

INPROX sensors



advanced laser gloss system
industrial quality & process control

MTG5F
gloss/finish sensor

INPROX sensors

industrial grade environmental duty

With a sturdy aluminum housing the MTG5F series laser gloss system is engineered to resist difficult production environments where temperature, dirt and other typical contaminants may impede performance.

G-Scope© software

This advanced software platform allows the customer to control all aspects of intensity, gloss, contrast, power, event and output; down to the ground level of operations.

open file network

INPROX Sensors offers an open file network that can run in real time and deliver unlimited individual files for an unprecedented level of access and customization.

easy to set up

G-Scope offers hassle-free installation and communication: RS232/USB software setup.+ PLC interfaces; and EEPROM stand alone operations after initial program.

directly stores control data

With the ability to sort and recognize over 15,000 gloss variations the MTG5F EEPROM holds individual data for frequency control of difficult gloss contrast control applications. There is no need to reprogram or have operators teach-in time consuming gloss or finish data.



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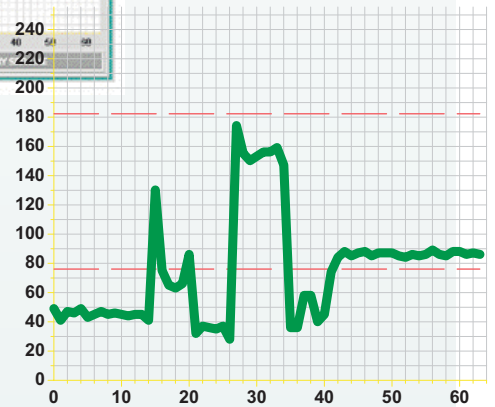
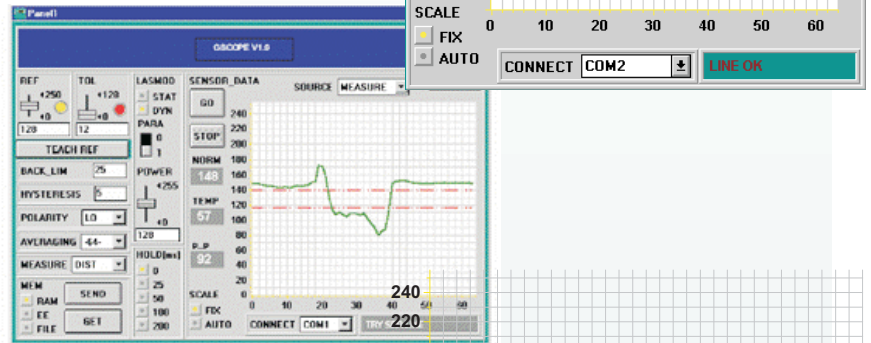
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INPROX sensors

advanced gloss recognition system

multi-function graphing platform



action events modes

- ▣ **Tolerance** output signals when ever the detection object deviates both high and low
- ▣ **Reference** output settings to define high or low polarity settings; representing the prime output signal
- ▣ **Backlimit** default value control
- ▣ **Hysteresis** control for signal buffer zones

2 recognition-setup modes

- « Intensity
- « Measurement



Specifications Overview

- ¥ 3 kHz typical response speed
- ¥ RS232/USB connection via G-scope software
- ¥ 64,000 scans per second
- ¥ Real-Time or EEPROM intellisense monitoring

