

FT 55-RLAM-800-PNSUID-S1L8M

Ordering information

Designation for ordering	FT 55-RLAM-800-PNSUID-S1L8M
Part number	624-41007
Order text	Laser distance sensor, operating range 200...1000 mm, 2xQ, QA 4...20 mA / 0.1...10 V, RS-485, laser class 1, Auto-detect (PNP/NPN), metal housing, IP 67 / IP 69K, display, metal plug M12, 8-pin
Components supplied	Operating manual, Sensor, Laser warning signs



Optical data	
Setting range [mm]	200 ... 1,000
Resolution [mm]	0.050
Explanation of resolution	QA, 14 bit
Linearity [mm]	1.50
Explanation of linearity	Typical, 5...90%; homogeneous, stationary object
Repeatability [mm]	≤ 0.80
Explanation of repeatability	0.02...0.2 mm, 5...90%, stationary object, see graphic
Light source	Laser
Laser class	1 (IEC 60825-1)
Light color	Red
Wavelength [nm]	655
Light spot size [mm]	4 x 1
Switching frequency ≤ [Hz]	≤ 600
Switching hysteresis [mm]	2.0
Explanation of switching hysteresis	5...90%; homogeneous, stationary object
Measuring frequency [Hz]	5000.00
Sensitivity to ambient light [Lux]	≤ 20000

Functions	
Display, LED yellow	Statusanzeige Q1/Q2
Display, LED green	Betriebsspannungsanzeige
Setting options	Teach-in Q1, Q2, QA, Q als Schaltfenster oder Schaltpunkt Mittelwerteinstellung an QA Auto-Detect / NPN / PNP / Push-Pull Smart Functions (Anzugs- und Abfallverzögerung, Counter, Impuls, Frequenz)
Default settings	Analogausgang QA: 4 ... 20 mA, Messbereichsgrenzen Schaltausgang Q1: 450 mm, N.O. Schaltausgang Q2: 750 mm, N.O.
Measuring range adjustment	per Display und IO-Link

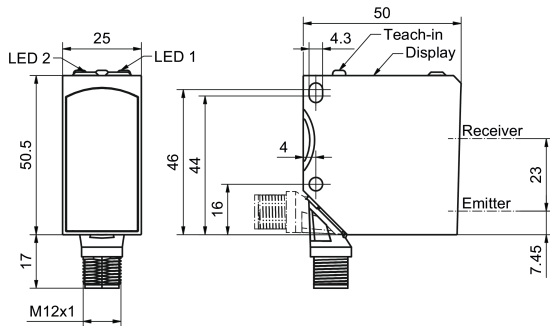
IO-Link	
Data storage	Yes
Communication mode	COM 2
Length of the process data [Bit]	32
Min. cycle time [ms]	3.0
SIO mode	is supported

Electrical data	
Operating voltage UB [V DC]	15 ... 30
Output current [mA]	≤ 50
Readiness delay [ms]	≤ 300
Reverse polarity protection	Yes
Short circuit protection	Yes
Response time Q [μs]	≤ 600
Response time QA [μs]	≤ 400.0
Explanation of response time	at 0...10 V to 0.1 V undefined accuracy
Analog output QA	2 ... 10 mA / 4 ... 20 mA; 0 ... 10 V / 2 ... 10 V
Measured value output	Analog (voltage), Analog (current), IO Link, RS-485
Protection class	2
Output function	N.O./N.C.
Power consumption [W]	1.50
Switching output Q	Auto-Detect/PNP/NPN/Push-Pull
Explanation of switching output Q	Auto-Detect: Automatic selection of PNP or NPN by the sensor
Number of outputs	2
Warm-up time [Min.]	20
Temperature profile [mm/K]	0.01
Averaging times	1 ms, 10 ms, 100 ms, 1000 ms
Measured value refresh time	Response time QA + averaging rate
Explanation of thermal response	QA < 0,02%/K, digital < 0,01%/K
Load [Ω]	1000
Explanation of load	≤ 1 kOhm (2...10 mA) / ≤ 500 Ohm (4...20 mA) ≥ 2 kOhm (0...10 V, 2...10 V)

Mechanical data	
Height [mm]	50.5
Length [mm]	50.0
Width [mm]	25.0
Weight [g]	~ 185
Front panel material	PMMA
Housing material	Die-cast zinc, matte chrome
Display material	PMMA
Ambient temperature: operation [°C]	-20 ... 50
Ambient temperature: storage [°C]	-20 ... 60
Protection class	IP 67, IP 69
Explanation of protection class	mit angeschlossenem IP 67 / IP 69 Stecker
Vibration and shock resistance	EN IEC 60947-5-2
Connection name	Plug, M12x1, 8-pole
- Number of pins	8
- Thread	M12x1
Housing type	Cuboidal
Display	LCD, mit Hintergrundbeleuchtung

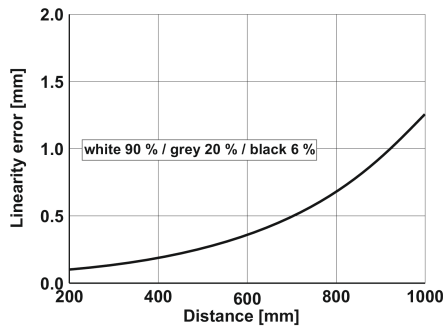
Technical drawings

Dimensional drawing



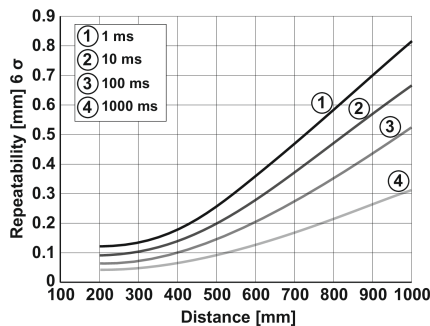
153-01270

Linearity (typ.)



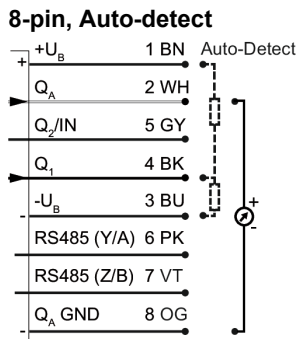
155-03318

Repeatability (typ.)



155-03460

Connections



PIN 8 deviates functionally from EN IEC 60947-5-2.

154-00553

Product link

<https://www.sensopart.com/en/products/details/624-41007>