



WTS26P-1H161120A00

W26

COMPACT PHOTOELECTRIC SENSORS

SICK
Sensor Intelligence.



Illustration may differ

Ordering information

Type	Part no.
WTS26P-1H161120A00	1218950

Other models and accessories → www.sick.com/W26



Detailed technical data

Features

Sensor/ detection principle	Photoelectric proximity sensor, TwinEye technology, Background suppression
Dimensions (W x H x D)	24.6 mm x 82.5 mm x 53.3 mm
Housing design (light emission)	Rectangular
Sensing range max.	10 mm ... 1,000 mm ¹⁾
Type of light	Visible red light
Light source	PinPoint LED ²⁾
Light spot size (distance)	Ø 10 mm (550 mm)
Wave length	635 nm
Adjustment	BluePilot: Teach-Turn adjustment with sensing range indicator, IO-Link
Pin 2 configuration	External Input (test), Teach-in, switching signal
Special applications	Detecting uneven, shiny objects

¹⁾ Object with 90 % reflectance (referred to standard white, DIN 5033).

²⁾ Average service life: 100,000 h at T_U = +25 °C.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC ¹⁾
Ripple	$\leq 5 V_{pp}$
Power consumption	30 mA, 50 mA ^{2) 3)}
Switching output	PUSH/PULL, PNP, NPN
Output: Q_{L1} / C	Switching output or IO-Link mode
Output function	Factory setting: Pin 2 / white (MF): NPN normally open (light switching), PNP normally closed (dark switching), Pin 4 / black (QL1 / C): NPN normally closed (dark switching), PNP normally open (light switching), IO-Link
Switching mode	Light/dark switching
Signal voltage PNP HIGH/LOW	Approx. $V_S - 2.5 V / 0 V$
Signal voltage NPN HIGH/LOW	Approx. $V_S / < 2.5 V$
Output current I_{max}	$\leq 100 mA$
Response time	$\leq 1.4 ms$ ⁴⁾
Switching frequency	350 Hz ⁵⁾
Connection type	Cable, 2 m ⁶⁾
Cable material	PVC
Circuit protection	A, B, C, D ^{10) 7) 8) 9)}
Protection class	III
Weight	130 g
IO-Link	✓
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA
Enclosure rating	IP66 (According to EN 60529) IP67 (According to EN 60529) IP69 (According to EN 60529) ¹¹⁾
Ambient operating temperature	-40 °C ... +60 °C
Ambient storage temperature	-40 °C ... +75 °C
UL File No.	NRKH.E181493 & NRKH7.E181493

¹⁾ Limit values.

²⁾ 16 V DC ... 30 V DC, without load.

³⁾ 10 V DC ... 16 V DC, without load.

⁴⁾ Signal transit time with resistive load in switching mode. Different values possible in COM2 mode.

⁵⁾ With light/dark ratio 1:1 in switching mode. Different values possible in IO-Link mode.

⁶⁾ Do not bend below 0 °C.

⁷⁾ A = V_S connections reverse-polarity protected.

⁸⁾ B = inputs and output reverse-polarity protected.

⁹⁾ C = interference suppression.

¹⁰⁾ D = outputs overcurrent and short-circuit protected.

¹¹⁾ Replaces IP69K with ISO 20653: 2013-03.

Safety-related parameters

MTTF_D	415 years
DC_{avg}	0%

Classifications

ECI@ss 5.0	27270904
ECI@ss 5.1.4	27270904
ECI@ss 6.0	27270904
ECI@ss 6.2	27270904
ECI@ss 7.0	27270904
ECI@ss 8.0	27270904
ECI@ss 8.1	27270904
ECI@ss 9.0	27270904
ETIM 5.0	EC002719
ETIM 6.0	EC002719
UNSPSC 16.0901	39121528

Smart Task

Smart Task name	Base logics
Logic function	Direct AND OR Window Hysteresis
Timer function	Deactivated On delay Off delay ON and OFF delay Impulse (one shot)
Inverter	Yes
Switching frequency	SIO Direct: 350 HzSIO Logic: 300 HzIOL: 280 Hz ^{1) 2) 3)}
Response time	SIO Direct: 1.4 msSIO Logic: 1.65 msIOL: 1.75 ms ^{1) 2) 3)}
Repeatability	SIO Direct: 750 µsSIO Logic: 800 µsIOL: 900 µs ^{1) 2) 3)}
Switching signal Q_{L1}	Switching output
Switching signal Q_{L2}	Switching output

¹⁾ SIO Direct: sensor operation in standard I/O mode without IO-Link communication and without using internal sensor logic or time parameters (set to "direct"/"deactivated").

²⁾ SIO Logic: Sensor operation in standard I/O mode without IO-Link communication. Sensor-internal logic or timing parameters plus Automation Functions used.

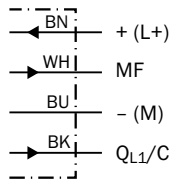
³⁾ IOL: Sensor operation with full IO-Link communication and usage of logic, timing and Automation Function parameters.

