

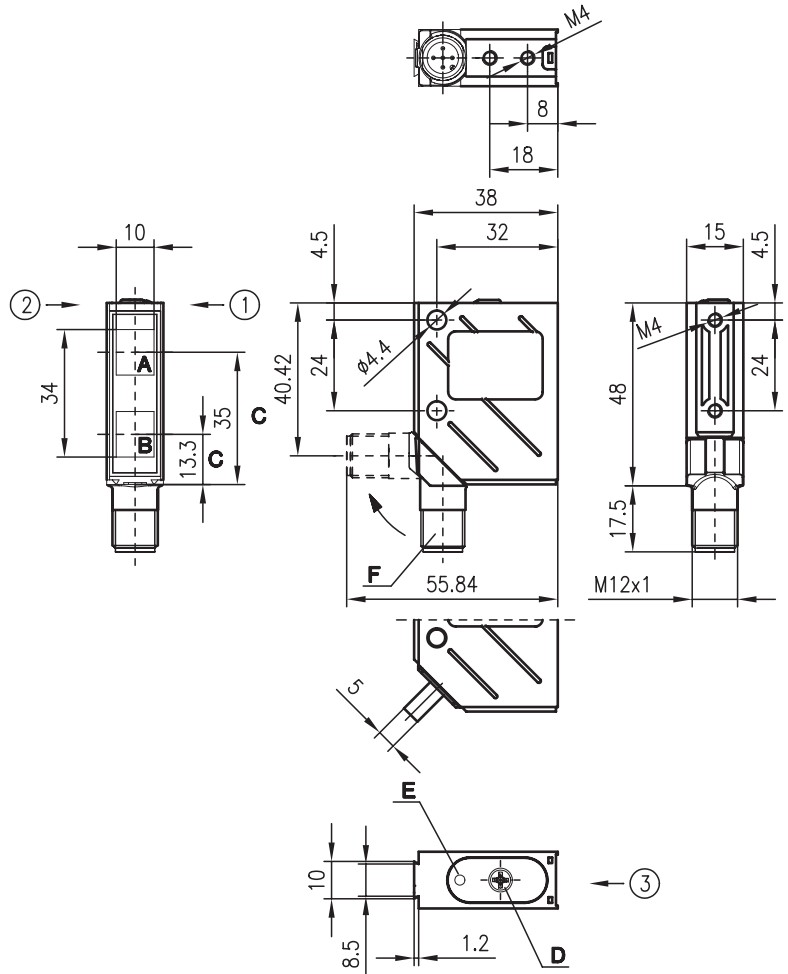


VRTR 8

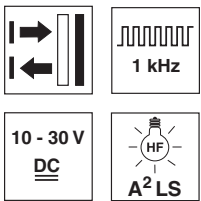
Diffuse reflection light scanner with foreground suppression



Dimensioned drawing



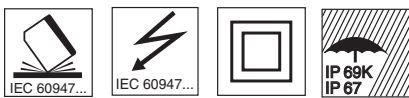
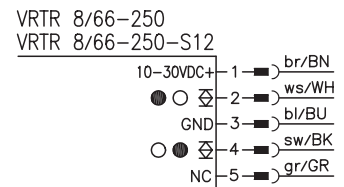
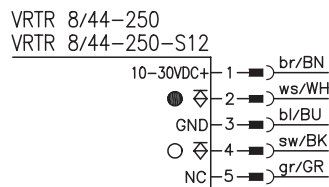
- A Receiver
 - B Transmitter
 - C Optical axis
 - D Operational control
 - E LED yellow
 - F 90° turning connector
- Preferred entry direction for objects ① + ② + ③



0 ... 250mm

- Adjustable foreground suppression
- A²LS - active suppression of extraneous light
- Push-pull switching outputs
- M12 turning connector or cable connection
- Visible red light

Electrical connection



Accessories:

(available separately • see page 74)

- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems
- Control guard

We reserve the right to make changes • 8_d04e.fm

Specifications

Optical data

Typ. scanning range limit ¹⁾	0 ... 250mm
Scanning range ²⁾	see tables
Mechanical adjustment range	50 ... 250mm
Light source	LED (modulated light)
Wavelength	660nm (visible red light)

Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B	10 ... 30VDC
Residual ripple	≤ 15% of U_B
Bias current	≤ 35mA
Switching output/function	.../66 2 push-pull switching outputs ³⁾ pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
	.../44 2 PNP switching outputs pin 2: dark switching pin 4: light switching
Signal voltage high/low	≥ ($U_B - 2V$) ≤ 2V
Output current	max. 100mA
Scanning range adjustment	mechanical via multiturn potentiometer

Indicators

LED yellow	object detected
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Mechanical data

Housing	metal
Optics cover	glass
Weight (plug/cable)	70g/140g
Connection type	M12 connector, 5-pin or cable: 2000mm, 5x0.25mm ²

Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C/-40°C ... +70°C
Protective circuit ⁴⁾	2, 3
VDE safety class ⁵⁾	II, all-insulated
Protection class ⁶⁾	IP 67, IP 69K ⁷⁾
LED class	1 (acc. to EN 60825-1)
Standards applied	IEC 60947-5-2

- 1) Typ. scanning range limit: max. attainable range without performance reserve
- 2) Scanning range: recommended range with performance reserve
- 3) The push-pull switching outputs must not be connected in parallel
- 4) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 5) Rating voltage 250VAC
- 6) In stop position of the turning connector (turning connector locked)
- 7) IP 69K test acc. to DIN 40050 part 9 simulated, high pressure cleaning conditions without the use of additives, acids and bases are not part of the test

Order guide

	Designation	Part No.
With M12 connector	VRTR 8/44-250-S12	500 36372
With 2m cable	VRTR 8/44-250	500 36373
With M12 connector	VRTR 8/66-250-S12	500 36374
With 2m cable	VRTR 8/66-250	500 36375

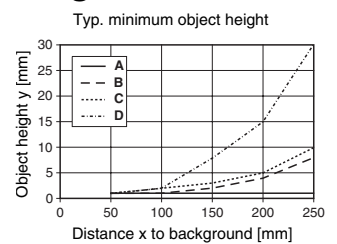
Tables

1	0	250	250
2	0	250	250
3	0	250	250

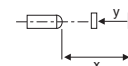
1	white 90%
2	grey 18%
3	black 6%

<input type="checkbox"/>	Scanning range [mm]
<input type="checkbox"/>	Typ. scanning range limit [mm]

Diagrams



- A Background/object 90%/6%
- B Background/object 90%/90%
- C Background/object 6%/6%
- D Background/object 6%/90%



Remarks

- **Adjustment:**
 1. Mount sensor at distance of max. 250mm away from constant background. Yellow LED must be OFF.
 2. Keep turning adjusting screw clockwise until stop is reached (25 turns).
 3. Turn adjusting screw anticlockwise until yellow LED lights up.
- Distance between sensor and background must not change.