



KTM-LP22182P

KTM Prime

CONTRAST SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

Type	Part no.
KTM-LP22182P	1109747

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

Detailed technical data

Features

Dimensions (W x H x D)	12 mm x 31.5 mm x 21 mm
Sensing distance	≤ 50 mm
Sensing distance tolerance	± 30 mm
Housing design	Small
Light source	Laser, red ¹⁾
Laser class	I
Wave length	680 nm
Light emission	Long side of housing
Light spot size	Ø 1.7 mm (50 mm)
Light spot direction	Round
Receiving filters	None
Max. web speed	10 m/s ²⁾
Adjustment	Teach-in button
Teach-in mode	2-point teach-in static/dynamic + proximity to mark ET: Teach-in dynamic

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

²⁾ At mark size = 1.5 mm.

Mechanics/electronics

Supply voltage	10 V DC ... 30 V DC
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¹⁾ May not exceed or fall below U_v tolerances.

²⁾ Without load.

³⁾ With light/dark ratio 1:1.

⁴⁾ Signal transit time with resistive load.

⁵⁾ At supply voltage > 24 V, I_{max} = 50 mA. I_{max} is consumption count of all Q_n.

Ripple	$\leq 5 V_{pp}$ ¹⁾
Current consumption	$< 35 \text{ mA}$ ²⁾
Switching frequency	4 kHz ³⁾
Response time	0.125 ms ⁴⁾
Jitter	57 μs
Accuracy	0.08 mm
Switching output	PNP
Switching output (voltage)	PNP: HIGH = $U_V \leq 2 \text{ V}$ / LOW approx. 0 V
Switching mode	Light/dark switching
Output current I_{max}	100 mA ⁵⁾
Input, dynamic teach-in (ET)	PNP: Teach: $U = 10,8 \text{ V} \dots < U_V$ PNP: Run: $U < 2 \text{ V}$ or open
Retention time (ET)	250 ms
Time delay	None
Connection type	Cable with M12 male connector, 4-pin, 0.3 m
Protection class	III
Circuit protection	U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression
Enclosure rating	IP67
Weight	Approx. 24 g
Housing material	Plastic, ABS
Optics material	Plastic, PMMA
Indication	LED indicator green: power on LED indicator, yellow: Status switching output Q

¹⁾ May not exceed or fall below U_V tolerances.

²⁾ Without load.

³⁾ With light/dark ratio 1:1.

⁴⁾ Signal transit time with resistive load.

⁵⁾ At supply voltage $> 24 \text{ V}$, $I_{max} = 50 \text{ mA}$. I_{max} is consumption count of all Q_n .

Ambient data

Ambient operating temperature	$-20 \text{ }^\circ\text{C} \dots +45 \text{ }^\circ\text{C}$
Ambient temperature, storage	$-40 \text{ }^\circ\text{C} \dots +70 \text{ }^\circ\text{C}$
Shock load	According to IEC 60068
UL File No.	E181493

Classifications

eCl@ss 5.0	27270906
eCl@ss 5.1.4	27270906
eCl@ss 6.0	27270906
eCl@ss 6.2	27270906
eCl@ss 7.0	27270906
eCl@ss 8.0	27270906
eCl@ss 8.1	27270906

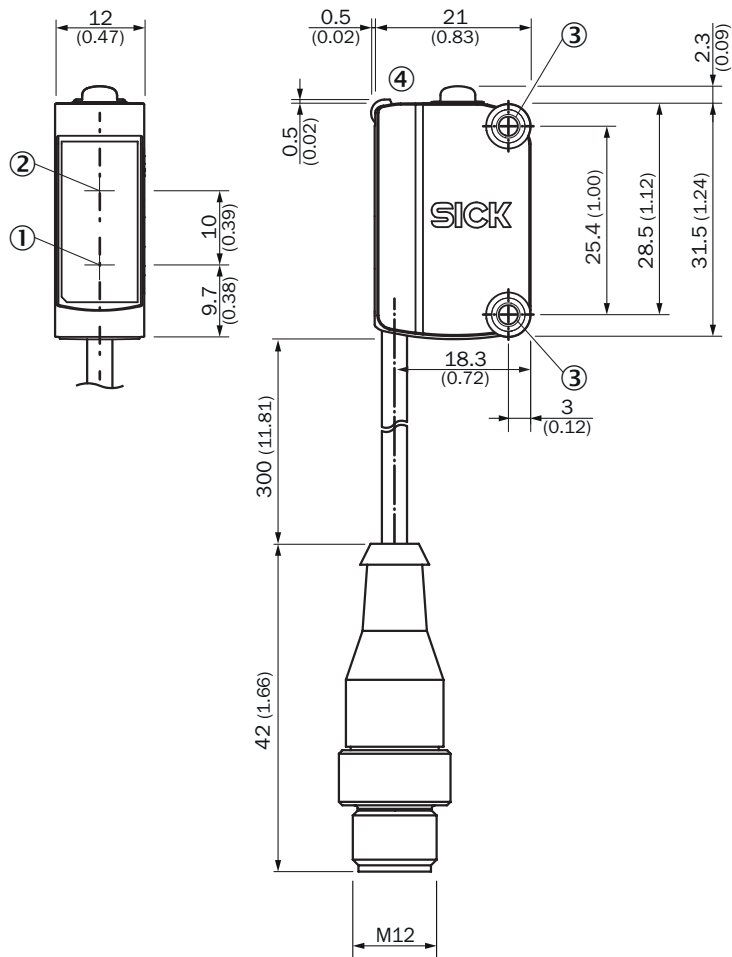
eCl@ss 9.0	27270906
eCl@ss 10.0	27270906
eCl@ss 11.0	27270906
eCl@ss 12.0	27270906
ETIM 5.0	EC001820
ETIM 6.0	EC001820
ETIM 7.0	EC001820
ETIM 8.0	EC001820
UNSPSC 16.0901	39121528

