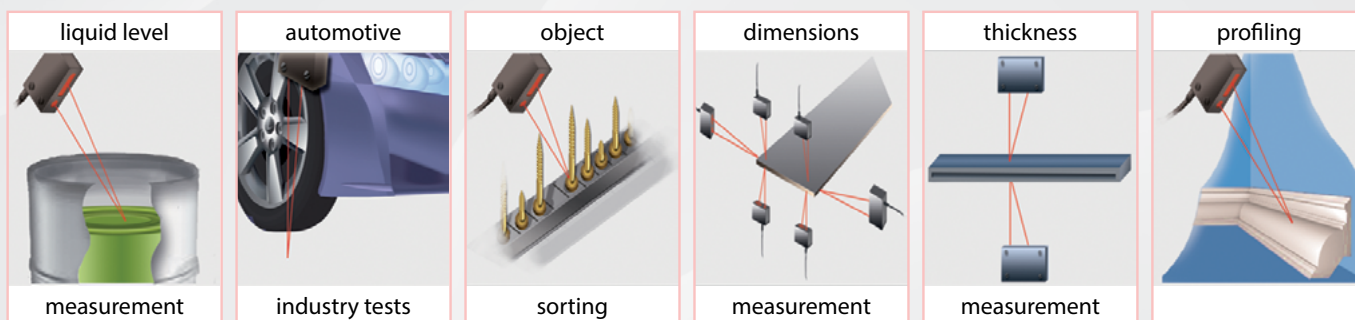


Position, dimensions, surface profiles, deformations, vibrations measurement, sorting and sensing presence or absence



- Universal laser sensors
- Measuring ranges from 2 to 1250 mm
- Linearity  $\pm 0.05\%$
- Resolution  $\pm 0.01\%$
- Sampling rate up to 9.4 kHz
- RS232/RS485/Ethernet/CAN +4...20 mA/0...10V
- Binocular sensors
- Sensors with BLUE lasers



### BASIC TECHNICAL DATA

RF603-	R-X/4	X/2	X/5	X/10	X/15	X/25	X/30	X/50	X/100	X/250	X/500	X/750	X/1000	X/1250	
Base distance X, mm	39	15	15	15, 25 60	15, 30, 65	25, 45 80	35, 55 95	45, 65, 105	60, 90, 140	80	125	145	245	260	
Measurement range, mm	4	2	5	10	15	25	30	50	100	250	500	750	1000	1250	
Linearity, %	±0.05 of the range													±0.1	
Resolution, %	0.01 of the range (for the digital output only)													0.02	
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)														
Light source	model	RF603													
	output power	≤0,2	≤3 mW												
	laser safety Class	1	3R (IEC60825-1)												
	model	RF603L													
	output power		≤0,95 mW												
	laser safety Class		2 (IEC60825-1)												
Light source	model											RFR603P			
	output power											≤20 mW			
	laser safety Class											3B (IEC60825-1)			
Output interface	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)													
Output 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),													
	Relative humidity	(-30...+120 for the sensors with in-built heater and air cooling housing)													
	Storage temperature, °C	5-95% (no condensation)													
Housing material	aluminum														
Weight (without cable)	100 gram														

Note 1: RF603-R-39/4 sensor is designed to use with mirror surfaces and glass



Certified according to ISO 9001:2008

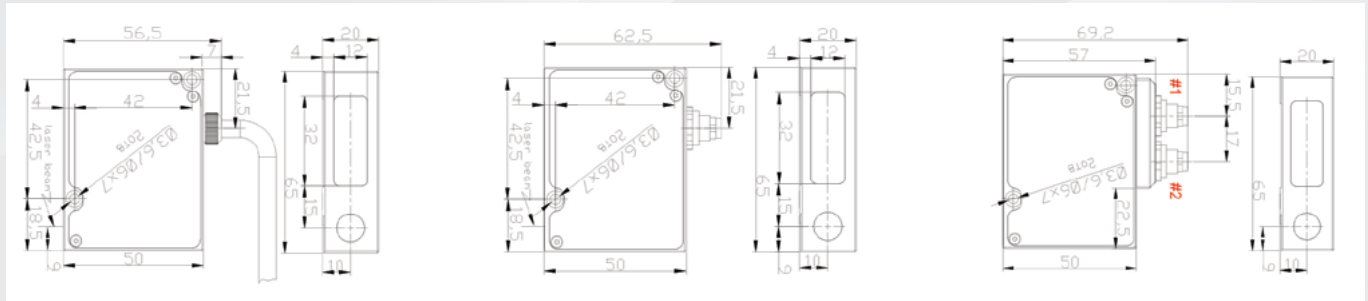
## OVERALL DIMENSIONS

Sensors are equipped by cable gland or connector. Sensors with CAN or Ethernet interface are equipped by two connectors.

RF603 sensor with cable gland (CG)

RF603 sensor with connector (CC)

RF603 sensor with 2 connectors (CC)



## EXAMPLE OF DESIGNATION WHEN ORDERING

RF603(BLUE)(L/P)-X/D(R)-SERIAL-ANALOG-IN-AL-CC(R)(90)-M-H-P-B

Symbol	Description
<b>(BLUE)</b>	Blue (405 nm) laser option
<b>L</b>	L or P – attribute showing Laser safety Class 2 or Class 3B
<b>X</b>	Base distance (beginning of the range), mm
<b>D</b>	Measurement range, mm
<b>(R)</b>	Round shape laser spot
<b>SERIAL</b>	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
<b>ANALOG</b>	Attribute showing the presence of 4...20 mA ( I ) or 0...10V ( U ) <b>Note:</b> 1) I output – only for sensors with RS232 or RS485 2) U output – only for sensors with RS232 or RS485 or CAN
<b>IN</b>	Trigger input (input of synchronization) presence
<b>AL</b>	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 <b>Note:</b> option AL is not available for sensors with in-built heater
<b>CC(90X)(R)</b>	Cable gland - CG, or cable connector - CC (Binder 712, IP67) <b>Note 1:</b> sensors with CAN or Ethernet interfaces have 2 connectors and are available with cable connectors only (CC only). <b>Note 2:</b> 90(X) option – angle cable connector <b>Note 3:</b> R option – robot cable
<b>M</b>	Cable length, m
<b>H</b>	Sensor with in-built heater
<b>P</b>	Sensor with protect air cooling housing
<b>B</b>	Sensor with spray guard
<b>Example.</b> RF603L-140/100R-232-I-IN-AL-24-CCR90A-3 – Class 2 laser, base distance – 140 mm, range – 100mm, round shape laser spot, RS232 serial port, 4...20mA analog output, trigger input and AL input are available, cable connector, angle type, position "A", robot cable, 3 m cable length.	