



Solution with background suppression in M12

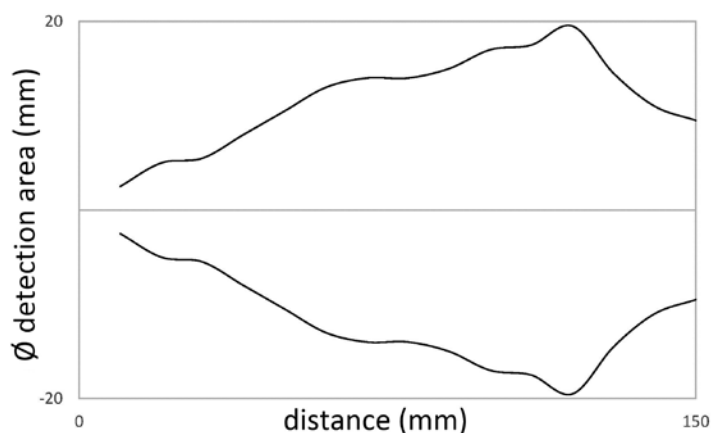
With the new [PT120320](#) ipf electronic presents for the first time an extremely compact optical diffuse reflection laser sensor with background suppression that is able to detect objects completely independent of their color. The background suppression works according to the so-called “time-of-flight” principle (TOF), a transit time method used for distance measurement. With this method, the distance of an object is determined by measuring the time-of-flight of a light pulse that is emitted by a sensor transmitter, reflected by the detected object and then finally captured by the sensor receiver. The range, or rather the switching distance, of this compact diffuse reflection sensor is therefore fully independent of the reflective properties of the object surface that is to be detected.



The sensors operate with infrared laser light of laser protection class 1. In addition, the device provides the option to program a window function and has a push-pull switching output.

The electrical connection is made via a 4-pin M12-connector. To avoid EMC-interferences, a shielded cable socket (e.g. [VK205325](#)) has to be used.

beam path



*The infrared laser spot is not focused.
The detection area amounts to Ø20mm at a distance of 150mm.*



New high temperature compact version: molded connector with integrated amplifier IVA0012T

Whenever a high temperature cable socket and an external amplifier were previously necessary, you will now only require the connection cable [IVA0012T](#), as the entire electronics that before has been in an additional housing ([IV400720](#), [IV120450](#), [IV850700](#)) is integrated within the M12-connector. This cable with molded M12-connector with integrated amplifier is suitable for sensors with enlarged temperature range up to +230°C with Lemo socket, e.g. [IB306040](#).

For clients who require a solution with PNP no only and don't need the useful features of the above mentioned amplifiers, the [IVA0012T](#) can be a pricy solution. The price amounts to 143.80€, for you as distributors 97.75€.

For the new [IB18012T](#) & [IB30012T](#) high temperature sensors, which are identical in construction with [IB186051](#), applies the same advantage: at the end of the cable there is a molded M12-connector with an integrated amplifier. While the sensor and the cable are suitable for temperatures up to 230°C, the M12-connector can tolerate, as generally usual, -20°C to +70°C.



[IN991197](#), [VK206F41](#), [IV120450](#):
three articles, pnp no/nc



[IB186050](#), [IV400720](#):
two articles, pnp no/nc, alarm,
time delay



[IN406040](#), [IVA0012T](#):
two articles, pnp no,
cable length 10m

ipf introduces nc version IB090250

In this context we would also like to mention that there is now an nc version of our successful, cuboid high-temperature sensor [IB090150](#) available.





Useful information about laser class 1

Whenever you need to detect small parts reliably, positioning has to be performed with great accuracy or objects need to be measured precisely, laser sensors are the right choice. Thanks to the highly directional light beam and the small light spot, a simplified alignment as well as an exact switching point are ensured. Besides, also the detection of narrow openings is facilitated.

Laser products of classes 2 and 3 are a potential danger for the human eye that is caused by the high power density in the laser beam. Thus, marking the laser area or instructing employees are protective measures that must be taken by the customer.

ipf electronic offers a wide range of laser sensors belonging to laser class 1. With their laser radiation you don't run the risk of harming the eyes. Thus, you can use them like classic sensors with LEDs and without taking any additional measures at the system.

The following ipf laser sensors provide laser protection class 1:

[PK140475](#)
[PK170020](#)
[PN630520](#)
[PR170420](#)
[PR180424](#)
[PR180428](#)
[PR430170](#)
[PR430270](#)

[PS120020](#)
[PS120022](#)
[PS120028](#)
[PS180020](#)
[PS180023](#)
[PS180024](#)
[PS180028](#)
[PT120320](#)

[PT140475](#)
[PT160373](#)
[PT180424](#)
[PT180426](#)
[PT180428](#)
[PT630525](#)

as well as all devices of the PS13 series, the fork light barriers for punching area and the standard versions of our line sensors.

All further ipf laser sensors correspond to laser class 2.



Potential addition to our portfolio: RFID-tags

As announced in the email, we would also like to inform you about RFID-tags in press fit housings we probably plan to include in our product range.

These miniaturized tags can be used for tool management, workpiece carriers or any similar use. The remarkable little transponders can be used e.g. to clearly identify tool components, even under the toughest operating conditions. As they come with press fit housing, an easy assembly is guaranteed: drilling a hole, insert the tag, ready.

By means of a reading device, the data entered on the chip can be imported into any Windows Office format. In these files, the production date, used time, revision etc. has to be entered by the customers themselves. Advantage: No expensive software is needed and the customers can decide whether they want to create an Excel table or an Access database for their administration. The reading devices would also be integrated in our portfolio.

Beside of their extreme durability, the RFID-tags in press fit housing provide the following features:

- Frequency range: HF 13.56MHz
- Wide reading range
- Temperature resistance up to 275°C for 15 minutes, up to 220°C for 2 hours
- Vibration-resistant
- Drop resistance: 100 times from a height of 2 metres onto concrete
- Sterilizable
- Autoclavable
- Read/write chip as standard; also available in read-only
- Memory capacity of up to 896 bit
- Conform to ISO/IEC 15693 standard
- Anti-collision protection
- Also comes with press fit housing for quick and easy assembly
- Can be used with a variety of materials
- Supplied in a carrier tape
- High mechanical reliability:
maximum mechanical compression load vertical/horizontal:



dimensions: \varnothing 4.35 x 3.6mm

