

NRG 16-50 S with four-pole connector

Water Level Limiter

Level Electrode

NRG 16-50 S

Description

The level electrode NRG 16-50 S is used in conjunction with level switch NRS 1-50 (de-energizing delay: 15 seconds) as water-level limiter for steam boilers and (pressurized) hot-water installations on board of seagoing vessels, mobile offshore platforms or river boats.

Water level limiters switch off the heating when the water level falls below the set minimum level (low water).

Function

When the water level falls below the low level, the level electrode is exposed and a low level alarm is triggered in the level switch NRS 1-50. This switchpoint "Low water level (LW)" is determined by the length of the electrode tip.

After the de-energizing delay has elapsed, the two output contacts of the level switch will open the safety circuit for the heating. The equipment has a factory set default de-energizing delay of 15 seconds to compensate for the movements of the ship.

The electrode operation is based on the conductive measuring principle using the electrical conductivity of the water for signalling water level. The self-monitoring function ensures that an alarm will also be triggered if the electrode insulation is contaminated or has developed a leak or if there is a malfunction in the electrical connection.

The level electrode is installed inside steam boilers, vessels or inlet lines of hot-water systems. The protection tube provided on site ensures the correct functioning.

If the level electrode is installed in an isolatable level pot outside the boiler, make sure that the connecting lines are rinsed regularly. In addition, the logic unit SRL 6-50 is required to monitor the purging times and the purging sequence.

If the connecting lines for steam ≥ 40 mm and water ≥ 100 mm, the installation is considered to be internal. In this case the rinsing processes do not have to be monitored.

Technical Data

Service pressure

PN 40, 32 bar at 238°C

Mechanical connection

Flange PN 40, DN 50, DIN 2527, form B

Materials

Sheath 1.4301 X5 CrNi18-10

Flange 1.0460 / A 105

Screw-in body 1.4571 X6 CrNiMoTi 17-12-2

Measuring electrode 1.4571 X6 CrNiMoTi 17-12-2

Electrode rods 1.4401 X5 CrNiMo 17-12-2

Electrode insulation Gylon®

Four-pole connector Polyamid (PA)

Lengths available

500 mm, 1000 mm, 1500 mm, 2000 mm

Electrical connection

Four-pole connector, cable gland M16

Protection

IP 65 to DIN EN 60529

Admissible ambient temperature

Max. 70°C

Weight

Approx. 4.5 kg (without electrode tip)

Approvals

GL 94277-10 HH

LR 98-20076 (E3)

ABS 01-HG 227959-3-PDA

BV 25082 / AO BV

DNV A-13857

KR HMB 0619-MS 002

NK TA 11016M

CCS HB12T00017_02

Water Level Limiter

Level Electrode

NRG 16-50 S

Important Notes

Electrical Connection

To connect the level electrode(s) use screened multi-core control cable with a min. conductor size 0.5 mm², e.g. LiYCY 4 x 0.5 mm².

Max. length 100 m with an electrical conductivity of the boiler water > 10 µS/cm at 25 °C.

Order & Enquiry Specification

GESTRA Level Electrode NRG 1...-50 S

PN 40, DN 50, inspection

Length supplied mm

Key

- ❶ Flange PN 40, DN 50, DIN 2527, form B
Bolt circle Ø 125
(4x Ø 18 for M16)
- ❷ For the approval of the boiler standpipe with connecting flange the relevant regulations must be considered.
- ❸ Vent hole
- ❹ Electrode rod d = 8 mm
- ❺ Protection tube ≥ DN 80
- ❻ Distance between electrode rods and protection tube ≥ 14 mm
- ❼ Reducer DIN 2616-2, K-88.9 x 3.2-42.4 x 2.6 W
- ❽ Low water (LW)
- ❾ High water (HW)
- ❿ Level pot ≥ DN 80

