

NRG 10-52, NRG 16-52 with five-pole connector

Level Electrode

NRG 10-52

NRG 16-52

Description

Installed in combination with the NRS 1-... level switch, the NRG 10-52, NRG 16-52 level electrode signals up to four different water levels. The level electrode is used in conjunction with level switches in steam boilers and hot water installations or in condensate and feedwater tanks, e.g., as a water level controller with MIN/MAX alarm.

The level electrode can be combined in a circuit with the following level switch: NRS 1-56.

Function

The level electrode uses the conductivity of the water to measure the level.

The switchpoints for the various water levels are determined by the length of the respective electrode rods.

The level electrode is installed inside steam boilers and tanks or externally in a level pot. If installing internally, please provide a protective tube to ensure reliable function.

The NRG 1...-52 level electrode can be installed in a single protective tube or level pot together with a GESTRA level electrode, for use as a water level limiter or high level alarm.

Technical data

Service pressure

NRG 10-52: 87 psi at 327 °F
(6 bar at 164 °C)

NRG 16-52: 464 psi at 460 °F
(32 bar at 238 °C)

Mechanical connection

Thread 1" - 11.5 NPT

Materials

Screw-in body 1.4404 / F316L

Electrode rods 1.4571, X6CrNiMoTi17-12-2

Insulation PTFE

Spacer PTFE

Five-pole connector 3.2161 G AISi8Cu3

Lengths supplied

39.37 in (1000 mm), 59.05 in (1500 mm)

Electrical connection

Five-pole connector, cable gland PG 11

Protection

IP 65 according to EN 60529

NEMA type 1 according to NEMA 250

Ambient temperature

Max. 158 °F (70 °C)

Weight

Approx. 3.53 lb (1.6 kg) NRG 16-52 L=39.37 in (1000 mm)

Transport temperature

-4 °F ... 176 °F (-20 °C ... +80 °C) (<100 hours),
only switch on after a defrosting period of 24 hours.

Storage temperature

-4 °F ... 158 °F (-20 °C ... +70 °C), only switch on after a defrosting period of 24 hours.

Level Electrode

NRG 10-52

NRG 16-52

Key

- 1 Flange
- 2 Perform preliminary inspection of standpipe and flange during the boiler inspection
- 3 Protective foam tube/level pot
- 4 Reducer
- 5 Pressure relief hole
- 6 High water HW
- 7 Low water LW
- 8 Electrode rod
- 9 Electrode spacing ≥ 0.55 in (≥ 14 mm)
(air gap and creepage path)
- CD Center distance

Important notes

Installation

One NRG 10-52, NRG 16-52 level electrode can be installed in a single protective tube or level pot [inside diameter 3.94 in (100 mm)] together with a GESTRA level electrode and a compact level switch or transmitter. If a level electrode intended for water level limitation is installed internally, it must be at least 1.57 in (40 mm) away from the upper pressure relief hole.

If the level electrode is installed outdoors, it must be equipped with a weatherproof cover from GESTRA.

Only install the level electrode in the vertical position.

Electrical connection

Use a shielded, multi-core TC-ER control cable with minimum wire size AWG18, e.g., OELFLEX CONTROL TM CY 5G1, to connect the level electrode. Max. length 328 ft (100 m).

Connect the shield just once to the central grounding point (CGP) in the control cabinet.

How to order and specify

GESTRA Level Electrode NRG 1...-52

Inspection.....

Length suppliedmm

Directives and standards

The equipment has been tested and approved for use in the scope governed by the following directives and standards:

Standards:

- UL 60730-1 and CAN/CSA E60730-1
General Requirements for Automatic Electrical Controls
- UL 60730-2-15 and CAN/CSA E60730-2-15
Requirements for Automatic Electrical Water Level Sensing Controls

Improper use

There is a danger of death due to explosion if the equipment is used in potentially explosive atmospheres.

Do not use the equipment in potentially explosive atmospheres.

Please note our general terms of business.

