

# RF601

## OEM module long-range laser distance measurement

The RF601 is an OEM laser distance measurement module for extrem long distances and poorly reflecting targets.

With its very small form factor it can easily be integrated in existing sensor or surveillance systems.

The used invisible infrared laser beam makes the RF601 to be used unnoticed in public places or applications where people are present.

The RF601 is unique on the market. With its special features it makes applications solvable which provide high demands on measuring range and compactness.



### Advantages

- Extremely wide measuring range without the need of special reflectors
- New modern measuring principle
- Very compact and lightweight design
- Invisible infrared laser beam
- New kind of measuring principle
- Broad range of application
- Laser class 1 or 1M
- Fast version with 400 Hz measurement rate available

### Applications

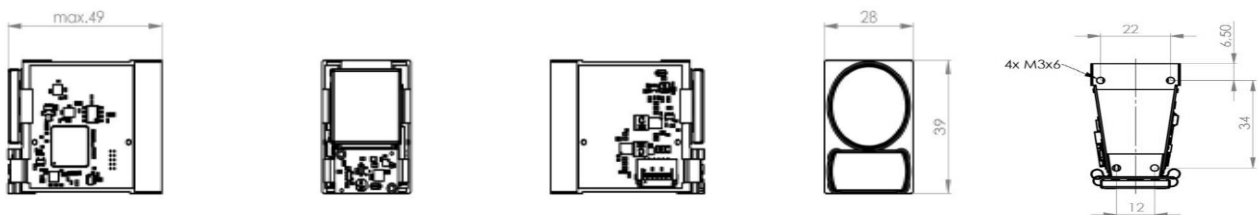
- Public safety
- Public transport and logistics
- Presence check
- Long distance detection on poorly reflecting targets
- Access control
- Traffic surveillance
- Offshore and harbor surveillance
- Altimeter
- Sports and hunting equipment

## Technical Data

Type	RF601	RF601F
Measurement range <sup>1)</sup>	1 m ... 2500m	1 m ... 3000 m
Target range (refl. 30%, target size 1.5 m x 0.5 m)	1350 m	1900 m
Accuracy (1 $\sigma$ @ 500 m / 700 m, 30 % albedo, 10 km visibility, 20 °C)	$\pm 0.5$ m	
Resolution	0.1 m	
Measuring time	0.05 s ... 1.5 s	0.0025 s ... 1.5 s
Measuring frequency	0.1 Hz ... 10 Hz	0.1 Hz ... 400 Hz
Laser class (acc. DIN EN 60825-1:2015-07)	Class 1	Class 1M
Laser wavelength	905 nm (infrared)	
Laser divergence	1.4 mrad x 0.4 mrad	
Opto-mechanical alignment accuracy	0.2 mrad	
Serial interface	UART, CMOS-Level, 3.3 V	
Interface connector (module)	Molex 5040500601	
Interface connector (supply electronics)	Molex 5040510601	
Power supply	1.9 V ... 5.2 VDC	
Power consumption	1 W ... 1.5 W (measurement running) 40 mW (stand-by)	
Operating temperature	-32 °C ... +55 °C	
Storage temperature	-45 °C ... +80 °C	
Dimensions (W x H x L)	28 mm x 39 mm x 49.5 mm	
Weight	< 60 g	
Protection class	IP00 (no housing)	
Mounting	3 threads M3, top and bottom side (see drawing)	

1) Depending on ambient conditions, target reflexion and target size

## Drawing



It is our policy to constantly improve the design and specifications. We reserve the right of technical modifications without prior notice.

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