

IHRT 8

Diffuse reflection light scanner with background suppression

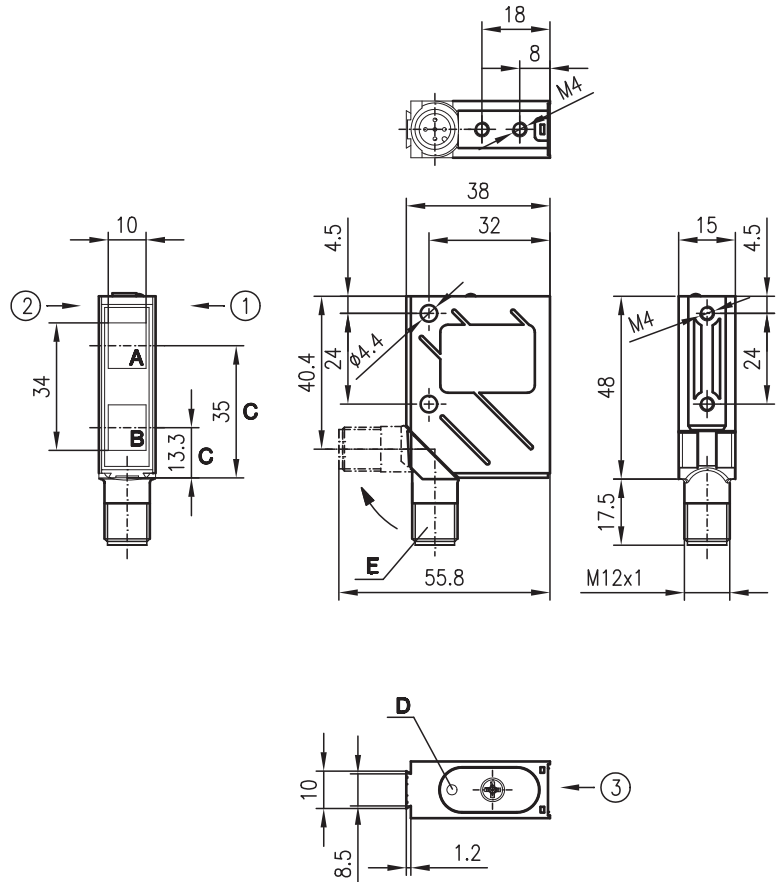
2025/01/24 50124759



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

Specifications

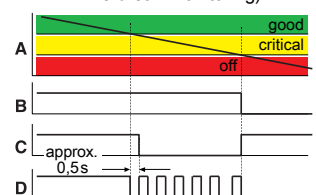
	...70...	...100...	...200...
Optical data			
Typ. scanning range limit (white 90%) ¹⁾	20 ... 70mm	30 ... 100mm	40 ... 200mm
Scanning range ²⁾	see tables		
Light source	LED (modulated light)		
Wavelength	880nm (infrared)		
Timing			
Switching frequency	200Hz		
Response time	2.5ms		
Delay before start-up	≤ 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		

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

i 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.

Warning output with double-function:

- Contamination control
- Wire break monitoring

Order guide

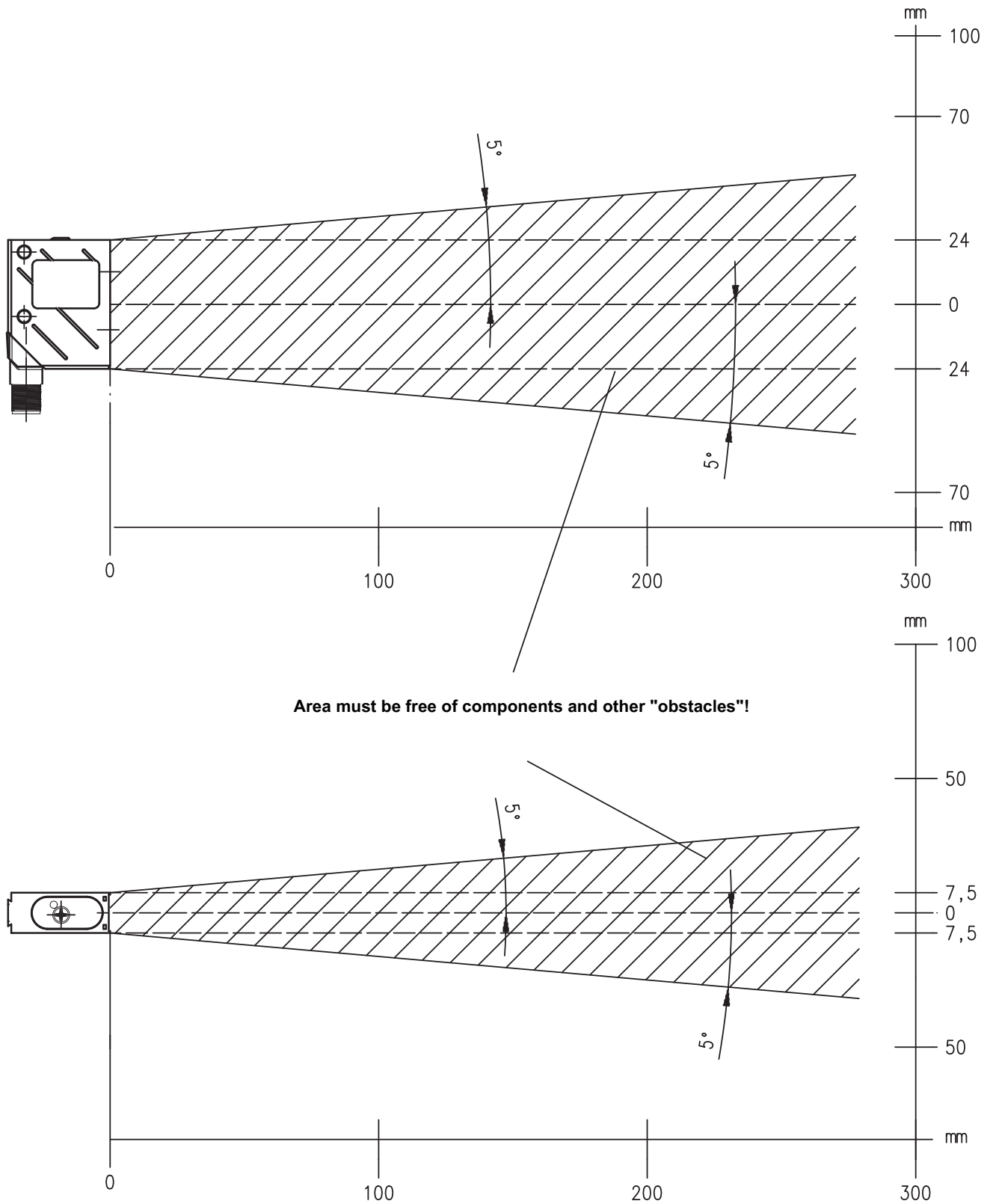
	Designation	Part No.
With M12 connector		
Scanning range 70mm	IHRT 8/4-70-S12	50124650
Scanning range 100mm	IHRT 8/4-100-S12	50103360
Scanning range 200mm	IHRT 8/4-200-S12	50103361

