

IHRT 8

Diffuse reflection light scanner with background suppression

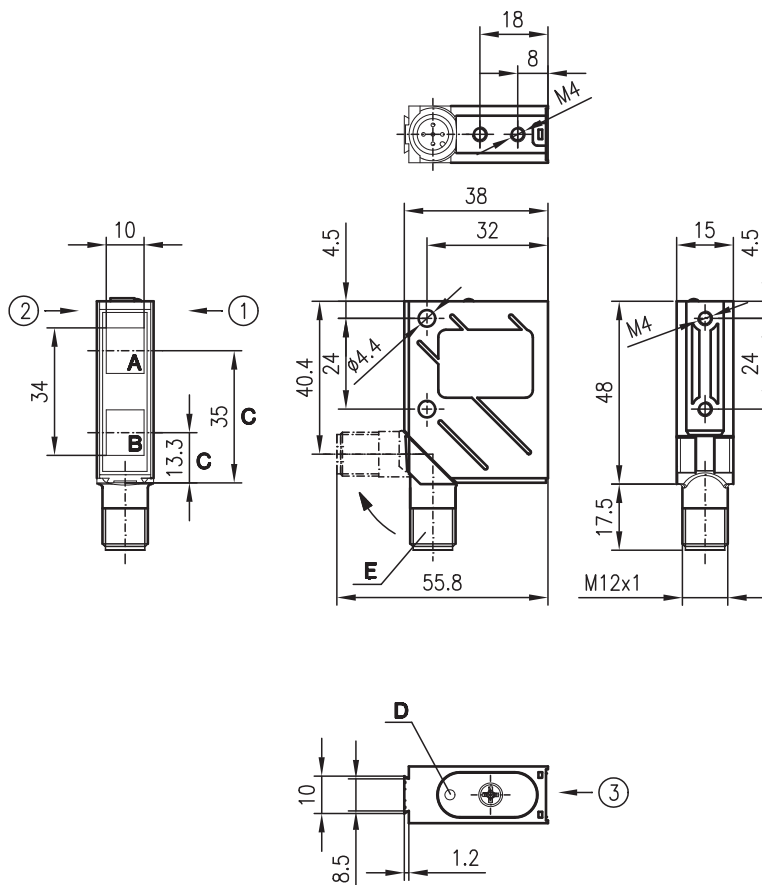
2025/01/24 50124759



20 ... 70 mm
30 ... 100 mm
40 ... 200 mm

- 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 Yellow LED
E Turning connector, 90°
Preferred entry direction for objects ① + ② + ③

Accessories:

(available separately)

- M12 connectors (KD ...)
- Mounting systems

Electrical connection

IHRT 8/4-70-S12	
IHRT 8/4-100-S12	
IHRT 8/4-200-S12	
10-32VDC+	1 — br/BN
warn ●	2 — ws/WH
GND	3 — bl/BU
○	4 — sw/BK
NC	5 — gr/GY

We reserve the right to make changes

Specifications

Optical data

	...70...	...100...	...200...
Typ. scanning range limit (white 90%) ¹⁾	20 ... 70mm	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
Open-circuit 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
Yellow LED, flashing	warning output activated
	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
Light source	free group (in acc. with EN 62471)
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

...70...

1	20	70	70
2	20	70	70
3	25	65	65

...100...

1	30	100	100
2	30	95	100
3	40	90	100

...200...

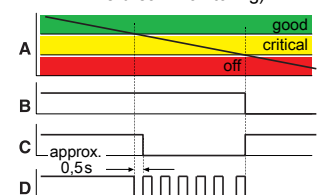
1	40	200	200
2	40	190	200
3	60	180	200

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

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

Diagrams

Output behaviour Q and QW (Warning output with wire break monitoring)



- A Received signal
B Switching output Q
C Warning output QW
D Indicator LED

NOTE

	In the areas between "Sensor OFF" and the operating range, the sensor functions with only a low performance reserve. The sensor typically flashes in this case. Depending on the tolerance, it is, however, also possible that the sensor no longer detects objects.
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Warning output with double-function:

