

INSTRUCTION MANUAL

HydroCer

DESCRIPTION

The HydroCER is a hydrostatic level transmitter based upon a capacitance ceramic sensor, with a very high burst pressure. The amplifier system is based on a microprocessor, which ensures a perfect linearity in the 4-20 mA output.

The compact electronics are placed in a "Stainless Steel" housing which can be installed by means of a wall mounting bracket (SS 316).

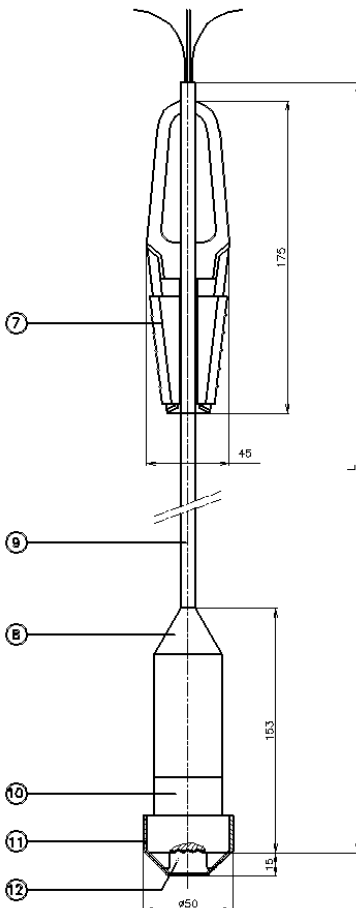
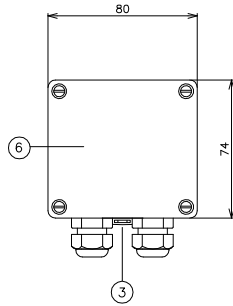
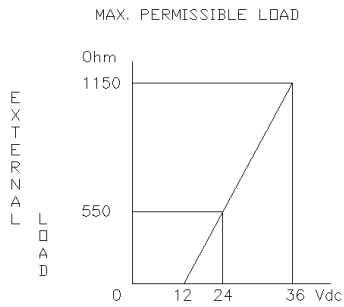
The ceramic sensor is sealed with an O-ring (material: VITON). Other materials are available on request.

The standard cable length is 3 meters. Other lengths up to a maximum of 80 meters should be specified when ordering.

WARNING:

Before installing the HydroCER, read the warnings and advises on page 3. For personal and system safety, and for optimum performance, make sure you thoroughly understand the contents before installing





POWER SUPPLY / EXTERNAL LOAD

The minimum power supply is based on the total circuit resistance. The maximum permissible load (Ri max.) in case of 24 Vdc is 550 Ω (Ohm). By increasing the power supply, the external load can be increased to 1150 Ohm / 36 Vdc. (see figure left).

$$RI \text{ max.} = \frac{\text{Power Supply} - 13 \text{ Vdc (min. power supply)}}{20 \text{ mA}}$$

HydroCER-Cable(3m)-FR "FIXED RANGE"

The HydroCER-Cable-FR cannot be adjusted by the customer. Every calibration can be chosen between 1 mWC till 20 mWC and must be done at the factory. The cable material (9) is Poly Ethylene (PE) with a diameter of 10 mm (8 mm is optional). As standard the cable length (L) is 3 meters. Every cable length is possible but has to be specified in the order code (Length L). A cable hanger (7) to mount the transmitter on every desired length can be delivered as an option (extra price). The cable hanger is made from SS 304 and PA.

TEMPERATURE COMPENSATION

The temperature compensation from the HydroCER-Cable-FR will be activated if the temperature changes. We strongly recommend to wait 5 till 10 minutes after installation to check the output signal, related to the depth (measuring range) of the transmitter to have a good temperature compensation.

WIRING HYDROBAR "FIXED RANGE"

Black wire = --
Red wire = +

The instrument always needs to be connected to earth.

Please ensure that the instrument is not connected to earth twice to prevent the occurrence of an 'earth loop'.

BAROMETRIC REFERENCE

The Hydrobar-Cable-FR is a "relative transmitter" which means that barometric changes will not affect the zero (4 mA). The venting tube at the end of the cable (9) must be placed in an absolute **dry** area to prevent moisture coming into the foot (10). A special junction box (6) can be delivered as an option (extra price). This junction box has a protection of IP 65 and has a special venting nipple. As standard there are two M20 cable glands at both sides. Dimensions: 80 x 75 x 76. The venting nipple must be kept clean.

TRACEABILITY YEAR OF MANUFACTURING

The year of manufacturing of the transmitter can be traced as follows: take the first two digits of the serial number that is engraved in the transmitter and add 1908. For example: if the serial number is 9302123. The year of manufacturing is 1908 + 93 = 2001.

ADVISES and WARNINGS:

We herewith give a list of some advisements and warnings concerning the application and installation of the electronic level transmitters, the HydroCER:

- * **Check if the specifications of the HydroCER meet the needs of the processconditions.**
- * **To achieve the most accurate measurement with the HydroCER, be aware of the place where the transmitter is mounted. Here are some advises:**
 1. **Don't mount a level transmitter in- or near filling or discharging pipes.**
 2. **In case of automatic cleaning systems or hand cleaning: never point the water jets on the diaphragm, take necessary steps to avoid this.
Guarantee will not be granted.**
- * **The diaphragm of the HydroCER is protected with a special protection cap. Prevent damaging of the diaphragm. Guarantee will not be granted.**
- * **Avoid high pressure water-jets pointed at the venting.**
- * **WARRANTY: The warranty is 1 year after delivery.
Klay Instruments B.V. does not accept liability for consequential damage of any kind due to use or misuse of the HYDROBAR. Warranty will be given, to be decided by the manufacturer. Transmitter must be shipped free of charge to the factory on manufacturer's authorization.**
- * **NOTE: Klay Instruments B.V. reserves the right to change its specifications at any time, without notice. Klay Instruments B.V. is not an expert in the customer's process (technical field) and therefore does not warrant the suitability of its product for the application selected by the customer.**
- * **CE-rules:
All our transmitters are manufactured according to the CE-rules. All transmitters are standard equipped with RFI filters. The influence on Radio Frequency Interference between 10 MHz to 10 GHz is neglectable.**

Manufacturer:

 **KLAY-INSTRUMENTS B.V.**
www.klay.nl

Nijverheidsweg 5
P.O. Box 13
Tel: +31 521591550
Fax: +31 521592046

7991 CZ DWINGELOO
7990 AA DWINGELOO
The Netherlands
E-mail: info@klay.nl