



Model Number

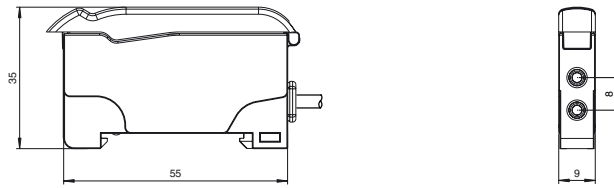
SU18-16/40a/115a/120

Fiber optic sensor
200 mm fixed cable with 4-pin, M8x1 connector

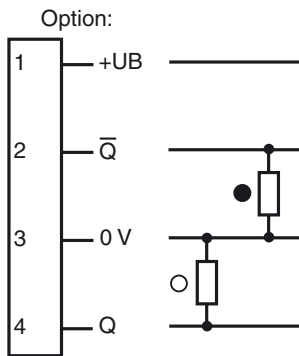
Features

- Basic line for DIN rail installation
- Sleek design
- 3 response times selectable
- High switching frequency

Dimensions



Electrical connection



○ = Light on
● = Dark on

Pinout



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Technical data**General specifications**

| | |
|---------------------|--------------------------------------|
| Sensor range | up to 150 mm (KLR-C02-2,2-2,0-K146) |
| Detection range | up to 450 mm (KLE-C01-2,2-2,0-K116) |
| Light source | LED |
| Light type | modulated visible red light , 660 nm |
| Ambient light limit | 10000 Lux |

Functional safety related parameters

| | |
|--------------------------------|-------|
| MTTF _d | 690 a |
| Mission Time (T _M) | 20 a |
| Diagnostic Coverage (DC) | 0 % |

Indicators/operating means

| | |
|-------------------|---|
| Operating display | LED green, statically lit Power on , Undervoltage indicator: Green LED, pulsing (approx. 0.8 Hz) , short-circuit : LED green flashing (approx. 4 Hz) |
| Function display | LED yellow: static illumination switching state, flashes when falling short of the stability control |
| Controls | Potentiometer for setting sensitivity slide switch 2 positions: light/dark switching slide switch 3 positions: timer function - timer off, on delay 40 ms, off-delay 40 ms slide switch 3 positions: operating mode - normal, high speed , high resolution |

Electrical specifications

| | | |
|------------------------|----------------|----------------|
| Operating voltage | U _B | 10 ... 30 V DC |
| Ripple | | 10 % |
| No-load supply current | I ₀ | ≤ 30 mA |

Output

| | | |
|---------------------|--|---|
| Switching type | light/dark on, switchable | |
| Signal output | 2 PNP, complementary, short-circuit protected, open collectors | |
| Switching voltage | max. 30 V DC | |
| Switching current | max. 100 mA , resistive load | |
| Voltage drop | U _d | ≤ 2 V DC at 100 mA ; ≤ 0.7 V at 10 mA |
| Switching frequency | f | Standard mode: 3 kHz , High speed mode: 6 kHz , High resolution: 500 Hz |
| Response time | | Standard mode: 160 μs , High speed mode: 80 μs , High resolution: 1 ms |
| Repeat accuracy | R | ≤ 0.5 % of adjusted sensor range |

Ambient conditions

| | |
|---------------------|-------------------------------|
| Ambient temperature | -10 ... 55 °C (14 ... 131 °F) |
| Storage temperature | -20 ... 70 °C (-4 ... 158 °F) |

Mechanical specifications

| | |
|-------------------|--|
| Protection degree | IP50 |
| Connection | 200 mm, PVC cable with M8 connector, 4-pin |
| Material | |
| Housing | PC |
| Mass | 45 g |

Compliance with standards and directives

| | |
|---------------------|---|
| Standard conformity | |
| Product standard | EN 60947-5-2:2007 IEC 60947-5-2:2007 |

Approvals and certificates

| | |
|--------------|--|
| UL approval | cULus Listed, Class 2 Power Source, Type 1 enclosure |
| CCC approval | Products with a maximum operating voltage of ≤36 V do not bear a CCC marking because they do not require approval. |

