

USER INSTRUCTIONS

LCD-H210

Digital Loop Powered LCD

Indicator Integrated into a Connection Head



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-H210 is a digital loop powered LCD indicator integrated into a connection head with window.
The connection head is designed to be fitted to a temperature sensor and can also be equipped with a built-in DIN B head mount 2-wire transmitter. The LCD indicator is installed 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.

GENERAL INFORMATION

The LCD indicator is integrated into a connection head and is used to show numerical values proportional to a 4-20 mA analogue process signal in the range from -1999 to 9999 on a digital display.
The indicator is loop powered and is connected to the 4-20 mA loop of a 2-wire transmitter or any device producing a 4-20 mA signal.
The aluminum connection head with polycarbonate window is designed to be fitted to a temperature sensor and can also be equipped with a built-in DIN B head mount 2-wire transmitter for direct process value visualization. A typical application is to use LCD-H210 fitted to a temperature sensor and connected to the 4-20 mA loop from a signal conditioner for local view of the measured temperature.
A high-contrast, 4-digit LCD display with backlight makes the display easy to read in any lighting conditions.
Configuration of the indicator is done either with NFC and the smartphone app INOR Connect or with three push buttons.



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.

DATA (short form)

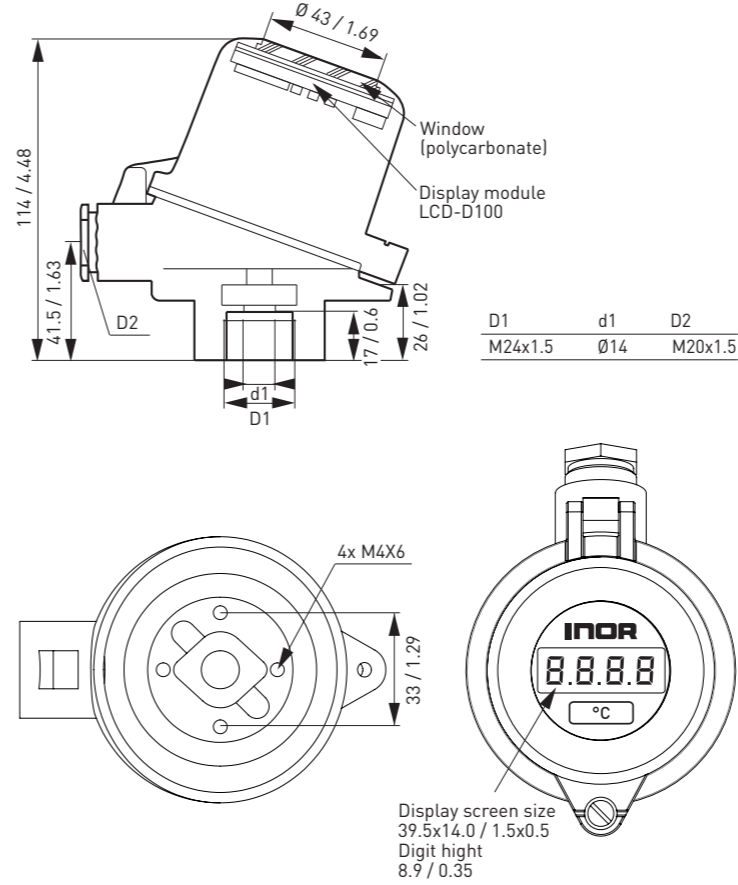
Display module	
Type	INOR model LCD-D100
Input Current	4-20 mA
Maximum current	30 mA
Minimum current for operation	-3.5 mA
Voltage drop	4.5 V
Indication	
Display	7-segment black LCD with clear background
Backlight	White LED powered from the 4-20 mA loop
Indication range	4 digits [-1999 to 9999]
Digit Height	8.89 mm / 0.35"
Decimals	Selectable, 0 to 3
Underrange / Overrange	Flashing symbols Lo (I ≤ 3.6 mA) / HI (I ≥ 21.0 mA)
Response time	Appr. 1s, Power on delay: 5s 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
Typical accuracy	±0.05% of span ±1 digit
NAMUR NE 43 compliance	Yes
HART transparent	Yes
Electrical connection	Push-in spring connections, Wire cross section 0.25 mm ² -1.5 mm ²
Connection head	
Type	INOR model BUZ-HW
Material of body / window	Aluminium pressure die-casting / Polycarbonate
Cable gland thread D2	M20x1.5
Process connection thread D1 / Hole d1	M24x1.5 / Ø14 mm
Paint type/colour	Polyester/white aluminium (RAL 9006)
Protection class	Up to IP65 (depending on applied cable gland and sealing for process connection)