Dimensions of the NRG 10-52, NRG 16-52

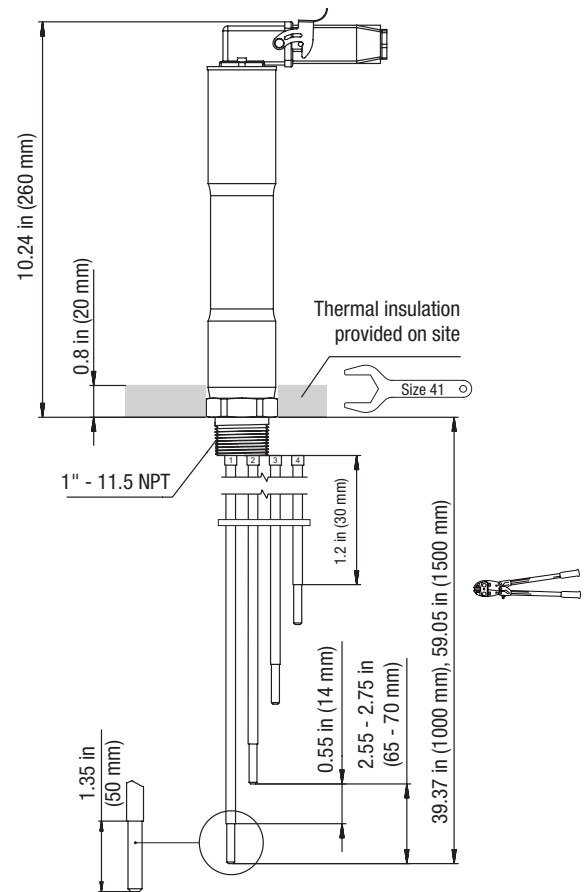


Fig. 1 NRG 10-52, NRG 16-52

Installation examples

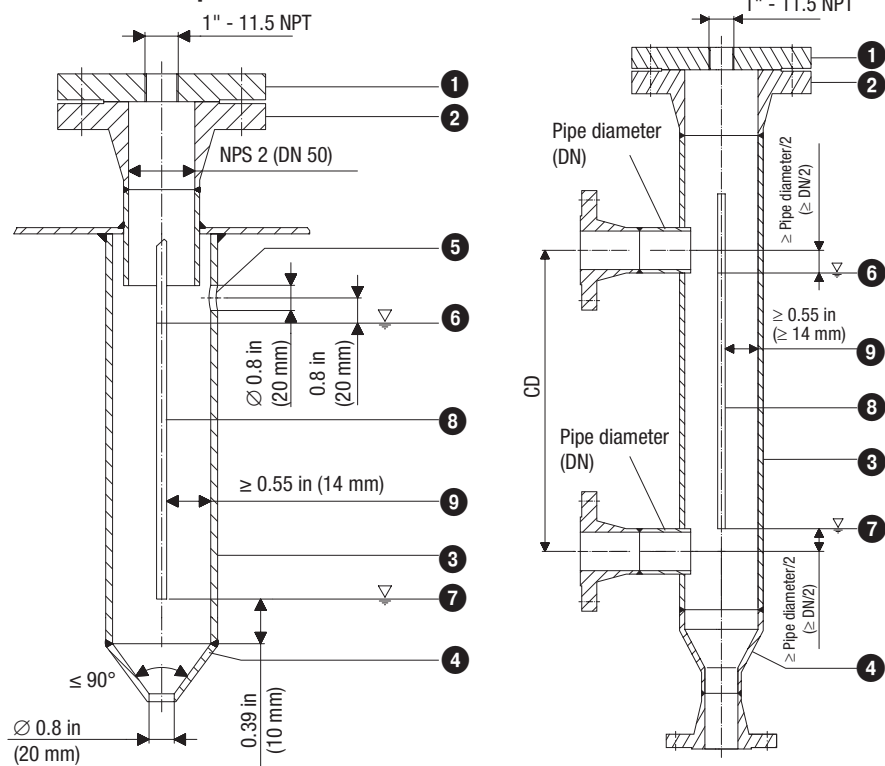


Fig. 2 Protective tube (provided on site) for internal installation

Fig. 3 Level pot for external use

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