Accessories**KLR-C02-2,2-2,0-K146**

Plastic fiber optic - diffuse

KLR-C02-2,2-2,0-K70

Plastic fiber optic - diffuse

KLR-C02-1,0-2,0-K75

Plastic fiber optic - diffuse

KLR-C09-1,25-2,0-K76

Plastic fiber optic - diffuse

KLR-C09-1,25-2,0-K74

Plastic fiber optic - diffuse

KLR-C16-2,2-2,0-K71

Plastic fiber optic - diffuse

KLR-A32-2,2-2,0-K83

Plastic fiber optic - diffuse

KHR-C02-2,2-2,0-K131

Plastic fiber optic - diffuse

KHTR-C02-2,2-2,0-K88

Plastic fiber optic - diffuse

LHR 00-0,8-1,0-20M4

Glass fiber optic - diffuse with silicon covering

KLE-C01-2,2-2,0-K116

Plastic fiber optic - thru-beam

KLE-C01-2,2-2,0-K103

Plastic fiber optic - thru-beam

KLE-C01-2,2-2,0-K102

Plastic fiber optic - thru-beam

KLE-C01-2,2-2,0-K100

Plastic fiber optic - thru-beam

KLE-C01-2,2-2,0-K101

Plastic fiber optic - thru-beam

KLE-C01-2,2-2,0-K113

Plastic fiber optic - thru-beam

KLE-C01-1,0-2,0-K120

Plastic fiber optic - thru-beam

KHE-C01-2,2-2,0-K122

Plastic fiber optic - thru-beam

KHTE-C01-2,2-2,0-K118

Plastic fiber optic - thru-beam

LHE 00-1,1-1,0-20M4

Glass fiber optic - thru-beam with silicon covering

Bracket SU

Mounting bracket for DIN rail

Other suitable accessories can be found at www.pepperl-fuchs.com

| Head shape | Moun-ting | Model number | Core | Detection distance | Fiber cross section | minimum Object size | Fiber optic length | Bend radius | Dimensions | Special features |
|------------------------|----------------|----------------------|------|--------------------|---------------------|---------------------|--------------------|-------------|------------|--|
| Cylindrical | dia. 1.5 mm | KLE-C04-1.0-2.0-K108 | PMMA | 70 mm | 4 x 0.25 mm | 0.12 mm | 2 m | min. 15 mm | | |
| Cylindrical | dia. 2 mm | KLE-C04-1.0-2.0-K106 | PMMA | 70 mm | 4 x 0.25 mm | 0.05 mm | 2 m | min. 15 mm | | |
| Highly flexible | | | | | | | | | | |
| Threaded | M3 | KHE-C01-1.0-2.0-K125 | PMMA | 50 mm | 0.5 mm | 0.15 mm | 2 m | min. 1 mm | | only 1 mm Bend radius |
| Threaded | M3 | KHE-C01-2.2-2.0-K122 | PMMA | 200 mm | 1 mm | 0.25 mm | 2 m | min. 2 mm | | only 2 mm Bend radius |
| Threaded | M4 x 0.7 /M2.6 | KHE-C01-1.0-2.0-K124 | PMMA | 50 mm | 0.5 mm | 0.15 mm | 2 m | min. 1 mm | | 4 x high Detection range with Auxiliary lens K-LA01/ 8 x high Detection range with Auxiliary lens K-LA06 Side view / Periscope with K-LA02/ only 1 mm Bend radius |
| Threaded | M6 | KHE-C01-2.2-2.0-K121 | PMMA | 200 mm | 1.0 mm | 0.25 mm | 2 m | min. 2 mm | | only 2 mm Bend radius |
| Cylindrical | dia. 1.5 mm | KHE-C01-1.0-2.0-K139 | PMMA | 50 mm | 0.5 mm | 0.05 mm | 2 m | min. 1 mm | | only 1 mm Bend radius |
| Cylindrical | dia. 3 mm | KHE-C01-2.2-2.0-K126 | PMMA | 50 mm | 0.5 mm | 0.15 mm | 2 m | min. 1 mm | | only 1 mm Bend radius |
| Cylindrical | dia. 3 mm | KHE-C01-2.2-2.0-K123 | PMMA | 200 mm | 1 mm | 0.25 mm | 2 m | min. 2 mm | | only 2 mm Bend radius |
| Right angle | dia. 15 x 5 | KHE-C01-2.2-2.0-K137 | PMMA | 35 mm | 0.5 mm | 0.15 mm | 2 m | min. 1 mm | | only 1 mm Bend radius |
| Right angle | dia. 15 x 5 | KHE-C01-2.2-2.0-K140 | PMMA | 150 mm | 1 mm | 0.25 mm | 2 m | min. 2 mm | | only 2 mm Bend radius |
| Flexible | | | | | | | | | | |

