

Coupling device CD25000



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Product description

The CD25000 can be used with an NGR monitor in HRG systems with a system voltage up to $U_{LL} = 25 \text{ kV}$ ($U_{NGR} = 14.5 \text{ kV}$).

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

Application

- The coupling device is suitable for HRG applications up to AC 25 kV and/or DC 14.5 kV.

Function

The combination of an NGRM... and a coupling device extends the range of application of the neutral grounding resistor monitor up to a system voltage of 25 kV. The duty time is limited to 10 s (minute), the cool-down period is 120 minutes.

Ordering details

Type	U_{LL}	U_{NGR}	Art. No.
CD25000	up to 25000 V	14500 V	B98039055

Device features

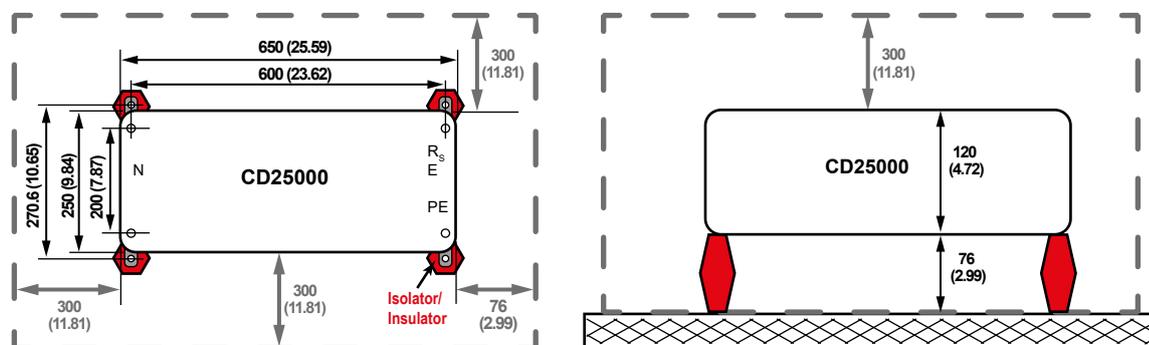
- Coupling device for NGRM
- Range of use up to AC 25 kV/DC 14.5 kV system voltage
- Application up to 5000 m

Certifications



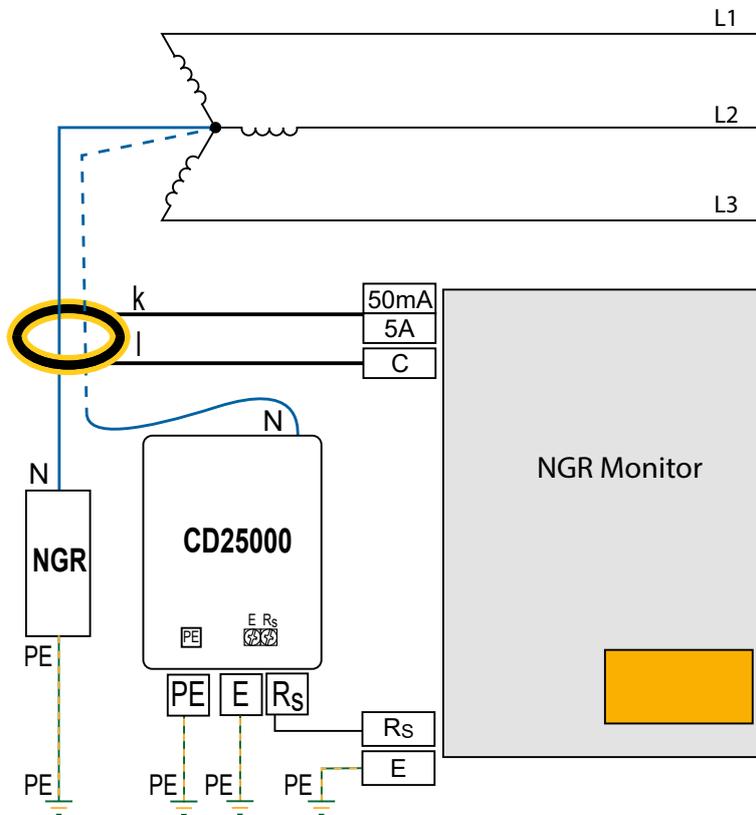
Dimension diagram

Dimensions in mm (in)

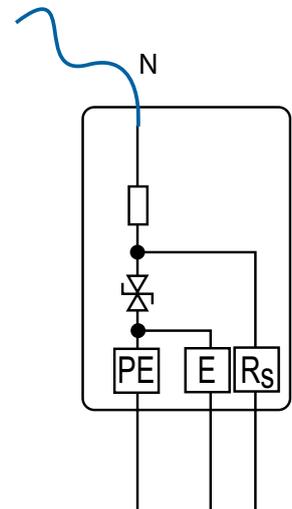


Wiring diagrams

Wiring diagram



Internal wiring diagram CD25000



i The „N“ terminal of the CD25000 should be connected directly to the star point of the transformer, so that the connection between NGR and star point is also monitored.
 A direct connection between the „N“ connections of the CD25000 and the NGR is not recommended, as in this case a line interruption between the star point and the NGR connection „N“ would not be monitored.

Terminal	Use	Connecting cable	
		Metrical	Imperial
N	Connection to the star point of the HRG system: permanently connected cable (1.8 m), cable lug provided by the customer	0.36 mm ²	
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	1.5 mm ²	AWG16
PE	Connection to the protective conductor, internally connected to E, M5 cable lug	≥ 1.5 mm ²	AWG16 or greater

Technical data

Insulation coordination DIN EN 50178:1997

Definition	
Measuring circuit (IC1)	N
Output circuit (IC2)	R _S
Protective circuit (IC3)	E, PE
Rated voltage	14500 V
Overtoltage category	III
Pollution degree	2
Rated insulation voltage	
no galvanic separation between the circuits!	
IC1/(IC2 – IC3)	14500 V
IC2/IC3	50 V

Voltage range

U_n	DC, 50/60 Hz, 10...3200 Hz	14500 V
I_n		145 mA

Operating time

without ground fault (2800 V)	unlimited
with ground fault (14500 V)	10 seconds
Cool-down period	120 minutes
Overload capacity	1.15 x I_n for < 10 seconds

Resistance

100 k Ω	± 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

(related to temperature and relative humidity)

Stationary use (IEC 60721-3-3)	3K22
Transport (IEC 60721-3-2)	2K11
Long-term storage (IEC 60721-3-1)	1K22

Classification of mechanical conditions acc. to IEC 60721

Stationary use	3M12
Transport	2M4
Long-term storage	1M12

Connection

<i>Connection R_S and E</i>	
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 ferrule 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 PE for cable lug

Tightening torque cable lug M5	2.2 Nm (19.5 lb-in)
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Connection N

Connection via HV line with open end	cable lug provided by the customer
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Other

Operating mode	in case of a ground fault maximum 10 s
Mounting	any position
Tightening torque cover screws	2.5 Nm (22.1 lb-in)
Operating altitude (when mounted on insulators)	up to 5000 m AMSL
Degree of protection, internal components (DIN EN 60529)	IP54
Flammability class	UL 94V-0
Documentation number	D00347
Weight	< 11 kg



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