC-7a, AC-21)        | 200000 switching cycles |
| Electrical service life (AC-3, AC-3e, AC-7b, AC-23) | 500000 switching cycles |
| Electrical service life (AC-5a)                     | 100000 switching cycles |
| Electrical service life (AC-5b)                     | 100000 switching cycles |
| Electrical service life (DC-1)                      | 100000 switching cycles |

#### Insulation characteristics: Control circuit/load circuit

|                          |       |
|--------------------------|-------|
| Rated insulation voltage | 440 V |
| Rated surge voltage      | 4 kV  |

### Input data

|                     |                         |
|---------------------|-------------------------|
| Voltage             | 24 V AC/DC              |
| Voltage range (AC)  | 20.4 V AC ... 26.4 V AC |
| Voltage range (DC)  | 20.4 V DC ... 26.4 V DC |
| Mains frequency     | 50/60 Hz                |
| Response time range | 15 ms ... 45 ms         |
| Release time range  | 20 ms ... 70 ms         |
| Drive and function  | monostable              |
| Power consumption   | 3.8 VA                  |

### Output data

|                                                     |                                                                              |
|-----------------------------------------------------|------------------------------------------------------------------------------|
| Contact switching type                              | 4 N/C contacts                                                               |
| Type of switch contact                              | Single contact                                                               |
| Minimum distance                                    | 3.6 mm (open contacts)                                                       |
| Fuse                                                | ≤ 25 A (Backup fuse for short-circuit protection KS according to UL and CSA) |
| Rated operating voltage (AC/DC)                     | 400 V (IEC)                                                                  |
| Rated operating voltage                             | 480 V (UL/CSA)                                                               |
| Current (thermal)                                   | 20 A                                                                         |
| Rated operating current (AC-1, AC-7a, AC-21)        | 20 A                                                                         |
| Rated operating current (AC-3, AC-3e, AC-7b, AC-23) | 8.5 A                                                                        |
| Rated operating current (AC-5a)                     | 11.2 A (230 V)                                                               |
| Rated operating current (AC-5b)                     | 9.7 A (230 V)                                                                |
| Rated operating current (DC-1 (L/R < 1 ms), 1 pole) | 25 A (24 V DC)                                                               |
|                                                     | 20 A (48 V DC)                                                               |
|                                                     | 15 A (60 V DC)                                                               |
|                                                     | 6 A (110 V DC)                                                               |
|                                                     | 0.6 A (220 V DC)                                                             |

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|                                                                |                    |
|----------------------------------------------------------------|--------------------|
| Rated operating current (DC-1 (L/R < 1 ms), 2 poles in series) | 25 A (24 V DC)     |
|                                                                | 25 A (48 V DC)     |
|                                                                | 20 A (60 V DC)     |
|                                                                | 10 A (110 V DC)    |
|                                                                | 6 A (220 V DC)     |
| Rated operating current (DC-1 (L/R < 1 ms), 3 poles in series) | 25 A (24 V DC)     |
|                                                                | 25 A (48 V DC)     |
|                                                                | 25 A (60 V DC)     |
|                                                                | 20 A (110 V DC)    |
|                                                                | 15 A (220 V DC)    |
| Rated operating current (DC-1 (L/R < 1 ms), 4 poles in series) | 25 A (24 V DC)     |
|                                                                | 25 A (48 V DC)     |
|                                                                | 25 A (60 V DC)     |
|                                                                | 20 A (110 V DC)    |
|                                                                | 15 A (220 V DC)    |
| Rated operating power (AC-1, AC-7a, AC-21)                     | 5.4 kW (1~, 230 V) |
|                                                                | 9 kW (3~, 230 V)   |
|                                                                | 16 kW (3~, 400 V)  |
| Rated operating power (AC-3, AC-3e, AC-7b, AC-23)              | 1.3 kW (1~, 230 V) |
|                                                                | 2.2 kW (3~, 230 V) |
|                                                                | 4 kW (3~, 400 V)   |
| Mains frequency                                                | 50/60 Hz           |

## Connection data

### Coil

|                                  |                                             |
|----------------------------------|---------------------------------------------|
| Connection method                | Screw connection                            |
| Stripping length                 | 7 mm                                        |
| Screw thread                     | M3                                          |
| Conductor cross-section rigid    | 1.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section flexible | 1.5 mm <sup>2</sup> ... 2.5 mm <sup>2</sup> |
| Conductor cross-section AWG      | 16 ... 14                                   |
| Tightening torque                | 0.5 Nm ... 0.6 Nm                           |

### Contact

|                                        |                                          |
|----------------------------------------|------------------------------------------|
| Connection method                      | Screw connection                         |
| Stripping length                       | 9 mm                                     |
| Screw thread                           | M3,5                                     |
| Conductor cross-section rigid          | 1 mm <sup>2</sup> ... 10 mm <sup>2</sup> |
| Conductor cross-section flexible       | 1 mm <sup>2</sup> ... 6 mm <sup>2</sup>  |
| Conductor cross-section AWG (rigid)    | 18 ... 8                                 |
| Conductor cross-section AWG (flexible) | 18 ... 10                                |
| Tightening torque                      | 1.1 Nm ... 1.2 Nm                        |

## Dimensions

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## Item dimensions

|        |                                   |
|--------|-----------------------------------|
| Width  | 35 mm                             |
| Height | 85 mm                             |
| Depth  | 64.9 mm                           |
|        | 60 mm (from top edge of DIN rail) |

## Material specifications

|       |                       |
|-------|-----------------------|
| Color | light gray (RAL 7035) |
|-------|-----------------------|

## Environmental and real-life conditions

### Ambient conditions

|                                         |                                                                |
|-----------------------------------------|----------------------------------------------------------------|
| Degree of protection                    | IP20                                                           |
|                                         | IP40 (for installation in a junction box - distribution board) |
| Ambient temperature (operation)         | -5 °C ... 40 °C                                                |
| Ambient temperature (storage/transport) | -30 °C ... 80 °C                                               |
| Altitude                                | ≤ 2000 m                                                       |
| Shock (operation)                       | switched contacts: 15g (Z-axis) and 2g (X-axis)                |
| Shock (storage/transport)               | unswitched contacts: 10g (Z-axis and X-axis)                   |
| Vibration (operation)                   | switched contacts: 3g (Z-axis) and 1g (X-axis)                 |
| Vibration (storage/transport)           | unswitched contacts: 2g (Z-axis and X-axis)                    |
| Noise level                             | 20 dB                                                          |

## EMC data

|                               |                                        |
|-------------------------------|----------------------------------------|
| Electromagnetic compatibility | Conformance with EMC directive         |
| Low Voltage Directive         | Conformance with Low Voltage Directive |

## Mounting

|                   |                                                                            |
|-------------------|----------------------------------------------------------------------------|
| Mounting type     | DIN rail mounting                                                          |
| Assembly note     | Number of contactors or switches next to each other < 40°C: no restriction |
| Mounting position | vertical (DIN rail horizontal, see mounting drawing)                       |

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## Approvals

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**cULus Listed**

Approval ID: E228652

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## Classifications

### ECLASS

|             |          |
|-------------|----------|
| ECLASS-13.0 | 27142308 |
| ECLASS-15.0 | 27142308 |

### ETIM

|           |          |
|-----------|----------|
| ETIM 10.0 | EC001653 |
|-----------|----------|

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%               |
| EF3.1 Climate Change                    |                                          |
| CO2e kg                                 | 1.97 kg CO2e                             |