



FDRF603 Series Laser Displacement Sensors

Laser displacement sensors are used for non contact measurement of displacement, speed, acceleration, vibrations, deformation and profiles in static and dynamic applications in the research and industry to improve quality and save costs.

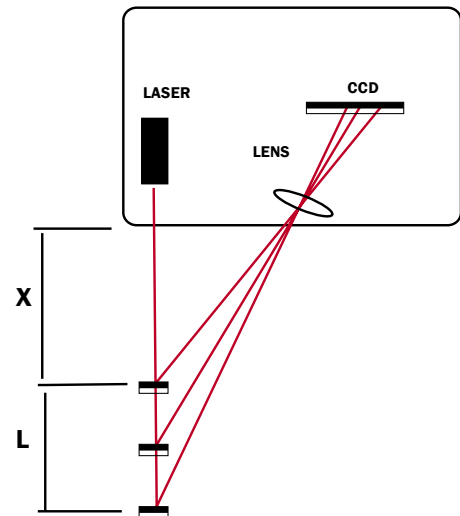
The measurement ranges vary from 2mm up to 1000mm. And with blind ranges from 10mm up to 245mm you can mount the sensor at a save distance from the moving target.

Due to the non contact measurement, you can avoid force on the target and wear of both target and sensor surfaces. Because the laser spot does not have mass, it will follow the target at target speed.



Features

- Save distance to target
- Non contact
- Non wear
- Non force
- Fast, non mass laser spot



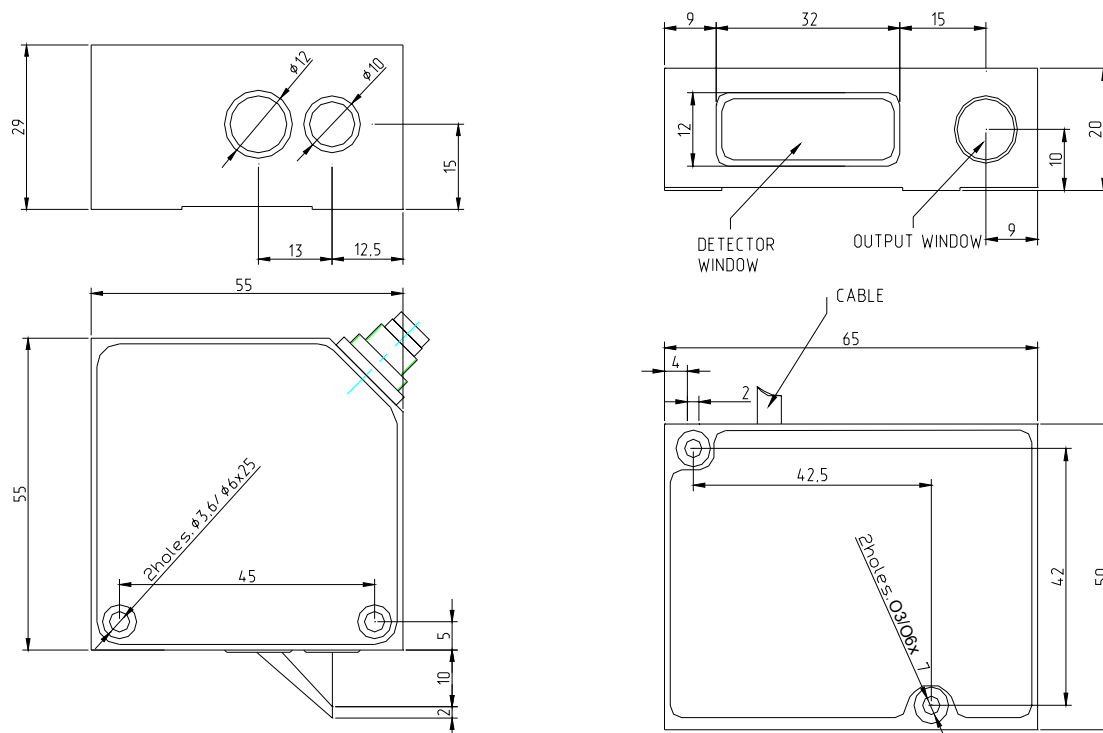
Specifications

FDRF603-	X/2	X/5	X/10	X/15	X/25	X/30	X/50	X/100	X/250	X/500	X/750	X/1000
Blind distance, X, mm	10	15	15, 25 55	15, 30 60	25, 45 80	35, 55 95	45, 65 105	60, 90 140	80	125	145	245
Working range, mm	2	5	10	15	25	30	50	100	250	500	750	1000
Linearity, %	±0,1 of the range										±0,2...0,3	
Resolution, %	0.01 of the range										0,03	
Maximum sampling rate, kHz	2 or 5 or 8											
Laser type	1...3 mW, wavelength 660 nm									5mW, 660 nm		
Output signal	digital	RS232 (460,8 kbit/s max) or RS485 (460,8 kbit/s max) or RS232 and CAN V2.0B (1 Mbit/s) or CANopen										
	analog	4...20 mA (≤500 Ω load) or 0...10 V										
Synchronization input	2,4-5 V (CMOS, TTL)											
Power Supply, V	5 (4,5...9) or 12 (9...18) or 24 (18...36)											
Alarm output	NPN: 100 mA max; 40 V max											
Power consumption, W	1,5...2											
Enclosure rating	IP67											
Operating temperature, °C	-10...+60, (-30...+60 for the sensor with built-in heater), (-30...+120 for the sensors with cooling housing)											
Weight (without cable), g	100											

Note: All specifications apply for a diffusely reflecting white paper

Dimensions

FDRF603 Laser Displacement



Ordering Information

Symbol	Description
F	maximum sampling rate , kHz (2 or 5 or 8)
X	base distance (beginning of the range) in mm
L	operating range in mm
SERIAL	type of the serial interface (RS232 or RS485 or RS232&CAN)
OUT	attribute showing the presence of Current Loop (I) or U output
IN	trigger input (input of synchronization)
AL	This signal is of triple purpose. It can be used as: 1) logical output; "0" – object is beyond the (selected) range "1" – object is within the (selected) range 2) line of mutual synchronization for two and more sensors 3) line of hardware zero setting
VV	supply voltage
CC	Connection: CG (Cable gland) or CC (socket + cable with connector, Binder 702, IP67)
M	Cable length in m
H	Sensor with built-in heater
P	Sensor with protect air cooling housing (See annex # 1)

For example: FDRF603.5-80/25-232-I-12-CC-3

5 kHz max frequency, Blind distance 80 mm, Measuring range 25 mm, Serial port RS232, Analog output 4..20 mA, Voltage supply 12V (9...18V), Cabling with connector + socket, Cable length 3 m.

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