G-scope© software included

MTG Series

▶ MTG5F Gloss Detection

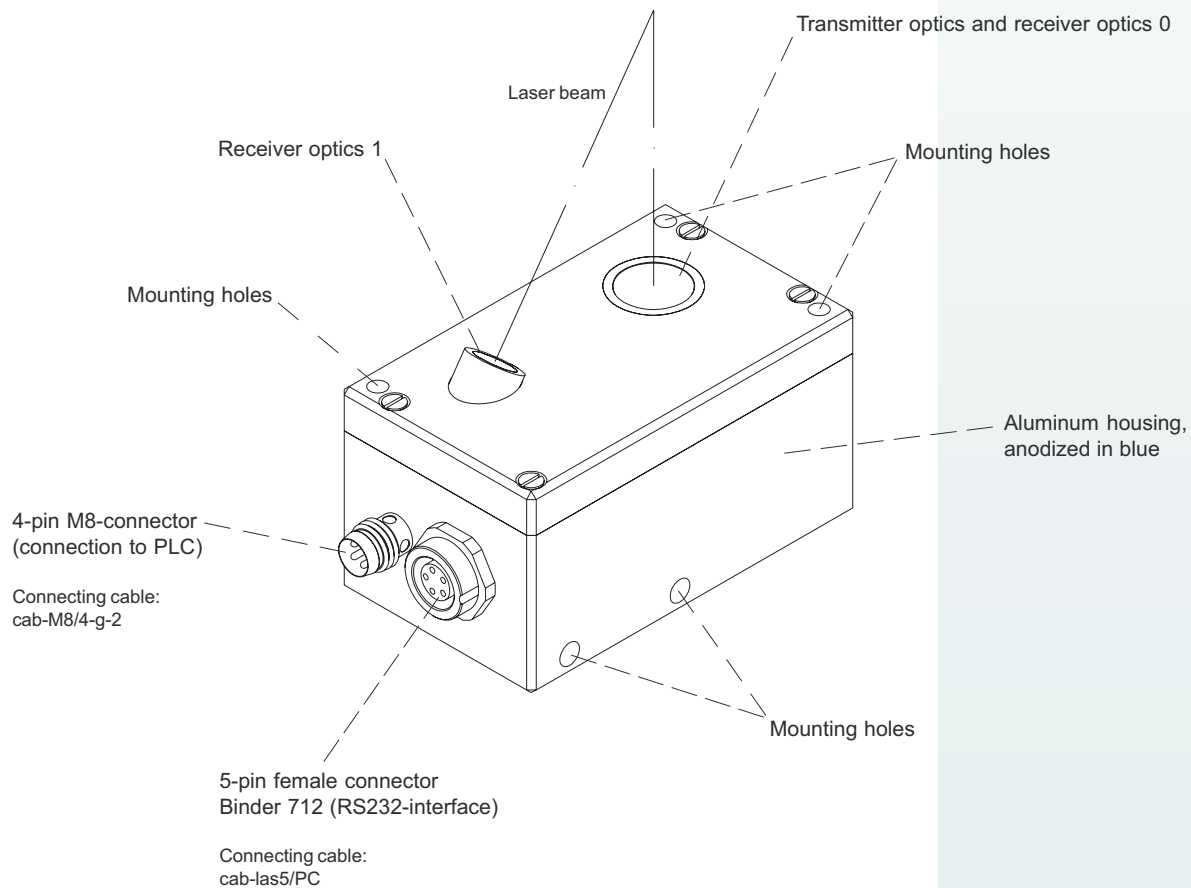
- 50 mm reference distance
- Focused laser beam
- Insensitive to outside light (interference filter and modulation)
- Evaluation independent of intensity
- Automatic laser power correction
- Averaging can be activated via PC
- Adjustable polarity of threshold state
- Parameterisable under Windows®
- RS232-interface (USB adaptor available)
- Scratch-resistant optics, sturdy aluminum housing




Design

Product name:

MTG5F

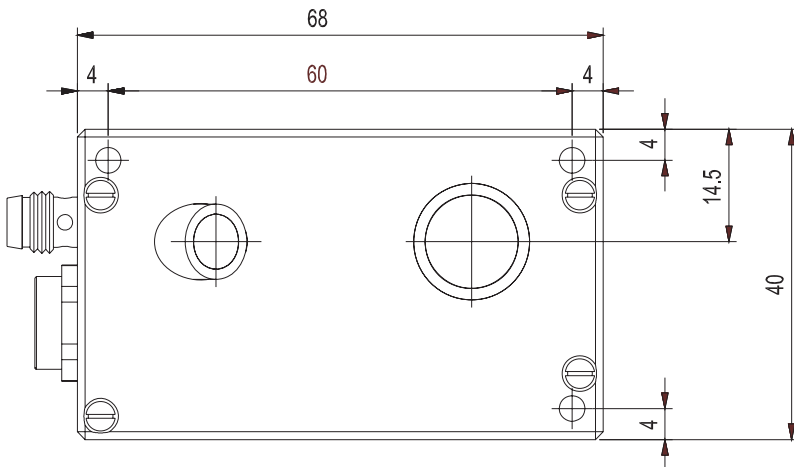
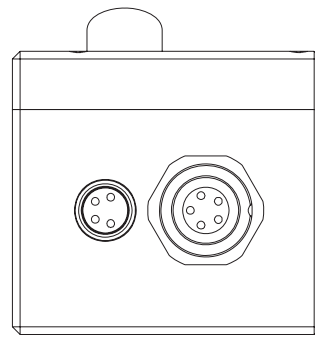
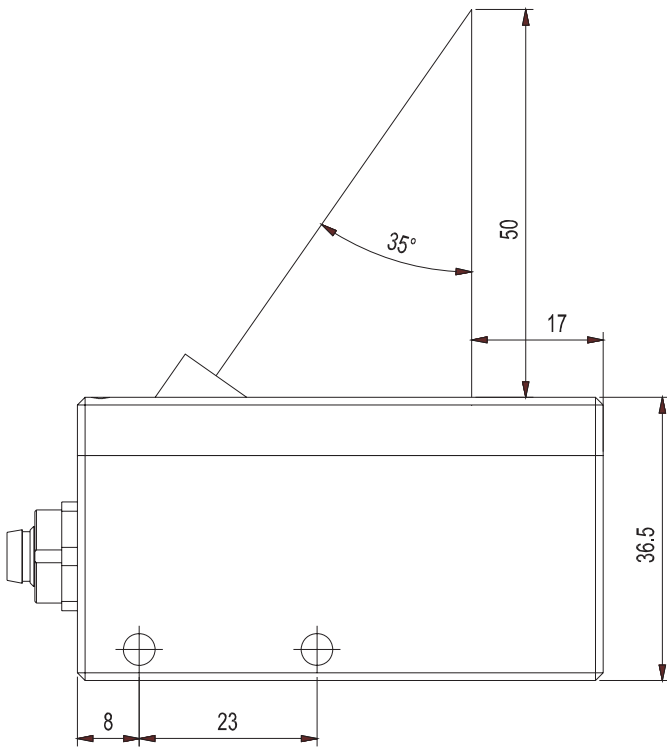


