

• Indication of the phase order in a three-phase systems

Network frequency : 50Hz , 60Hz and 400Hz (40Hz....500Hz)

• Led status indicator

- Normal , reverse and phase loss

• DOP23 : Phase sequence ok, phase presence ok

Solid state relay or electromagnetic relay output

• DOP23L: phase presence ok

Electromagnetic relay output



The DOP23 relay is for monitoring phase order on a three phase electrical system that can be changed and whose direction of rotation is important (eg. Pumps, saws and drills). An output contact indicating the correct sequence order of the phase and the presence of all phases can be used to validate the power on of the installation. The LEDs on the front panel allow easy diagnosis (normal, reverse order or phase failure).

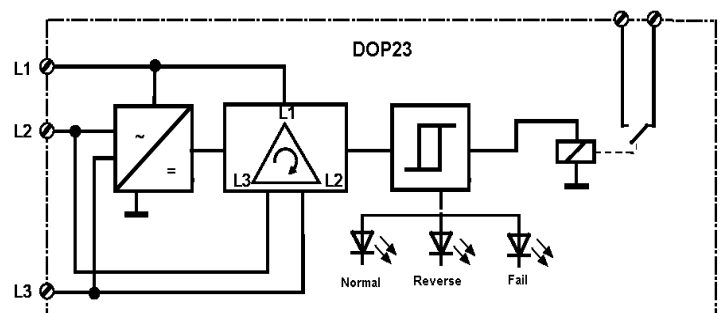
Description:

- Phase order detection,
- Phase failure or phase loss detection,
- Fuses monitoring,
- Led status indication,
- Self powered module

Feature:

- DIN rail mounting (symmetrical)
- Screw terminal blocks (up to 2.5 mm²)
- Conformal coating
- Protection rating : IP20 (enclosure/ terminal blocks)
- Solid state relay 60V 0.5A (normally open contact)
- option: electromagnetic changeover contact relay 6A 250Vac

Synoptic



Version and order :

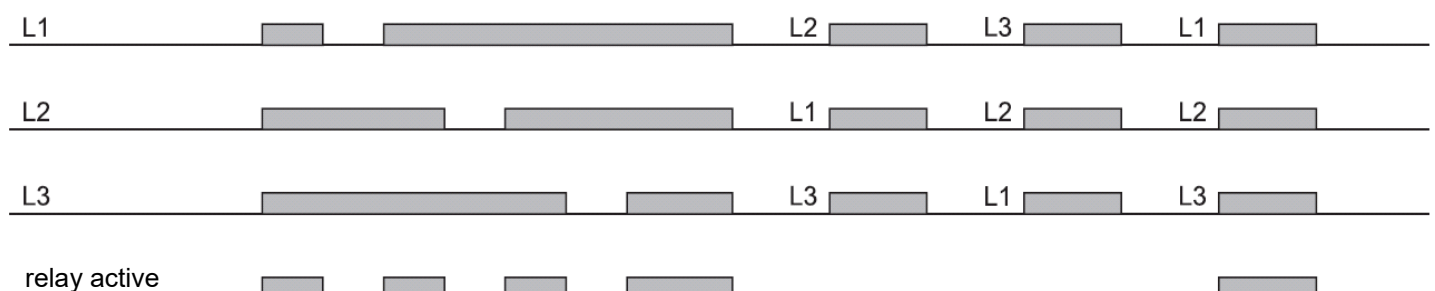
[Request a quote](#)

- DOP23/1** : version for 90 - 140V between phase (40Hz...500Hz)
- DOP23/2** : version for 200 - 240V between phase (40Hz...500Hz)
- DOP23/4** : version for 380 - 500V between phase (40Hz...500Hz)
- DOP23/5** : version for 550 - 700 volts between phase (40Hz...500Hz)

Option : **-RE** : Changeover contact relay 6A 250V. (35mm width case)

DOP23L : presence phase monitoring only
(No phase sequence control)

Operating diagram



INPUT / POWER SUPPLY

TYPE 3 wires (L1,L2,L3) RANGE

DOP23 / 1: version for 90 to 140 volts between phase - 40...500 Hz
DOP23 / 2: version for 200 to 240 volts between phase - 40...500 Hz
DOP23 / 4: version for 380 to 500 volts between phase - 40...500 Hz
DOP23 / 5: version for 550 to 700 volts between phase - 40...500 Hz
 Current consumption < 3mA per phase

OUTPUT RELAY

DOP23: Static relay, normally open contact, free potential
 Resistive power switching 50V - 500 mA
 ON resistance 1 ohms
 Isolation 2500 Vac
 Leakage current < 1uA

