



KTX-WBN1141252ZZZZ

KTX Prime

CONTRAST SENSORS

SICK
Sensor Intelligence.



Ordering information

Type	Part no.
KTX-WBN1141252ZZZZ	1220055

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



Detailed technical data

Features

Special applications	Color Sequence
Device type	Standard
Dimensions (W x H x D)	30 mm x 53 mm x 78.5 mm
Sensing distance	13 mm
Sensing distance tolerance	± 5 mm
Housing design (light emission)	Rectangular
Light source	LED, RGB ¹⁾
Wave length	470 nm, 525 nm, 625 nm
Light emission	Long side of housing
Light spot size	0.9 mm x 3.8 mm
Light spot direction	Vertical ²⁾
Receiving filters	None
Teach-in mode	N-point teach-in, 2-point teach-in, teach-in dynamic, auto mode
Output function	Light/dark switching
Delay time	Adjustable
Special features	-
Delivery status	N-point-teach-in
Parameter presettings	None

¹⁾ Average service life: 100,000 h at T_U = +25 °C.

²⁾ In relation to long side of housing.

Mechanics/electronics

Supply voltage	10.8 V DC ... 28.8 V DC ¹⁾
Ripple	$\leq 5 V_{pp}$ ²⁾
Current consumption	$< 100 \text{ mA}$ ³⁾
Switching frequency	11.5 kHz ^{4) 5)}
Response time	42 μs ^{6) 7)}
Jitter	21 μs ⁸⁾
Switching output	PUSH/PULL
Switching output (voltage)	Push/Pull: HIGH = $V_S - 3 \text{ V}$ / LOW $\leq 3 \text{ V}$
Output current I_{max}	100 mA ⁹⁾
Input, teach-in (ET)	Teach: $U = 10 \text{ V} \dots < V_S$
Input, blanking input (AT)	Blanked: $U = 10 \text{ V} \dots < U_v$
Input, fine/coarse (F/C)	Coarse: $U = 10 \text{ V} \dots < U_v$
Input, light/dark (L/D)	Light: $U = 10 \text{ V} \dots < U_v$
Retention time (ET)	25 ms, non-volatile memory
Connection type	Male connector M12, 5-pin
Protection class	III
Circuit protection	U_v connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP67
Weight	94 g
Housing material	Plastic, VISTAL®
Optics material	Plastic, PMMA

¹⁾ Limit values: DC 12 V (–10 %) ... DC 24 V (+20 %). Operation in short-circuit protected network max. 8 A.

²⁾ May not exceed or fall below U_v tolerances.

³⁾ Without load.

⁴⁾ With light/dark ratio 1:1.

⁵⁾ Contrast mode: 35 kHz.

⁶⁾ Signal transit time with resistive load.

⁷⁾ Contrast mode: 14 μs .

⁸⁾ Contrast mode: 7 μs .

⁹⁾ Total current of all Outputs.

Ambient data

Ambient operating temperature	–20 °C ... +60 °C
Ambient storage temperature	–25 °C ... +75 °C
Shock load	According to IEC 60068-2-27 (30 g/11 ms)
UL File No.	E181493

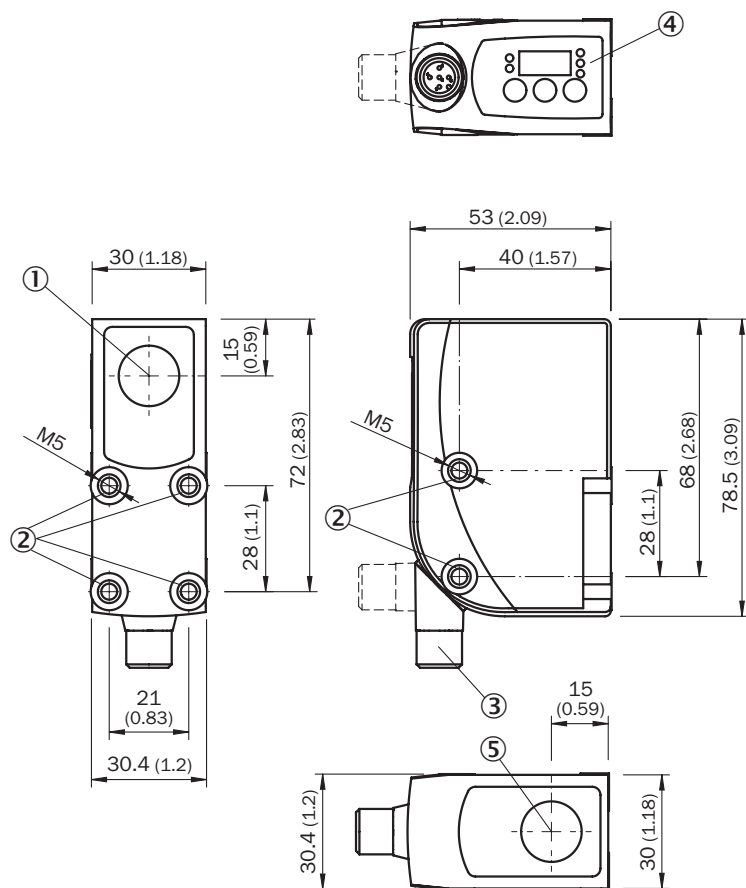
Classifications

ECI@ss 5.0	27270906
ECI@ss 5.1.4	27270906
ECI@ss 6.0	27270906
ECI@ss 6.2	27270906

