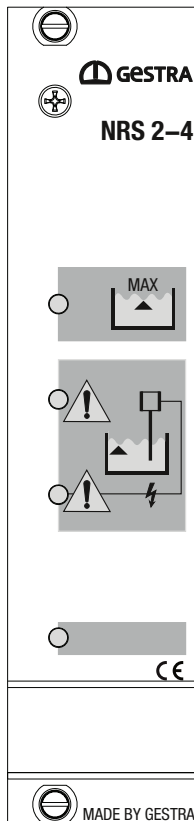
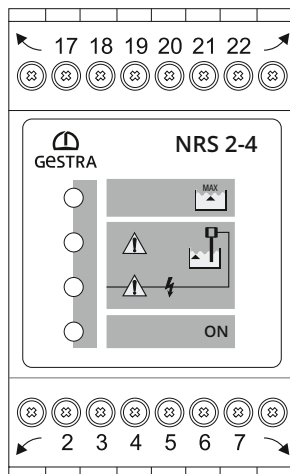


NRS 2-4d



NRS 2-4b



Level Switch

NRS 2-4

System description

The NRS 2-4 level switch is an analogue electronic amplifier for NRG 29 or NRG 211 capacitance level electrodes.

In combination with these NRG 29 or NRG 211 electrodes, the NRS 2-4 can detect a high water level, analyse a malfunction signal from the electrodes and monitor the electrode supply cable. The level switch can therefore be used in power plants as part of a controlled drainage system.

Function

The incoming measuring voltage is decoded as a function of its magnitude and indicated by LEDs as a malfunction in the electrode supply cable or in the electrode and when the electrode is exposed or submerged. In the case of malfunctions, the "Malfunction" output relay is energized. When the electrode is submerged, the "Alarm" output relay is energized.

Optocouplers are connected in parallel and assigned to the output relays. They are energized when signals are present.

Design

NRS 2-4b

Equipment in DIN rail case for installation in a control cabinet on a 35 x 7.5 mm DIN rail

NRS 2-4d

Spare 19" plug-in

Important notes

Electrical connection

Use a shielded, four-core cable as the supply cable, e.g. LIYCY 4 x 0.5 mm², maximum length 500 m.

Connect the shield to the central earthing point (CEP) at the control cabinet end.

Route the connecting cable to the level electrode separately from power lines.

Technical data

Supply voltage

24V DC +/-20%

Power consumption

3 W

Measuring circuit output

12 V DC (supply voltage to level electrode) 30 mA

Measuring circuit input

1 – 10 V DC (measuring voltage from level electrode)

Control circuit outputs

Two volt-free relay contacts.

Maximum contact rating with switching voltages

of 24 V, 115 V and 230 V AC: 4 A resistive,

0.75 A inductive at $\cos \varphi = 0.5$.

Maximum contact rating at a switching voltage of 24 V DC: 4 A.

Two optocouplers (NPN), short-circuit-protected due to inherent current limiting characteristics.

Max. ratings: 70 V, 10 mA.

Indicators and controls

1 green "Power" LED, 1 red "High level" LED,

1 yellow "Defective electrode" LED,

1 yellow "Cable malfunction" LED.

Protection

IP 10 to DIN 40050

Admissible ambient temperature

0 °C to + 70 °C

Case

Design b:

DOLD case K04763 (16 pins), mounting clip on DIN rail to IEC/EN 60 175

Design d:

19" plug-in with front panel to EN 60297-3-100

and Eurocard connector (32-pin) to DIN 41612

on the back for installation in 19" racks.

Front panel: Aluminium.