- Contamination control
- Wire break monitoring

Order guide

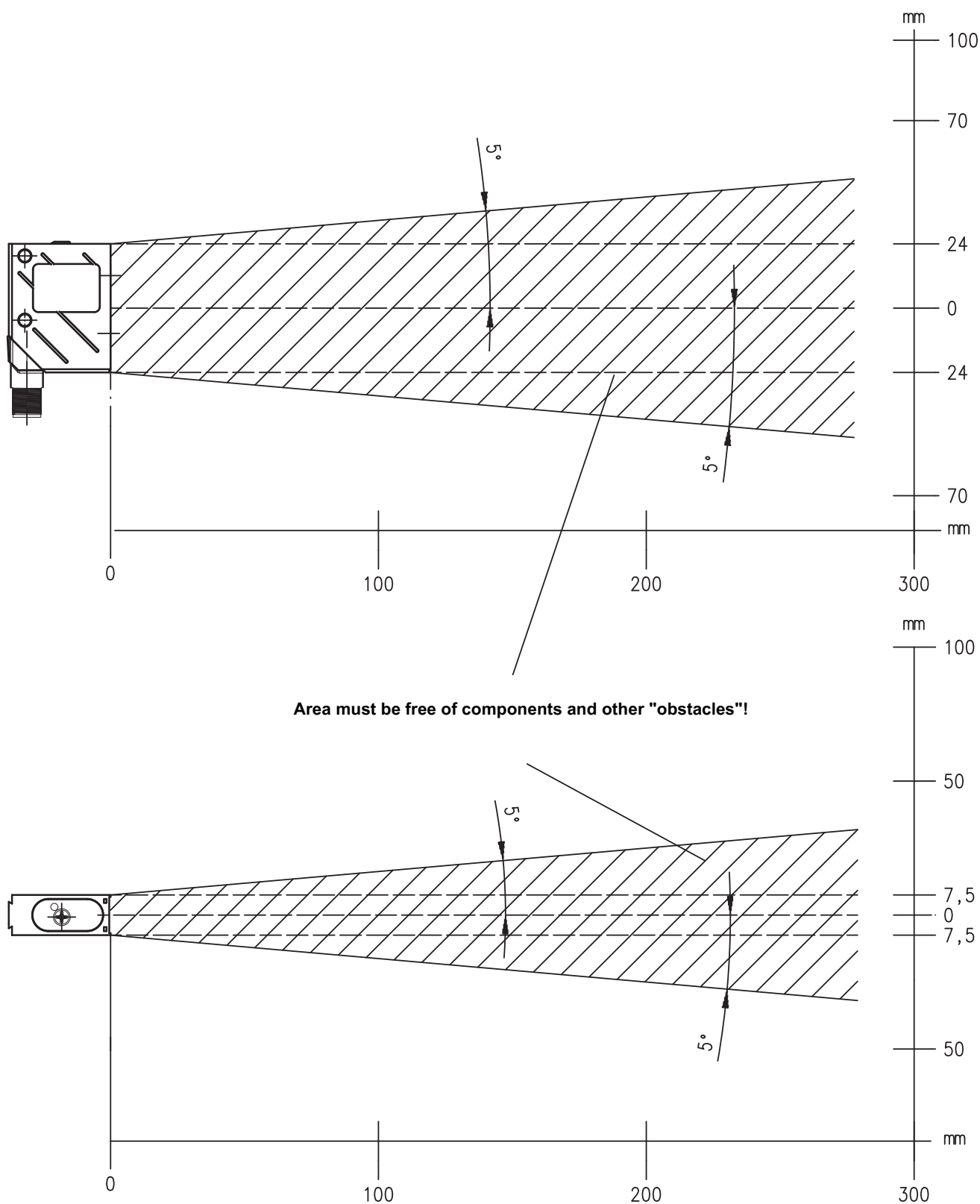
	Designation	Part No.
With M12 connector		
Scanning range 70mm	IHRT 8/4-70-S12	50124650
Scanning range 100mm	IHRT 8/4-100-S12	50103360
Scanning range 200mm	IHRT 8/4-200-S12	50103361