ECI@ss 7.0	27270906
ECI@ss 8.0	27270906
ECI@ss 8.1	27270906
ECI@ss 9.0	27270906
ECI@ss 10.0	27270906
ECI@ss 11.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
UNSPSC 16.0901	39121528

Dimensional drawing (Dimensions in mm (inch))

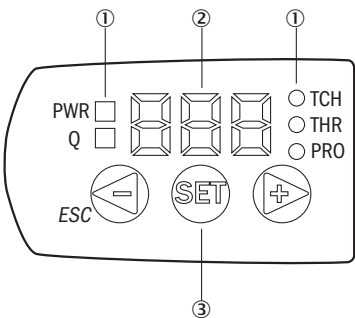
KTX Prime



- ① Optical axis and light emission, long housing side (type-dependent)
- ② Threaded mounting hole M5
- ③ Connector M12 (rotatable up to 180°)
- ④ Control panel
- ⑤ Optical axis and light emission, short housing side (type-dependent)

Adjustments

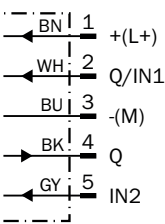
KTS/KTX Prime



- ① LED status indicator
- ② Display
- ③ Control panel

Connection diagram

Cd-382



Concept of operation

Teaching-in of a sequence of up to eight contrast or color features

Suitable for teaching a sequence of up to eight contrast or color features.
(here's an example of four contrast or color features)

1. Position the first contrast or color feature under the light spot.

Confirm with the SET pushbutton.

2. Position the second contrast or color feature under the light spot.

Confirm with the SET pushbutton.

3. Position the third contrast or color feature under the light spot.

Confirm with the SET pushbutton.

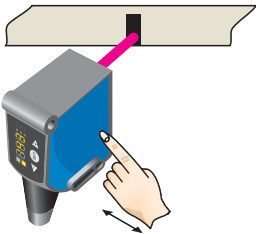
4. Position the last contrast or color feature to be detected under the light spot.

Confirm with the SET pushbutton.

KTS/KTX Prime - Setting the switching threshold (color mode)

Suitable for teaching in color properties.

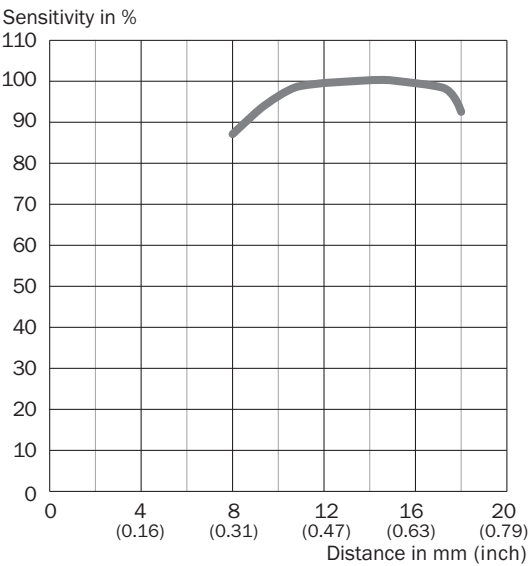
1. Position mark/color property



When detecting the contrast or color to be detected, "1st" flashes. Press set button. The Quality of Teach-in is displayed.

Sensing distance

Sensing distance 13 mm, light spot direction horizontal/vertical



Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate G for universal clamp bracket, steel, zinc coated, Universal clamp (2022726), mounting hardware	BEF-KHS-G01	2022464

	Brief description	Type	Part no.
	Mounting bar, straight, 200 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12G-A	4056054
	Mounting bar, L-shaped, 150 mm x 150 mm, steel, steel, zinc coated, without mounting hardware	BEF-MS12LA	4056052
Plug connectors and cables			
	Head A: female connector, M12, 5-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A15-050VB5XLEAX	2096240
	Head A: male connector, M12, 5-pin, straight Cable: unshielded For field bus technology	STE-1205-G	6022083

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We have extensive experience in a wide range of industries and understand their processes and requirements. With intelligent sensors, we can deliver exactly what our customers need. In application centers in Europe, Asia and North America, system solutions are tested and optimized in accordance with customer specifications. All this makes us a reliable supplier and development partner.

Comprehensive services complete our offering: SICK LifeTime Services provide support throughout the machine life cycle and ensure safety and productivity.

For us, that is “Sensor Intelligence.”

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