Technical Data

Model	MTG5F
Laser	Solid-state laser, 670 nm, AC-operation, 1 mW max. opt. power, laser class 2 acc. to DIN EN 60825. The use of these laser transmitters therefore requires no additional protective measures.
Reference distance	50 mm
Working range	typ. 40 mm ... 60 mm
Beam geometry	Laser beam focused
Optical filter	Red light filter RG630 + interference filter
Voltage supply	+12VDC ... +32VDC, reverse-polarity protected, overcurrent protected
Operation	100 kHz
Ambient light	up to 5000 Lux
Enclosure rating	IP67
Current consumption	approx. 110 mA
Interface	RS232, parameterisable under Windows®
EMC test acc. to	IEC - 801... 
Type of connector	Connection to PLC: 4-pin M8-connector, connection to PC: 5-pin female connector Binder Series 712
Operating temperature range	-20°C ... +55°C
Storage temperature range	-20°C ... +85°C
Housing	Aluminum, anodized in blue
Pulse lengthening	0 ms, 25 ms, 50 ms, 100 ms, 200 ms (parameterisable under Windows®)
Max. switching current	100 mA, short-circuit protected
Switching frequency	typ. 3 kHz (depends on parameter setting)
Outputs	1x tolerance output (window) 1x switching threshold (reference)
Bright-/dark-switching	parameterisable under Windows®
Laser power adjustment	parameterisable under Windows®
Switching hysteresis	parameterisable under Windows®
Switching state indication	by means of an orange LED integrated in the M8-connector
Averaging	from 1 to 64 values (adjustable under Windows®)

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Dimensions

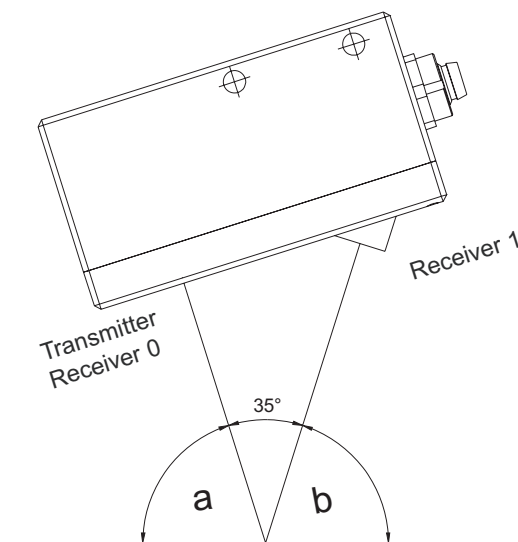
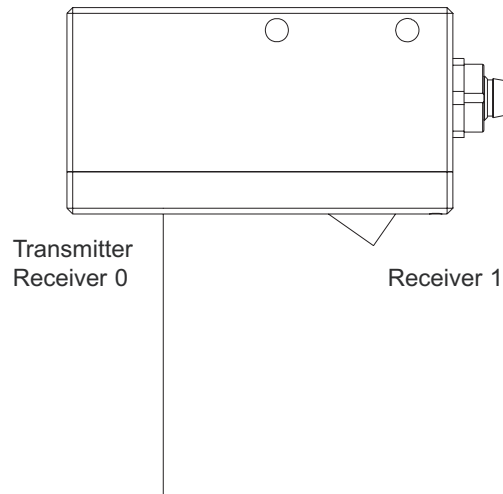


