

USER INSTRUCTIONS
LCD-H300 AL
 Loop Powered Heavy-duty
 LCD Field Indicator in Aluminium



The user instruction must be read prior to adjustment and/or installation.
 All information subject to change without notice.

MEASURE OF SUCCESS



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This product should not be mixed with other kind of scrap, after usage.
 It should be handled as an electronic/electric device.

MEASURE OF SUCCESS

INTRODUCTION

LCD-H300 is a loop powered digital indicator to be connected directly in a 4-20 mA loop without need for external power supply. The indicator show numeric values in the range from -1999 to 9999 proportional to the 4-20 mA input signal on a digital display. LCD-H300 is designed for field mounting on wall or pipe and has a robust instrument housing that is suitable for industrial environment.

GENERAL INFORMATION

Configuration of the indicator is done either with NFC and the smartphone app INOR Connect or with three push buttons. The indicator can be connected to the 4-20 mA loop of any normal 2-wire transmitter.

The field indicator LCD-H300 can be equipped with an integrated INOR In-Head transmitter of any type for direct sensor input. LCD-H300 is equipped with a rugged IP68 / NEMA 4X housing with double cable conduits openings and one process opening for convenient installation. The indicator is designed for operating ambient temperatures between -20 to +70 °C (-4 to +158 °F).



INFORMATION!
 This manual describes in short form the various functions and technical data for the display, for a more detailed description please consult the handbook for Display Module LCD-D100.



CAUTION!
 Installation, assembly, start-up and maintenance may only be performed by appropriately trained personnel. The regional occupational health and safety directives must always be observed.



CAUTION!
 To configure the LCD-D100 and the transmitters the unit needs to be opened to allow close access to the NFC antenna. Range is limited to a few centimeters depending on the smartphone used.

DATA (short form)

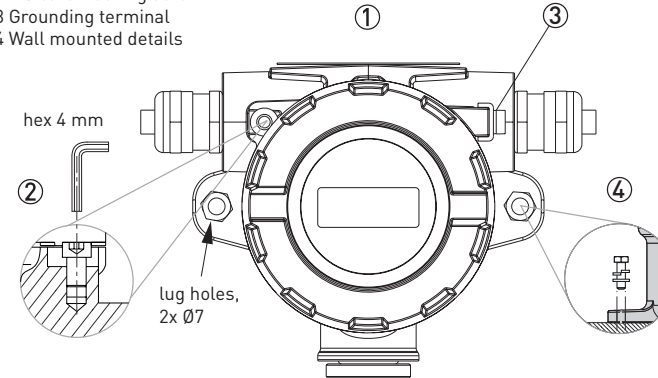
Input Current	4-20 mA
Maximum current	30 mA
Minimum current for operation	~3.5 mA
Voltage drop	4.5 V
Indication	
Display	7-segment black LCD with clear background
Backlight	White LED powered from the 4-20 mA loop
Indication range	4 digits [-1999 to 9999]
Digit height	8.89 mm / 0.35"
Decimals	Selectable, 0 to 3
Under range / Over range	Flashing symbols Lo (I ≤ 3.6 mA) / HI (I ≥ 21.0 mA)
Engineering units	Set of self-adhesive labels included for units: °C, °F, mA, mV, V, bar, mbar, Pa, kPa, MPa, pH, %, s, ms, μs, mm, cm, m
Response time	Appr. 1 s, Power on delay: 5 s and stable after 1 min
Temperature influence	≤ ±0.01 % FS / °C
Configuration method	3 push buttons or NFC, located on the rear of the display
Operation temperature	-20 to +70 °C / -4 to +158 °F
Operational	-20...+70°C / -4...+158°F, depending on configuration see handbook for the selected parts
Humidity	0...95% RH (non-condensing)
Storage and Transport	-40...+85°C / -40...+185°F
Typical accuracy	±0.05% of span ±1 digit
NAMUR NE 43 compliance	Yes
HART transparent	Yes
Protection	Up to IP68 (depending on applied cable glands and sealing)
Mounting	Wall mount or pipe mount (with pipe mounting bracket)
Enclosure	
Material of body, cover and O-ring	Aluminium pressure die-casting, rubber gasket sealing silicone VMQ
Coating	Chromating and chemically resistant paint (outside only)
Paint	Spray Epoxy, Color RAL 9006 White aluminium
Connections	Push-in spring connection, Wire cross section 0.25 mm ² -1.5 mm ² AWG 24-16
Threaded ports (threads only)	D1=D2=D3 M20x1.5 or ½" NPTmod

