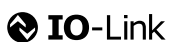


FT 25-RLA

Miniature laser distance sensor



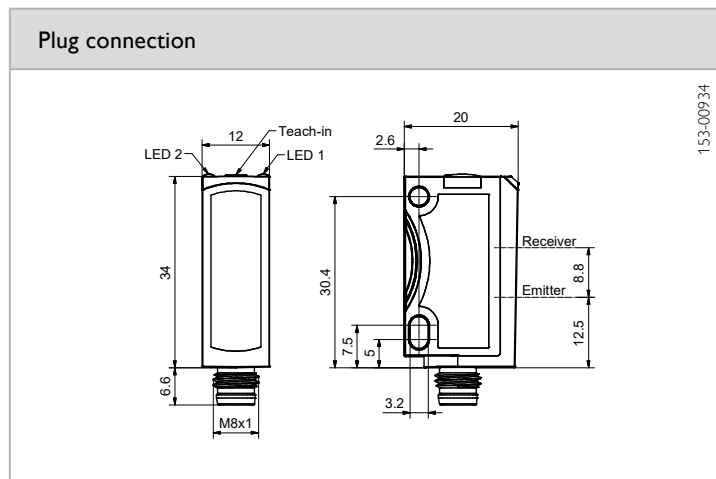
PRODUCT HIGHLIGHTS

- Small laser light spot for reliable distance measurement of small objects part detection
- Miniature housing and low weight - suitable for robotic applications
- High linearity and high repeatability for precise control tasks
- Invertible analogue characteristic
- Window mode e.g. for two-step controls separately adjustable
- Measurement value output via IO-Link

Optical data		Functions	
Measurement range	20 ... 100 mm ¹	Indicator LED, green	Operating voltage indicator
Resolution	0.12 mm (12-bit)	Indicator LED, yellow	Switching output indicator
Linearity	± 0.25 mm ²	Measurement range adjustment	Via Teach-in button
Repeatability	< 0.25 mm ^{2,3}	Adjustment possibilities	Analogue measurement range Q _A
Type of light	Laser, red, 650 nm		Invertible analogue characteristic
Light spot size	See diagram		Switching output Q (window mode)
Laser class (IEC 60825-1)	1		N.O. / N.C. via teach-in button
			Wide variety of adjustment possibilities of service and process data via IO-Link
		Default settings	See Table
Electrical data		Mechanical data	
Operating voltage, +U _B	13 ... 30V DC	Dimensions	34 x 20 x 12 mm
No-load current, I ₀	≤ 30 mA	Enclosure rating	IP 67 / IP 69 ⁵
Output current, I _e Q	≤ 100 mA	Material, housing	ABS
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Material, front screen	PMMA
Protection Class	2	Type of connection	See selection table
Power On Delay	< 300 ms	Ambient temperature: operation	-20 ... +60 °C ⁶
Switching output, Q	1x Auto-Detect (PNP/NPN) ⁴	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (metal plug device)	10 g
Max. capacitive load	10 nF	Resistance to vibrations and impacts	EN 60947-5-2
Switching frequency, f (ti/tp 1:1) Q	≤ 1000 Hz		
Response time Q	500 µs	IO-Link	
Analogue output Q _A	1 ... 10V / max. 3 mA		
Response time Q _A	3.4 ms		
Warm-up time	10 min.		
Temperature drift	< 0.1 mm/K		
		Communication mode	COM 2
		Min. cycletime	2.7 ms
		SIO mode	Compatible
		Length process data	24 Bit
		Specification	1.1

¹ Reference material: 6 ... 90 % reflectivity ² Reference material, 18 % reflectivity ³ At 6 σ, at constant ambient conditions, typ. values see diagram ⁴ Auto-Detect: Automatic selection of PNP or NPN by the sensor; PNP or NPN can be fixed ⁵ With connected IP 67 / IP 69 plug ⁶ UL: -20 ... +50 °C

Measurement range	Analogue output	Switching output	Type of connection	Part number	Article number
20 ... 100 mm	1 ... 10V	Auto-Detect	Metal plug, M8x1, 4-pin, IO-Link	FT 25-RLA-80-PNSUL-M4M	604-41013



Connection, 4-pin, IO-Link	Light spot size
154-00575	155-01394

Scanning properties	Repeatability ¹ (typ.)
155-01966	155-01968

¹ At constant ambient conditions

Characteristics	Default settings				
155-01661	<table> <tr> <td>Analogue output Q_A (1 ... 10V)</td><td>20 ... 100 mm</td></tr> <tr> <td>Switching output Q (A1 ... A2), N.O.</td><td>20 ... 100 mm</td></tr> </table>	Analogue output Q_A (1 ... 10V)	20 ... 100 mm	Switching output Q (A1 ... A2), N.O.	20 ... 100 mm
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	Accessories <table> <tr> <td>Connection cables</td><td rowspan="3">www.sensopart.com/en/accessories</td></tr> <tr> <td>Brackets</td></tr> <tr> <td>Sensolo (901-01001)</td></tr> </table>	Connection cables	www.sensopart.com/en/accessories	Brackets	Sensolo (901-01001)
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