Weight

Design b: approx. 0.25 kg

Design d: approx. 0.6 kg

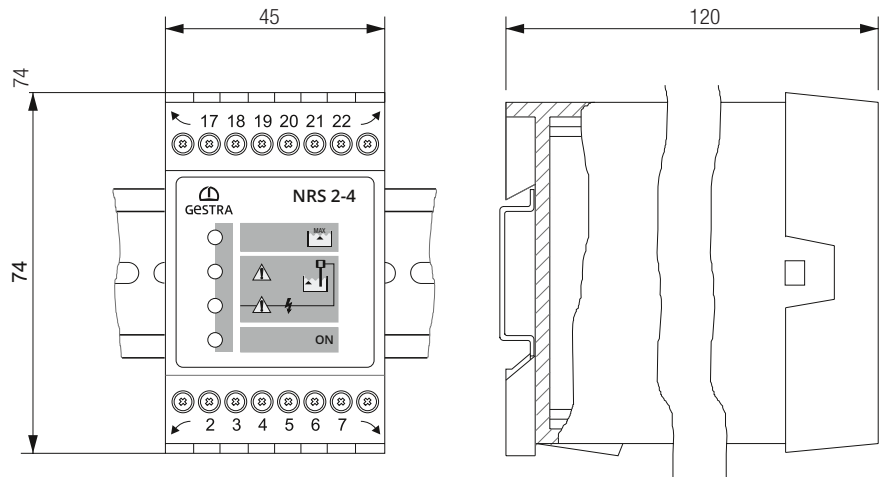
How to order

GESTRA Level Switch NRS 2-4

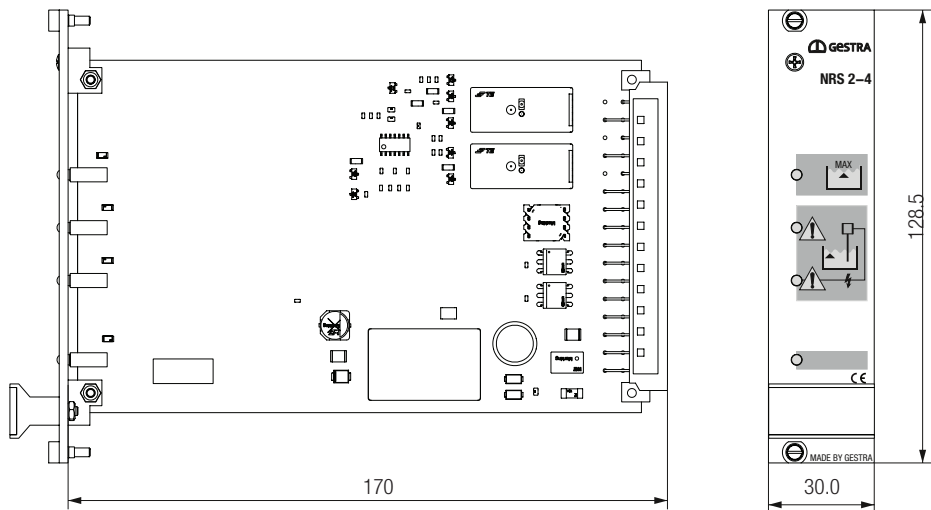
■ DOLD DIN rail case NRS 2-4b

■ Spare 19" plug-in NRS 2-4d

NRS 2-4b



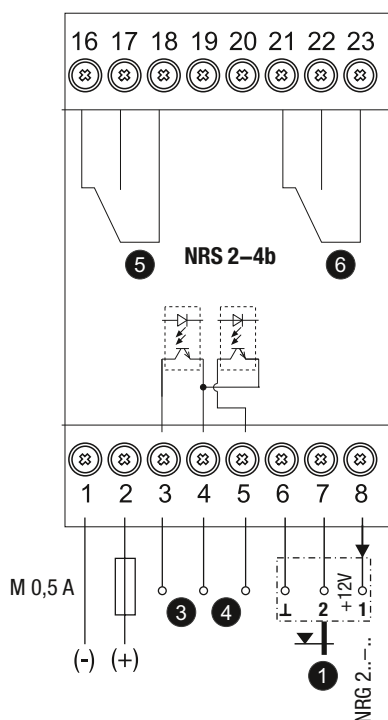
NRS 2-4d



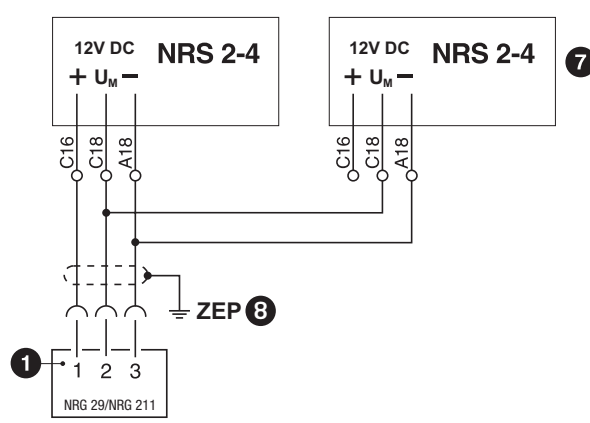
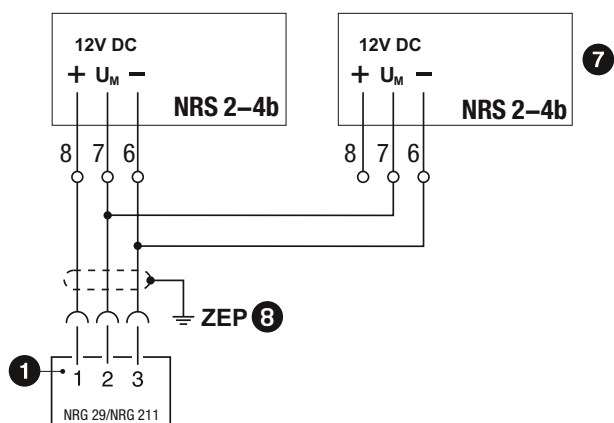
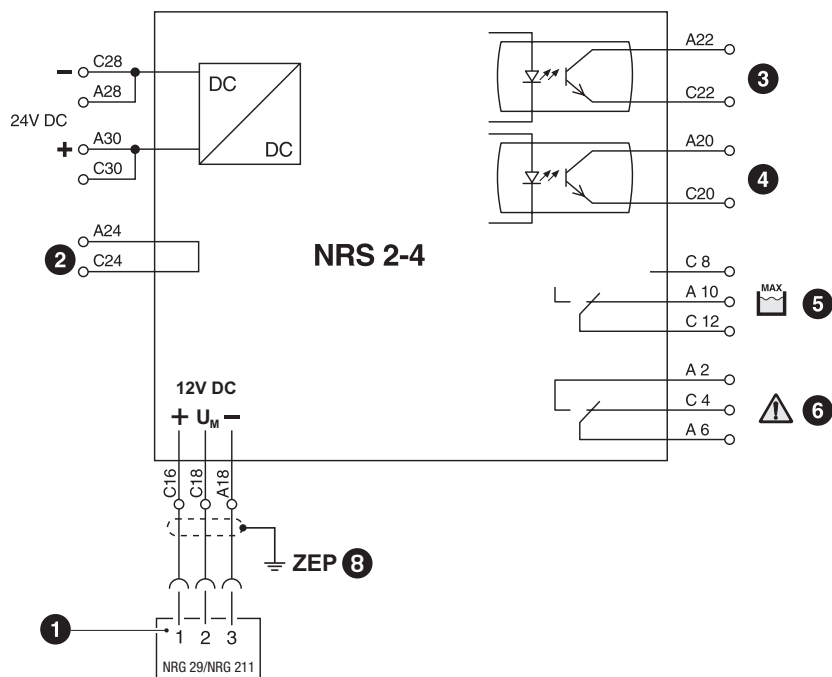
Level Switch NRS 2-4

Wiring diagrams

NRS 2-4b



NRS 2-4d



- ① NRG 29 / NRG 211
- ② Test loop
- ③ Alarm
- ④ Malfunction
- ⑤ Alarm
- ⑥ Malfunction
- ⑦ Two NRS 2-4 connected in parallel (double redundancy)
- ⑧ Cable shield connected to CEP (central earthing point) at control cabinet end

Directives and standards

You can find details on the conformity of the equipment and the relevant standards and directives, where applicable, in the Declaration of Conformity and associated certificates or approvals.

Please note our general terms of business.

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