ORDERING INFORMATION

Product	Part No.
LCD-H210	70LCDH2101
LCD-H210 - Customized	On request
LCD-D100 - Display module only	70D1000001

DIMENSIONS

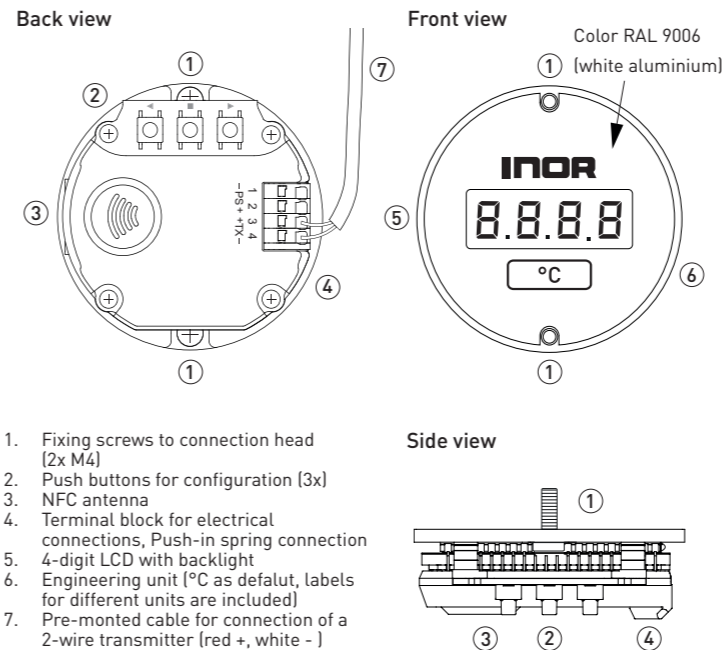
LCD-H210



mm / inch

The display module can be rotated 180°

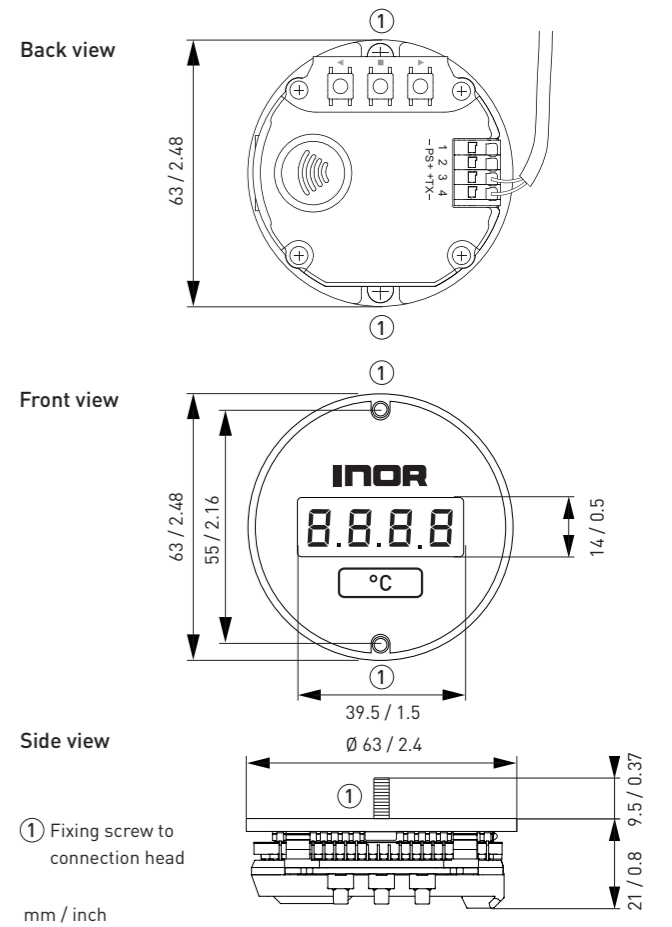
INDICATOR DESIGN



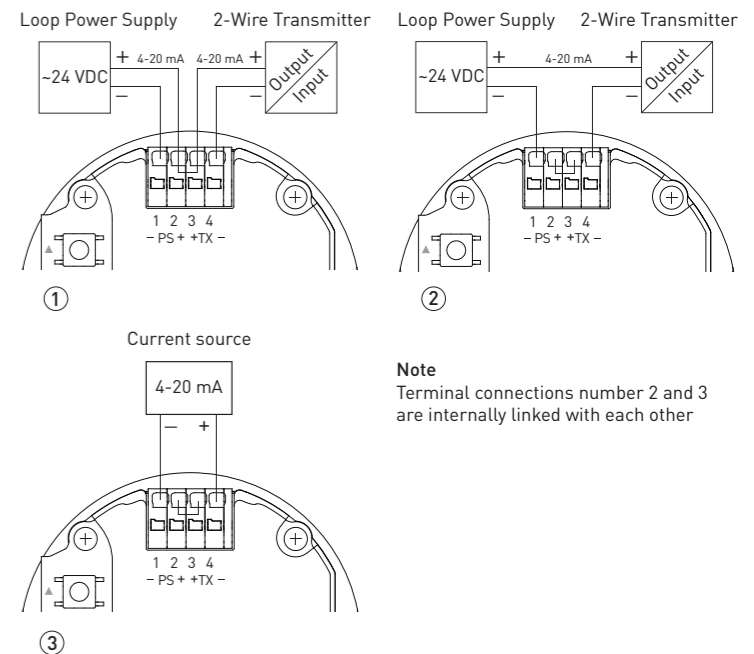
1. Fixing screws to connection head (2x M4)
2. Push buttons for configuration (3x)
3. NFC antenna
4. Terminal block for electrical connections, Push-in spring connection
5. 4-digit LCD with backlight
6. Engineering unit [°C as default, labels for different units are included]
7. Pre-mounted cable for connection of a 2-wire transmitter (red +, white -)

