

FNC Laser Distance Sensor Series



Features

Reliable optical distance measurement with long range up to 10 meters
Operation up to 200 klux ambient light immunity measurement
High accuracy (1%)
Scalable measuring range and window function
Programmable two switching outputs
Easy integration
High repeatability

Technical data-electrical ratings

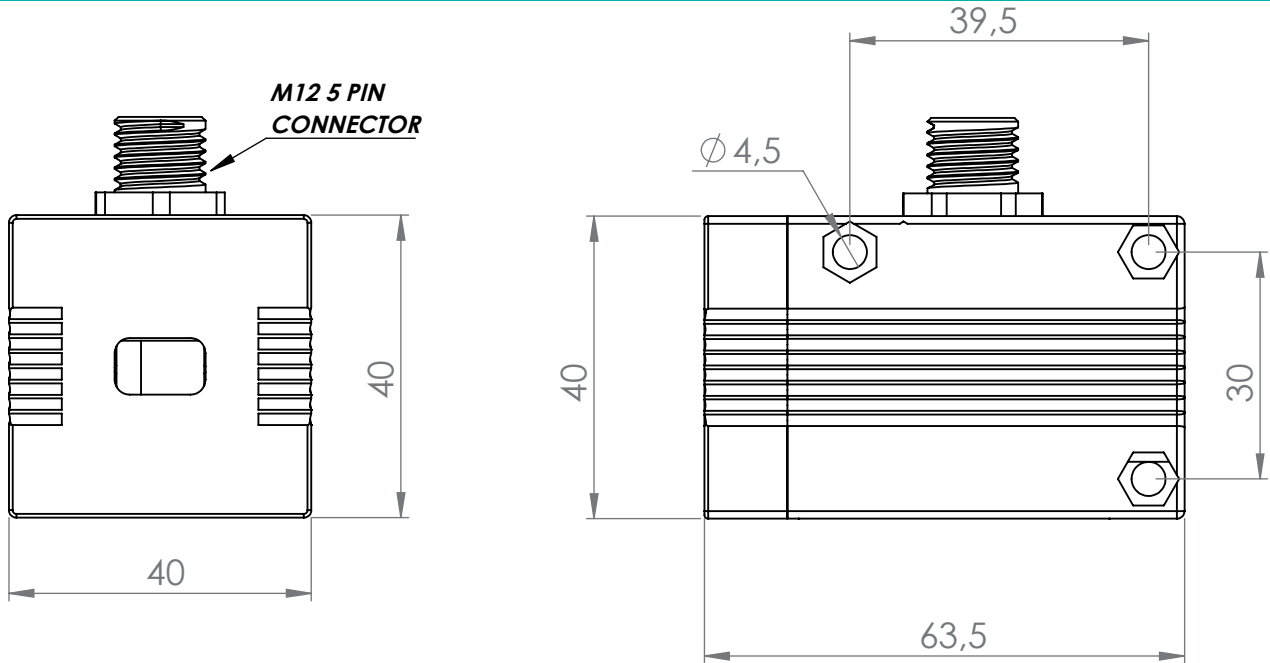
Voltage supply	24VDC to 30VDC
Consumption w/o load	≤200 mA
Light emission	680 nm visible red
Ambient light immunity	200 klux
Measuring range	20 cm - 10 m
Sample rates	1 - 50 Hz
Measuring accuracy	1%
Digital output	1 or 2 PNP / NPN / (Push Pull)
Analog current output	4 - 20 mA
Analog voltage output	0 - 10V
Display	Switching status : LED Red Power : 8 digits Display Distance & prog : 8 digits Display
Connector	1xM12, 5 pin Male

Technical data-mechanical ratings

Dimensions (flange)	59 x 42 x 52
Housing	Rectangular
Protection DIN EN 60529	IP65
Materials	Housing: Aluminum Lens : Glass Window : Gorilla glass
Operating temperature	-10 up to +55°C
Storage temperature	-25°C up to +70°C
Weight approx.	300 g

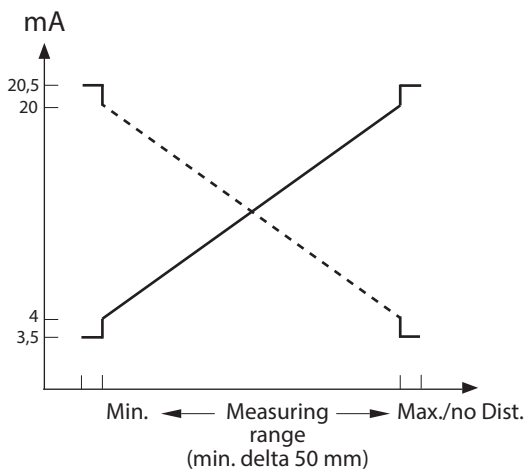
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Mechanical Dimensions

