Conductive Sensors
Level Probes
Types CLH

- **Flexible conductive level probe**
- **1 to 5 electrodes**
- **User defined electrode length**
- **Isolated or unisolated electrodes**
- **1 1/2" without pipe thread according to ISO 228/1-G1$^1/_2$A**

Product Description

A compact and flexible level probe for measuring the level of conductive liquids, i.e overfill, dry run protection or pump control.
A total measurements system consist of a multiple probe-head, 1-5 electrodes and a control unit.
The electrode length can be freely defined be means of electrode extention units - with or without isolation.

Ordering Key

CLH 5

Type
Head mounting
Number of electrodes

Type Selection - Probe

Pipe thread	Housing Material	Ordering no. for 3 electrodes	Ordering no. for 5 electrodes
1 1/2"	PP	**CLH3**	**CLH5**

Type Selection - Electrode

Type	Ordering no. 1000 mm Basic	Ordering no. 2000 mm Extended	Ordering no. Extension 1000 mm
Electrode without isolation	**CLE1**	**CLE2**	**CLE1X**
Electrode with isolation, Kynar (PVDF)	**CLE1K**	**CLE2K**	**CLE1KX**
Electrode with isolation, Polyolefine (FR)	**CLE1P**	**CLE2P**	**CLE1PX**
Description	1000 mm Basic electrode for no further extension	1000 mm Basic electrode for extension 1000 mm extension electrode 1 extension joint 1 isolation tube	1000 mm extension electrode 1 extension joint 1 isolation tube

Specifications

Probe Head		
Material		PP (Polypropylen)
No of electrodes	CLH3	3
	CLH5	5
Electrode connection		M4
Cable connection		Screw terminals
Electrodes		
Material		Stainless steel AISI316/DIN1.4401
Length	CLE1	1000 mm
	CLE1	1000 mm
Diameter		Ø 4 mm
Isolation	CLE.K.	Kynar (PVDF)
	CLE.P.	Polyolefine (FR)
Environment		
Overvoltage category		III (IEC 60664)
Degree of protection		
Housing		IP 65
Electrode connections		IP 68
Pollution degree		2(IEC 60664/60664A, 60947-1)
Operating temperature		-20° to +90ºC (-4º to +194ºF)
Storage temperature		-40º to +100ºC (-40º to +212ºF)

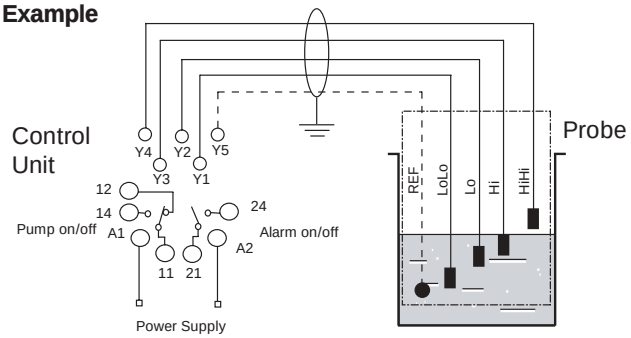
Specifications (cont.)

Weight	
Probe Head	260 g
Electrodes	107 g
CE marking	EN12445, EN12453, EN12978

Mode of Operation

Functionality - example
The diagram shows the level control system connected as max. and min control, i.e. registration of 2 levels + 2 alarm levels. The relays react to the low alternating current created when the electrodes is in contact with the liquid.
The reference (Ref) must be connected to the container or if the container are made of a nonconductive material, to an additional electrode. In the diagram this electrode is shown by the dotted line.

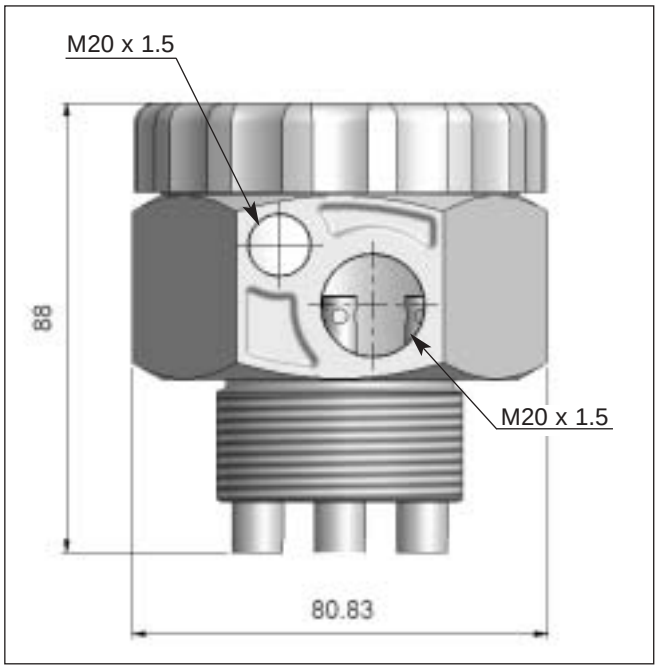
Example



Electrodes
Cut or extend the electrodes to the desirable length. If using extended electrodes, place the enclosed isolation tube over the extension joint, and heat it with a heat gun. Mount the electrodes in the probehead by means of the M4 screw inserts. Take care not to damage the isolation material of the isolated electrodes.

Connection cable
2, 3, 4 or 5 conductor PVC cable, normally screened. Cable length: max. 100 m. The resistance between the cores and the ground must be at last 200k. In normal cases it is recommended to use screened cable between probe and controller, e.g. where the cable is placed in parallel to the load cables (mains). The screen has to be connected to Y5 (reference).

Dimensions



Accessories

Extension joint Ø4	VD
60 mm Kynar for isolation	VDK
60 mm Polyolefine for isolation	VDP
M12 Cable Gland	M12 Cable Gland
M20 Cable Gland	M20 Cable Gland

Delivery Contents

Probe Head
M20 Cable Gland
M12 Blind flange
Installation Instruction