

LRG 16-4

Conductivity Electrode LRG 16-4

Description

The LRG 16-4 conductivity electrode is used with LRS 1-.. conductivity switches or LRR 1-.. conductivity controllers for measuring conductivity in liquid conductive media.

The LRG 16-4 conductivity electrode can be used as a conductivity limiter or blowdown controller in steam boilers in combination with the following equipment:

Conductivity switch LRS 1-50
Conductivity controller LRR 1-50
Conductivity controller LRR 1-52

Function

The LRG 16-4 conductivity electrode is used as a conductivity limiter and blowdown controller in steam boilers in combination with the following equipment:

Conductivity switch LRS 1-50
Conductivity controller LRR 1-50
Conductivity controller LRR 1-52

In addition, this equipment can monitor conductivity in condensate and feedwater circuits and in cooling and cleaning water. In combination with conductivity switches or controllers, the conductivity electrode measures conductivity in conductive fluids.

In the event of a short circuit or broken wire in the conductivity electrode, an error signal is generated in the conductivity switch or controller.

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

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.

Technical data

Service pressure

Max. 464 psi at 460 °F (32 bar at 238 °C)

Mechanical connection

Thread 3/8" 18 NPT

Materials

Screw-in body: 1.4404 / F316L
Measuring electrode: 1.4571, X6CrNiMoTi17-12-2
Electrode rod insulation: PTFE

Electrode length

3.94, 11.81, 15.75, 19.69, 23.62, 31.5, 39.37, 47.24 in
(100, 300, 400, 500, 600, 800, 1000, 1200 mm)

Cell constant

1 cm⁻¹

Electrical connection

Four-pole connector, cable glands M 16 (PG 11) with integrated cable clamp

Protection

IP 65 according to DIN EN 60529
NEMA type 1 according to NEMA 250

Admissible ambient temperature

Max. 158 °F (70 °C)

Weight

Approx. 1.1 lb (0.5 kg)

Important notes

Installation

The conductivity electrode is intended for a horizontal or inclined installation position. Please adhere to the stated distances between the lower end of the measuring electrode, the boiler wall, the smoke tubes and other metallic fittings, and the low water level (LW). Bear in mind that the measuring surface must be permanently submerged.

Electrical connection

Use a shielded, multi-core TC-ER control cable with minimum wire size AWG18 e.g., OELFLEX CONTROL TM CY 3G1, to connect the conductivity electrode.

The cable length between the conductivity electrode and switch or controller is max. 98 ft (30 m), or max. 32 ft (10 m) with a conductivity of 0.5 -5 ppm (1-10 µS/cm).

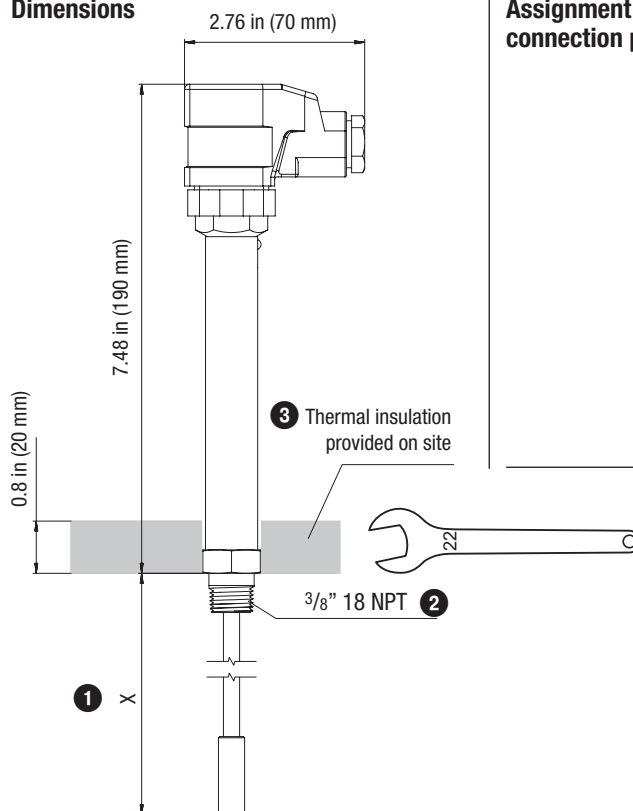
Route the connecting cable between items of equipment separately from power lines.

Suitable conductivity switch/controller

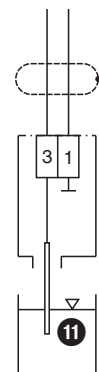
- Conductivity switch LRS 1-50
- Conductivity controller LRR 1-50, LRR 1-52

Conductivity Electrode LRG 16-4

Dimensions



Assignment of terminals in the connection plate

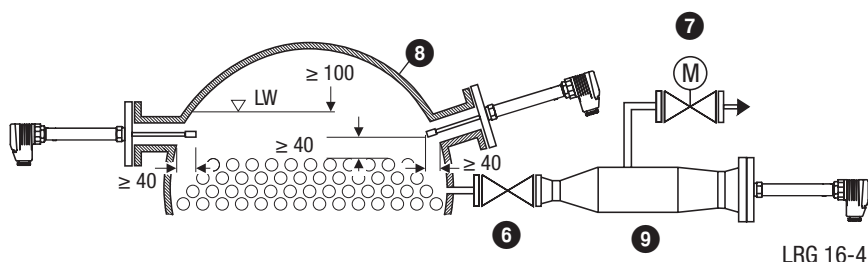


x = available electrode lengths:

- 3.94 in (100 mm)
- 11.81 in (300 mm)
- 15.75 in (400 mm)
- 19.69 in (500 mm)
- 23.62 in (600 mm)
- 31.50 in (800 mm)
- 39.37 in (1000 mm)
- 47.24 in (1200 mm)

Installation example

For conductivity monitoring, the conductivity electrode is installed directly via a flanged connection on the side, or is installed in a separate level pot



Key

- ① Electrode length
- ② Electrode thread 3/8" 18 NPT
- ③ Thermal insulation provided on site, d = 0.8 in (20 mm), outside thermal insulation of steam generating unit
- ⑥ Stop valve
- ⑦ Continuous blowdown valve
- ⑧ Boiler drum
- ⑪ Measuring electrode

Please note our general terms of business.

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