



Photoelectric sensors W15, Photoelectric retro-reflective sensor, Standard optics

WL15-F2433



Model Name > [WL15-F2433](#)
Part No. > [1043319](#)



Illustration may differ

At a glance

- Photoelectric retro-reflective sensor in hybrid design with 5 m sensing range
- Mounting flexibility: M18 front mount using plastic nut or snap ring, side assembly with 24.1 mm through holes
- Flush mounting possible using the snap ring
- Transparent back cover
- Highly visible sender LED
- Options with an adjustable delay of 0 - 2s

Your benefits

- Compatible with many competitor models, making it easy to install and commission
- Flush mounting reduces setup time and prevents obstructions to material flow on conveyor sections
- Clearly visible LED indicators reduce setup time and simplify troubleshooting
- Quick and easy alignment due to highly visible light spot



Features

Sensor/detection principle:	Photoelectric retro-reflective sensor, Standard optics
Dimensions (W x H x D):	16.2 mm x 48.5 mm x 31.9 mm
Housing design (light emission):	Hybrid
Thread diameter (housing):	M18 x 1
Sensing range max.:	0.035 m ... 5 m ¹⁾
Sensing range:	0.035 m ... 3.5 m
Type of light:	Visible red light
Light source:	LED ²⁾
Wave length:	650 nm
Time type:	Time delay off, Adjustable via time control
Delay time:	0 ... 2 s
Angle of dispersion:	1.5 °
Light spot size (distance):	140 mm (3.5 m)

