



KTM-LN557A2P

KTM

CONTRAST SENSORS

SICK
Sensor Intelligence.



Illustration may differ



Ordering information

| Type | part no. |
|--------------|----------|
| KTM-LN557A2P | 1105834 |

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

Detailed technical data

Features

| | |
|-----------------------------------|-----------------------------------------------------------------------------------|
| Housing design | Small |
| Dimensions (W x H x D) | 12 mm x 31.5 mm x 21 mm |
| Light source | Laser, visible red light ¹⁾ |
| Light emission | Long side of housing |
| Light spot size | Ø 1.8 mm (250 mm) |
| Light spot direction | Round |
| Receiving filters | None |
| Wave length | 680 nm |
| Laser class | I ²⁾ |
| Sensing distance | ≤ 250 mm |
| Sensing distance tolerance | ± 30 mm |
| Max. web speed | 10 m/s ³⁾ |
| Display | LED indicator green: power on LED indicator, yellow: Status switching output Q |
| Adjustment | Teach-in button, Teach-in button |
| Teach-in mode | 2-point teach-in static/dynamic + proximity to mark |

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

²⁾ Do not intentionally look into the laser beam. Never point the laser beam at people's eyes.

³⁾ At mark size = 1.5 mm.

Interfaces

| | |
|---------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| IO-Link | ✓, V1.1 |
| Data transmission rate | 38,4 kbit/s (COM2) |
| Cycle time | 2.3 ms |
| Process data length | 16 Bit |
| Process data structure A | Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = switching signal Q_{Int1} Bit 3 ... 5 = empty Bit 6 ... 15 = measuring value |
| Process data structure B | Bit 0 = switching signal Q_{L1} Bit 1 = switching signal Q_{L2} Bit 2 = switching signal Q_{Int1} Bit 3 ... 15 = empty |
| Digital output | Q_1, Q_2 |
| Number | 2 |

Electronics

| | |
|--------------------------------------------|---------------------------------------------------------------------------------------------------------------------|
| Supply voltage | 10 V DC ... 30 V DC |
| Ripple | $\leq 5 V_{pp}^{1)}$ |
| Current consumption | $< 35 mA^{2)}$ |
| Switching frequency | 1.5 kHz ³⁾ |
| Response time | 333 μs |
| Jitter | 122 μs |
| Accuracy | 0.15 mm |
| Switching output | NPN |
| Switching output (voltage) | NPN: HIGH = approx. U_V / LOW $\leq 2 V$ |
| Switching mode | Light/dark switching |
| Output current I_{max} | 100 mA ⁴⁾ |
| Retention time (ET) | 250 ms |
| Time delay | Switch-off delay, 520 ms (via IO-Link) |
| Protection class | III |
| Circuit protection | U_V connections, reverse polarity protected Output Q short-circuit protected Interference pulse suppression |
| Connection type | Cable with M12 male connector, 4-pin, 0.3 m |

¹⁾ May not fall below or exceed U_V tolerances.

²⁾ Without load.

³⁾ With light/dark ratio 1:1.

⁴⁾ At supply voltage $> 24 V$, $I_{max} = 50 mA$. I_{max} is consumption count of all Q_n .

Mechanics

| | |
|-------------------------|--------------|
| Housing material | ABS |
| Optics material | PMMA |
| Weight | Approx. 24 g |

Ambient data

| | |
|--------------------------------------|------------------------|
| Ambient operating temperature | -20 °C ... +50 °C |
| Ambient temperature, storage | -40 °C ... +70 °C |
| Shock load | According to IEC 60068 |
| Enclosure rating | IP67 |
| UL File No. | E181493 |

Connection type/pinouts

| | | |
|------------------------|---------------------------------------------|--------|
| Connection type | Cable with M12 male connector, 4-pin, 0.3 m | |
| Pinouts | BN 1 | + (L+) |
| | WH 2 | Q |
| | BU 3 | - (M) |
| | BK 4 | Q/C |

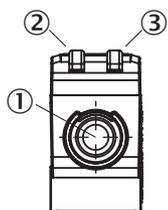
Classifications

| | |
|-----------------------|----------|
| ECLASS 5.0 | 27270906 |
| ECLASS 5.1.4 | 27270906 |
| ECLASS 6.0 | 27270906 |
| ECLASS 6.2 | 27270906 |
| ECLASS 7.0 | 27270906 |
| ECLASS 8.0 | 27270906 |
| ECLASS 8.1 | 27270906 |
| ECLASS 9.0 | 27270906 |
| ECLASS 10.0 | 27270906 |
| ECLASS 11.0 | 27270906 |
| ECLASS 12.0 | 27270906 |
| ETIM 5.0 | EC001820 |
| ETIM 6.0 | EC001820 |
| ETIM 7.0 | EC001820 |
| ETIM 8.0 | EC001820 |
| UNSPSC 16.0901 | 39121528 |

Certificates

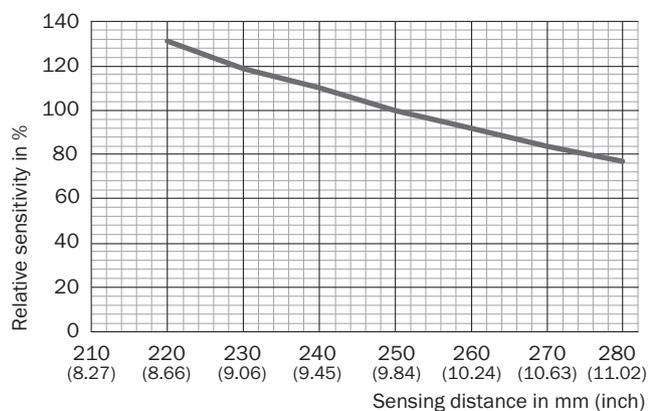
| | |
|------------------------------------------------------------------------------|---|
| EU declaration of conformity | ✓ |
| UK declaration of conformity | ✓ |
| ACMA declaration of conformity | ✓ |
| Moroccan declaration of conformity | ✓ |
| China RoHS | ✓ |
| cULus certificate | ✓ |
| IO-Link certificate | ✓ |
| Information according to Art. 3 of Data Act (Regulation EU 2023/2854) | ✓ |

display and adjustment elements

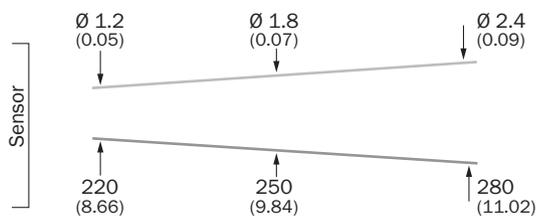


- ① Teach-in button
- ② LED yellow
- ③ LED green

Sensing distance



Light spot size KTM-Lxx5xxx



Recommended accessories

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

| | Brief description | Type | part no. |
|-----------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------|----------|
| connectors and cables | | | |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Male connector, M12, 4-pin, straight, A-coded • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Untaminated zones, Zones with chemicals | YF2A14-050VB3M2A14 | 2096600 |
|  | <ul style="list-style-type: none"> • Connection type head A: Female connector, M12, 4-pin, straight, A-coded • Connection type head B: Flying leads • Signal type: Sensor/actuator cable • Cable: 5 m, 4-wire, PVC • Description: Sensor/actuator cable, unshielded • Application: Untaminated zones, Zones with chemicals | YF2A14-050VB3XLEAX | 2096235 |

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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