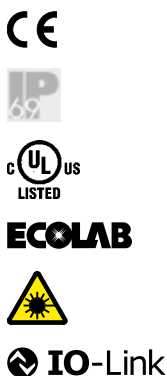


FT 55-RLAM-800 / FT 55-RL2AM-800

Distance sensor for a wide range of applications



PRODUCT HIGHLIGHTS

- Operating range up to 1 m enables versatile applications in which precision at large distances is required
- Precise measurements thanks to repeatability up to $\leq 40 \mu\text{m}$
- Switching hysteresis of 2 mm enables smart part detection even at large distances up to 1000 mm
- Variant with laser class 2 for measurements on very dark objects

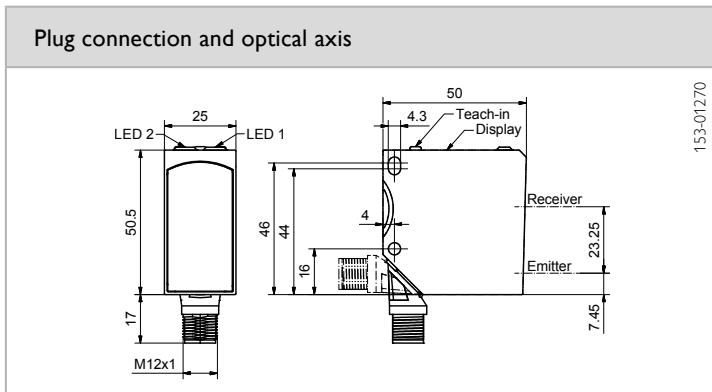
Optical data		Functions	
Operating range ¹	200 ... 1000 mm	Indicator LED 1, green	Operating voltage indicator
Resolution (14 Bit)	50 μm	Indicator LED 2, yellow	Status indicator Q_1 / Q_2
Linearity (typ.) ¹	$\pm 1.5 \text{ mm}$	Measurement range adjustment	Via display or IO-Link
Repeatability ¹	40 ... 820 μm , see illustration	Adjustment possibilities	Teach-in Q_1, Q_2, Q_A, Q as switching window or switching point
Hysteresis ¹	$\leq 2 \text{ mm}$		Setting of mean value at Q_A
Type of light	Laser, red 655 nm		Auto-Detect / NPN / PNP / Push-Pull
Immunity to ambient light	$\leq 20,000 \text{ lux}$ (laser class 2: 3000 Lux)		Smart Functions (On-delay and drop-out delay, counter, impulse, frequency)
Light spot size (w x h)	4 x 1 mm		
Measurement frequency	5 kHz (laser class 2: 2.5 kHz)		
Laser class (IEC 60825-1)	1 / 2, see selection table		
Electrical data			
Operating voltage $+U_B$	15 ... 30V DC	Load	$\leq 1 \text{ k}\Omega$ (2 ... 10 mA)
Power consumption	$\leq 1.5 \text{ W}$		$\leq 500 \text{ }\Omega$ (4 ... 20 mA)
Output current $I_e Q$	$< 50 \text{ mA}$		$\geq 2 \text{ k}\Omega$ (0 ... 10V, 2 ... 10V)
Protection circuits	Reverse polarity protection U_B / short-circuit protection (Q)	Switching frequency f (ti/tp 1:1) Q^3	$\leq 1000 \text{ Hz}$ (laser class 2: 500 Hz)
Protection class	2	Response time Q	600 μs (laser class 2: 1 ms)
Power On Delay	$< 300 \text{ ms}$	Response time Q_A	400 μs (laser class 2: 800 μs)
Switching output Q	Auto-Detect ² / PNP / NPN / Push-Pull	Averaging time ⁴	1 ms, 10 ms, 100 ms, 1000 ms
Output function Q	N.O./N.C.	Update time measured value	Update time Q_A + averaging time
Thermal response Q_A / digital	$< 0.02 \text{ \%}/\text{K}$ / 0.01 $\text{ \%}/\text{K}$	Analogue output Q_A	2 ... 10 mA / 4 ... 20 mA
Warm-up time	20 min.		0 ... 10V ⁵ / 2 ... 10V
Mechanical data			
Dimensions	50 x 50.5 x 25 mm	Ambient temperature: operation	-20 ... +50 $^\circ\text{C}$ ⁷
Enclosure rating	IP 67 & IP 69 ⁶	Ambient temperature: storage	-20 ... +60 $^\circ\text{C}$
Material, housing	Zinc die-cast, matt chrome	Weight (plug device)	185 g
Material, front screen / Display	PMMA	Resistance to vibration and impacts	EN 60947-5-2
Type of connection	See selection table	Display	LCD, with background illumination

¹ 5 ... 90 %; homogenous object, not moving ² Auto-Detect: Automatic selection of PNP or NPN by the sensor; PNP or NPN can be fixed operation lower ⁴ Scalable ⁵ up to 0.1 V undefined accuracy ⁶ With connected IP 67 / IP 69 plug ⁷ UL: max. +45 $^\circ\text{C}$

³ all RL(2)AM: Switching frequency in IO-Link

IO-Link			
Communication modus	COM 2	Length process data	32 Bit
Min. cycletime	3 ms	Data Storage	compatible
SIO mode	Compatible	Specification	1.1

Interface	Type of connection	Part Number	Article number
IO-Link	Plug, M12x1, 5-pin, IO-Link	FT 55-RLAM-800-PNSUIDL-L5M	624-41006
RS485	Plug, M12x1, 8-pin	FT 55-RLAM-800-PNSUID-S1L8M	624-41007
IO-Link	Plug, M12x1, 5-pin, IO-Link	FT 55-RL2AM-800-PNSUIDL-L5M	624-41009



Sold & Serviced By:



Toll Free Phone (877) SERV098
www.electromate.com
sales@electromate.com

5

Connection, 5-pin, Auto-Detect ^{8,9}	Connection, 8-pin, Auto-Detect ^{8,9}
154-00590	154-00533
*8 PIN fonctionnant avec un cable de norme DIN EN 60947-5-5 / IEC = 2007	

⁸ In IO-Link mode, a 4-pin cable must be used ⁹ For analogue transmission of measured values we recommend shielded cables ¹⁰ Can be used as output or input

Repeatability (typ.) ¹¹	Linearity error (typ.)
155-03460	155-03318

¹¹ Repeatability 6 σ , 5 ... 90 %, homogenous object, not moving

Default setting	Accessories
Analogue output Q_A	4 ... 20 mA, Measurement range limits
Switching output Q_1	450 mm, N.O.
Switching output Q_2	750 mm, N.O.
	Connection cables ¹² Bracket SensoClip MBD F 55ST2 (579-50012) SensoIO (901-01001)
	www.sensopart.com/en/accessories

¹² For 8-pin versions, use DIN EN 60947-5-2 / IEC = 2007 compliant cables, see From Page A-44