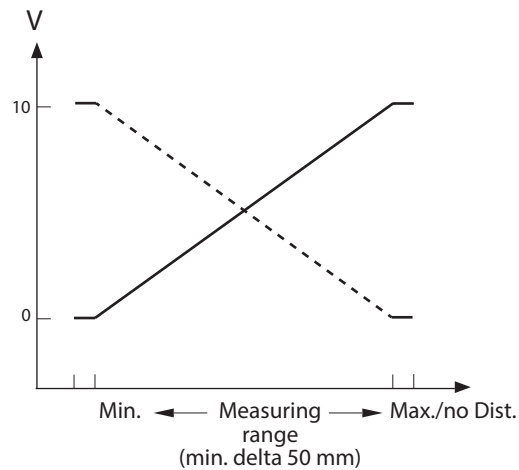


Signal Diagram

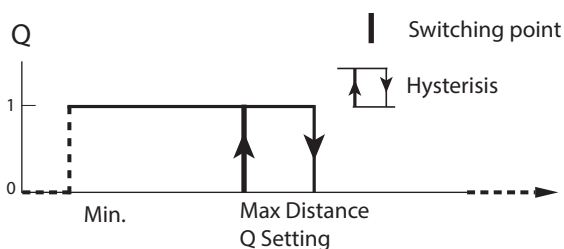
1 4 - 20 mA Analog Out



2 0 - 10 V Analog Out



3 NPN-PNP Digital Out



Laser Sensor

Cable / Connector Wiring, Part Number



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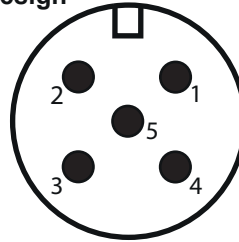
Cable & Connector Connection

Function	M1205 (Male)	Standart Sensor Connector
VCC	pin 1	Brown
4 - 20 mA / 0 - 10 V or Out 2 switching output	pin 2	White
GND	pin 3	Blue
Out 1 switching output	pin 4	Black
Not Connected	pin 5	