Dimensions

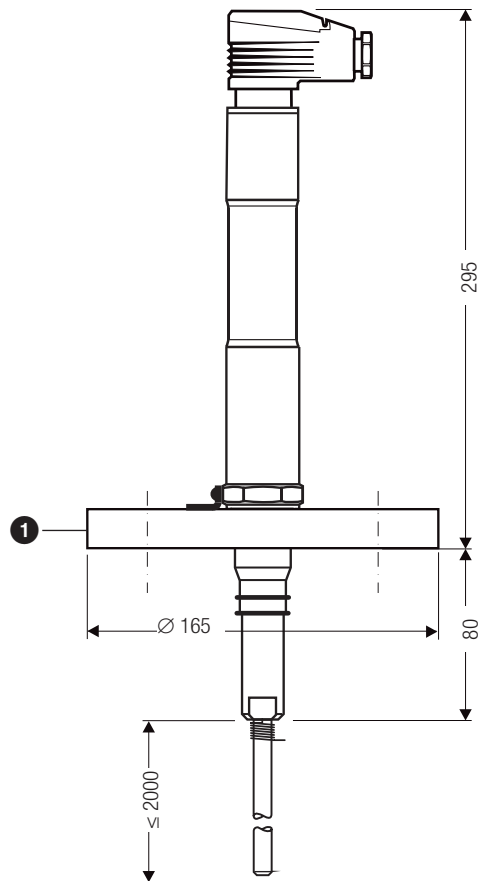


Fig. 1 NRG 16-50S

Examples of installation

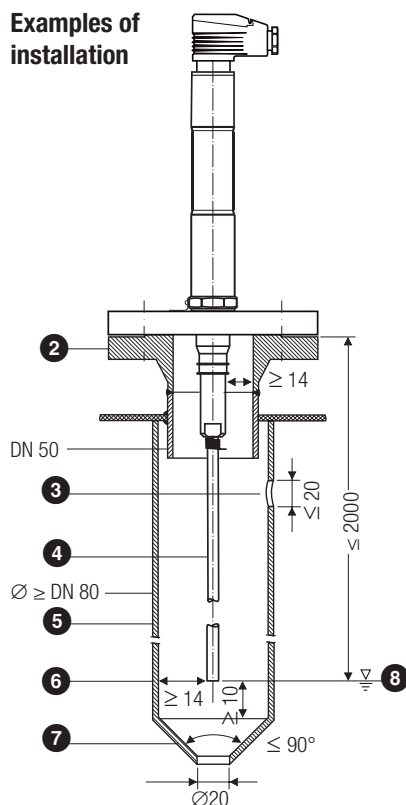


Fig. 2 Protection tube (provided on site) if electrode is used as internal water-level limiter

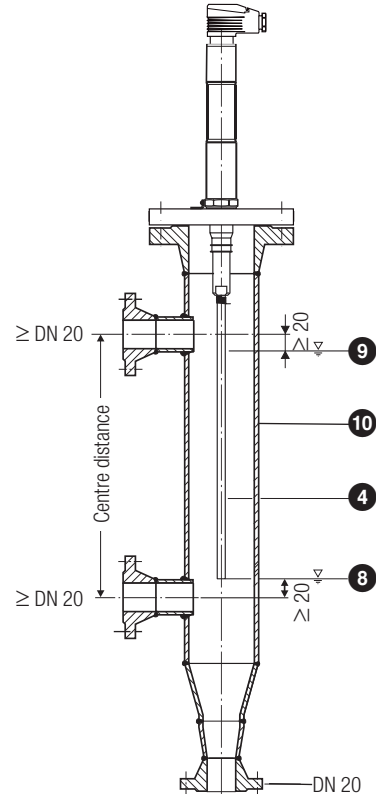


Fig. 3 Level pot DN 80 if water level limiter is installed outside the boiler

Supply in accordance with our general terms of business.

GESTRA AG

Münchener Straße 77, 28215 Bremen, Germany
Telefon +49 421 3503-0, Telefax +49 421 3503-393
E-mail info@de.gestra.com, Web www.gestra.de

GESTRA