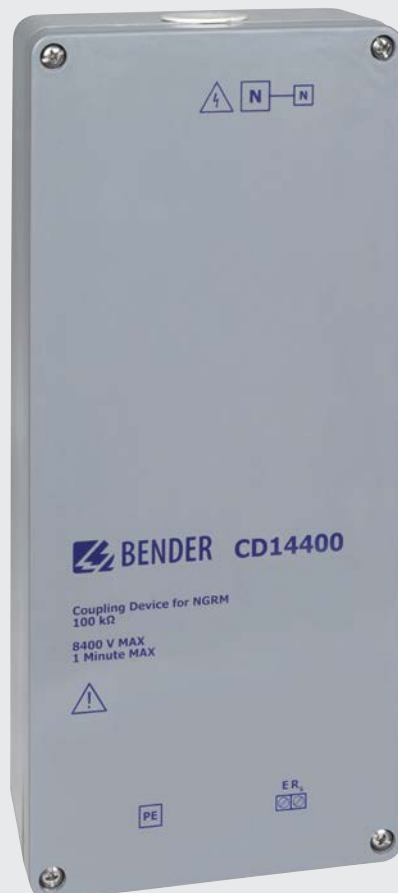


Coupling device CD14400



Coupling device CD14400



Product description

The CD14400 can be used with an NGR monitor in HRG systems with a system voltage U_{LL} up to 14.4 kV ($U_{NGR} = 8.4$ kV).

The maximum operating altitude is 5000 m above mean sea level.

Application:

- The coupling device is suitable for HRG applications up to a system voltage of 14400 V.

Function

The combination of an NGR monitor and a coupling device extends the range of application of the neutral grounding resistor monitor up to a system voltage of 14.4 kV. The duty time is limited to 60 s (1 minute), the cool-down period is 120 minutes.

Device features

- Coupling device for NGRM
- Range of use up to 14400 V system voltage
- Application up to 5000 m
- IP54

Ordering details

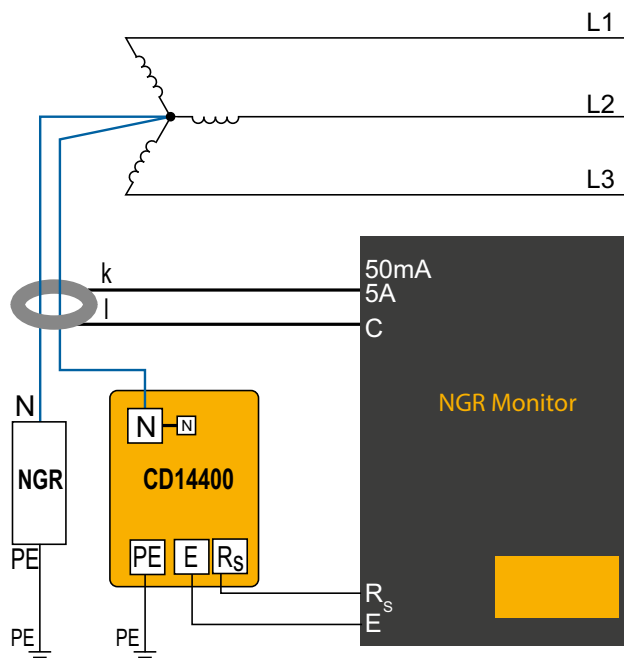
| Nominal system voltage U_n | Type | Art. No. |
|--|---------|-----------|
| Up to $U_{LL} = 14400$ V ($U_{NGR} = 8400$ V) | CD14400 | B98039054 |

Certifications

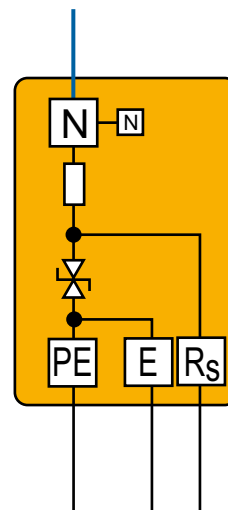


Wiring diagrams

Wiring diagram



Internal wiring diagram CD14400



| Terminal | Use | Connecting cable | |
|----------|---|-----------------------|------------------|
| | | Metrical | Imperial |
| R_S | Connection to R_S of the NGRM... | 1.5 mm ² | AWG16 |
| E | Connection to E of the NGRM...; internally connected to PE | | |
| N | Connection to the star point of the HRG system; via cable lug M5 or M10 | ≥ 1.5 mm ² | AWG16 or greater |
| PE | Connection to protective earth conductor; internally connected to E, cable lug M5 | | |

Technical data

Insulation coordination DIN EN 50178:1997

| | |
|--|----------------|
| Definitions | |
| Measuring circuit (IC1) | N |
| Output circuit (IC2) | R _S |
| Protective circuit (IC3) | E, PE |
| Rated voltage | 8400 V |
| Overvoltage category | III |
| Pollution degree | 2 |
| Rated insulation voltage | |
| no galvanic separation between the circuits! | |
| IC1/(IC2 – IC3) | 8400 V |
| IC2/IC3 | 50 V |

