

# DC and DY

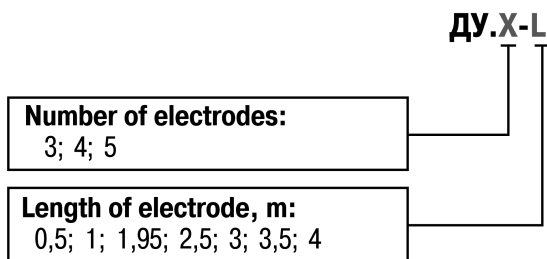
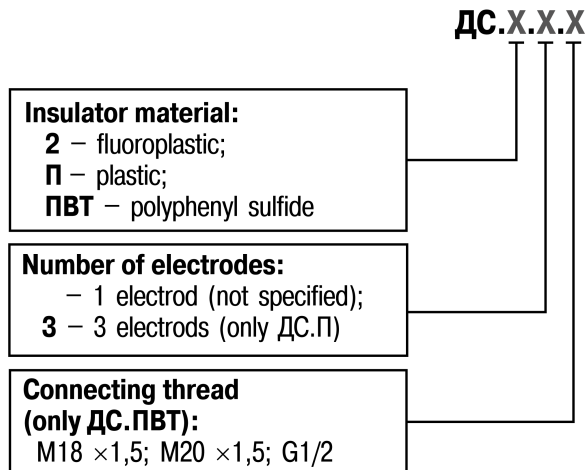
## Conductivity level sensors

### Short guide

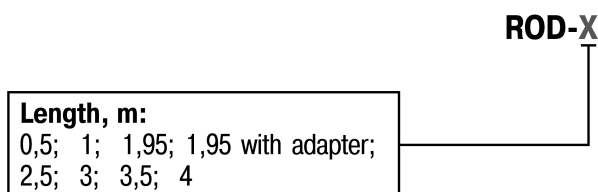
#### Introduction

Conductometric level sensors DC and DY (hereinafter referred to as sensors) are intended for a complete set of level control devices for liquids that have electrical conductivity (for example, food products, water and aqueous solutions of salts, milk) and are not aggressive to the sensor materials.

Sensors are available in various versions, differing in their design, overall and mounting dimensions. Ordering keys see below.



For DC sensors, an electrode (rod) is available on a separate order, according to the following key:



#### Technical data

Table 1 – Specification

Parameter	Value				
	DY	DC.П	DC.ПВТ	DC.П.3	DY
<b>Design</b>					
Insulator material	fluoro-plastic	plastic	polyphenyl sulfide	plastic	polyethylene
Electrode material	stainless steel (12X18N10T)				
Electrode length	0.5, 1, 1.95, 2.5, 3, 3.5, 4 m				
Working position	vertical and horizontal			vertical	
Tank type	open and closed				open
IP Code	IP54				IP00
<b>Medium</b>					
Working overpressure, max.	0.25 MPa	0.1 MPa	2.5 MPa	2 MPa	—
Temperature, max.	100 °C		240 °C	70 °C	85 °C
<b>Environmental conditions</b>					
Ambient temperature	-55...+85 °C				

#### Installation

Installation of the sensor should be performed in metal or non-metal tanks of open and closed type.



#### NOTICE

It is not recommended to use the sensor to control the level of liquids forming non-conductive deposits (films) on the sensor electrode. Otherwise, it should be possible to periodically clean the sensor electrodes.



#### NOTICE

Metal tanks with measured liquid should be earthed

The number of electrodes of the DY sensor or the number of single-electrode DC sensors necessary to control the liquid level is determined by the formulas:

- for metal tanks:  $N = M$ ;
- for non-metal tanks:  $N = M + 1$ ,

where  $M$  is the number of controlled levels.

DY sensor must be installed vertically.

DC sensors depending on the version (see table 1) may be mounted:

- vertically (on the tank cover);
- horizontally (on the side wall of the tank).



#### NOTICE

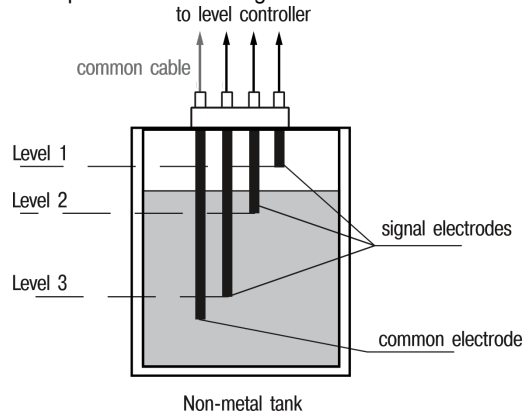
Installation is not allowed, in which the sensor electrodes are in contact with each other or with the wall of a metal tank.