DIMENSIONS

LCD-D100 - Display module only

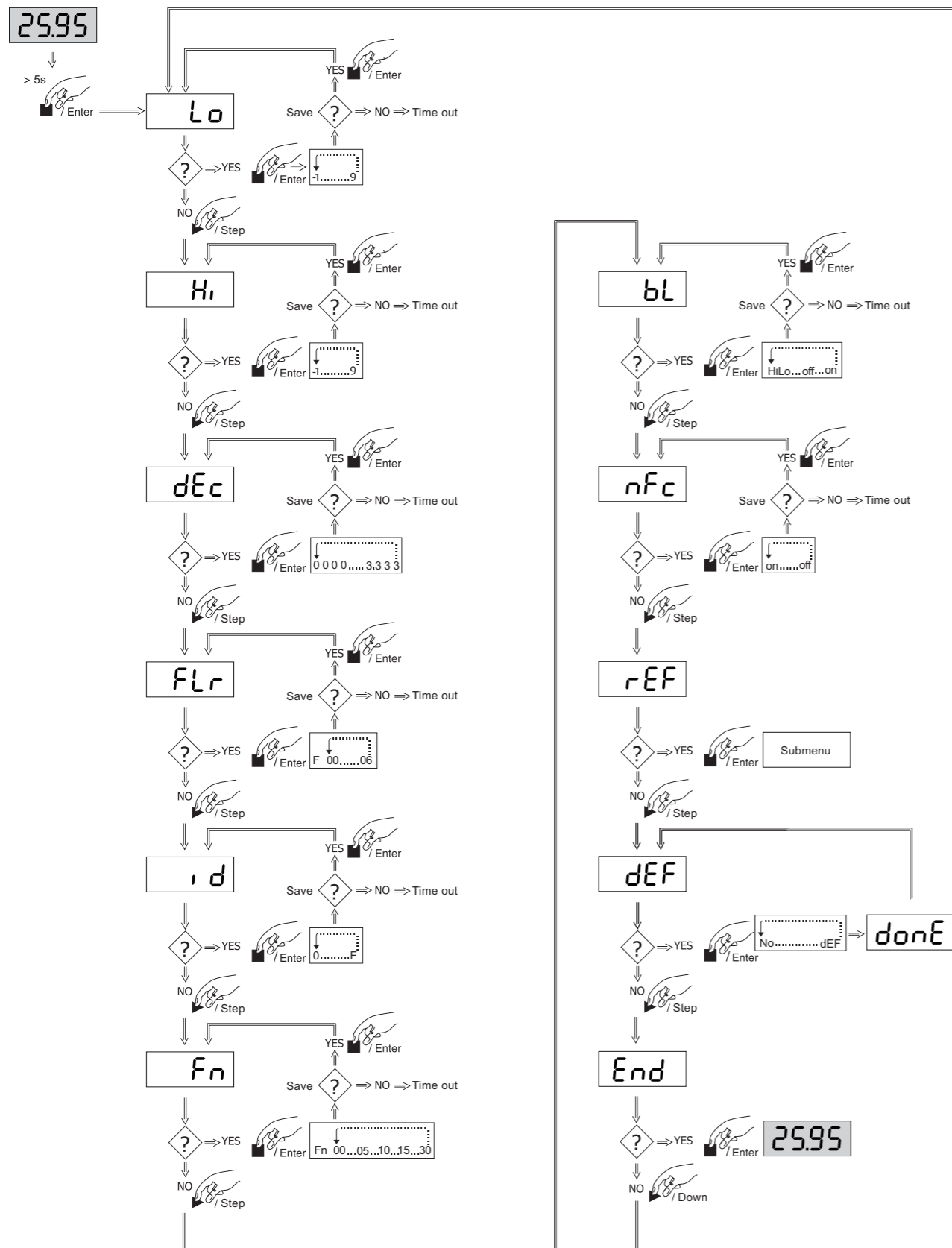


CONNECTIONS

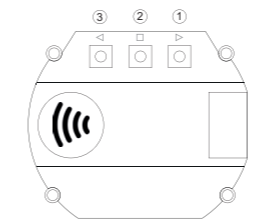


- Note**
Terminal connections number 2 and 3 are internally linked with each other
1. Connection to the indicator with power supply (for the transmitter) and a 2-wire transmitter by using the internal jumper between terminals 2 and 3 to establish a 4-20 mA current loop.
 2. Connection to the indicator with power supply (for the transmitter) and a 2-wire transmitter without using the internal jumper between terminals 2 and 3.
 3. Connection to the indicator with a current source (an active 4-20 mA signal)

CONFIGURATION - VIA PUSH BUTTONS



CONFIGURATION - VIA PUSH BUTTONS



- 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	rId	③
6	Fn	Fn00
7	nFc	on
8	rEf	-
9	dEf	-
10	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.

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

CONFIGURATION - VIA APP

Before making a configuration of LCD-H210 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

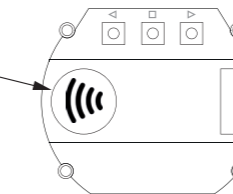
Android
Android 4.4 or later

Scan the QR code to download and install INOR Connect



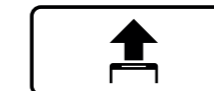
Configuration procedure:

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.



DISPLAY FUNCTION, NAMUR NE 43

Input current (mA)	Signal description	Indication on LCD-H210
≥ 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	Overrange	Extended indication range
4,0 to 20,0 mA	Normal operating range	The configured indication range
3,8 to 4,0 mA	Underrange	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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INOR Process AB, or any other affiliated company within the Inor Group (hereinafter jointly referred to as "Inor"), hereby warrants that the Product will be free from defects in materials or workmanship for a period of five (5) years from the date of delivery ("Limited Warranty"). This Limited Warranty is limited to repair or replacement at Inor's option and is effective only for the first end-user of the Product. Upon receipt of a warranty claim, Inor shall respond within a reasonable time period as to its decision concerning:

- 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.

This Limited Warranty is provided by Inor and contains the only express warranty provided.

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