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Setting Hints

Design:

The sensor is placed in an angle which is dependent on the distance from the sensor to the object (ideal 50 mm) in a way that the angle of incidence at the object is equal to the angle of reflection and impinges at receiver 1.



$$a = b$$

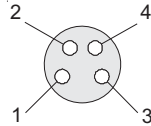
Connector Assignment

Connection to PLC:

4-pole connector M8

Pin No.: (Color) Assignment:

1	(brn)	+12VDC...+32VDC
2	(wht)	TOLOUT (100mA)
3	(blu)	0V (GND)
4	(blk)	REFOUT (100mA)

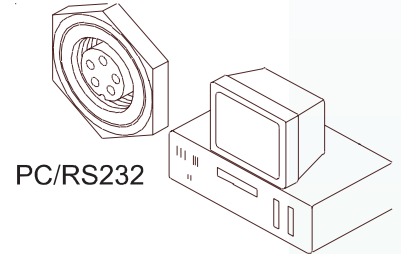
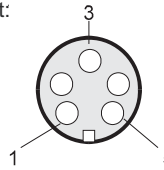


Connection to PC:

5-pole female connector Binder 712

Pin: Assignment:

1	GND (0V)
2	TX0
3	RX0
4	n.c.
5	n.c.



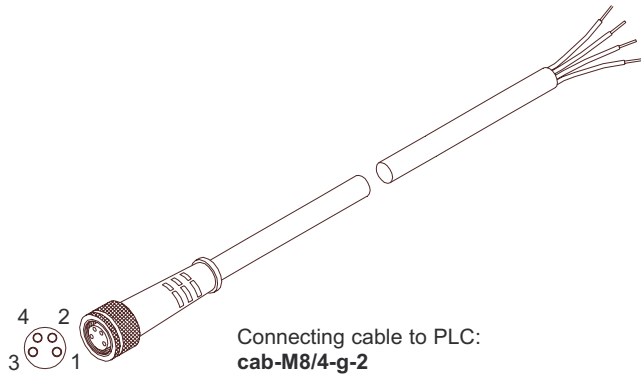
PC/RS232



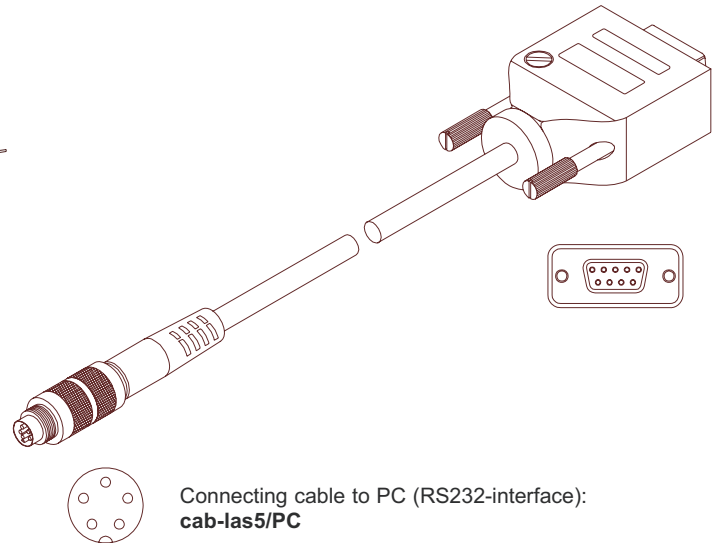
Connecting Cables

Connecting cables:

cab-M8/4-g-2 Length: 2m Outer jacket: PUR
cab-las5/PC Length: 2m Outer jacket: PUR



Connecting cable to PLC:
cab-M8/4-g-2



Connecting cable to PC (RS232-interface):
cab-las5/PC



Laser Warning

The laser reflex sensors of RT Series comply with laser class II according to EN 60825. The use of these laser sensors therefore requires no additional protective measure.

The laser reflex sensors of RT Series are supplied with a laser warning label.