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| Head shape | Moun-ting | Model number | Core | Detection distance | Fiber cross section | minimum Object size | Fiber optic length | Bend radius | Dimensions | Special features |
|-----------------------------|----------------|----------------------|------|--|---------------------|---------------------|--------------------|-------------|------------|--|
| Threaded | M3 x 0.5 /M2.6 | KLE-C01-1.3-2.0-K112 | PMMA | 200 mm | 1 mm | 0.25 mm | 2 m | min. 25 mm | | 4 x high Detection range with Auxillary lens K-LA01/ 8 x high Detection range with Auxillary lens K-LA06 Side view / Periscope with K-LA02 |
| Threaded | M3 x 0.5 | KLE-C01-2.2-2.0-K103 | PMMA | 220 mm | 1 mm | 0.25 mm | 2 m | min. 25 mm | | |
| Threaded | M4 x 0.7 /M2.6 | KLE-C01-2.2-2.0-K102 | PMMA | 220 mm | 1 mm | 0.25 mm | 2 m | min. 25 mm | | 4 x high Detection range with Auxillary lens K-LA01/ 8 x high Detection range with Auxillary lens K-LA06 Side view / Periscope with K-LA02 |
| Threaded | M6 | KLE-C01-2.2-2.0-K100 | PMMA | 220 mm | 1 mm | 0.32 mm | 2 m | min. 25 mm | | |
| Threaded | M2.6 | KLE-C01-2.2-2.0-K113 | PMMA | 200 mm | 1 mm | 0.25 mm | 2 m | min. 25 mm | | 4 x high Detection range with Auxillary lens K-LA01/ 8 x high Detection range with Auxillary lens K-LA06 Side view / Periscope with K-LA02 |
| Cylindrical | dia. 2 mm | KLE-C01-1.3-2.0-K114 | PMMA | 220 mm | 1 mm | 0.25 mm | 2 m | min. 25 mm | | |
| Cylindrical | dia. 5 mm | KLE-C01-2.2-2.0-K101 | PMMA | 220 mm | 1 mm | 0.32 mm | 2 m | min. 25 mm | | |
| Bendable tip | | | | | | | | | | |
| Threaded | M4 | KLE 00-2.2-2.0-K55 | PMMA | 228 mm | 1 mm | | 2 m | min. 25 mm | | |
| High detection range | | | | | | | | | | |
| Threaded | M3 | KLE-C01-2.2-2.0-K116 | PMMA | 450 mm | 1.5 mm | 0.35 mm | 2 m | min. 40 mm | | |
| Threaded | M6 | KLE-C01-2.2-2.0-K115 | PMMA | 450 mm | 1.5 mm | 0.35 mm | 2 m | min. 40 mm | | |
| Threaded | M8 x 1 | FEF-PLT1 | PMMA | 6000 mm calculated value related on 2 m Fiber optic length | 1 mm | | 1 m | min. 25 mm | | Narrow beam |

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Subject to modifications without notice

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| Head shape | Mounting | Model number | Core | Detection distance | Fiber cross-section | Fiber optic length | Bend radius | Dimensions | Special features |
|----------------|----------------|----------------------|------|--------------------|---|--------------------|-------------|------------|--|
| Threaded | M3 x 0.5 | KLR-C04-1.25-2.0-K78 | PMMA | 8 mm | 4 x 0.25 mm | 2 m | min. 15 mm | | |
| Cylindrical | dia. 2.0 mm | KLR-C02-1.0-2.0-K91 | PMMA | 4 mm | 2 x 0.25 mm | 2 m | min. 10 mm | | |
| Cylindrical | dia. 3.0 mm | KLR-C02-1.0-2.0-K90 | PMMA | 4 mm | 2 x 0.25 mm | 2 m | min. 10 mm | | |
| Cylindrical | dia. 1.5 mm | KLR-C04-1.25-2.0-K80 | PMMA | 8 mm | 4 x 0.25 mm | 2 m | min. 15 mm | | |
| Cylindrical | dia. 1.5 mm | KLR-C04-1.0-2.0-K133 | PMMA | 7 mm | 4 x 0.25 mm | 2 m | min. 15 mm | | |
| Cylindrical | dia. 2.0 mm | KLR-C02-1.0-2.0-K87 | PMMA | 25 mm | 2 x 0.5 mm | 2 m | min. 15 mm | | |
| Cylindrical | dia. 3.0 mm | KLR-C04-1.25-2.0-K79 | PMMA | 8 mm | 4 x 0.25 mm | 2 m | min. 15 mm | | |
| Coaxial | | | | | | | | | |
| Threaded | M3 x 0.5 | KLR-C09-1.25-2.0-K76 | PMMA | 30 mm | 1 x 0.5 mm Emitter 9 x 0.25 mm Receiver | 2 m | min. 15 mm | | only 0.5 mm light spot at 8 mm with auxiliary lens K-LA03 |
| Threaded | M4 x 0.7 /M2.6 | KLR-C09-1.25-2.0-K74 | PMMA | 30 mm | 1 x 0.5 mm Emitter 9 x 0.25 mm Receiver | 2 m | min. 15 mm | | only 0.7 mm light spot at 10 mm with auxiliary lens K-LA04/ 2 x high Detection range with Auxiliary lens K-LA01/ 3 x high Detection range with Auxiliary lens K-LA06 |
| Threaded | M6 x 0.75 | KLR-C16-2.2-2.0-K71 | PMMA | 85 mm | 1 x 1.0 mm Emitter 16 x 0.25 mm Receiver | 2 m | min. 25 mm | | |
| Cylindrical | dia. 1.0 mm | KLR-C06-1.25-2.0-K81 | PMMA | 20 mm | 1 x 0.25 mm Emitter 6 x 0.25 mm Receiver | 2 m | min. 15 mm | | |

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