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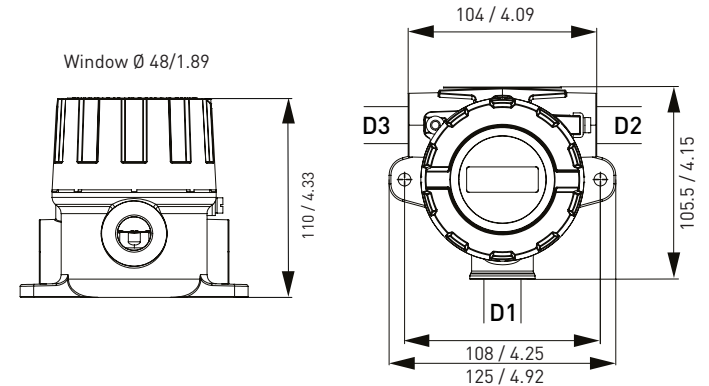
MOUNTING

Wall Mounted

- 1 LCD-H300 AL
- 2 M5 cover locking screw
- 3 Grounding terminal
- 4 Wall mounted details



DIMENSIONS



mm/inches

D2, D3 Conduit openings, D1 Process opening

PROTECTION DEGREE

Openings deciding the IP degree (max. possible to achieve IP68)
 Take the following into consideration to achieve max. IP degree

Housing cover

- Tighten up the cover with normal hand force until the end
- Lock the cover with the locking screw

Process opening

- Choice of type of connection between housing - sensor
- Housing - sensor sealing
- Sufficient tightening

Conduit openings

- Choice of cable gland type with sufficient IP degree
- Match cable diameter and type of cable gland according to the specification
- Cable gland mounting with sealing and correct tightening torque according to the specification
- Correct rate of press cap tightness

Each threaded hole D1, D2 and D3 can be plugged.

- Use blanking plugs with sufficient IP degree
- Plug mounting with sealing and correct tightening torque according to the specification

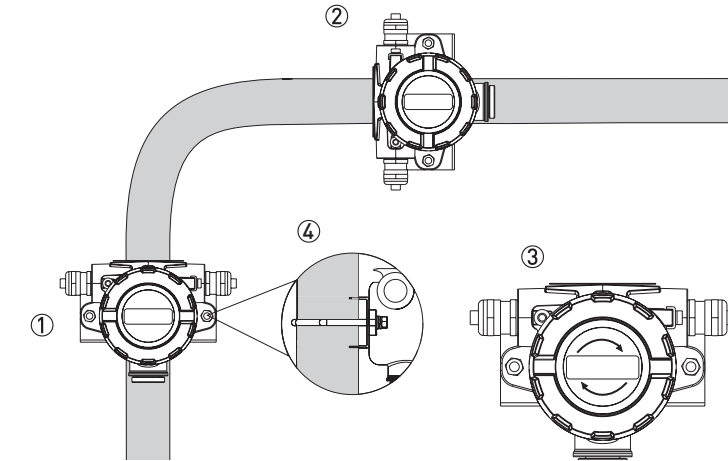
Type of sealing for Cable glands / Blanking plugs / Sensor

Threads	Threaded connection sealing	Possible IP
M thread	Without sealing washer	IP54
	Thread tightened with O-ring	IP68
NPT thread	No use of any thread sealant	IP54
	Threads are additionally sealed with use of a thread sealant, e.g. Loctite 577	IP68

MOUNTING

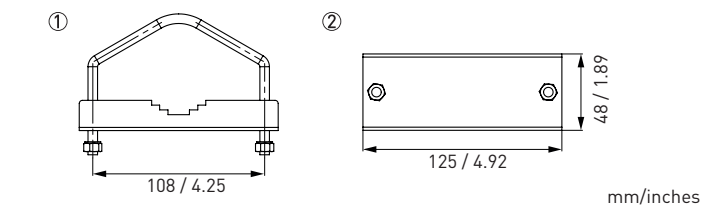
Pipe Mounted

- 1 Vertical installation
- 2 Horizontal installation
- 3 The orientation of the window can be adjusted easily on site according to the requirement
- 4 Pipe mounted details

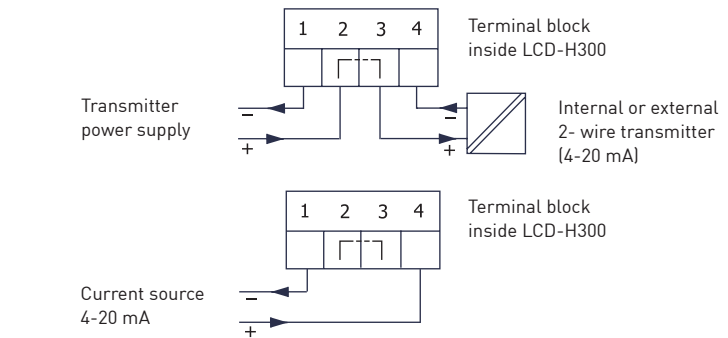


Pipe clamp

- Ordering number: 4003435101
1. Side view of the 1.5" x 2" pipe clamp
 2. Bottom view of the 1.5" x 2" pipe clamp