¹⁾ PL80A ²⁾ Average service life of 100,000 h at T_A = +25 °C

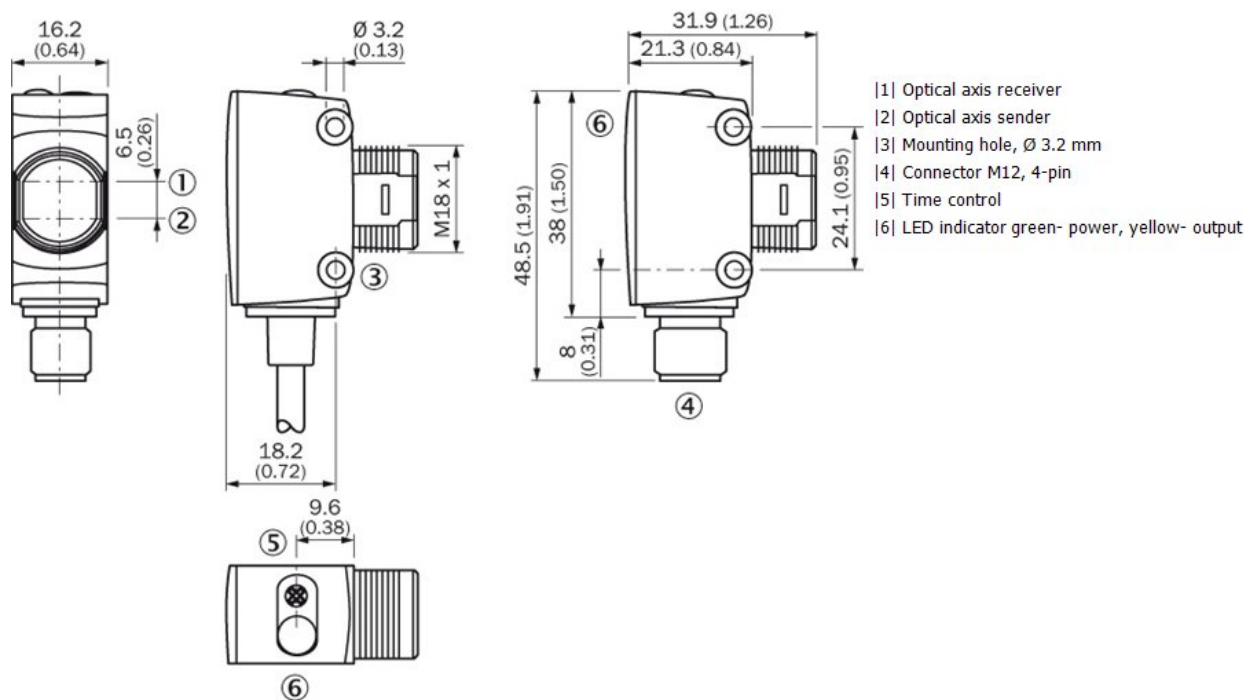
Mechanics/electronics

Supply voltage:	10 V DC ... 30 V DC ¹⁾
Ripple:	≤ 5 Vpp ²⁾

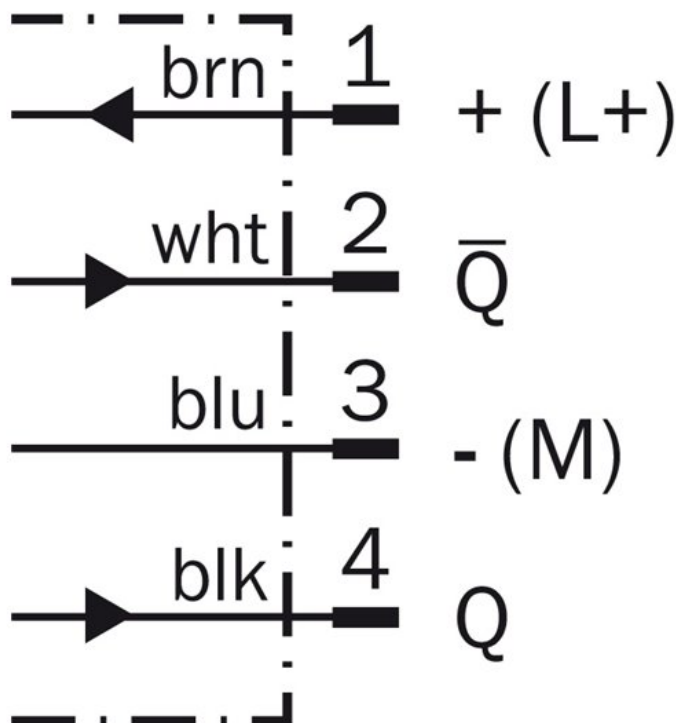
Power consumption:	$\leq 30 \text{ mA}$ ³⁾
Output type:	PNP
Output function:	Complementary
Switching mode:	Light/dark-switching
Output current I _{max.} :	$\leq 100 \text{ mA}$
Response time:	$\leq 1.25 \text{ ms}$ ⁴⁾
Switching frequency:	400 Hz ⁵⁾
Connection type:	Connector M12, 4-pin
Circuit protection:::	A, B, D ⁶⁾ ⁷⁾ ⁸⁾
Protection class:	II ⁹⁾
Weight:	10 g
Polarisation filter:	✓
Special device:	-
Housing material:	ABS, Plastic
Optics material:	PMMA
Enclosure rating:	IP 67
Items supplied:	Snap-ring and M18 nut
Ambient operating temperature:	-25 °C ... 55 °C
Ambient storage temperature:	-25 °C ... 70 °C
UL File No.:	NRKH7.E189383

¹⁾ Limit values, operation in short-circuit protected network max. 8 A ²⁾ May not exceed or fall short of V_S tolerances ³⁾ Without load ⁴⁾ Signal transit time with resistive load
⁵⁾ With light/dark ratio 1:1 ⁶⁾ A = V_S connections reverse-polarity protected ⁷⁾ B = inputs and output reverse-polarity protected ⁸⁾ D = outputs overcurrent and short-circuit protected ⁹⁾ Reference voltage 50 V DC

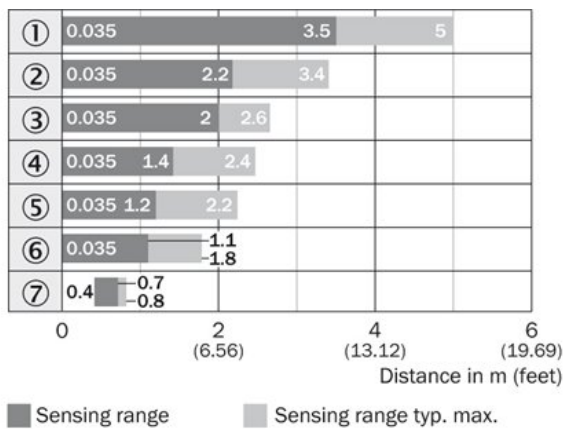
Dimensional drawing



Connection diagram



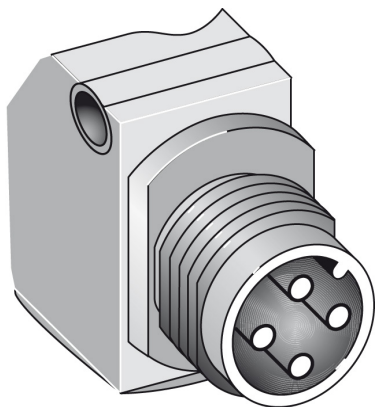
Sensing range diagram



Reflector type

- ① PL80A
- ② P250
- ③ C110
- ④ PL50A/PL40A
- ⑤ PL30A/PL31A
- ⑥ PL20A
- ⑦ Reflective tape REF-Plus

Connection type



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