

ONLINE DATA SHEET
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Photoelectric sensors
Through-beam photoelectric sensor, Product group W160

WS/WE160-F440



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Through-beam photoelectric sensor, Product group W160

Model Name > WS/WE160-F440
Part No. > 6022758



- Vertical models
- Slotted masks (accessories) for detecting small objects or positioning jobs
- Red light as alignment aid
- Sensitivity adjustable
- LED indicator: operating reserve

Product features

Sensing range min ... max::	0 m ... 11 m, 0 m ... 15 m
Light source::	LED
Type of light:	Red light
Light spot diameter:	Approx. 1500 mm at 10 m distance
Laser:	Red light
Sensing range max.:	0 m ... 11 m, 0 m ... 15 m
Sensitivity adjustment:	Potentiometer, 2 rotations
Wave length:	680 nm

Technical data

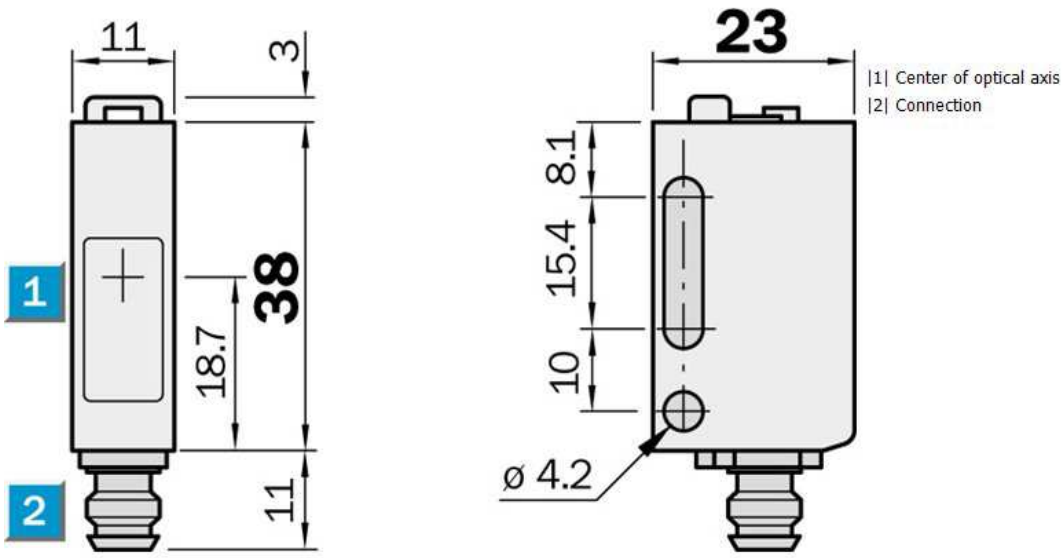
Design::	Rectangular
Dimensions (W x H x D):	11 mm x 38 mm x 23 mm
Supply voltage min ... max::	DC 10 ... 30 V [1)]
Ripple:	± 10 %
Output type:	PNP: open collector: Q
Switching mode:	Light/dark switching via rotary switch
Output current max.:	100 mA
Response time::	≤ 0.5 ms
Switching frequency:	1,000 Hz
Connection type:	Connector, M8, 4-pin
Circuit protection:	V_S connections reverse-polarity protected/In-/outputs short-circuit protected/Interference suppression/receiver only/Outputs overcurrent and short-circuit protected/receiver only
Enclosure rating::	IP 67: EN 60529, IP 69K: EN 40050
Ambient operation temperature, min ... max::	-25 °C ... +55 °C
Ambient storage temperature, min ... max:	-40 °C ... +70 °C
Weight:	Ca. 20 g
Housing material:	PBT
Signal voltage PNP HIGH/LOW:	Vs - 1.8 V/approx. 0 V
Angle of dispersion:	ca. 8.5 °

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Power consumption, sender:	20
Power consumption, receiver:	≤ 20 mA
Series:	W160
Optics material:	PMMA
Angle of reception:	Ca. 15 °
Housing design:	Vertical

[1] Limit values, reverse-polarity protected operation in short-circuit protected network max. 8 A

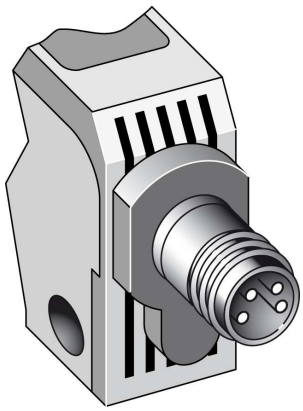
Dimensional drawing



Adjustment possible

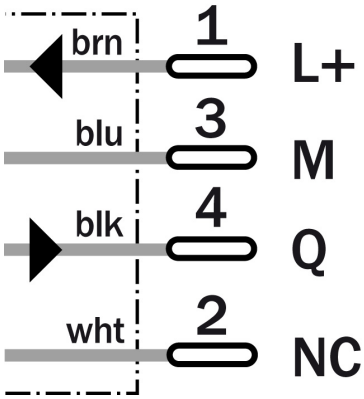
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Connection type

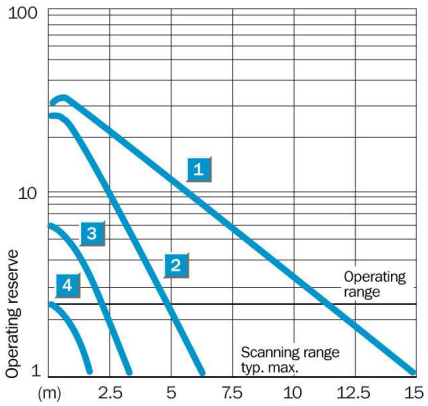


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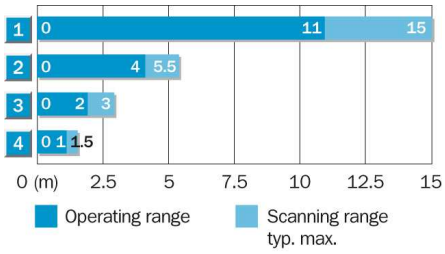
Connection diagram



Characteristic curve



Sensing range diagram



1	Without slotted mask
2	With slotted mask 2 mm, BL-160-SK
3	With slotted mask 1 mm, BL-160-SK
4	With slotted mask 0.5 mm, BL-160-SK

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