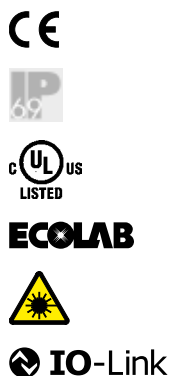


FT 55-RLAM-480

Distance sensor for a wide range of applications



PRODUCT HIGHLIGHTS

- Operating range up to 600 mm enables versatile applications in which precision at large distances is required
- Precise measurements thanks to repeatability up to 0.06 mm
- Switching hysteresis of 1.2 enables smart part detection even at large distances up to 600 mm

Optical data		Functions	
Operating range ¹	120 ... 600 mm	Indicator LED 1, green	Operating voltage indicator
Resolution (14 Bit)	30 µm	Indicator LED 2, yellow	Status indicator Q ₁ / Q ₂
Linearity (typ.) ¹	± 0.6 mm	Measurement range adjustment	Via display or IO-Link
Repeatability ¹	up to 0.06 mm, see selection table	Adjustment possibilities	Teach-in Q ₁ , Q ₂ , Q _A , Q as switching window or switching point; Setting of mean value at Q _A
Hysteresis ¹	≤ 1.2 mm		Auto-Detect / NPN / PNP / Push-Pull
Type of light	Laser, red 655 nm		Smart Functions (On-delay and drop-out delay, counter, impulse, frequency)
Immunity to ambient light	≤ 20.000 lux		
Light spot size (w x h)	4 x 1 mm		
Measurement frequency	5 kHz		
Laser class (IEC 60825-1)	1		
Electrical data			
Operating voltage +U _b	15 ... 30V DC	Load	≤ 1 kOhm (4 ... 20 mA)
Power consumption	≤ 1.5 W		≤ 500 Ohm (2 ... 10 mA)
Output current I _e Q	< 50 mA		≥ 2 kOhm (0 ... 10V, 2 ... 10V)
Protection circuits	Reverse polarity protection U _b / short-circuit protection (Q)	Switching frequency f (ti/tp 1:1) Q	≤ 1000 Hz
Protection class	2	Response time Q	600 µs
Power On Delay	< 300 ms	Response time Q _A	400 us
Switching output Q	Auto-Detect ² / PNP / NPN / Push-Pull	Analogue output Q _A	2 ... 10 mA / 4 ... 20 mA
Output function	N.O./N.C.		0 ... 10V / 2 ... 10V
Averaging time Q _A ³	1 ms, 10 ms, 100 ms, 1000 ms	Temperature drift Q _A / digital	< 0.02 %/K / 0.01 %/K
		Warm-up time	20 min.
Mechanical data			
Dimensions	50 x 50.5 x 25 mm	Ambient temperature: operation	-20 ... +50 °C ⁵
Enclosure rating	IP 67 & IP 69 ⁴	Ambient temperature: storage	-20 ... +60 °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 6 ... 90 %; homogenous object, not moving ² Auto-Detect: Automatic selection of PNP or NPN by the sensor; PNP or NPN can be fixed ³ Scalable

⁴ With connected IP 67 / IP 69 plug ⁵ UL: max. +45 °C

IO-Link			
Communication mode	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-480-PNSUIDL-L5M	624-41004
RS485	Plug, M12x1, 8-pin	FT 55-RLAM-480-PNSUID-S1L8M	624-41005

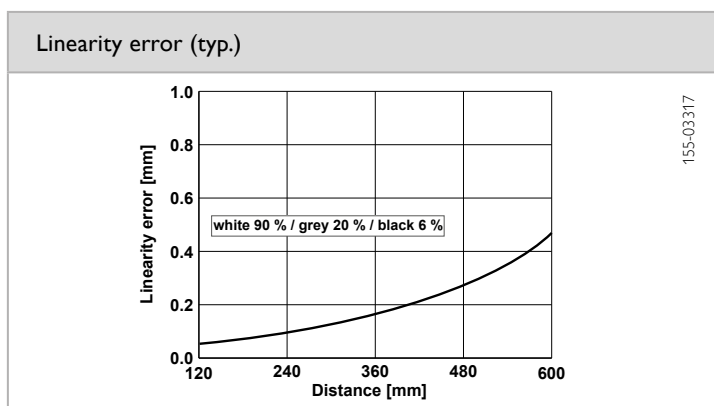
Plug connection and optical axis	Response time Q_A	Repeatability $6\sigma^1$
	1 ms	1.2 mm
	10 ms	0.38 mm
	100 ms	0.12 mm
	1000 ms	0.06 mm

¹ Repeatability 6σ , 6 ... 90 %, homogenous object, not moving

Connection, 5-pin, Auto-Detect ^{2,3}	Connection, 8-pin, Auto-Detect ^{2,3}

*8 PIN fonctionnant avec un câble de norme DIN EN 60947-5-5 / IEC = 2007

² In IO-Link mode, a 4-pin cable must be used ³ The sensor must be used with shielded cables ⁴ Can be used as output or input



Default setting	Accessories	
Analogue output Q_A	Connection cable 8-pin to 4-pin for Sensolo (L8/L4-2m-PUR / 902-51857) ⁴ Further connection cables Bracket SensoClip MBD F 55ST2 (579-50012) Sensolo (901-01000)	
Switching output Q_1		From Page A-38
Switching output Q_2		From Page A-38
	From Page A-4	
	From Page A-4	

⁴ Utiliser pour les variantes en 8 pôles câbles selon norme DIN EN 60947-5-5 / IEC = 2007, From Page A-38