laser sensors
measuring systems

- design: 37 x 73 x 60mm
- sensing range:
  - black (6%): 0.2 ... 5m
  - gray (18%): 0.2 ... 8m
  - white (90%): 0.2 ... 20m

- robust metal housing
- analog output 4 ... 20mA / 0 ... 10V
- 2 push-pull outputs
- laser protection class 2
- LED-display
- connection with 8-pin M12-connector

radiated light technology
versatile programming

description
With the time-of-flight measuring method, the distance of an object is determined using the propagation time of a light pulse emitted by the sensor transmitter, reflected by the object and then received by the sensor receiver.
The measurement principle is suitable for large ranges with simultaneous immunity to ambient light interference.
The measuring range depends on the object’s degree of reflection. White objects (90% reflectivity) can be detected up to 20m distance, while the sensing range for black objects (6% reflectivity) is 5m.
The display shows the current measured value.
The switching outputs can be programmed freely (see "technical data").

The analog output is switchable between 4 ... 20mA and 0 ... 10V. Thereby, attention must be paid to the maximum (current), respectively minimal load (voltage)!
Via the key pad with 4 buttons the device is easy to parameterize.

application examples
- sag monitoring of web material
- position monitoring of moving objects
- distance measurement / position determination
- monitoring of feed systems

factory setting
response time (average): 45ms (slow)
alog output: 4 ... 20mA
mode RS485-output: none
RS 485-connection: off
input function: teach-in (switching output 1)
logic of switching outputs: light-on mode
mode of switching outputs: push-pull
switching point 1: 500mm
switching point 2: 500mm
hysteresis: 10mm
scalable range (min.): 200mm
scalable range (max.): 20.000mm

keys:
▲▼ entry into main menu (simultaneously 5sec)
previous menu item
next menu item
SET: submenu / store
ESC: back

LED-displays:
left: switching output 1 (yellow)
centre: switching output 2 (yellow)
right: operating (green)
measuring range exceedance (red)
**laser sensors**

**measuring systems**

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<tr>
<th>article-no.</th>
<th>PT730520</th>
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<tbody>
<tr>
<td>sensing range</td>
<td>0.2 ... 20m (white object)</td>
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### TECHNICAL DATA

- **sensing range**: 0.2 ... 20m (90% white) / 0.2 ... 8m (18% gray) / 0.2 ... 5m (6% black)
- **analog output**: programmable: 0.2 ... 10V / 4 ... 20mA
- **linearity error**: ± 0.03% FS (voltage) / ± 0.02% FS (current)
- **switching outputs**: programmable: PNP / NPN / push pull / light on- / dark on mode / alarm
- **output current (max. load)**: 100mA per output
- **operating voltage**: 24V DC ± 20%
- **current consumption (without load)**: typ. 125mA
- **response time**: "slow": typ. 45ms / "medium": typ. 30ms / "fast": typ. 15ms
- **repeatability (white object)**: 1mm up to sensing range 10m / 2mm up to sensing range 20m
- **resolution**: 1mm / 16bit
- **accuracy (white object)**: 7mm (response time "slow")
- **warm-up period**: typ. 20min.
- **short-circuit protection**: +
- **reverse polarity protection**: +
- **transmitting element**: laser diode, red
- **wavelength**: 658nm
- **laser protection class**: 2
- **dimensions**: 37 x 73 x 60mm
- **material (housing)**: zinc alloy ZAMA 13
- **material (front screen)**: PMMA
- **temperature (operating)**: -15 ... +50°C
- **temperature (storage)**: -25 ... +70°C
- **degree of protection (EN60529)**: IP 67
- **mounting accessories (bracket)**: AP000040
- **connection**: M12-connector, 8-pin
- **connection accessories**: i. e. VK205A25

### Pin configuration

- **PT730520**
- **Pin Configuration**

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