

Use

Detection by conductivity provides a simple and economical solution for detecting levels for electrically conductive products, even if their conductivity is low. **Conventional applications:** High level security, Protection of pumps against dry running, control between a minimum and a maximum. Different combinations of electrodes provide a variety of applications:

- Detecting one or more levels in a tank,
- Regulation between two levels in a tank, etc.

Introduction

A detection chain is composed of two parts:

1. The **Electronic Detector**:

- Number of Relays: one or two (potential-free contact),
- Sensitivity adjustment: with or without,
- Type of assembly: in cabinet on DIN rail or outside.

2. The **Probe**, matched to the specific features of the installation - temperature, pressure, type of fitting, length, etc. - comprises:

- An electrical connection head,
- A process fitting: Flange, Threaded Coupling, Clamp connection, etc.
- One or more electrodes, rigid or cabled.



Functions

The **Electronic Detector** delivers an alternating current which crosses the circuit formed by:

- an ELECTRODE set to the level to be detected,
- one Reference ELECTRODE (which may be the tank itself),
- the detected LIQUID, which must be electrically conductive, even slightly.

When the LIQUID closes the circuit between the electrodes, the current acts on the **Detector** and its relay output (changeover contact) gives an alarm, control or regulation.

Remarks

1. The use of two electrodes provides regulation between two points.
2. The use of an AC measuring signal avoids electrolytic phenomena in the product.
3. Reference : If the tank is metal, its mass replaces the reference electrode.
: If the tank wall is insulated, it is essential to use a reference electrode is needed.

Technical specifications

1. Conductive Level Sensors (these are detailed in the instructions specific to each device).

Manual code	Output	Installation	Connection	Sensitivity
DR50	1 Changeover	Cabinet on DIN rail	Plug-in DIN base	Fixed
DR52	1 Changeover	Cabinet on DIN rail	Plug-in DIN base	Variable
DR53	2 changeovers	Cabinet on DIN rail	Plug-in DIN base	Variable + Delay
DR54	4 changeovers	Cabinet or Outside	Internal terminal	Variable
R7D	2 changeovers	Cabinet or Outside	Internal terminal	Fixed
R7H	1 changeover	Cabinet or Outside	Internal terminal	Fixed
R7W	AQUALARM	Ground Water Presence Detector		

2. Probes & Conductive Electrodes (these are detailed in the instructions specific to each device).

Manual code	Description	Fixing
A11	Multi-electrode probe	G1" or G2" connection Rigid rods or cables
RL6	Multi-electrode probe	CLAMP, SMS DIN (Sanitary Fitting) Rigid Rods, Insulated PTFE or PVC
SR01	Multi-electrode probe	PVC flange Rigid rods
A11AL	Single probe	Clamp connection
A11FK	TRIPLE Electrode	G1/2 connection in PVC Bare rods
A11FO	Single electrode	Cable - For Wells or Boreholes
A11FV	Single electrode	G1/4 connection in PTFE (A11FV) or R1/4 in stainless steel (A11FVX)
A11R/T	Single electrode	G1/2 connection (A11RL) or G3/8 connection (A11TL)
A11W/Y	Single probe	G1/2 connection in stainless steel Rigid rod (A11W) or cable (A11Y)

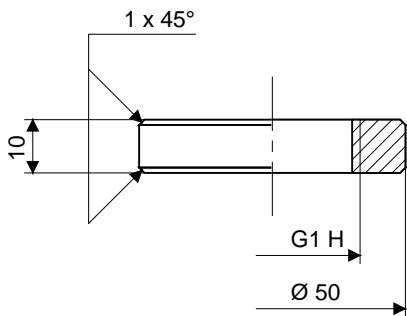
Subject to change without notice.

Tranquillisation skirts

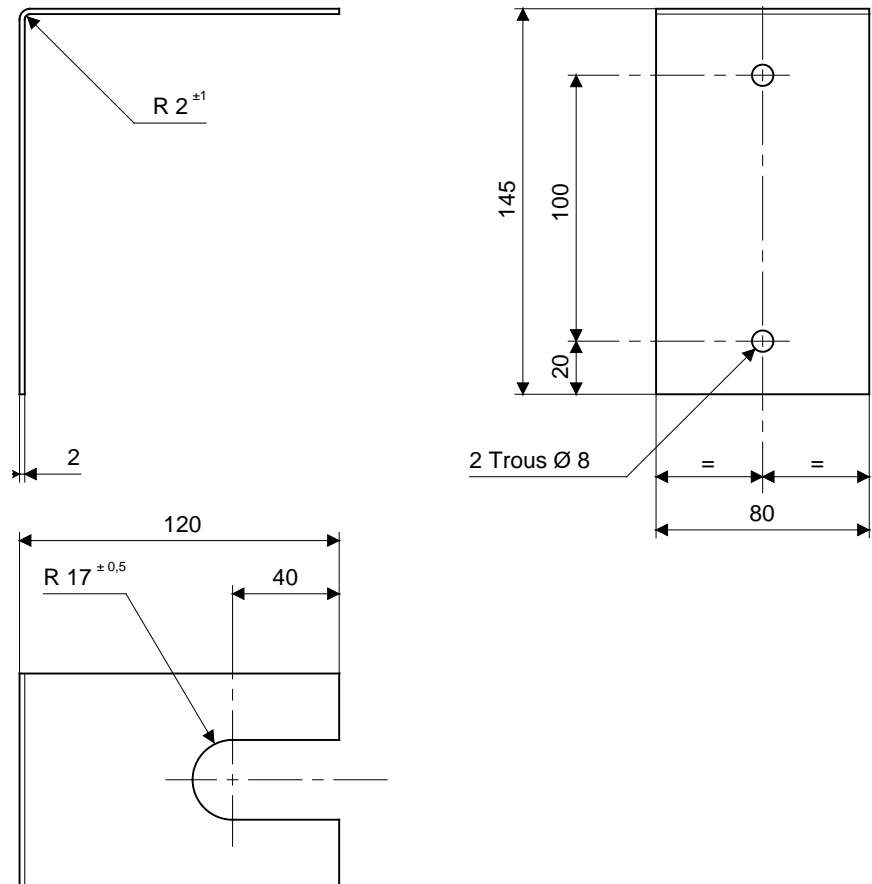
When the liquid is agitated, the electrodes must be placed inside a vertical tube which calms the liquid surface at the detection point. This tube, open at the bottom, must include one or more holes in the upper part. The skirt must exceed the longest electrode by a length at least equal to the maximum height of the waves. It can be an integral part of the tank. The tranquillisation skirt, which must always be grounded when metal, may optionally be used as a ground electrode.

Mounting accessories for A11FE & A11FL sensors

G1H polyamide nut 215 104



Mounting plate stainless steel 215 106



Subject to change without notice.