

RT 318

Energetic diffuse reflection light scanners

Dimensioned drawing

Part No. 501 08671

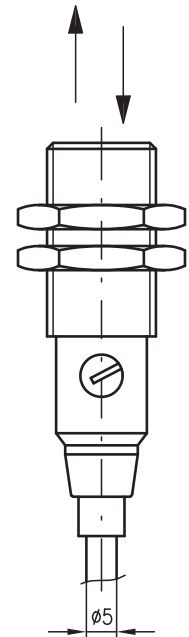
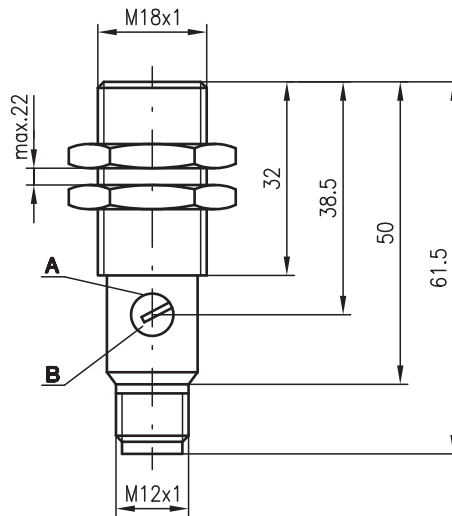


0 ... 500mm
0 ... 700mm

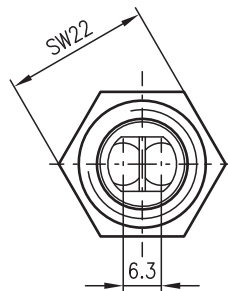


- Energetic diffuse reflection light scanner with infrared light and straight optics
- Robust cylindrical metal or plastic housing M18x1, protection class IP 67 for industrial application
- Complementary switching outputs for light/dark switching or as a control function
- Very short construction for application in limited spaces

RT 318M/...

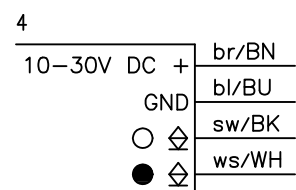
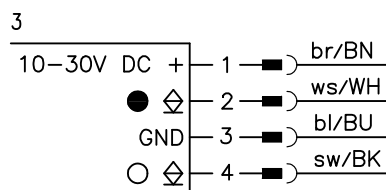
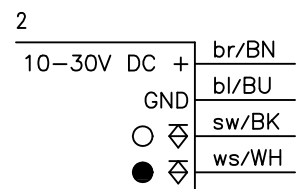
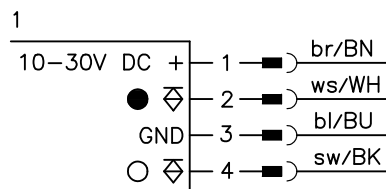


RT 318K/...



- A** Indicator diode
- B** Sensitivity adjustment

Electrical connection



Accessories:

(available separately)

- Mounting systems (BT 318, BT 318-ARH)
- M12 connectors (KD ...)
- Ready-made cables (K-D ...)

We reserve the right to make changes • 318_c02gb.fm

Specifications

Optical data

Typ. scanning range limit (white 90%) ¹⁾	0 ... 500mm, 0 ... 700mm
Scanning range ²⁾	see tables
Adjustment range	170 ... 500mm, 190 ... 700mm
Light source	LED (modulated light)
Wavelength	880nm

Timing

Switching frequency	1000Hz
Response time	0.5ms
Delay before start-up	≤ 30ms

Electrical data

Operating voltage U_B	10 ... 30VDC
Residual ripple	≤ 10% of U_B
Bias current	≤ 15mA
Switching output	2 transistor outputs, complementary
Function characteristics	light/dark switching
Signal voltage high/low	≥ ($U_B - 1.6V$)/≤ 1.6V
Output current	max. 100mA
Sensitivity	adjustable

Indicators

LED red	reflection
LED red flashing	reflection, no performance reserve

Mechanical data

Housing	polyamide 12 or stainless steel
Optics cover	polyamide 12
Weight	90g (cable), 20g (M12)
Connection type	M12 connector, 4-pin cable 2m, 4x0.25mm ²

Environmental data

Ambient temp. (operation/storage)	-25°C ... +65°C/-40°C ... +70°C
Protective circuit ³⁾	1, 2, 3, 4
VDE safety class ⁴⁾	II, all-insulated
Protection class	IP 67
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) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs, 4=interference blanking
- 4) Rating voltage 250VAC

Remarks

Approved purpose:

The diffuse reflection light scanners are optical electronic sensors for optical, contactless detection of objects.

With the set scanning range, a tolerance of the upper and lower scanning range limit is possible depending on the reflection properties of the material surface.

Order guide

Selection table		RT 318K/P-550-S12 Part No. 500 82175	RT 318K/P-400-S12 Part No. 500 81351	RT 318M/P-550-S12 Part No. 500 82196	RT 318M/P-400-S12 Part No. 500 81353	RT 318K/P-550 Part No. 500 82197	RT 318K/P-400 Part No. 500 81352	RT 318M/P-550 Part No. 500 82198	RT 318M/P-400 Part No. 500 81354	RT 318K/N-550-S12 Part No. 500 83194	RT 318K/N-400-S12 Part No. 500 82146	RT 318M/N-400-S12 Part No. 500 82147	RT 318K/N-400 Part No. 500 83113	RT 318M/N-400 Part No. 500 83112
Equipment ↓	Order code →													
	Housing	plastic	●	●		●	●			●	●		●	
Scanning range	stainless steel			●	●			●	●			●		●
	550 mm	●		●		●		●		●		●		●
Connection	400 mm		●						●		●	●	●	●
	M12 connector	●	●	●	●					●	●	●		
Switching output	cable					●	●	●	●				●	●
	PNP	●	●	●	●	●	●	●	●				●	●
Connection diagram	NPN									●	●	●	●	●
		1	1	1	1	2	2	2	2	3	3	3	4	4

Tables

RT 318...-400-...

1	0	400	500
2	4	200	240
3	10	125	150

RT 318...-550-...

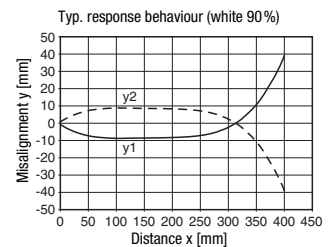
1	0	550	700
2	7	260	310
3	15	165	190

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

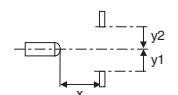
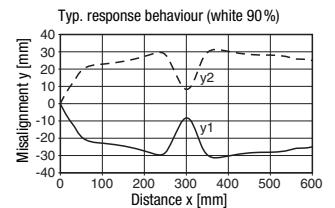
□ Scanning range [mm]
 ▒ Typ. scanning range limit [mm]

Diagrams

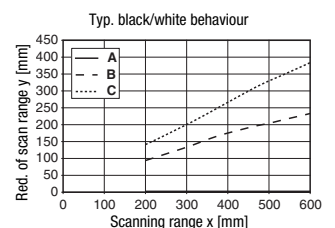
RT 318...-400-...



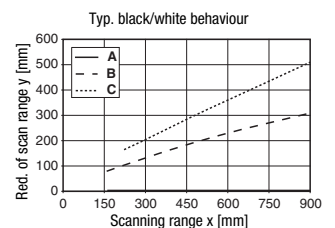
RT 318...-550-...



RT 318...-400-...



RT 318...-550-...



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

