

GESTRA Steam Systems

Product Range B

Level Electrode NRG 16-4

NRG 16-4

Description

The level electrode NRG 16-4 is designed for detecting and signalling levels in liquids with a minimum electrical conductivity.

Depending on the type of level switch used the electrode can detect the highest or lowest (max./min.) liquid level.

The level electrode NRG 16-4 can be used in conjunction with level switches NRS 1-1, 1-2, 1-3 and 1-5 as part of a water level control, high level alarm or water level limiting system (without SMART function) in steam boilers and pressurised hot water plants.

Function

For the correct functioning of the level electrode NRG 16-4 together with level switch NRS 1-... a minimum electrical conductivity of $0.5 \mu\text{S/cm}$ at 25°C of the water is required.

The switching signal is triggered off as soon as the electrode tip submerges or is exposed. The electrode tip is simply cut to length to give the required switching level.

System components

Level switch type NRS 1-1,
Level switch type NRS 1-2,
Level switch type NRS 1-3,
Level switch type NRS 1-5.

Design

NRG 16-4:
Electrode with screwed connection $\frac{3}{8}"$ BSP, ISO 228-1.

Technical Data

Type approval no.
TÜV.WR/ WB.03-302

Service pressure
32 barg at 238°C

Connection
Screwed $\frac{3}{8}"$ BSP, ISO 228-1

Materials
Screw-in body: 1.4571 X6CrNiMoTi 17-12-2
Electrode tip: 1.4571 X6CrNiMoTi 17-12-2
Electrode insulation: PTFE
Terminal box and connector: Plastic

Electrode tip
Lengths available: 500, 1000, 1500 mm
Diameter: 5 mm

Sensitivity (at 25°C)
> $0.5 \mu\text{S/cm}$ (depending on level switch)

Wiring
Four-pole connector with screw terminals, cable strain relief and cable gland PG 11

Protection
IP 65 to EN 60529

Ambient temperature at terminal box
Max. 70°C

Weight
Approx. 0.5 kg

Important Notes

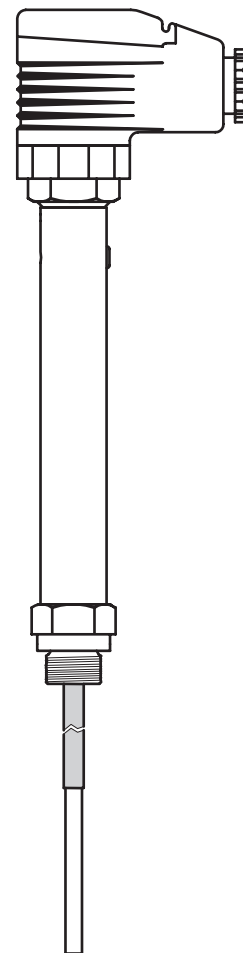
The level electrode NRG 16-4 can be installed directly into the boiler or fitted in an external pot.

For economic reasons and ease of maintenance we recommend installation of the electrode inside the boiler of steam plants and pressurised hot water installations.

For installation inside the boiler a protection tube > DN 80 is required.

The electrode shall be installed vertically or with a lateral inclination of 45° . Note: If the electrode is in an inclined position the length of the electrode must not exceed 500 mm.

Use screened cable I-Y(St) Y2 x 2 x 0.8 mm^2 or LIYCY 4 x 0.5 mm^2 for wiring.



NRG 16-4

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Please note:

- For the approval of the boiler standpipe the relevant regulations must be considered.
- The angle of installation of the electrode must not exceed 45° and the length of the electrode rod is limited to 500 mm.
- If installed outdoors the level electrode must be equipped with a GESTRA weather protection cover.

Order & Enquiry Specification

GESTRA Level electrode NRG 16-4
Inspection.....
Length supplied.....mm
The following test certificate can be issued on request, at extra cost: In accordance with EN 10204-2.2 and -3.1B.
All inspection requirements have to be stated with the order. After supply of the equipment certification cannot be established. For tests and inspection charges please consult us.

Accessoires

GESTRA Weather protection cover for outdoor installation.

ATEX (Atmosphère Explosible)

The equipment is a simple item of electrical equipment according to DIN EN 50020 section 5.4. According to the European Directive 94/9/EC the equipment must be equipped with approved Zener barriers if used in potentially explosive areas.

