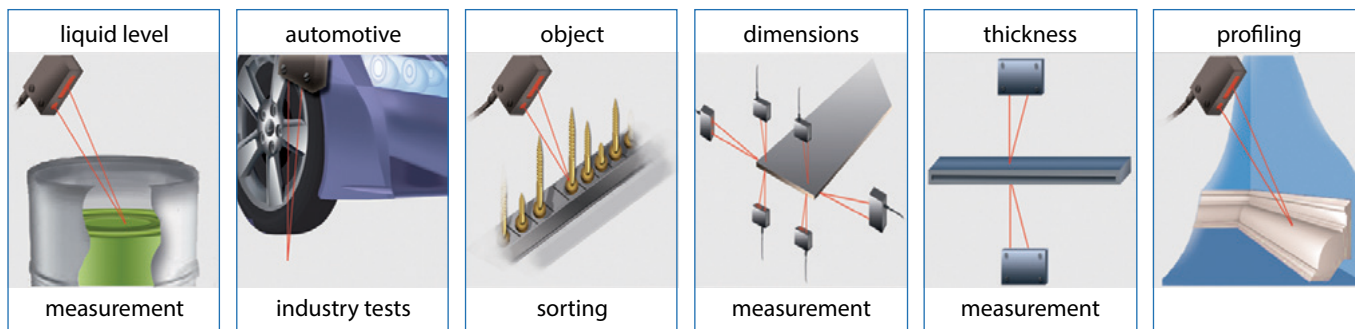




Position, dimensions, surface profiles, deformations, vibrations measurement, sorting and sensing presence or absence



- Universal high-speed laser sensors
- Measuring ranges from 2 to 1250 mm
- Linearity  $\pm 0.1\%$
- Resolution  $\pm 0.01\%$
- Sampling rate up to 180 kHz
- RS232/RS485/Ethernet +4...20 mA/0...10V
- Sensors with BLUE lasers

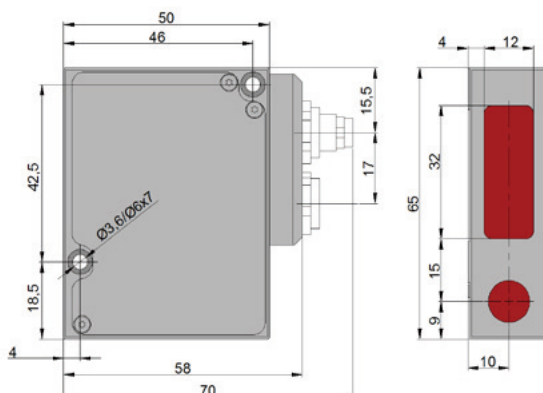


## BASIC TECHNICAL DATA

<b>Base distance X, mm</b>	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
<b>Measurement range, mm</b>	2	5	10	15	25	30	50	100	250	500	750	1000	1250
<b>Max. measurement frequency, kHz</b>	60, 120, 180												
<b>Linearity, %</b>	$\pm 0.1$ (60 kHz), $\pm 0.2$ (120 kHz), $\pm 0.3$ (180 kHz) of the range												
<b>Resolution, %</b>	0.01 (60 kHz), 0.02 (120 kHz), 0.04 (180 kHz) of the range												
<b>Temperature drift</b>	0,02% of the range/°C												
<b>Light source</b>	red semiconductor laser, 660 nm wavelength or UV semiconductor laser 405 nm wavelength (BLUE version)												
<b>Output power</b>	$\leq 0,95$ mW			$\leq 4,8$ mW				$\leq 70$ mW					
<b>Laser safety Class</b>	2 (IEC60825-1)			3R (IEC60825-1)				3B (IEC60825-1)					
<b>Output interface</b>	<b>Parameterization</b>												
	<b>Data transfer</b>												
	<b>Analog</b>												
<b>Synchronization input</b>	0...10 V												
<b>Logic output</b>	2,4 – 5 B (CMOS, TTL)												
<b>Power supply, V</b>	programmed functions, NPN: 100 mA max; 40 V max for output												
<b>Power consumption, W</b>	9...36												
<b>Environment resistance</b>	4,8												
	IP67												
	<b>Enclosure rating</b>												
	<b>Vibration</b>												
	<b>Shock</b>												
	<b>Operation temperature, °C</b>												
	<b>Permissible ambient light, lx</b>												
<b>Relative humidity</b>													
<b>Storage temperature, °C</b>													
<b>Housing material</b>	aluminum												
<b>Weight (without cable)</b>	110 gram												

## OVERALL DIMENSIONS

Sensors are equipped by cable gland or connector.



## EXAMPLE OF DESIGNATION WHEN ORDERING

RF603HS(BLUE).F-X/D(R)-SERIAL-ANALOG-IN-AL-CC(R)(90)-M-H-P-B

<b>(BLUE)</b>	Blue (405 nm) laser option
<b>F</b>	Maximal sampling frequency, 60 or 120 or 180 kHz
<b>X</b>	Base distance (beginning of the range), mm
<b>D</b>	Measurement range, mm
<b>(R)</b>	Round shape laser spot option
<b>SERIAL</b>	The type of serial interface: (RS232 and Ethernet) – 232-ET or (RS485 and Ethernet) – 485-ET
<b>ANALOG</b>	Attribute showing an analog output presence 0...10V ( U )
<b>IN</b>	User programmed signal, which has several purposes: 1) Trigger input (input of synchronization) 2) Encoder _A input
<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 5) Encoder _B input 6) status line input 7) input for Ethernet restart
<b>CC(90X)(R)</b>	Cable gland - CG, or cable connector - CC (Binder 712, IP67) <b>Note 1:</b> 90(X) option – angle cable connector <b>Note 2:</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> RF603HS.60-140/100R-232-ET-U-IN-AL-24-CCR90A-3 – 60kHz sampling frequency, base distance – 140 mm, range – 100mm, round shape laser spot, RS232 and Ethernet serial port, 0...10V analog output, trigger input and AL input are available, cable connector, angle type, position "A", robot cable, 3 m cable length.	