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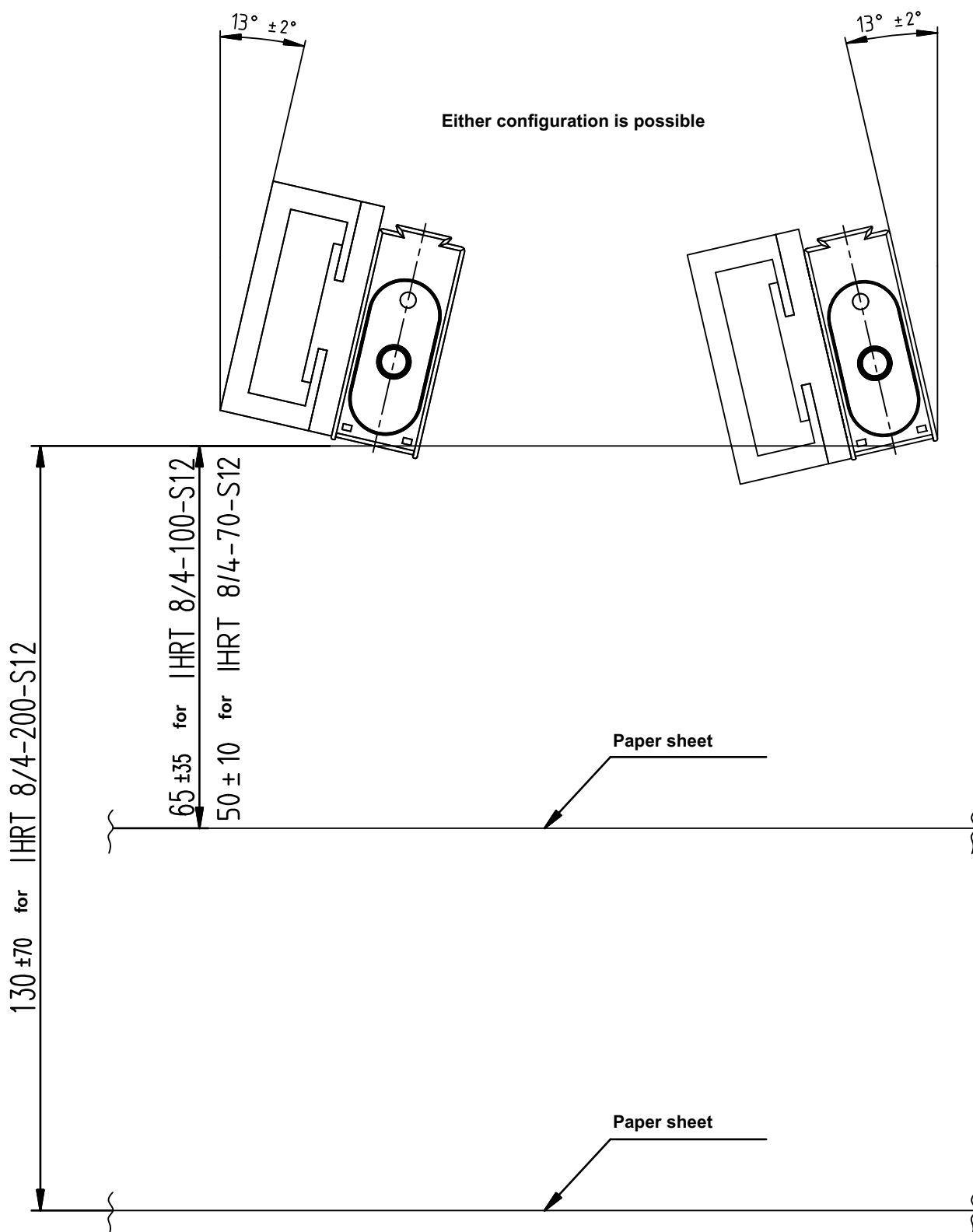
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Mounting

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**.

