

RT 318

Energetic diffuse reflection light scanners

Dimensioned drawing

en 07-2014/07 50108671-01



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

We reserve the right to make changes • DS_RT318_400_550_en_50108671_01.fm

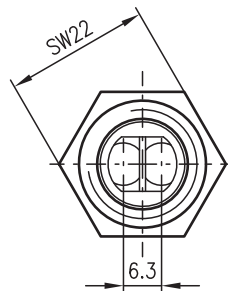
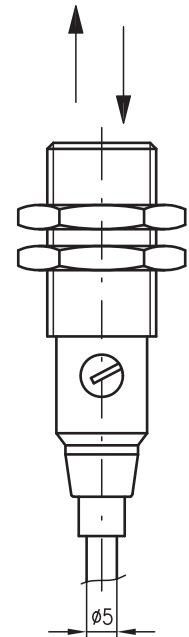
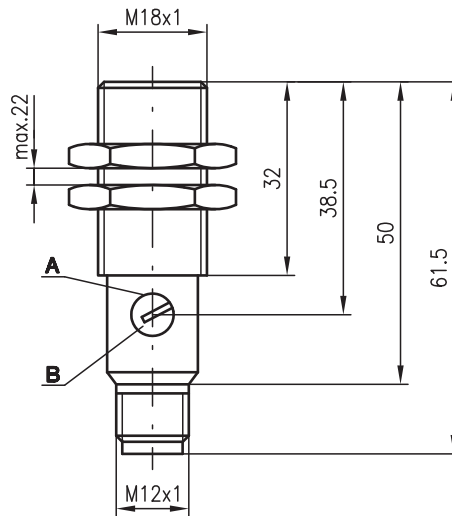


Accessories:

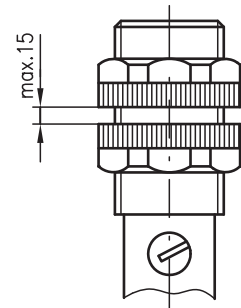
(available separately)

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

RT 318M/...

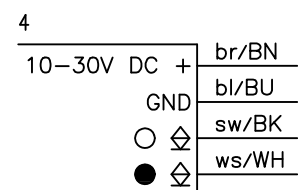
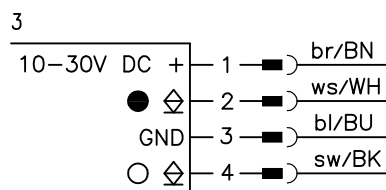
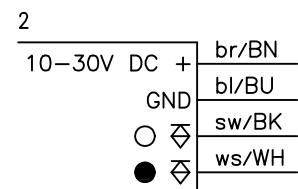
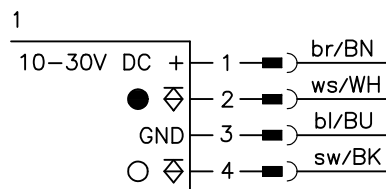


RT 318K/...



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

Electrical connection



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 ³⁾	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 ⁴⁾	1, 2, 3, 4
VDE safety class ⁵⁾	II, all-insulated
Protection class	IP 67
Light source	exempt group (in acc. with EN 62471)
Standards applied	IEC 60947-5-2
Certifications	UL 508, C22.2 No.14-13 ³⁾ 6)

- 1) Typ. scanning range limit: max. attainable range without performance reserve
- 2) Scanning range: recommended range with performance reserve
- 3) For UL applications: for use in class 2 circuits according to NEC only
- 4) 1=transient protection, 2=polarity reversal protection, 3=short circuit protection for all outputs, 4=interference blanking
- 5) Rating voltage 250VAC
- 6) These proximity switches shall be used with UL Listed Cable assemblies rated 30V, 0.5A min, in the field installation, or equivalent (categories: CYJV/CYJV7 or PVVA/PVVA7)

Remarks

Operate in accordance with intended use!

- ⚠ This product is not a safety sensor and is not intended as personnel protection.
- ⚠ The product may only be put into operation by competent persons.
- ⚠ Only use the product in accordance with the intended use.

- 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		Order code →												
Equipment ↓		RT 318K/P-550-S12 Part No. 50082175	RT 318K/P-400-S12 Part No. 50081351	RT 318M/P-550-S12 Part No. 50082196	RT 318M/P-400-S12 Part No. 50081353	RT 318K/P-550 Part No. 50082197	RT 318K/P-400 Part No. 50081352	RT 318M/P-550 Part No. 50082198	RT 318M/P-400 Part No. 50081354	RT 318K/N-550-S12 Part No. 50083194	RT 318K/N-400-S12 Part No. 50082146	RT 318M/N-400-S12 Part No. 50082147	RT 318K/N-400 Part No. 50083113	RT 318M/N-400 Part No. 50083112
Housing	plastic	●	●			●	●			●	●		●	
	stainless steel			●	●			●	●			●		●
Scanning range	550mm	●		●		●		●		●		●		
	400mm		●		●		●		●		●		●	●
Connection	M12 connector	●	●	●	●									
	cable												●	●
Switching output	PNP	●	●	●	●	●	●	●	●				●	●
	NPN									●	●	●	●	●
Connection diagram		1	1	1	1	2	2	2	2	3	3	3	4	4

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RT 318...-550... - 07

Tables

RT 318...-400-...

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

RT 318...-550-...

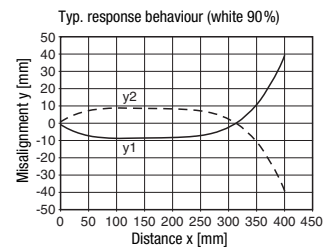
1	0	550	700
2	7	260	310
3	15	165	190

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

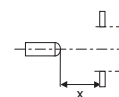
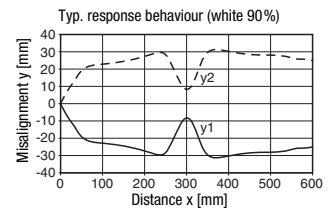
□ Scanning range [mm]
 □ Typ. scanning range limit [mm]

Diagrams

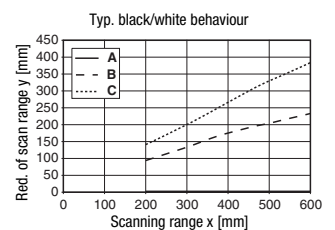
RT 318...-400-...



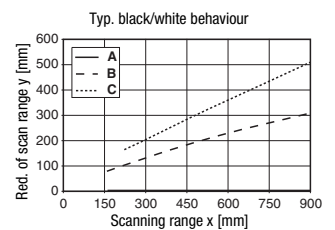
RT 318...-550-...



RT 318...-400-...



RT 318...-550-...



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