DOP23-RE : Electromagnetic relay, changeover contact
 Resistive power switching 250V - 6A (1500VA)
 Dielectric strength 1.2 / 50 μ s , 6000V
 isolation 4000Vac

Maximum Rise Time. 400 ms (correct phase order)
 Release delay max. 400 ms (phase failure)
 (security to avoid spurious switching)

ENVIRONMENT

Operating temperature -20 to 60 °C
 Storage temperature -25 to 85 °C
 Hygrometry 85 % not condensed

Weight 120 g
 Protection rating IP20

MTBF (MIL HDBK 217F) > 3 000 000 Hrs @ 25°C
 Life time > 200 000 Hrs @ 30°C

Electromagnetic compatibility 2014/30/UE / Low Voltage Directive 2014/35/UE

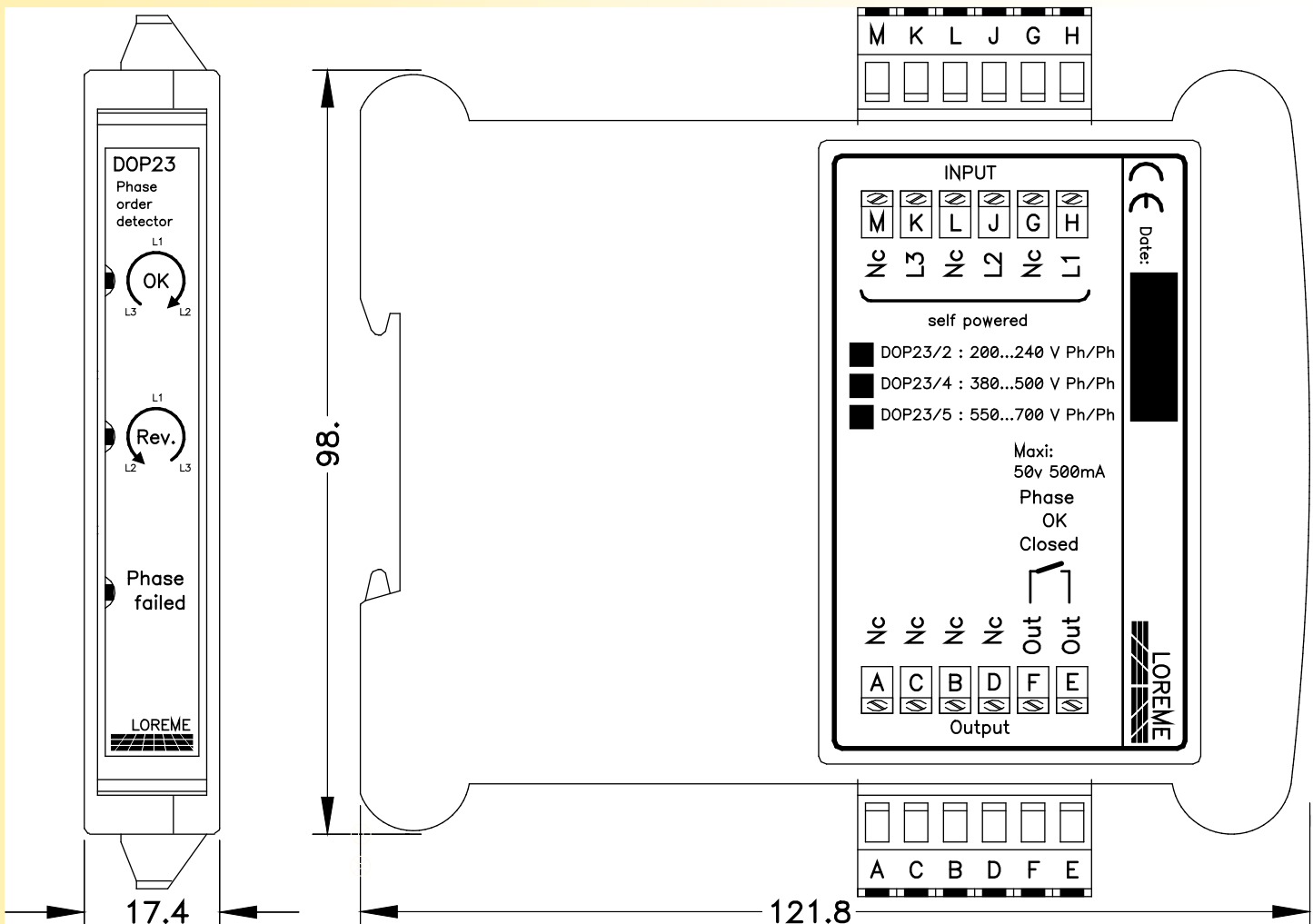
Immunity standard for industrial environments
EN 61000-6-2Emission standard for industrial environments
EN 61000-6-4

