



## Specifications

### Optical data

Typ. scanning range limit (white 90%) <sup>1)</sup>	5 ... 400mm
Scanning range <sup>2)</sup>	see tables
Mechanical adjustment range	50 ... 400mm
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 <sup>3)</sup> 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 $\geq (U_B - 2V) \leq 2V$ max. 100mA
Signal voltage high/low	
Output current	
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 <sup>2</sup>

### Environmental data

Ambient temp. (operation/storage)	-40°C ... +60°C/-40°C ... +70°C
Protective circuit <sup>4)</sup>	2, 3
VDE safety class <sup>5)</sup>	II, all-insulated
Protection class <sup>6)</sup>	IP 67
LED class	1 (acc. to EN 60825-1:1994 +A1:2002 +A2:2001)
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)

## Order guide

	Designation	Part No.
with M12 connector with 2m cable	HRTR 8/44-350-S12	500 36350
	HRTR 8/44-350	500 36351
with M12 connector with 2m cable	HRTR 8/66-350-S12	500 36352
	HRTR 8/66-350	500 36353

## Tables

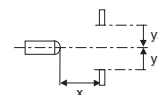
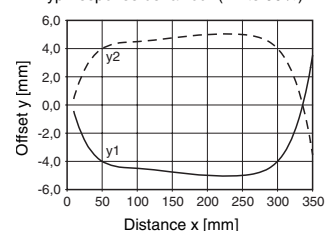
1	7	350	400
2	10	330	370
3	12	300	340

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

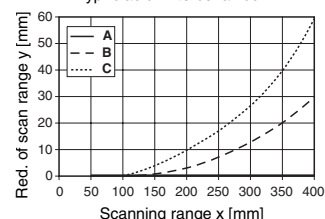
	Scanning range [mm]
	Typ. scanning range limit [mm]

## Diagrams

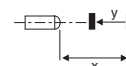
Typ. response behaviour (white 90%)



Typ. black/white behaviour



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



## Remarks