Communication interface

Communication interface	IO-Link V1.1
Communication Interface detail	COM2 (38,4 kBaud)
Cycle time	2.3 ms
Process data length	16 Bit
Process data structure	Bit 0 = switching signal Q _{L1} Bit 1 = switching signal Q _{L2} Bit 2 ... 15 = empty
VendorID	26
DeviceID HEX	0x80017C
DeviceID DEZ	8388988

Connection diagram

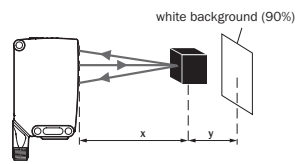
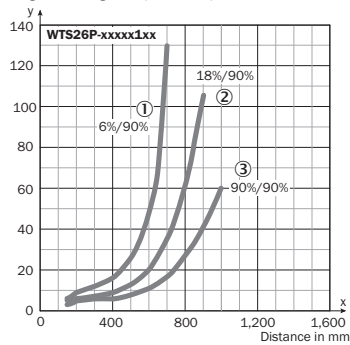
Cd-389



Characteristic curve

WTS26P-xxxxx1xx

Minimum distance in mm (y) between the set sensing range and background (white, 90%)

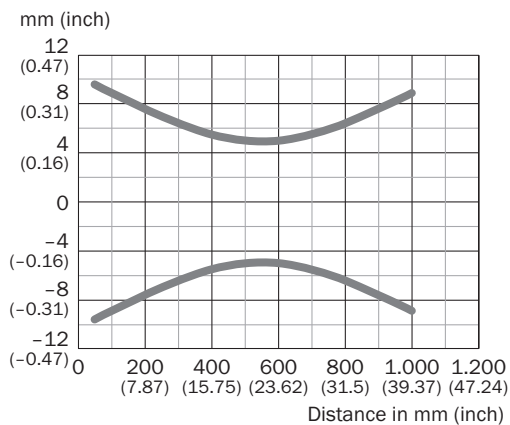


Example:
 Sensing range on black, 6%,
 $x = 500 \text{ mm}$, $y = 25 \text{ mm}$

- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

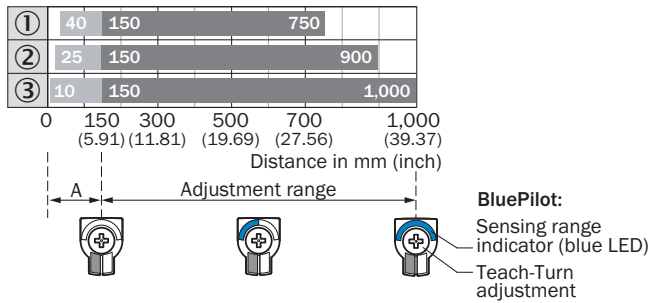
Light spot size

WTS26P-xxxxx1xx



Sensing range diagram

WTS26P-xxxxx1xx

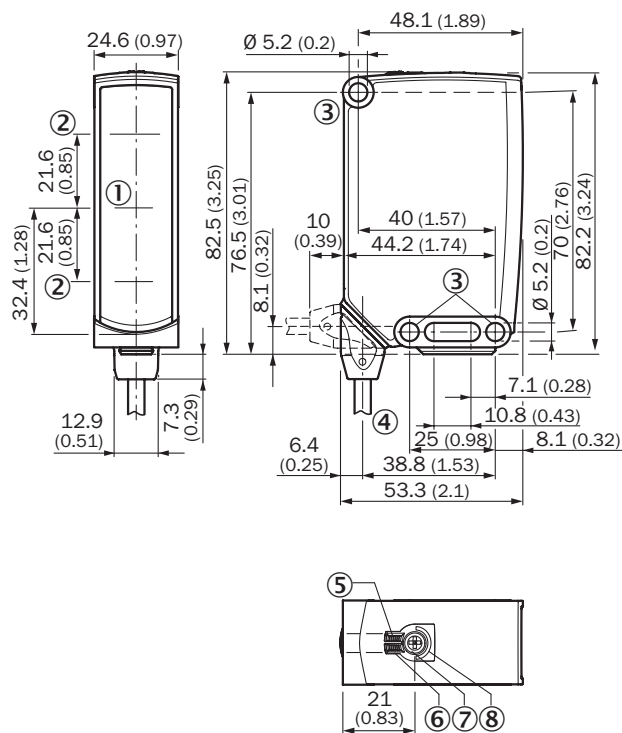


A = Detection distance (depending on object remission)

- ① Sensing range on black, 6% remission
- ② Sensing range on gray, 18 % remission
- ③ Sensing range on white, 90% remission

Dimensional drawing (Dimensions in mm (inch))


WTS26, cable



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting hole, Ø 5.2 mm
- ④ Connection
- ⑤ LED indicator green: power
- ⑥ LED indicator yellow: Status of received light beam
- ⑦ Teach-Turn adjustment of sensing range
- ⑧ BluePilot blue: sensing range indicator

Recommended accessories

Other models and accessories → www.sick.com/W26

	Brief description	Type	Part no.
Mounting brackets and plates			
	Mounting bracket with articulated arm, steel, zinc coated, mounting hardware included	BEF-WN-MULTI2	2093945

SICK AT A GLANCE

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