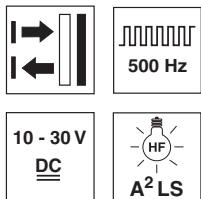


HRTR 25

Diffuse reflection light scanner with background suppression

Part No. 501 08926



**5 ... 400 mm
(700mm)**

- Visible red light
- Mechanical background suppression
- A²LS - active suppression of extraneous light
- Push-pull switching outputs
- Mount-compatible via elongated holes

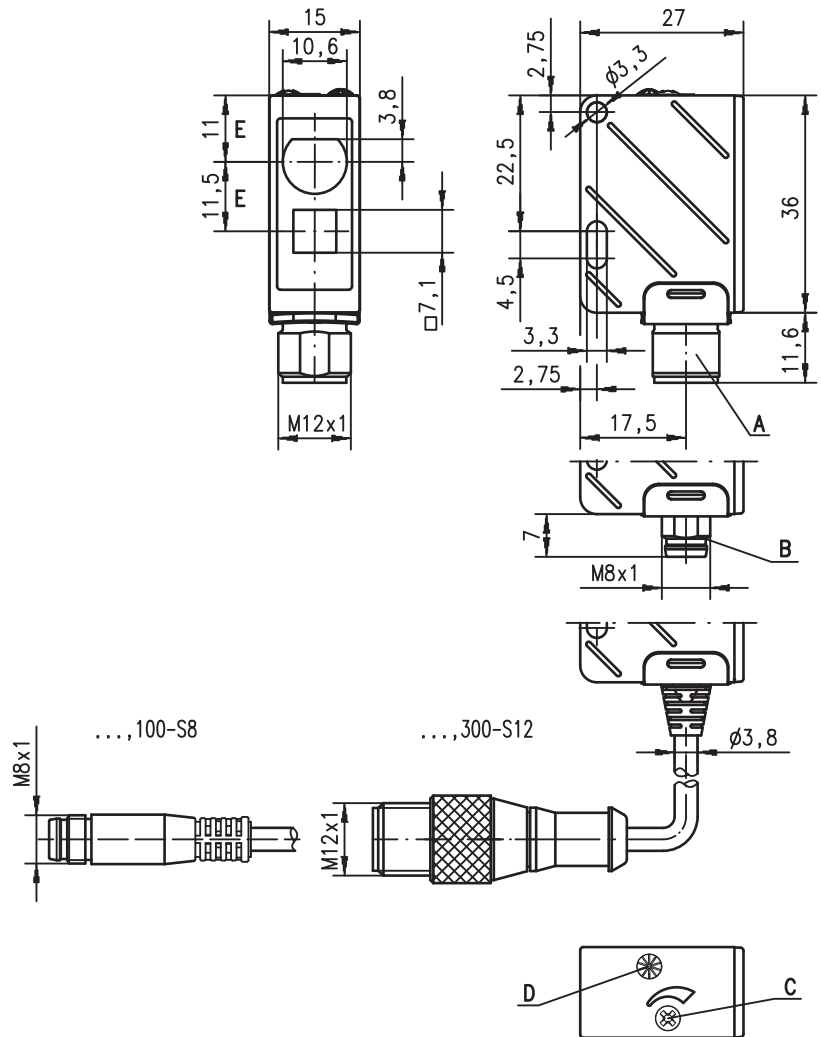


Accessories:

(available separately)

- M8 connectors (D M8...)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)
- Mounting systems (bracket, rod, clamp)

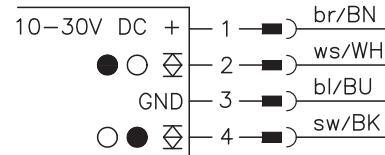
Dimensioned drawing



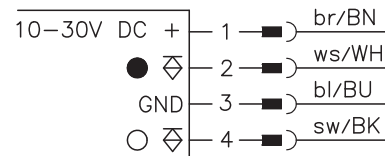
- A** M12 connector
- B** M8 connector
- C** Scanning range adjustment
- D** Indicator diode
- E** Optical axis

Electrical connection

HRTR 25/66...



HRTR 25/44...



We reserve the right to make changes • 25_d02gb.fm

Specifications

Optical data

Typ. scanning range limit (white 90%) ¹⁾	5 ... 400mm (700mm ²⁾)
Scanning range ³⁾	see tables
Mechanical adjustment range	40 ... 400mm
Light source	LED (modulated light)
Wavelength	660nm (red light)

Timing

Switching frequency	500Hz
Response time	1ms
Delay before start-up	≤ 100ms

Electrical data

Operating voltage U_B	10 ... 30VDC (incl. residual ripple)
Residual ripple	≤ 15% of U_B
Bias current	≤ 20mA
Switching output/function	.../66... 2 push-pull switching outputs ⁴⁾ pin 2: PNP dark switching, NPN light switching pin 4: PNP light switching, NPN dark switching
	.../44... 2 transistor switching outputs pin 2: PNP dark switching pin 4: PNP light switching
Signal voltage high/low	≥ ($U_B - 2V$) ≤ 2V
Output current	max. 100mA
Scanning range adjustment	mechanical via multiturn potentiometer

Indicators

Yellow LED	object detected
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Mechanical data

Housing	plastic
Optics cover	plastic
Weight (plug/cable)	15g/55g
Connection type	M8 and M12 connector 4-pin or cable with M8 and M12 connector 4-pin or cable: 2,000mm, 4x0.2mm ²

Environmental data

Ambient temp. (operation/storage)	-30°C ... +55°C/-40°C ... +70°C
Protective circuit ⁵⁾	2, 3
VDE safety class ⁶⁾	II, all-insulated
Protection class	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 with limited background suppression
- 3) Scanning range: recommended range with performance reserve
- 4) The push-pull switching outputs must not be connected in parallel
- 5) 2=polarity reversal protection, 3=short-circuit protection for all outputs
- 6) Rating voltage 250VAC
- 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

Push-pull switching outputs

	Designation	Part No.
With M12 connector	HRTR 25/66-300-S12	500 39548
With M8 connector	HRTR 25/66-300-S8	500 39547
With 2m cable	HRTR 25/66-300	500 39546
With 300mm cable and M 12 connector	HRTR 25/66-300, 300-S12	501 05210
With 500mm cable and M 12 connector	HRTR 25/66-300, 500-S12	501 09062
With 100mm cable and M 8 connector	HRTR 25/66-300, 100-S8	501 05803

PNP switching outputs

With M12 connector	HRTR 25/44-300-S12	501 10102
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Tables

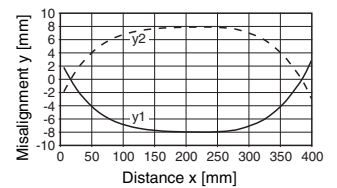
1	7	300	400 ... 700
2	9	270	340 ... 530
3	12	250	300 ... 400

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

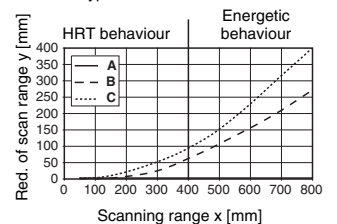
<input type="checkbox"/>	Scanning range [mm]
<input type="checkbox"/>	Typ. scanning range limit [mm]

Diagrams

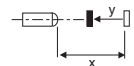
Typ. response behaviour (white 90%)



Typ. black/white behaviour



- A white 90%
- B grey 18%
- C black 6%



Remarks

- **Approved purpose:**
The light scanners are optical electronic sensors for optical, contactless detection of objects.