CONNECTIONS



Connection method

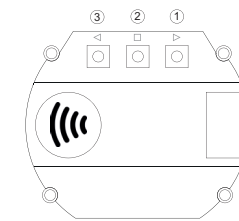
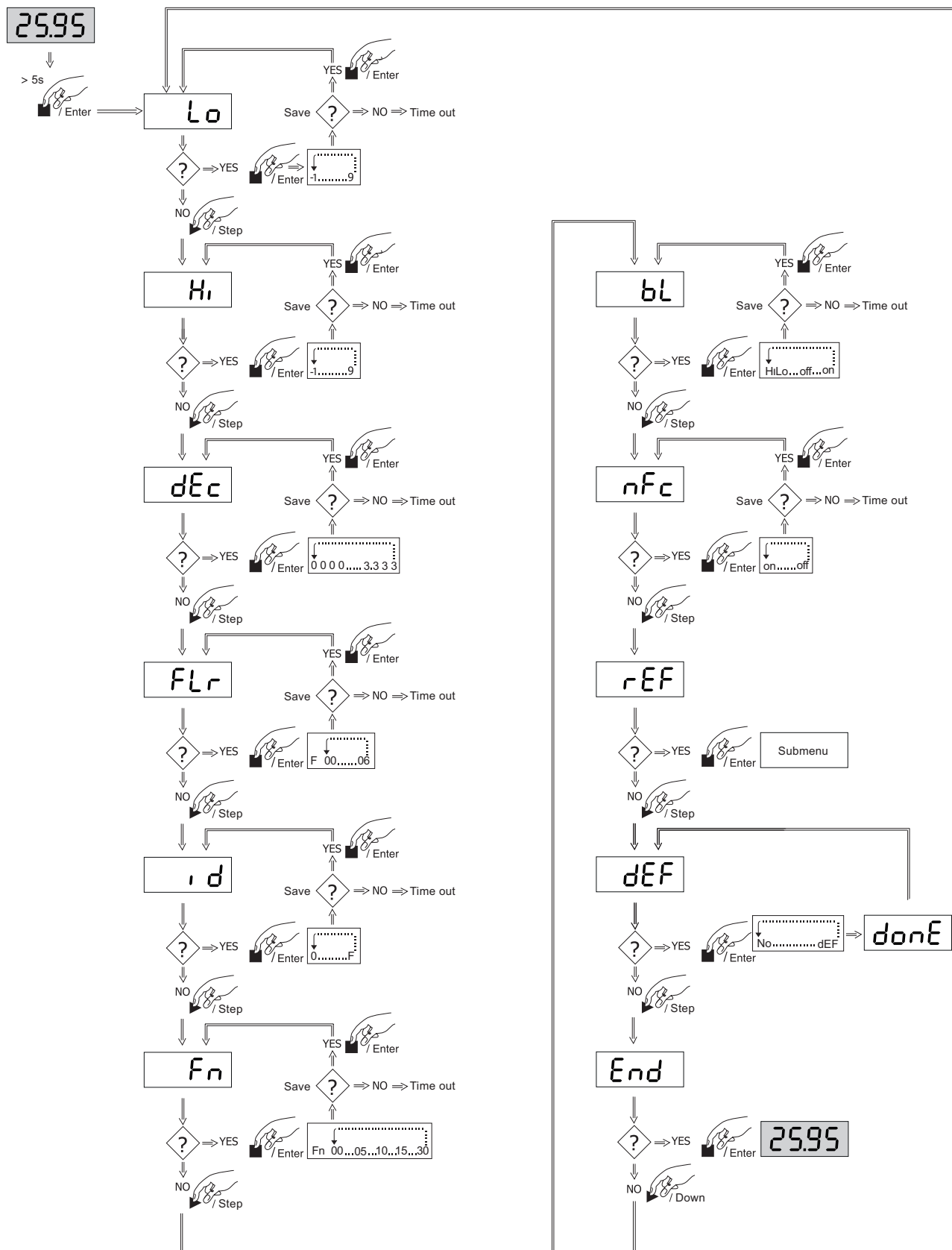
Terminal block with Push-in spring connection

