

## Level Switch NRS 2-4

### System Description

The level switch NRS 2-4 is an analogue electronic amplifier for the capacitance electrode type NRG 211.

In combination with this level electrode it can detect high water level. In addition, the level switch evaluates possible malfunction signals coming from the electrode and monitors the electrode supply cable and can therefore be used as part of a controlled draining system in power stations.

### Function

The measuring voltage delivered by the electrode is decoded as a function of its magnitude and indicated by LEDs when there is a malfunction in the electrode supply cable or in the electrode and when the electrode is exposed or submerged (high level).

In the case of a malfunction the output relay MALFUNCTION is energized. When the electrode is submerged (high level) the output relay ALARM is energized.

Optocouplers are connected in parallel and assigned to the output relays. They will be energized in the event of a malfunction or an alarm.

### Design

#### NRS 2-4 c

19" slide-in unit with guide rails and 32 pole screw-type connector for installation in 19" magazines to DIN 41494 part 5.

#### NRS 2-4 d

Spare 19" slide-in unit.

### Important Note

Use screened four-core cable, e.g. 4 x 0.5 mm<sup>2</sup>. Max. cable length 500 m.

### Technical Data

#### Supply voltage

18 - 36 V DC

#### Power consumption

2 VA

#### Output – Measuring circuit

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

#### Input – Measuring circuit

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

#### Output – Control circuit

2 volt-free relay contacts

Max. contact rating with switching voltages of 24/115 / 230 V AC: 4 A resistive, 0.75 A inductive at cos φ 0.5.

Max. contact rating with switching voltage

24 V DC: 4 A.

Service life of relay: 30 x 10<sup>6</sup> switching cycles

2 optocouplers (npn), short-circuit protected due to inherent current limiting characteristics.

Max. ratings: 70 V, 10 mA.

#### Indicators and adjustors

1 green LED OPERATION, 1 red LED HIGH LEVEL,

1 yellow LED DEFECTIVE ELECTRODE, 1 yellow LED

MALFUNCTION IN CABLE.

#### Protection

IP 10 to DIN 40050

#### Max. admissible ambient temperature

0 °C to + 70 °C

#### Case

19" slide-in unit with front panel to DIN 41494 part 5 and rear 32 way Euro card connector to DIN 41612 for installation into 19" magazine.

Front panel: aluminium.

#### Weight

Approx. 0.6 kg

### Order and Enquiry Specification

GESTRA Level switch NRS 2-4

■ 19" slide-in unit with guide rails  
NRS 2-4 c

■ Spare 19" slide-in unit  
NRS 2-4 d

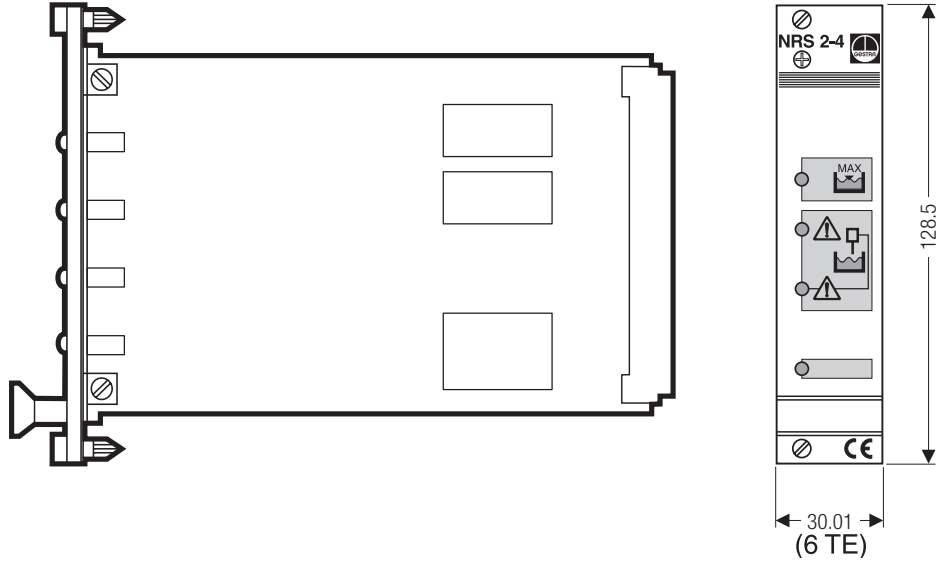
### Ancillary Unit

■ Level electrode NRG 211

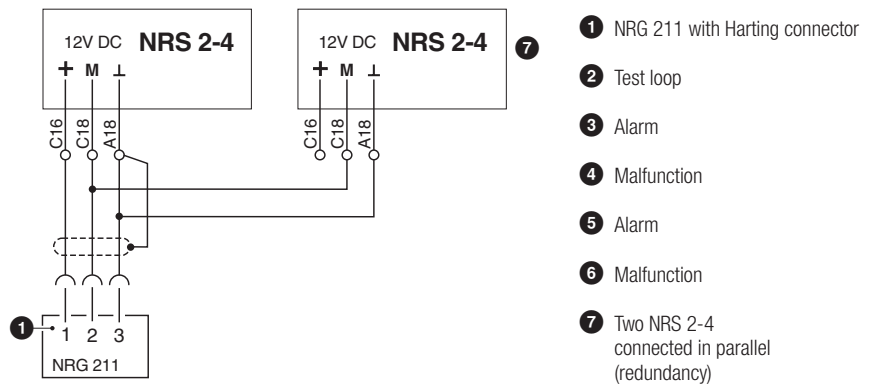
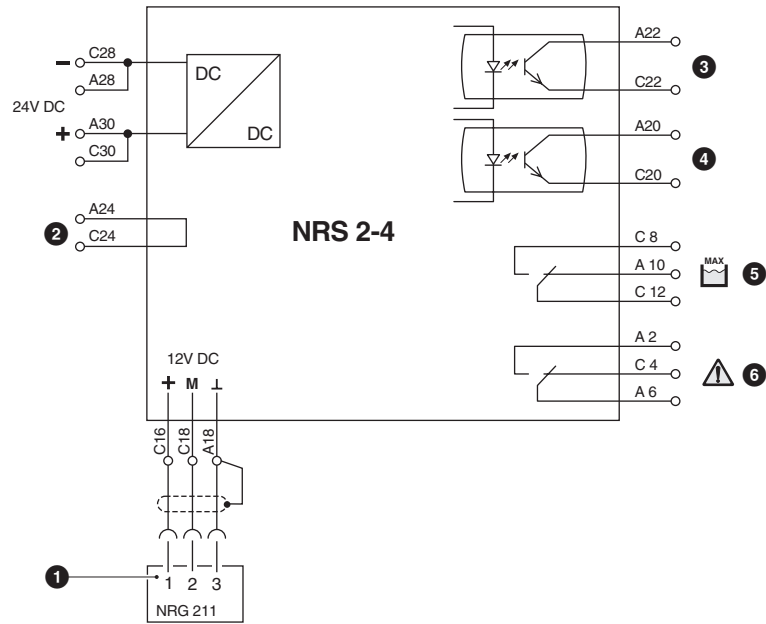
■ Power supply unit URN 2

Level Switch Type  
**NRS 2-4**

**Dimensions**



**Wiring Diagram**  
 Design "c" / "d"



Supply in accordance with our general terms of business.

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