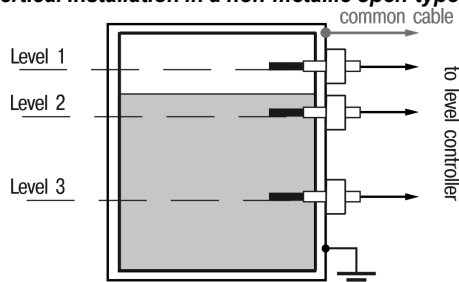
#### NOTICE

Horizontal mounting of sensors in a metal tank is possible only when controlling liquids that do not form conductive deposits on the sensor insulator.

Installation examples are shown in Figure 1.



a) vertical installation in a non-metallic open-type tank



b) horizontal installation in a metal tank

Figure 1 – Installation example

**Dimensions**



**NOTICE**

L\* – electrode length, determined upon order. The electrode for DC sensors is shown conditionally.  
 ROD – electrode for DC sensors, available on request.

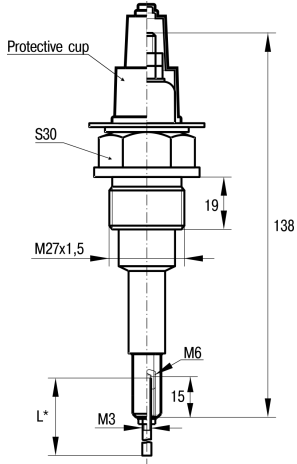


Figure 2 – DC.2

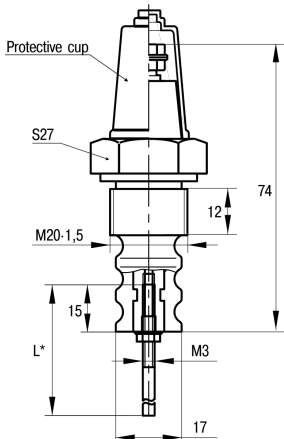


Figure 3 – DC.П

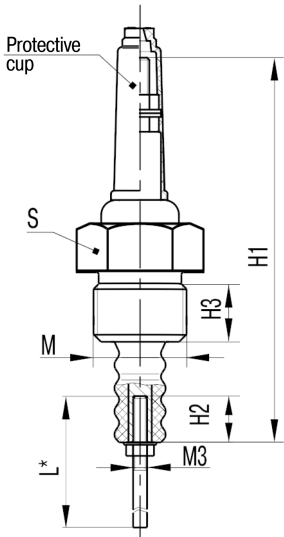


Figure 4 – DC.ПВТ.X

Thread, M	S, mm	H1, mm	H2, mm	H3, mm
M18×1.5	24	83	10	11
M20×1.5	24	83	10	15
G1/2	24	83	10	15

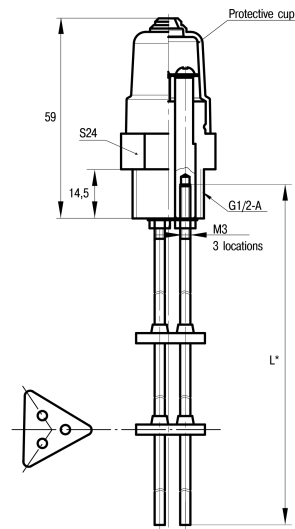
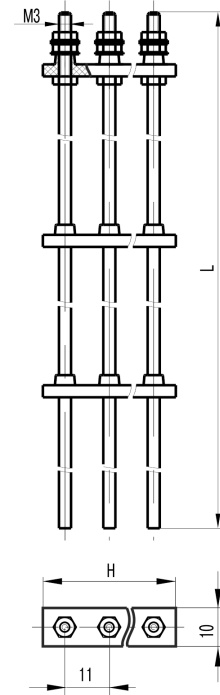


Figure 5 – DC.П.3



Sensor	H, mm
ДУ.3	34
ДУ.4	45
ДУ.5	56

Figure 6 – ДУ.X

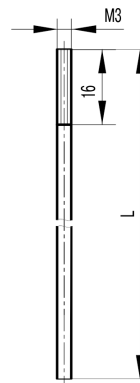


Figure 7 – ROD-L

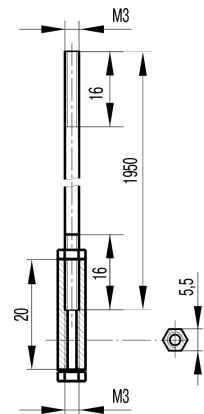


Figure 8 – ROD-1.95 with adapter

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