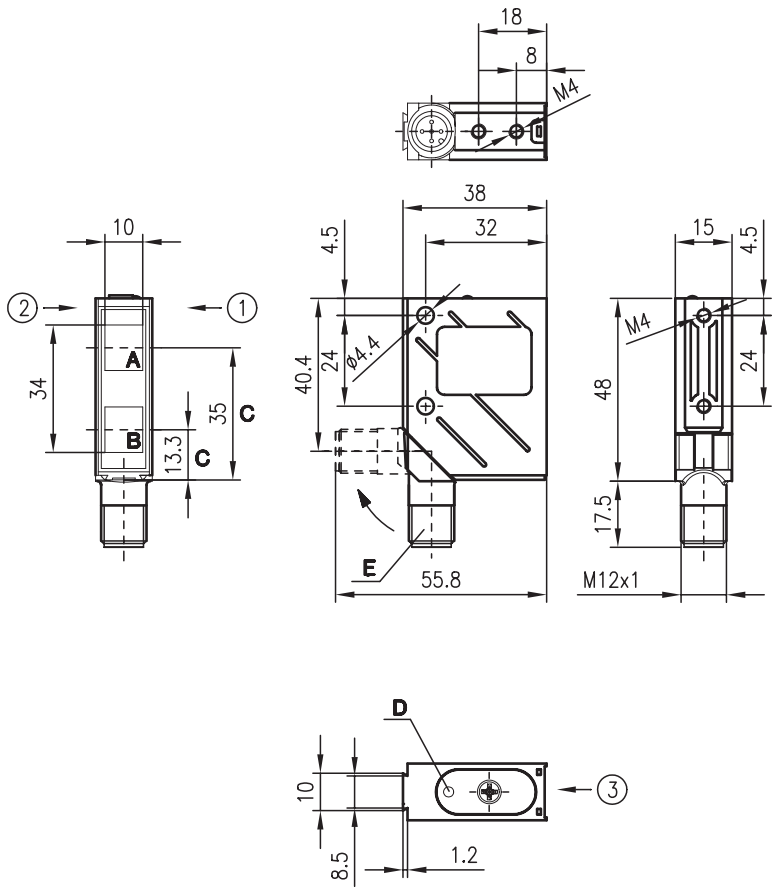
IHRT 8 Diffuse reflection light scanner with background suppression

30 … 100mm
40 … 200mm

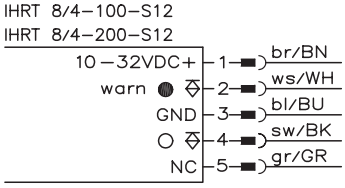
- Fixed scanning range
- Background suppression
- Warning output (soiling)
- Wire break monitoring
- PNP outputs
- Infrared light
- Mounting holes for fast installation
- M12 turning connector

Dimensioned drawing



A Receiver
B Transmitter
C Optical axis
D LED yellow
E 90° turning connector
Preferred entry direction for objects ①+②+③

Electrical connection



Accessories:

(available separately • see page 74)

- M12 connectors (KD …)
- Ready-made cables (K-D …)
- Mounting systems

We reserve the right to make changes • 8_d11e.fm

Specifications

	…100…	…200…
Optical data		
Typ. scanning range limit (white 90%) [1]	30 … 100mm	40 … 200mm
Scanning range [2]	see tables	
Light source	LED (modulated light)	
Wavelength	880nm (infrared)	
Timing		
Switching frequency	200Hz	
Response time	2.5ms	
Delay before start-up	≤ 300ms	
Electrical data		
Operating voltage U_B	10 … 32VDC (incl. residual ripple)	
Residual ripple	≤ 15% of U_B	
Bias current	≤ 35mA	
Switching output	pin 4: PNP light switching	
Signal voltage high/low	≥ (U_B-2V)/≤ 2V	
Output current	max. 100mA	
Indicators		
LED yellow off	no reflection, warning output activated (wire break monitoring)	
LED yellow on	reflection, switching output activated warning output activated	
LED yellow flashing	reflection, no performance reserve warning output not activated	
Mechanical data		
Housing	metal	
Optics cover	glass	
Weight (plug)	70g	
Connection type	M12 connector, 5-pin	
Environmental data		
Ambient temp. (operation/storage)	-20°C … +60°C/-30°C … +70°C	
Protective circuit [3]	2, 3	
VDE safety class [4]	III	
Protection class [5]	IP 67	
LED class	1 (acc. to EN 60825-1)	
Standards applied	IEC 60947-5-2	
Options		
Warning output warn	pin 2 PNP transistor output	
Function characteristics		
Switching output = Q	at reflection: Q high/QW high	
Warning output = QW	at reflection, performance reserve insufficient: Q = high, QW = low no reflection: Q = low/QW = high	

1) Typ. scanning range limit: max. attainable range without performance reserve
2) Scanning range: recommended range with performance reserve
3) 2=polarity reversal protection, 3=short-circuit protection for all outputs
4) Functional extra-low voltage with reliable disconnection or protective extra-low voltage (VDE 0100/T 410)
5) In stop position of the turning connector (turning connector locked)

Tables

…100…

1	30	100	100
2	30	100	100
3	50	100	100

…200…

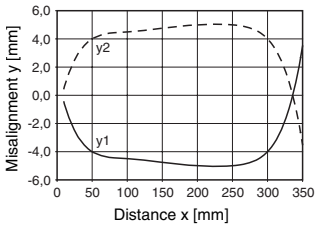
1	40	200	200
2	40	200	200
3	50	200	200

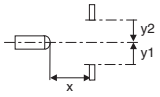
1	white 90%
2	grey 18%
3	black 6%

Scanning range [mm]
Typ. scanning range limit [mm]

Diagrams

Typ. response behaviour (white 90%)





Order guide

	Designation	Part No.
With M12 connector		
Scanning range 100mm	IHRT 8/4-100-S12	501 03360
Scanning range 200mm	IHRT 8/4-200-S12	501 03361

Remarks

Warning output with double-function:

- Contamination control
- Wire break monitoring