Connector



Pin Design



Sensor Part Number

FNC LDS 40 1000 D1NA1 - M12

LDS : Laser distance sensor

Housing

40 : 40 mm

Sensing Distance : 20 - 1000 cm

Other dimensions on request

Electrical Connections

R2 : radial 2m, shield not connected (standard)
M12 : M12, 5 pin connector

Output Type

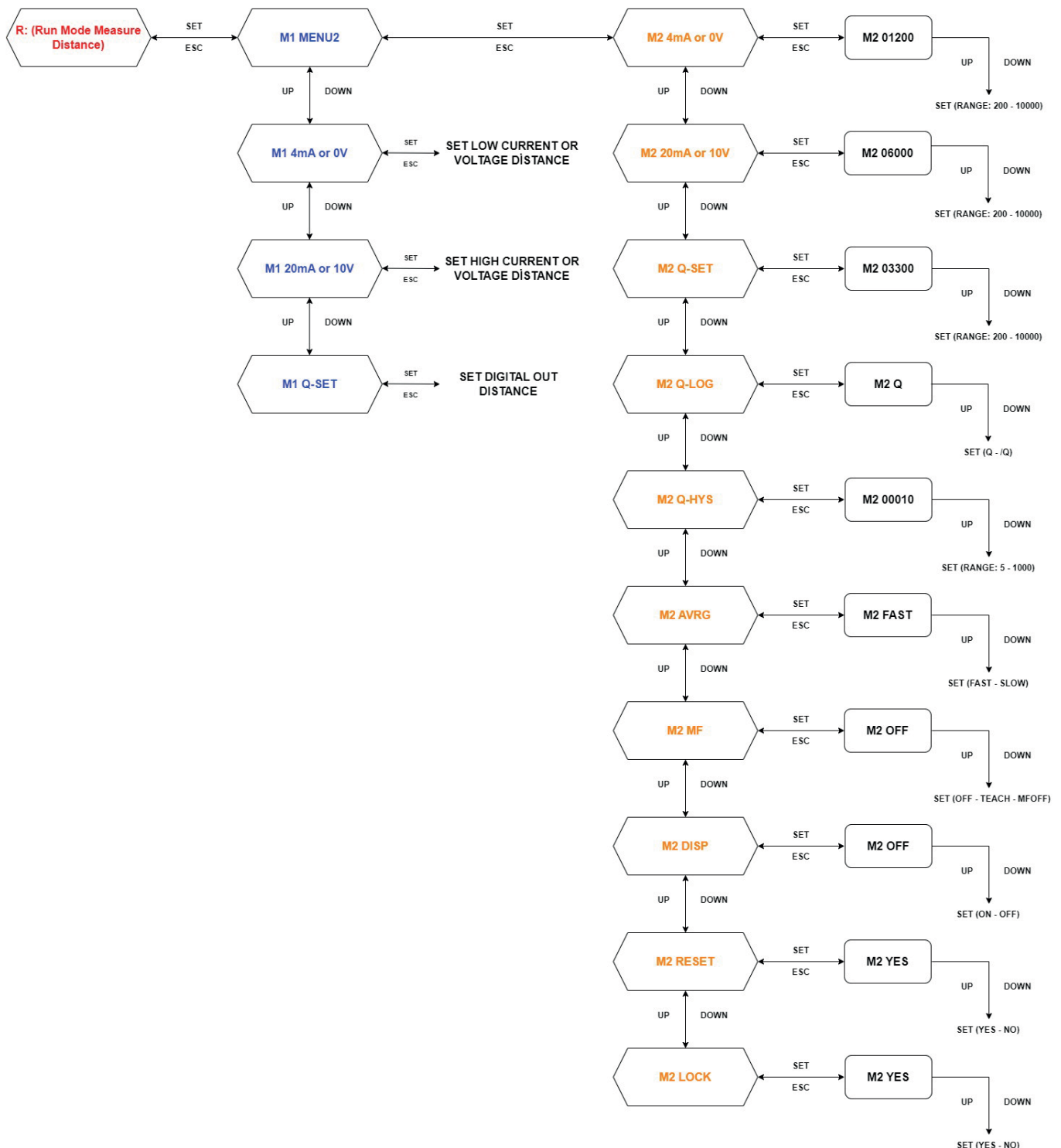
D1NA1 : 1 x NPN Digital Out , 1 x Analog Out 4 - 20 mA
D1PA1 : 1 x PNP Digital Out , 1 x Analog Out 4 - 20 mA
D1NV1 : 1 x NPN Digital Out , 1 x Analog Out 0 - 10V
D1PV1 : 1 x PNP Digital Out , 1 x Analog Out 0 - 10V
D1D2N : 2xNPN Digital Out
D1D2P : 2xPNP Digital Out

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User Manual

Sensor General Definition: This sensor can measure the distance between 200 mm and 10000 mm. Device can be programable with buttons which is placed on it. It has also an LCD display. Display is used for measured distance indicator and programming interface. Device has 2 outputs can be analog and digital. Interfaces are shown on the below;

