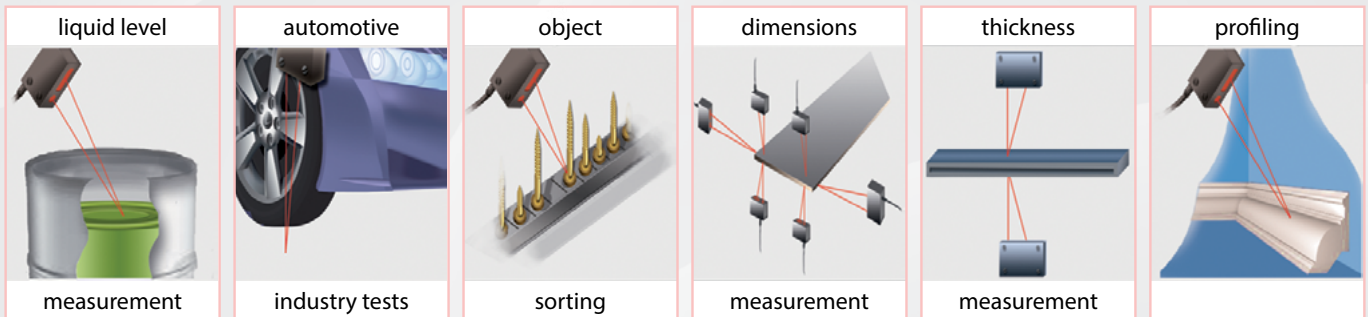# LASER TRIANGULATION SENSORS
RF600 SERIES

Position, dimensions, surface profiles, deformations, vibrations measurement, sorting and sensing presence or absence

- ■ Large-base and long range laser sensors
- ■ Measuring ranges from 10 to 2500 mm
- ■ Linearity ±0.1%
- ■ Resolution ±0.01%
- ■ Sampling rate up to 9.4 kHz
- ■ RS232/RS485/Ethernet/CAN +4...20 mA/0...10V

liquid level	automotive	object	dimensions	thickness	profiling
measurement	industry tests	sorting	measurement	measurement	

BASIC TECHNICAL DATA

RF600-	X/10	X/30	X/40	X/100	X/250	X/500	X/600	X/1000	X/1000	X/1500	X/2000	X/2500
Base distance X, мм	230	300	330	500	230	300, 1000	230	1300	380	390	410	420
Measurement range, mm	10	30	40	100	250	500	600	1000	1000	1500	2000	2500
Linearity, %	±0.1 of the range										±0.2	
Resolution, %	0.01 of the range (for the digital output only)										0.03	
Temperature drift	0,02% of the range/°C											
Max. measurement frequency, Hz	9400											
Light source	red semiconductor laser, 660 nm wavelength or UV semiconductor laser 405 nm wavelength (BLUE version)											
	output power	≤4,8 mW										≤20 mW	
	laser safety Class	3R (IEC60825-1)										3B (IEC60825-1)	
Output	digital	RS232 (max. 460,8 kbit/s) or RS485 (max. 921,6 kbit/s) or RS232 and CAN V2.0B (max 1Mbit/s) or Ethernet and (RS32 or RS485)											
interface	analog	4…20 mA (£500 Ω load) or 0…10 V											
Synchronization input		2,4 – 5 V (CMOS, TTL)											
Logic output		programmed functions, NPN: 100 mA max; 40 V max for output											
Power supply, V		9 …36											
Power consumption, W		1,5..2											
Environment resistance	Enclosure rating	IP67 (for the sensors with cable connector only)											
	Vibration	20g/10…1000Hz, 6 hours, for each of XYZ axes											
	Shock	30 g / 6 ms											
	Operation temperature, °C	-10…+60, (-30…+60 for the sensors with in-built heater)											
	Permissible ambient light, lx	30000											
	Relative humidity	5-95% (no condensation)											
	Storage temperature, °C	-20…+70											
Housing material		Aluminum											
Weight (without cable)		500 gram											

Certified according to ISO 9001:2008

OVERALL DIMENSIONS

Sensors are equipped by cable gland or connector.
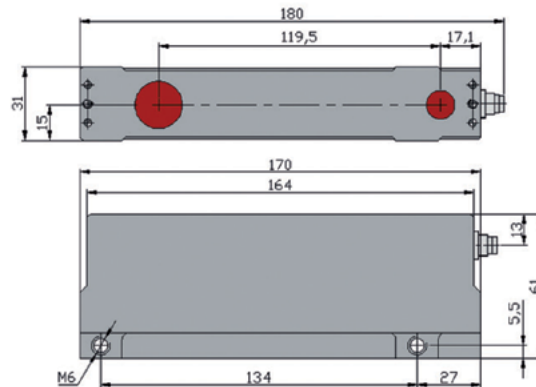
EXAMPLE OF DESIGNATION WHEN ORDERING

RF600(BLUE)-X/D-SERIAL-ANALOG-IN-AL-CC(90X)(R)-M-H

Symbol	Description
(BLUE)	Blue (405 nm) laser option
X	Base distance (beginning of the range), mm
D	Measurement range, mm
SERIAL	The type of serial interface: RS232-232 or RS485-485 or (CAN and RS232) - CAN, or (Ethernet and RS232) – ET-232 or (Ethernet and RS485) - ET-485
ANALOG	Attribute showing the presence of 4…20 mA (I) or 0…10V (U) **Note:** 1) I output – only for sensors with RS232 or RS485 2) U output – only for sensors with RS232 or RS485 or CAN
IN	Trigger input (input of synchronization) presence
AL	User programmed signal, which has several purposes. It can be used as 1) logical output (indication of run-out beyond the range) 2) line of mutual synchronization of two and more sensors 3) line of hardware zero setting 4) hardware laser switch ON/OFF
CC(90X)(R)	Cable gland - CG, or cable connector - CC (Binder 712, IP67) **Note 1:** sensors with CAN or Ethernet interfaces have 2 connectors and are available with cable connectors only (CC only) **Note 2:** 90(X) option – angle cable connector **Note 3:** R option – robot cable
M	Cable length, m
H	Sensor with in-built heater

Example. RF600-380/1000-232-I-IN-AL-CCR90A-3 – sensor with base distance – 380 mm, range – 1000mm, RS232 serial port, 4…20mA analog output, trigger input and AL input are available, cable con-nector, angle type, position "A", robot cable, 3 m cable length.