Applicable in Ex zones 1, 2 (1999/92/EC).
The equipment does not bear an Ex marking.
The suitability of the Zener barriers is certified in a separate document.

- 1 Flange PN 40, DN 50, DIN 2527
Flange PN 40, DN 100, DIN 2527
- 2 For the approval of the boiler standpipe with connecting flange the relevant regulations must be considered.
- 3 Provide vent hole as close to the boiler wall as possible!
- 4 High water (HW)
- 5 Electrode rod d = 5 mm
- 6 Protection tube > DN 80
- 7 Protection tube > DN 100
- 8 Electrode distance > 14 mm
- 9 Low water (LW)
- 10 Reducer DIN 2616-2, K 88, 9 x 3.2 - 42.4 x 2.6 W
- 11 Reducer DIN 2616-2, K 114, 3 x 3.6 - 48.3 x 2.9 W
- 12 Centre distance of connecting flanges

Supply in accordance with our general terms of business.

Dimensions

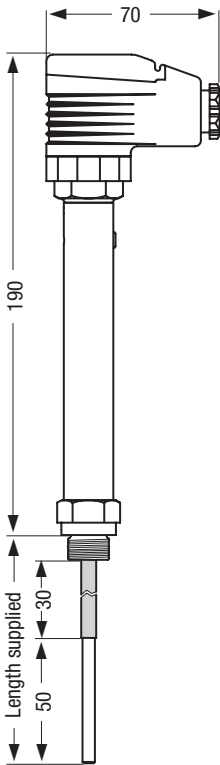


Fig. 1 Level electrode NRG 16-4

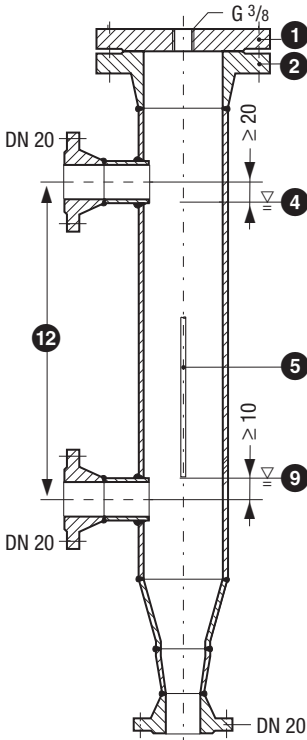


Fig. 2 External measuring pot

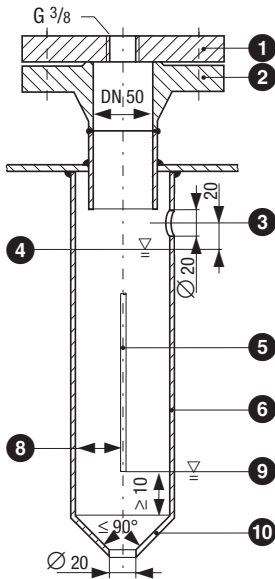


Fig. 3 Protection tube (on site) for installation of electrode inside the boiler

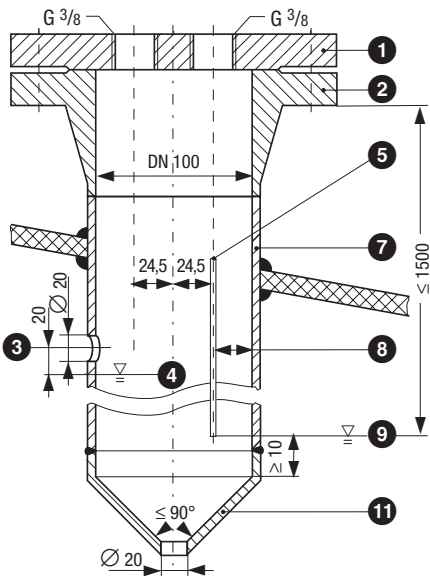


Fig. 4 Protection tube (on site) for installation of electrode inside the boiler

POZNAŃ

www.armaterm.pl
tel. +48 (61) 8488 431
fax +48 (61) 8488 431
e-mail: biuro@armaterm.pl



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