

FT 80 RLA

Distance sensor with RS485 interface



CE

IP 67



PRODUCT HIGHLIGHTS

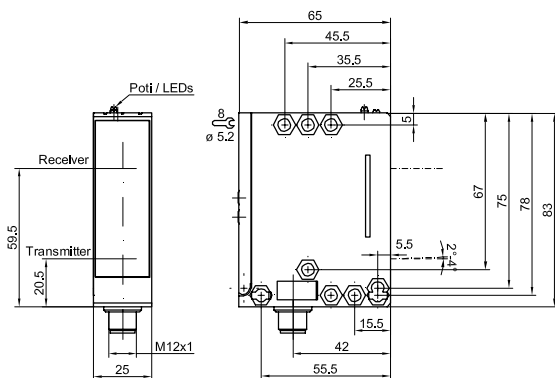
- Long operating distance
- 2 switching outputs + analogue output: 4 ... 20 mA
- High resolution (0.1% of measurement range)
- Type S1 with serial Bus interface (RS485 half-duplex)
- Adjustable via Teach-in; Type S1 also via software
- Wide range of functions

Optical data		Functions	
Operating range	250 ... 750 mm ¹	Indicator LED, green	Operating voltage indicator
Measurement range	500 mm	Indicator LED, yellow	Switching output indicator
Type of light	Laser, red, 650 nm	Indicator LED, red	State indicator
Laser Class (DIN EN 60825-1:2008-5)	2	Scanning distance adjustment	Via Teach-in button and control input
Resolution	< 0.1 % of measurement range end-value	Adjustment possibilities	Button lock via control input
Linearity	< 0.25 % of measurement range end-value	Default settings	Max. scanning distance and N.O.
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30V DC	Dimensions	83 x 65 x 25 mm
No-load current, I ₀	≤ 40 mA	Enclosure rating	IP 67 ²
Output current, I _e	≤ 100 mA	Material, housing	PBT
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection, Q (not Type S1)	Material, front screen	PMMA
Temperature drift		Type of connection	See Selection Table
Protection Class	2	Ambient temperature: operation	-10 ... +60 °C
Power On Delay	≤ 300 ms	Ambient temperature: storage	-20 ... +80 °C
Switching output, Q ₁ / Q ₂	PNP	Weight	107 g
Output function	N.O. / N.C.		
Analogue output	4 ... 20 mA		
Temperature drift	< 0.02 % of operating range end-value / K		
Load	≤ 500 Ω (recommended)		
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz		
Response time	≥ 0.4 ms (when mean value formation = off) / 4 ms / 40 ms to end-value		
Serial interface	See Selection Table		

¹ Reference material: Kodak grey, 18 % ²With connected IP 67 plug

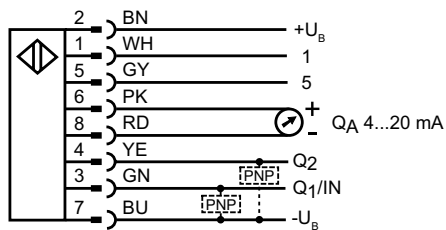
Scanning distance	Measurement range	Resolution	Linearity	Serial interface	Type of connection	Part number	Article number
250 ... 750 mm	500 mm	0,1 mm	0,25 mm	—	Plug, M12x1, 8-pin	FT 80 RLA-500-L8	574-41020
250 ... 750 mm	500 mm	0,1 mm	0,25 mm	RS485	Plug, M12x1, 8-pin	FT 80 RLA-500-S1L8	574-41024

Plug connection



153-00347

Connection, 8-pin



154-00127

Type

FT 80 RLA 500 -S1L8.
FT 80 RLA 500 -L8.

Pin 1

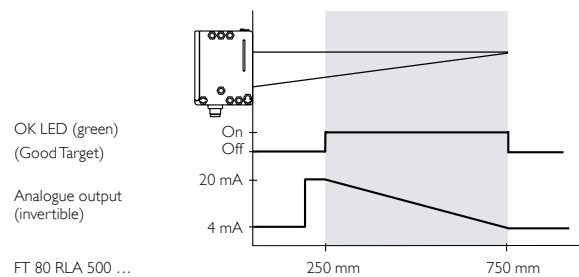
RS485 Y/A
not connected

Pin 5

RS485 Z/B
not connected

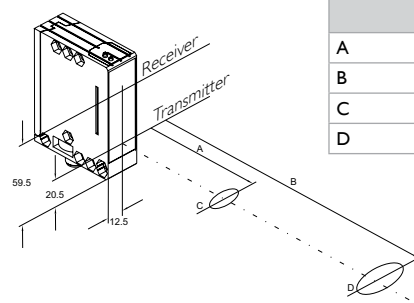
Characteristic analogue curve

Operating range (default settings)



155-00143

Light spot geometry



	FT 80 RLA 500 ...
A	250 mm
B	750 mm
C	1.9 mm x 1.2 mm
D	2.7 mm x 1.9 mm

155-00157

Accessories

Connection cables

From Page A-34

Brackets

From Page A-4