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

The information contained in this data sheet has been prepared with the utmost care. We reserve the right to make technical changes.

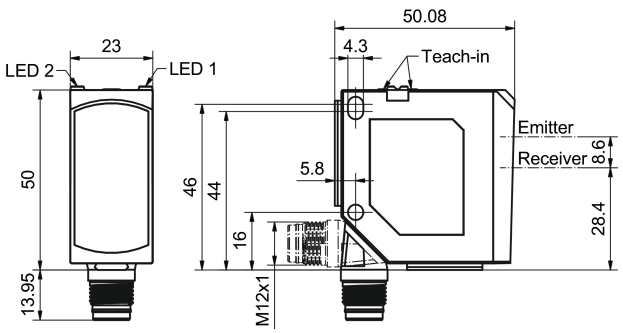
Electrical data	
Operating voltage UB *[V DC]*	18 ... 30
No-load current *[mA]*	≤ 60
Output current *[mA]*	≤ 100
Readiness delay *[ms]*	≤ 5,000
Reverse polarity protection	Yes
Short circuit protection	Yes
Response time Q *[µs]*	≤ 10,000
Analog output QA	4 ... 20 mA
Control input	Control input IN 1 and 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

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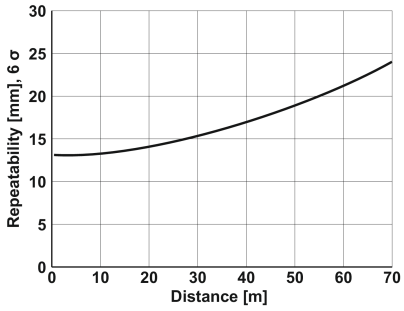
Technical drawings

Dimensional drawing



153-01104

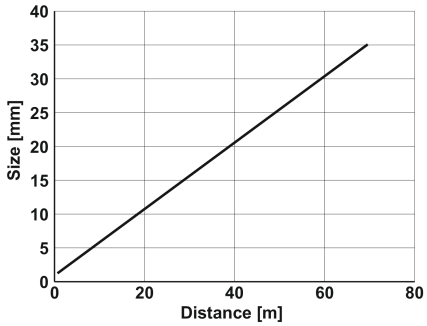
Repeatability (typ.)



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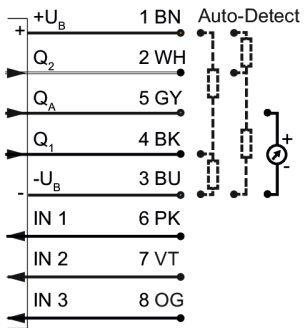
Constant ambient conditions, 6 σ stationary object, reflective foil RF 250/V (904-51579)

Light spot size



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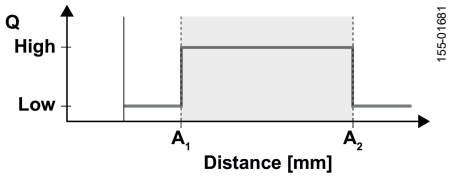
Connections

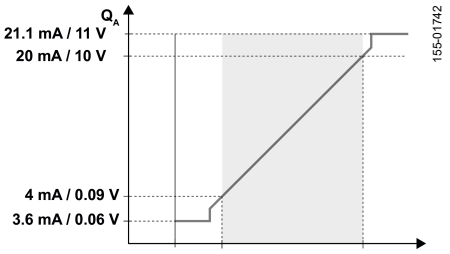


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Characteristic curves

Output and analog characteristic curve





Product link

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