

FR 55-RLAP-70-2PNSI-L8

Ordering information

Designation for ordering FR 55-RLAP-70-2PNSI-L8

Part number 621-11026

Order text Distance sensor to reflector for long ranges – time-of-flight technology 0.3...70 m, laser, Auto-detect, N.O./N.C., teach-in, M12 8-pin plug, IP67 & IP69K This product is being discontinued. Last order date: 2023-07-21



Optical data	
Measuring range [mm]	300 ... 70000
Explanation of measuring range	Reference material Reflector RF250
Resolution [mm]	35.000
Explanation of resolution	8 µA
Linearity [mm]	350.00
Explanation of linearity	± 0.5%, reference material reflector RF250; of the set measurement range
Repeatability [mm]	≤ 1.50
Explanation of repeatability	at 1 σ, set measurement range < 20 m, for further values see diagram
Light source	Laser
Laser class	1 (IEC 60825-1)
Light color	Red
Wavelength [nm]	655
Switching frequency ≤ [Hz]	≤ 50
Explanation of switching frequency	ti/tp 1:1
Switching hysteresis [mm]	60.0

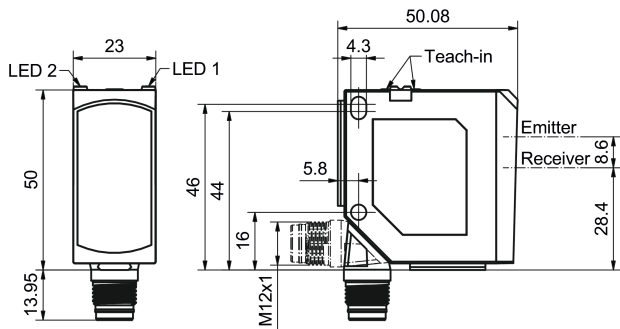
Functions	
Display, LED yellow	LED 1 / LED 2 = switching output indicator
Display, LED green	Betriebsspannungsanzeige
Setting options	Adjustable analogue measurement range QA Analogue characteristic curve invertible Adjustable switching output Q (switching window) N.O. / N.C. / antivalent Q1/Q1 and Auto-detect / NPN / PNP via teach-in button and control input Button lock via control input
Explanation of temperature drift	< 1 mm / K
Default settings	Analogue range QA (4...20 mA) Measurement range: 2...6 m Switching output Q1 (A1...A2), N.O., Auto-detect Measuring range: 2...6 m Switching output Q2 (A1...A2), N.O., Auto-detect Measurement range: 2...6 m
Measuring range adjustment	via teach-in button or control input

Electrical data	
Operating voltage UB [V DC]	18 ... 30
No-load current [mA]	≤ 60
Output current [mA]	≤ 100
Readiness delay [ms]	≤ 5,000
Reverse polarity protection	Yes
Short circuit protection	Yes
Response time Q [μs]	≤ 10,000
Analog output QA	4 ... 20 mA
Control input	Control input IN 1 and IN 2: + UB = teach-in - UB = button locked Open = normal operation Control input IN 3: + UB = laser off - UB = laser on open = laser on
Measured value output	Analog (current)
Protection class	2
Load [Ω]	500
Explanation of load	≤ 500 Ohm (4...20 mA)
Output function	N.O./N.C./antivalent Q1
Switching output Q	Auto-detect (PNP/NPN)
Explanation of switching output Q	Auto-detect: automatic selection of PNP or NPN by sensor, PNP or NPN can be configured permanently
Number of outputs	3
Warm-up time [Min.]	20
Temperature drift [mm/K]	1.000
Explanation of temperature drift	< 1 mm / K

Mechanical data	
Height [mm]	50.1
Length [mm]	50.0
Width [mm]	23.0
Weight [g]	~ 42
Front panel material	PMMA
Housing material	ABS
Ambient temperature: operation [°C]	-30 ... 60
Explanation of operation at ambient air temperature	UL: max. +45 °C
Ambient temperature: storage [°C]	-40 ... 80
Protection class	IP 67, IP 69K
Explanation of protection class	With IP 67/ IP 69K plug connected
Vibration and shock resistance	EN 60947-5-2
Connection name	Plug, M12x1, 8-pole
- Number of pins	8
- Thread	M12x1
Housing type	Cuboidal

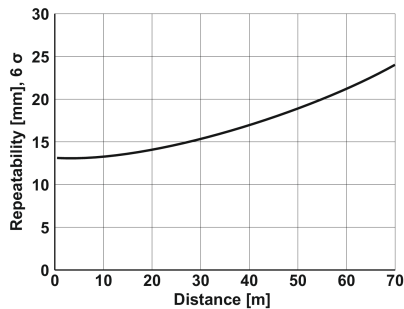
Technical drawings

Dimensional drawing



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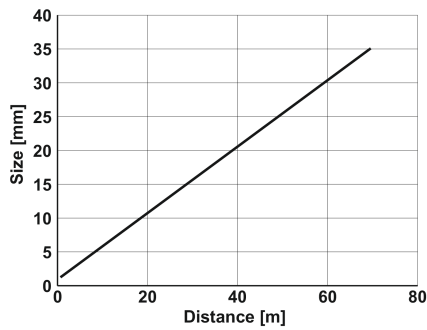
Repeatability (typ.)



Constant ambient conditions, 6 σ stationary object, reflective foil RF 250/V (904-51579)

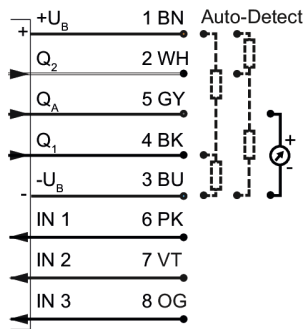
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Light spot size

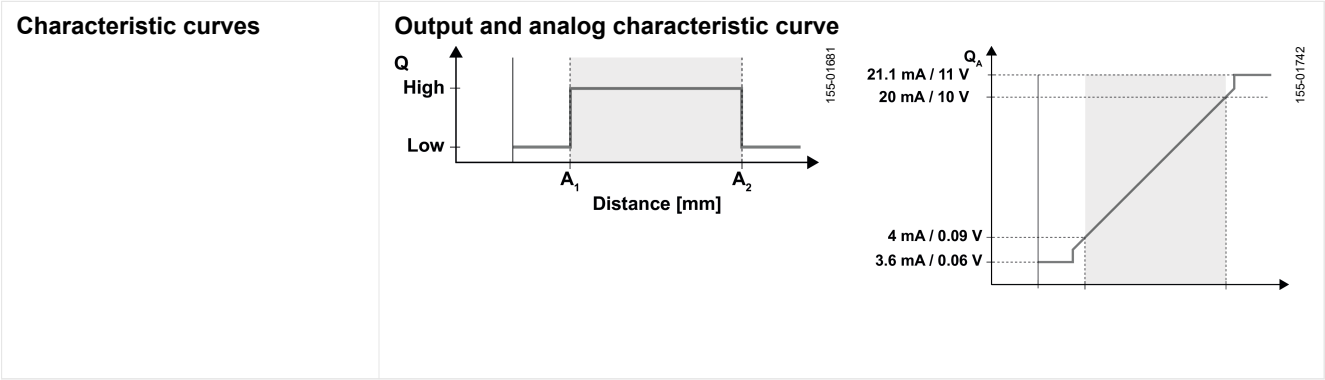


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Connections



154-00545



Product link

<https://www.sensopart.com/en/products/details/621-11026>