

dimensions **96 x 50 x 194mm**

dif. reflection sensor sensing range **0.2 to 35m**

- ✓ measurement on surfaces with up to +1200°C possible
- ✓ measuring range on all natural surfaces up to 35m, with additional reflectors up to 150m
- ✓ 1mm measured value resolution
- ✓ robust aluminum housing
- ✓ glass lens
- ✓ simple alignment thanks to visible laser
- ✓ laser protection class 2
- ✓ separately programmable analog and switching output
- ✓ output of the measured value via RS 232 / RS 422
- ✓ connection with 8-pin M12-connector



**laser distance measurement device  
up to 150m measuring range**



#### description

The **PT900020** is a laser device for measuring distances which precisely measures distances in the range of 0.2m to 30m.

The target to be measured can be clearly identified by the red laser measuring spot. The range is dependent on the reflectivity and the surface characteristic of the target to be measured.

The device works on the basis of the phase comparison measurement. High-frequency modulated laser light is transmitted. The measured object diffusely reflects the light. The reflected and phase-shifted light is compared to the reference signal. From the value of the phase shift, it is possible to determine the distance with millimeter accuracy.

The electrical connection is made via a standard 8-pin M12-connector. A separate SUB-D connector for the serial interface is provided.

A digital switching output and an analog output 4 ... 20mA are also available.

The measurement functions, scaling, measuring time, speed, temperature of the electronics, distance and error codes can be retrieved with the aid of the supplied software. The triggering of a distance measurement can take place in different ways:

- through the transmission of a command by means of a PC or another control unit
- through the appropriate parametrization of the auto-start command and by connecting the supply voltage

#### application examples

- ▶ monitoring of feed systems and crane equipment
- ▶ distance measurement / position determination
- ▶ filling level measurement
- ▶ position monitoring of moving objects

article-no.

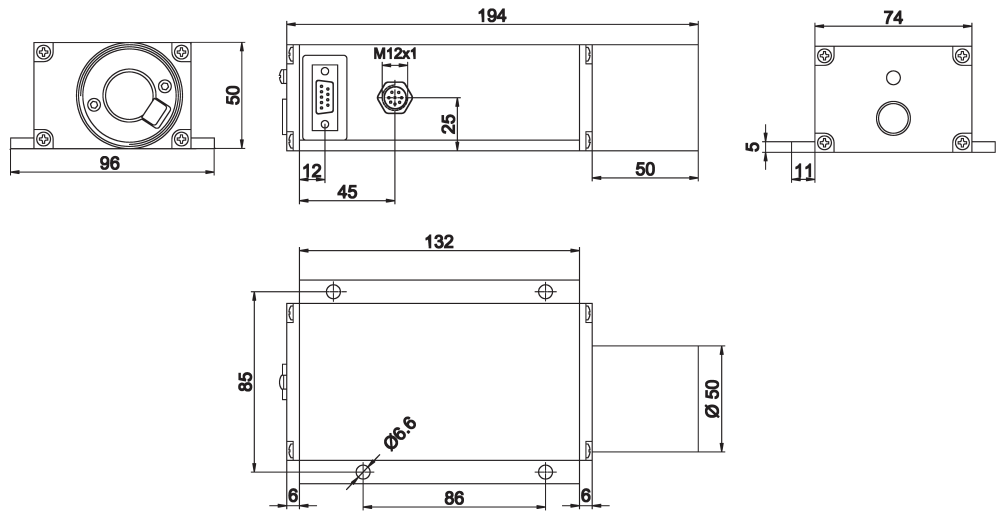
PT900020

version

diffuse reflection sensor

sensing range

0.2 ... 35m (150m with reflector)

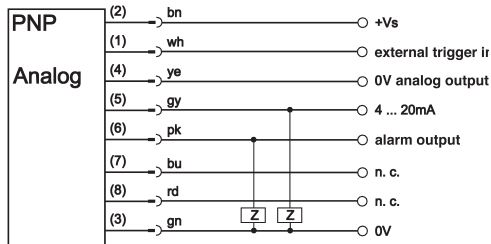


TECHNICAL DATA

sensing range	0.2 ... 35m (150m with reflector)
resolution	1mm depending on the scale factor
output	pnp programmable, 4 ... 20mA
operating voltage	10 ... 30V DC
power consumption (w/o load)	< 1.5W at 24V DC
output current (max. load)	0.5A / 24V DC
transmitting element (pulsed)	laser LED
wavelength (transmitter)	650nm, red light
laser class	2
measuring accuracy	±3mm (at +15 ... +30°C)
repeat accuracy	≤ ±0.5mm
hysteresis	programmable
measuring rate	10Hz on white surfaces, otherwise 5Hz
laser divergency	0.6mrad
display (signal)	yellow LED
short-circuit protection	+
reverse polarity protection	+
dimensions	96x50x194mm
housing material	aluminum
lens material	glass
operating temperature	-10 ... +50°C
degree of protection (EN 60529)	IP65
connection	M12-connector, 8-pin
connection accessories	e.g. <b>VK205A21</b>
interface	selectable RS232 / RS422
connection accessories	<b>AV000119</b>

connection

connector device



**Caution, laser radiation!**  
**Do not stare into the beam!**

**laser diode**

wavelength 650nm  
 max. output power < 1mW  
**laser class 2**

This data sheet contains the standard versions only. Kindly request the availability of other output and connection versions.

We will be pleased to supply the matching cable socket for your devices with connector. Please refer to the list in catalog chapter "accessories" under "cable sockets **ipf-SENSORFLEX®**" or search our website for "VK".

**Warning:** Never use these devices in applications where the safety of a person depends on their functionality.

This data sheet as well as your personal contact can be found at [www.ipf-electronic.com](http://www.ipf-electronic.com)



### notes

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