EN 61000-4-2 ESD	EN 61000-4-8 AC MF
EN 61000-4-3 RF	EN 61000-4-9 pulse MF
EN 61000-4-4 EFT	EN 61000-4-11 AC dips
EN 61000-4-5 CWG	EN 61000-4-12 ring wave
EN 61000-4-6 RF	EN 61000-4-29 DC dips

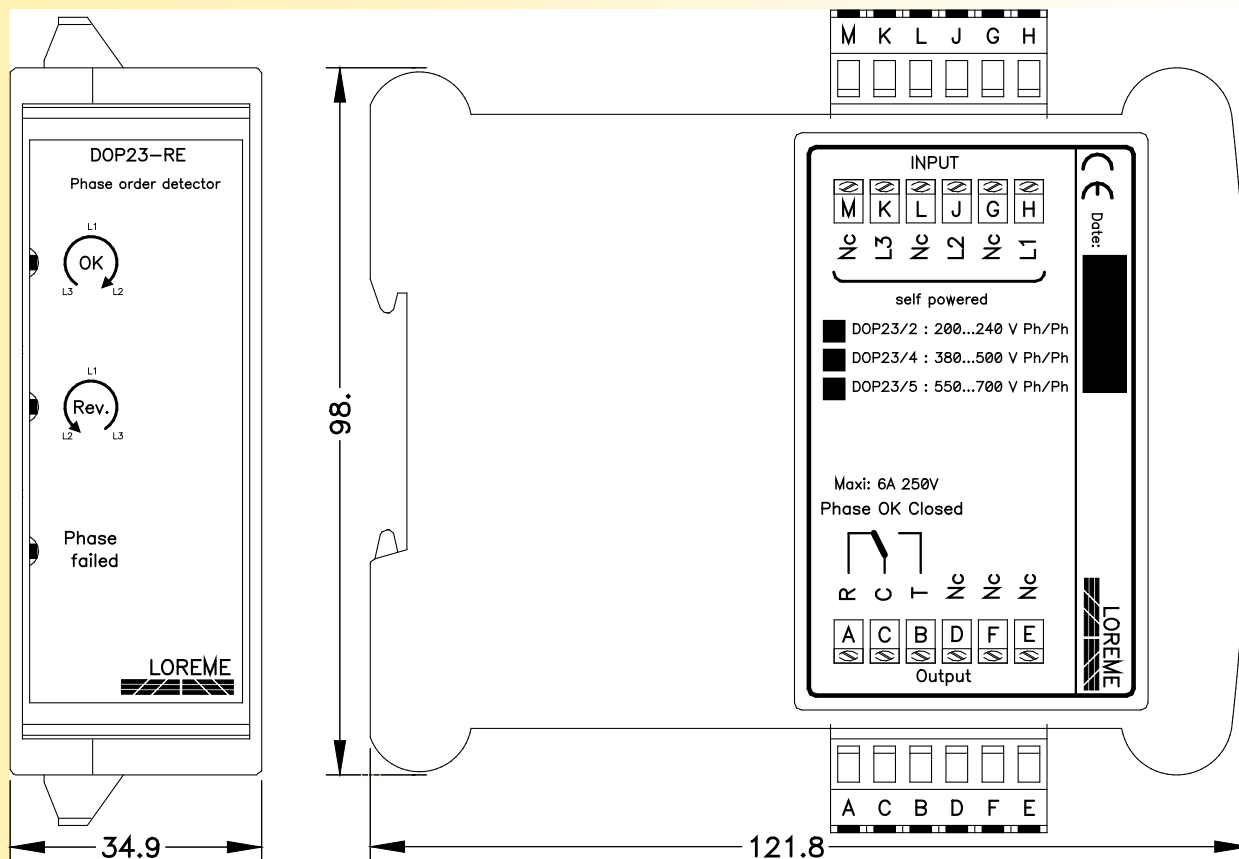
EN 55011
 group 1
 class A



WIRING AND OUTLINE DIMENSIONS:

DOP23 : Presence and phase order control, solid state relay output, NO contact, 50V 0.5A

DOP23-RE : Presence and phase order control, changeover contact relay, 250V 6A



DOP23L : Presence phase monitoring only