Connection capacity

Conductor cross section, flexible	0.2 mm ² ... 1.5 mm ²
Conductor cross section flexible, with ferrule without plastic sleeve	0.25 mm ² ... 0.75 mm ²
Conductor cross section flexible, with ferrule with plastic sleeve	0.25 mm ² ... 0.75 mm ²
Stripping length	8 mm
Conductor cross section AWG	24 ... 16

ORDERING INFORMATION

Product	Part No.
LCD-H300 - M20x1.5	70LCDH3001
LCD-H300 - ½ NPT	70LCDH3002
LCD-H300 - Customized	On request
Mounting bracket for pipe Ø 1.5"-2"	4003435101



- ① Pushbutton with step (decrease) function
- ② Pushbutton with enter function
- ③ Pushbutton with step (increase) function

	①	②
1	Lo	0000
2	Hi	1000
3	dEc	1111
4	FLr	F 00
5	rd	③
6	Fn	Fn00
7	bL	h iLo
8	nFc	on
9	rEF	-
10	dEF	-
11	End	-

- ① Parameter name
- ② Factory default value
- ③ The default setting value refers to display TAG / ID is the last four digits in the serial number.

Parameter description:

1. Engineering value related to the lower point (4 mA), the default setting value refers to 0.0 at lower point.
2. Engineering value related to the higher point (20 mA), the default setting value refers to 100.0 at higher point.
3. Decimal point location, the default setting value refers to 1 decimal.
4. Filter, the default setting value refers to "No filter".
5. TAG / ID number, the default setting value refers to the last four digits in the serial number for the display.
6. Display update interval, the default setting value refers to update display immediately.
7. Backlight mode, the default setting value refers to the backlight on but flashing during alarm.
8. NFC mode, the default setting value refers to the configuration via NFC is on.
9. NFC mode, the default setting value refers to the configuration via NFC is on.
10. Error correction, the default setting refers to no error correction.
11. Reset back to factory default.
12. End setup and return to indication.



INFORMATION!
Consult the handbook for Display Module LCD-D100 for a more detailed description of the various functions.

Before making a configuration of LCD-H300 you need to do following:

1. Make sure that you have a mobile device with NFC communication activated
2. Download the app INOR Connect to your mobile device

Required versions:

iOS
iOS 13 or later and
Iphone 7 or later for NFC

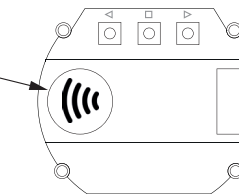
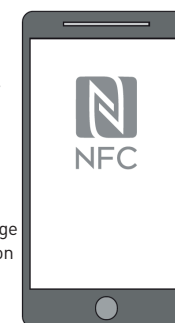
Android
Android 4.4 or later

Scan the QR code to download and install INOR Connect



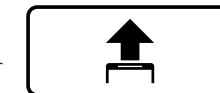
Configuration procedure:

1. Launch the app by clicking on the App icon or holding your mobile device against the display on the part of the device where NFC is located (only possible with Android).
2. Click on "Read Configuration" and hold your mobile device against the display as explained in the first section.
3. In the app you can edit the following:
 - Display indication range
 - Decimal points position
 - Backlight mode
 - Filter settings
 - TAG-no



Place the smartphone's NFC antenna directly on the display's NFC antenna for configuration via the app INOR Connect

4. Once you have set the desired values in the app, you transfer it to the display by clicking the transfer button and holding the mobile device against the display until a green check box appears confirming that the transfer has been completed.



Input current (mA)	Signal description	Indication on LCD-H300
≥ 21,0 mA	Failure	Flashing HI
20,5 to <21,0 mA	-	Fixed value (max. range value +3.1 %)
20,0 to 20,5 mA	Over range	Extended indication range
4,0 to 20,0 mA	Normal operating range	The configured indication range
3,8 to 4,0 mA	Under range	Extended indication range
>3,6 to 3,8 mA	-	Fixed value (min. range value -1.25 %)
≤ 3,6 mA	Failure	Flashing Lo

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- 1 Whether Inor acknowledges its responsibility for any asserted defect in materials or workmanship; and, if so,
- 2 the appropriate cause of action to be taken (i.e. whether a defective product should be replaced or repaired by Inor).

This Limited Warranty applies only if the Product:

- 1 is installed according to the instructions furnished by Inor;
- 2 is connected to a proper power supply;
- 3 is not misused or abused; and
- 4 there is no evidence of tampering, mishandling, neglect, accidental damage, modification or repair without the approval of Inor or damage done to the Product by anyone other than Inor.

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