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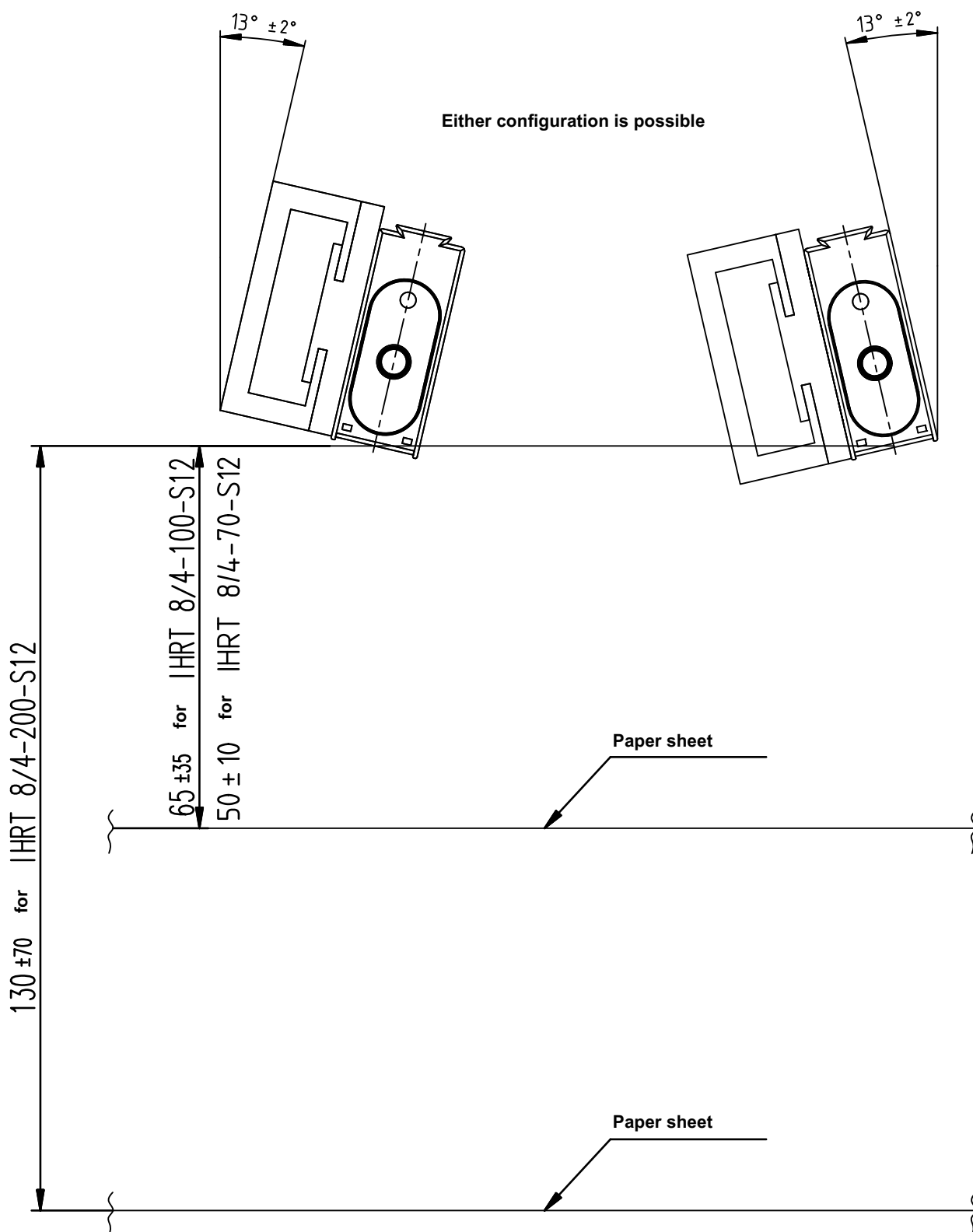
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Mounting

Recommended free space



Recommended fitting position for maximum performance reserve



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Recommended fitting position

For highest performance reserve with **high-gloss surfaces**.

