



**Model Number**

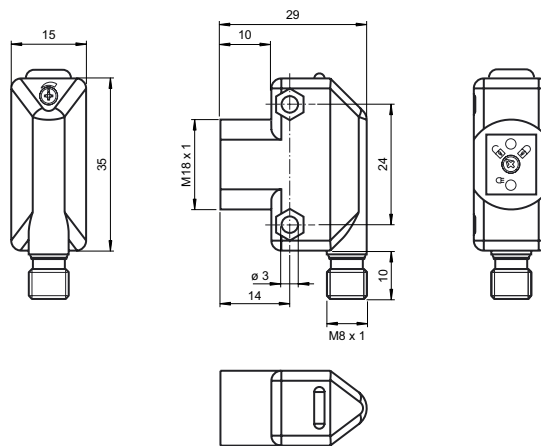
**ML17-LL-K/136/143**

Fiber optic sensor  
with 4-pin, M18 x 1 plastic connector

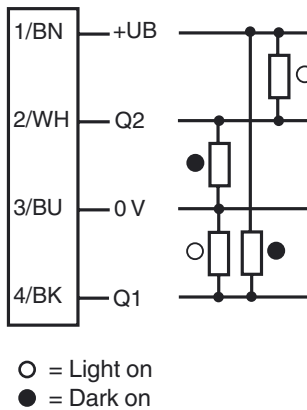
**Features**

- Miniature design
- Ultra bright LEDs for power on and switching state
- Quick attachment of plastic fiber optic cable
- Adjustable sensitivity
- Front mounting with M18-threads or side mounting holes
- Compact, versatile housing
- 360° visibility ultra bright status LEDs

**Dimensions**



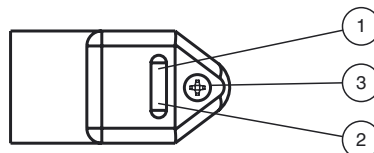
**Electrical connection**



**Pinout**



**Indicators/operating means**



1	Signal display	yellow
2	Operating display	green
3	Sensitivity adjustment	

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Refer to "General Notes Relating to Pepperl+Fuchs Product Information".

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**Technical data****General specifications**

Effective detection range	depends on the fiber optic cable being used
Light source	LED
Light type	modulated visible red light , 670 nm
Ambient light limit	≤ 10000 Lux

**Indicators/operating means**

Operation indicator	LED green, statically lit : Power on green LED , flashing: Short circuit/overload indication
Function indicator	LED yellow, lights up when light beam is free, flashes when falling short of the stability control
Control elements	sensitivity adjustment

**Electrical specifications**

Operating voltage	$U_B$	10 ... 30 V DC , class 2
Ripple		± 10 %
No-load supply current	$I_0$	< 25 mA
Time delay before availability	$t_v$	≤ 100 ms

**Output**

Switching type	light/dark on
Signal output	2 push-pull (4 in 1) outputs, short-circuit protected, reverse polarity protected, overvoltage protected
Switching voltage	max. 30 V DC
Switching current	max 100 mA per output

Voltage drop	$U_d$	≤ 2.5 V DC
Switching frequency	f	500 Hz
Response time		≤ 1 ms

**Ambient conditions**

Ambient temperature	-20 ... 55 °C (-4 ... 131 °F)
Storage temperature	-20 ... 75 °C (-4 ... 167 °F)

**Mechanical specifications**

Degree of protection	IP67
Connection	4-pin, M8 plastic connector
Material	
Housing	ABS
Optical face	Acrylic
Mass	9 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
CCC approval	CCC approval / marking not required for products rated ≤36 V

**Accessories****HPF-D032**

**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

**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

Additional accessories can be found in the Internet.