

# Coupling device CD14400



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### 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

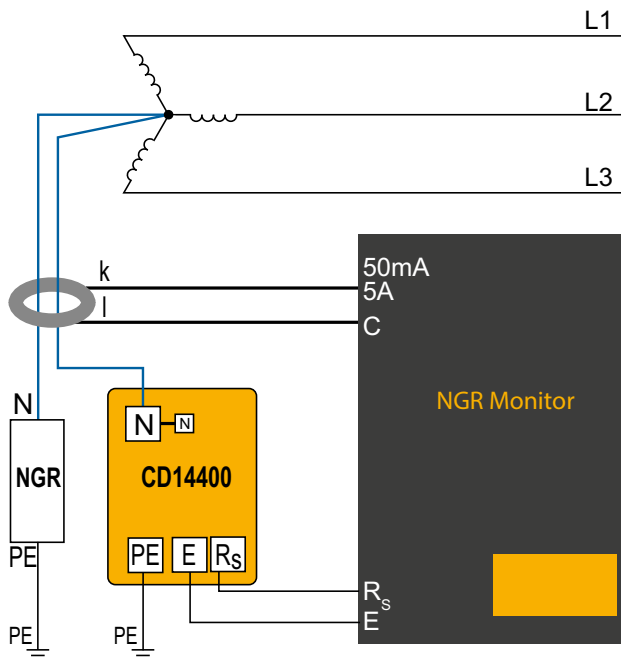
Nominal system voltage $U_n$	Type	Art. No.
Up to $U_{LL} = 14400$ V ( $U_{NGR} = 8400$ V)	CD14400	B98039054

### Certifications

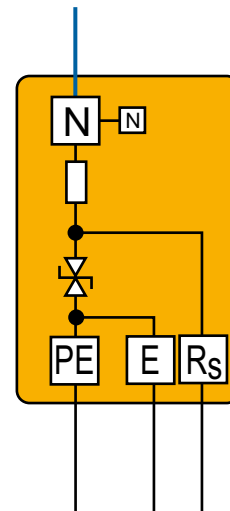


### Wiring diagrams

#### Wiring diagram



#### Internal wiring diagram CD14400



Terminal	Use	Connecting cable	
		Metrical	Imperial
$R_S$	Connection to $R_S$ of the NGRM...	1.5 mm <sup>2</sup>	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 <sup>2</sup>	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 <sub>S</sub>
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 <sub>n</sub>	DC / 50/60 Hz / 50...3200 Hz	8400 V
I <sub>n</sub>		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 <sub>n</sub> for < 30 seconds	

**Resistance**

100 kΩ	±0.5 %
Temperature coefficient	20 ppm/K

**Environment**

Ambient temperature	-40...+70 °C
Ambient temperature for U <sub>L</sub>	-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<sub>S</sub> 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 <sup>2</sup>
Conductor, flexible	0.2...2.5 mm <sup>2</sup>

**Multiple conductor, flexible with ferrule**

without plastic sleeve	0.25...1.5 mm <sup>2</sup>
with plastic sleeve	0.25...2.5 mm <sup>2</sup>

**Multiple conductor, flexible with TWIN ferrule**

with plastic sleeve	0.5...1.5 mm <sup>2</sup>
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**Connection N and PE**

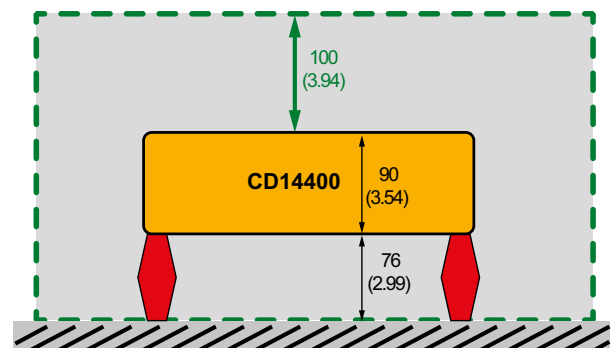
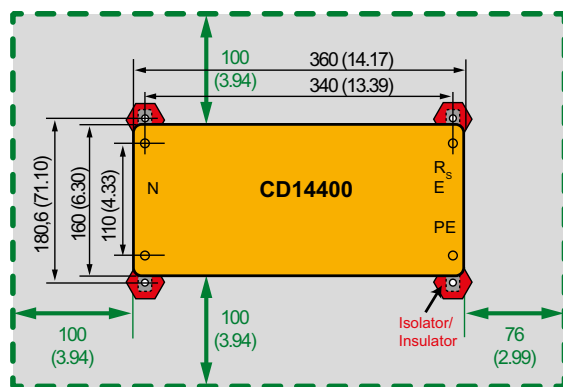
Tightening torque cable lug M10	17 Nm (150 lb-in)
Tightening torque cable lug M5	2.2 Nm (19.5 lb-in)

**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



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