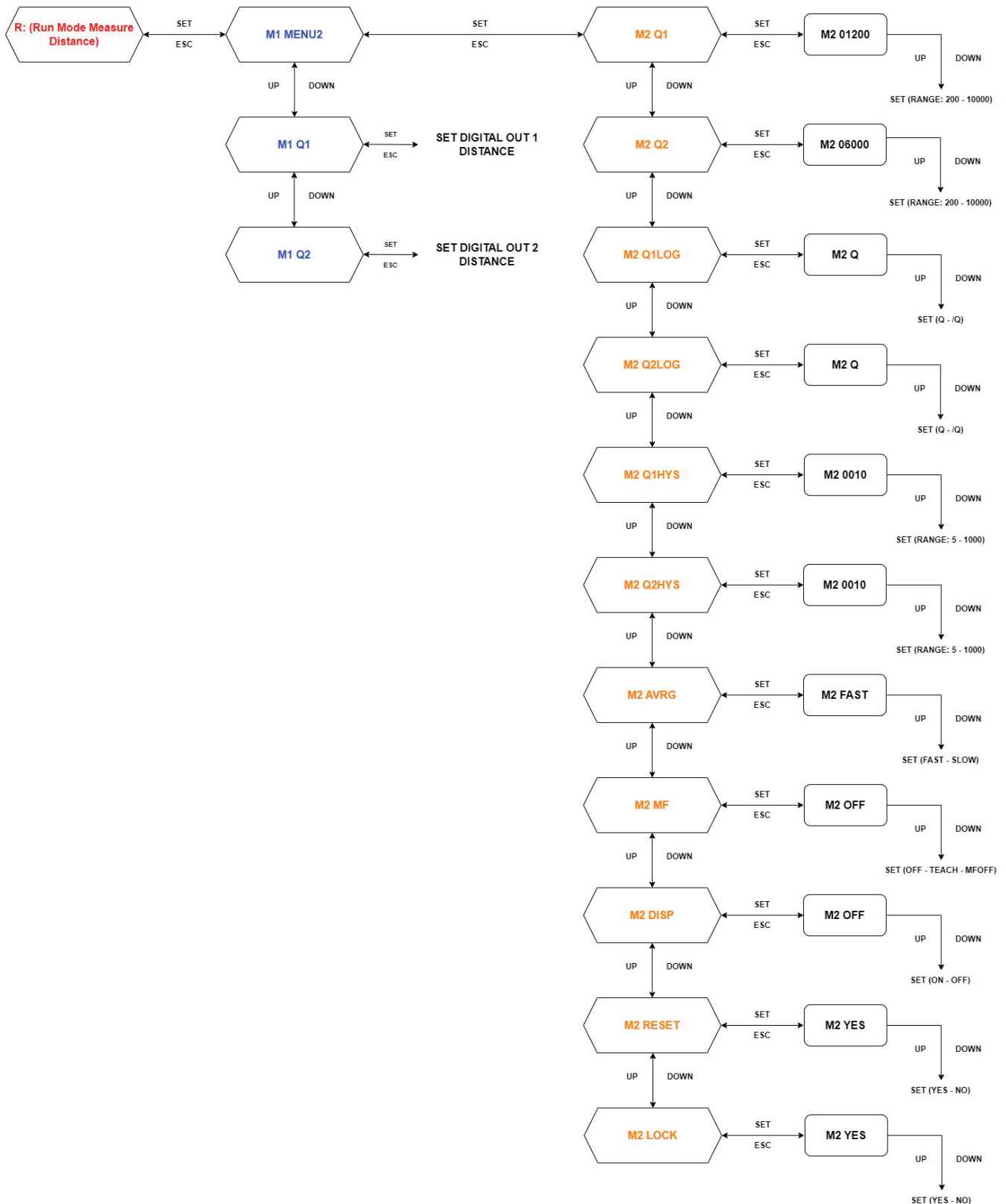
Analog - Digital Interface



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User Manual

Digital - Digital Interface



FNC Laser Distance Sensor Series

User Manual

Interface has 3 main parts:

RUN MODE (R): In this mode, device show the measured distance on the display. User can change the mode (MENU1) with SET button.

MENU1 (M1): This menu used for one button programming. User show to sensor desired measurement and push the SET button. Device set this measurement choosen parameter. It can be digital and analog.

Analog-Digital Interface:

- M1 MENU2: Change mode to MENU2 (M2).
- M1 4mA or 0V: Choose the sensor distance for 4mA or 0V analog output.
- M1 20mA or 10V: Choose the sensor distance for 20mA or 10V analog output.
- M1 Q-SET: Choose the sensor distance for digital output.

Digital-Digital Interface:

- M1 MENU2: Change mode to MENU2 (M2).
- M1 Q1: Choose the sensor distance for digital 1 output.
- M1 Q2: Choose the sensor distance for digital 2 output.

MENU2: In this section, the desired distance is determined by manually entering it into the device. Additionally, detailed settings of the device are also made here. This menu used to choose the desired distance manually. This menu also has other options.

Analog-Digital Interface;

- M2 4mA or 0V: Choose the sensor distance for 4mA or 0V analog output.
- M2 20mA or 10V: Choose the sensor distance for 20mA or 10V analog output.
- M2 Q-SET: Choose the sensor distance for digital output.
- M2 Q-LOG: Choose the sensor digital output polarity.
- M2 Q-HYS: Choose the sensor digital output hysteresis. Digital output change the state use this value.
- M2 AVRG: Deactive.
- M2 MF: Deactive.
- M2 DISP: This option used to LCD screen off for power saving.
- M2 RESET: Choose YES to reset the device.
- M2 LOCK: Deactive.

Digital-Digital Interface;

- M2 Q1: Choose the sensor distance for digital 1 output.
- M2 Q2: Choose the sensor distance for digital 2 output.
- M2 Q1LOG: Choose the sensor digital 1 output polarity.
- M2 Q2LOG: Choose the sensor digital 2 output polarity.
- M2 Q1HYS: Choose the sensor digital 1 output hysteresis. Digital output change the state use this value.
- M2 Q2HYS: Choose the sensor digital 2 output hysteresis. Digital output change the state use this value.
- M2 AVRG: Deactive.
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