Voltage range

| | | |
|-------------------------------|--|-------------|
| U _n | DC / 50/60 Hz / 50...3200 Hz | 8400 V |
| I _n | | 84 mA |
| Operating time | | |
| without ground fault (1900 V) | | unlimited |
| with ground fault (4200 V) | | 90 seconds |
| with ground fault (8400 V) | | 60 seconds |
| Cool-down period | | 120 minutes |
| Overload capacity | 1.15 x U _n for < 30 seconds | |

Resistance

| | |
|-------------------------|----------|
| 100 kΩ | ±0.5 % |
| Temperature coefficient | 20 ppm/K |

Environment

| | |
|--|--------------|
| Ambient temperature | -40...+70 °C |
| Ambient temperature for U _L | -40...+60 °C |
| Humidity | ≤ 98 % |

Classification of climatic conditions acc. to IEC 60721

(except condensation and formation of ice)

| | |
|-----------------------------------|--------------------|
| Stationary use (IEC 60721-3-3) | 3K5 |
| Transport (IEC 60721-3-2) | 2K3 (-40...+85 °C) |
| Long-term storage (IEC 60721-3-1) | 1K4 (-40...+70 °C) |

Classification of mechanical conditions acc. to IEC 60721

| | |
|-------------------|-----|
| Stationary use | 3M7 |
| Transport | 2M2 |
| Long-term storage | 1M3 |

Connection

Connection R_S and E

| | |
|---------------------|--------------------------------|
| Tightening torque | 0.5...0.6 Nm (4.4...5.3 lb-in) |
| Conductor sizes | AWG 24-12 |
| Stripping length | 7 mm |
| Conductor, rigid | 0.2...4 mm ² |
| Conductor, flexible | 0.2...2.5 mm ² |

Multiple conductor, flexible with ferrule

| | |
|------------------------|----------------------------|
| without plastic sleeve | 0.25...1.5 mm ² |
| with plastic sleeve | 0.25...2.5 mm ² |

Multiple conductor, flexible with TWIN ferrule

| | |
|---------------------|---------------------------|
| with plastic sleeve | 0.5...1.5 mm ² |
|---------------------|---------------------------|

Connection N and PE

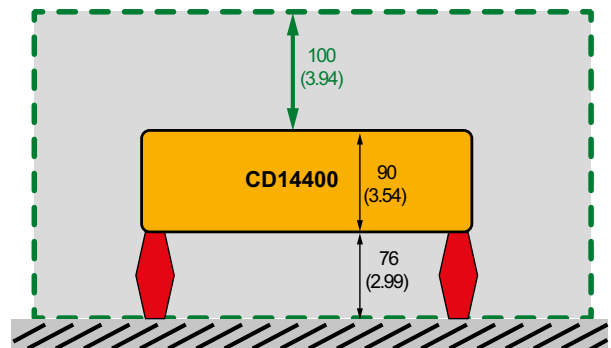
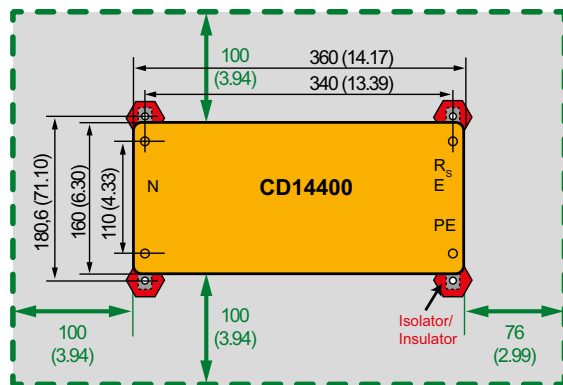
| | |
|---------------------------------|---------------------|
| Tightening torque cable lug M10 | 17 Nm (150 lb-in) |
| Tightening torque cable lug M5 | 2.2 Nm (19.5 lb-in) |

Other

| | |
|--|--|
| Tightening torque | |
| cover screws | 2.5 Nm (22.1 lb-in) |
| mounting screws | 21 Nm (186 lb-in) |
| Operating mode | in case of a ground fault maximum 60 s |
| Mounting | any position |
| Operating altitude | up to 5000 m AMSL |
| Degree of protection, internal components (DIN EN 60529) | IP54 |
| Flammability class | UL 94V-0 |
| Documentation number | D00346 |
| Weight | < 4.4 kg |

Dimension diagram

Dimensions in mm (in)



Tightening torque cover screws: 2.5 Nm (22.1 lb-in)

←→ Minimum distance to adjacent devices



Bender GmbH & Co. KG

P.O. Box 1161 • 35301 Grünberg • Germany

Londorfer Straße 65 • 35305 Grünberg • Germany

Tel.: +49 6401 807-0 • Fax: +49 6401 807-259

E-mail: info@bender.de • www.bender.de



BENDER Group