

OS12A253

HIGH-PERFORMANCE THROUGH-BEAM SENSORS • THROUGH-BEAM SENSORS TRANSMITTERS

Optical sensors function contactlessly. They detect objects independent of their characteristics (e.g., shape, color, surface structure, material). The basic operating principle is based on the transmission and reception of light. There are three different versions: 1. The through-beam sensor consists of two separate devices, a transmitter and a receiver that are aligned with one another. If the light beam between the two devices is interrupted, the switching output integrated in the receiver changes its status. 2. With the retro-reflective sensor, the transmitter and receiver are located in one device. The emitted light beam is reflected back to the receiver by a reflector that is to be mounted opposite the device. As soon as the light beam is interrupted, the switching output integrated in the device changes its status. 3. With the diffuse reflection sensor, the transmitter and receiver are in one device. The emitted light beam is reflected by the object that is to be detected. As soon as the receiver detects the reflected light, the switching output integrated in the device changes its status.



MECHANICAL DATA

Ambient temperature	-25 °C ... 60 °C
Degree of protection (IP)	IP67
Housing coating	Nickel-plated
Housing design	Cylinder, screw-thread
Housing material	Brass
Material of optical surface	Plastic
Reflector included in the scope of delivery	No
Sensor length	66 mm
Shock resistance	30 g
Thread length	40 mm
Thread pitch	1 mm
Vibration resistance	55 Hz

ELECTRICAL DATA

Clock frequency of the transmitter	11.7 kHz
Function test	Yes
IO-Link compatible	No
Measuring range	6 m
No-load current	30 mA
No-load current, transmitter	30 mA
Number of pins	3
Operating voltage	15 V ... 30 V
Rated switching distance	6000 mm
Reverse polarity protection	Yes
Setting procedure	Other
Type of electrical connection	Connector M12
Type of input voltage	DC

ELECTRICAL DATA

Voltage type DC

With time function No

OPTICAL DATA

Angle of beam spread 20 °

Light beam form Point

Light source Infrared light

Wavelength of the sensor 880 nm

OTHER DATA

Scope of delivery of the one-way system Transmitter

DIMENSIONAL DRAWING**INSTALLATION**

Mounting / Installation may only be carried out by a qualified electrician!

DISPOSAL**SAFETY WARNINGS**

Before initial operation, please make sure to follow all safety instructions that may be provided in the product information!