Connection/pin assignment

Connection type	Cable with M12 male connector, 4-pin, 0.3 m								
Pin assignment	<table border="0"> <tr> <td>BN 1</td> <td>+ (L+)</td> </tr> <tr> <td>WH 2</td> <td>ET</td> </tr> <tr> <td>BU 3</td> <td>- (M)</td> </tr> <tr> <td>BK 4</td> <td>Q</td> </tr> </table>	BN 1	+ (L+)	WH 2	ET	BU 3	- (M)	BK 4	Q
BN 1	+ (L+)								
WH 2	ET								
BU 3	- (M)								
BK 4	Q								

Dimensional drawing (Dimensions in mm (inch))

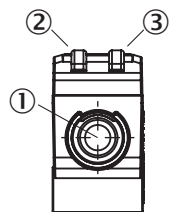
KTM-Lxxxxx2P



- ① Center of optical axis, sender
- ② Center of optical axis, receiver
- ③ Mounting holes M3
- ④ Display and adjustment elements

Adjustments

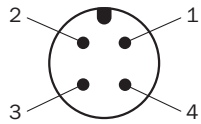
Display and adjustment elements



- ① Teach-in button
- ② LED yellow
- ③ LED green

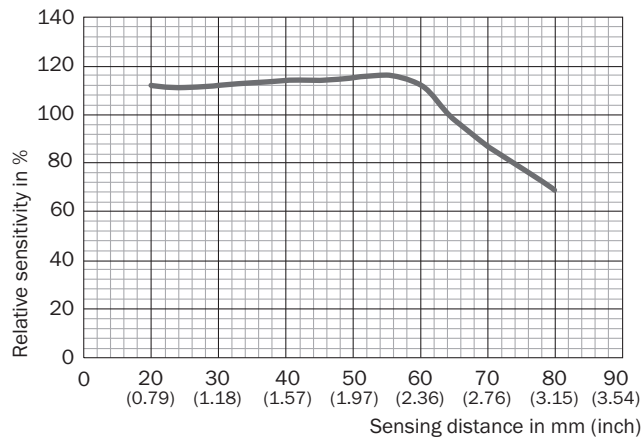
Pin assignment

Connection type. see table: Connection/PIN assignment



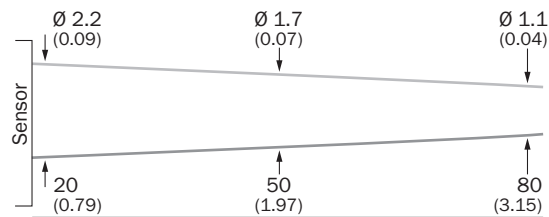
M12 male connector, 4-pin, A-coding

Sensing distance




Light spot size





KTM-Lxx2xxxx



Recommended accessories

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

	Brief description	Type	Part no.
Universal bar clamp systems			
	Plate N07 for universal clamp bracket, Zinc plated steel (sheet), Zinc die cast (clamping bracket), Universal clamp (5322626), mounting hardware	BEF-KHS-N07	2051613

	Brief description	Type	Part no.
Mounting brackets and plates			
	Universal mounting bracket for reflectors, steel, zinc coated	BEF-WN-REFX	2064574
Plug connectors and cables			
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: Flying leads Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3XLEAX	2096235
	Head A: female connector, M12, 4-pin, straight, A-coded Head B: male connector, M12, 4-pin, straight, A-coded Cable: Sensor/actuator cable, PVC, unshielded, 5 m	YF2A14-050VB3M2A14	2096600
Reflectors			
	Rectangular, screw connection, 84 mm x 84 mm, PMMA/ABS, Screw-on, 2 hole mounting	PL80A	1003865

SICK AT A GLANCE

SICK is one of the leading manufacturers of intelligent sensors and sensor solutions for industrial applications. A unique range of products and services creates the perfect basis for controlling processes securely and efficiently, protecting individuals from accidents and preventing damage to the environment.

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.”

WORLDWIDE PRESENCE:

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