FT 25-RLAP-1500-PNSUL-M4M



Ordering information

Designation for ordering	FT 25-RLAP-1500-PNSUL-M4M
Part number	**604-41015**
Order text	Distance sensor with time-of-flight measurement, 0.1... 1.5 m, laser, analogue 1...10 V, Auto-detect, N.O./N.C., metal plug M8 4-pin, IP 67 & IP 69, IO-Link
Components supplied	Operating manual, Sensor, Laser warning signs

Optical data	
Resolution *[mm]*	0.340
Explanation of resolution	QA, 12 bit
Linearity *[mm]*	15.00
Explanation of linearity	Specification ±; reference material, 5...90% remission; see graph for typical values
Repeatability *[mm]*	≤ 7.00
Explanation of repeatability	2...7 mm; white reference material, 90% remission; at 50 Hz/10 ms; homogeneous, stationary object; see graph for typical values
Light source	Laser
Laser class	1 (IEC 60825-1)
Light color	Red
Wavelength *[nm]*	658
Light spot size *[mm]*	See diagram
Switching frequency ≤ *[Hz]*	≤ 300
Explanation of switching frequency	At 800 mm; white reference material, 90% remission
Switching hysteresis *[mm]*	4.0
Explanation of switching hysteresis	4...7 mm; white reference material, 90% remission; at 5 Hz/100 ms
Working range *[mm]*	100 ... 1,500
Explanation working range	Reference material white, 90% remission
IO-link resolution *[mm]*	0.10

Functions	
Connection, BK	Switching output Q/IO-Link
Connection, WH	Analogue output QA
Display, LED yellow	Switching output indicator Q
Display, LED green	Operating voltage indicator
Setting options	Measurement range QA Switching output Q (switching window) Parallel shifting of the analogue characteristic curve QA to a new reference level via AutoCenter N.O. / N.C. and Auto-detect / PNP / NPN Switchover averaging Q / QA via teach-in button and IO-Link Wide range of setting options for service and process data via IO-Link
Default settings	Analogue output QA 1...10 V, 100...1500 mm Switching output Q: Switching window 100...1500 mm, N.O.
Measuring range adjustment	via teach-in button and IO-Link

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IO-Link	
Data storage	Yes
Communication mode	COM 2
Length of the process data *[Bit]*	32
Min. cycle time *[ms]*	4.0
SIO mode	is supported
IO link specification	1.1

Electrical data	
Operating voltage UB *[V DC]*	18 ... 30
Explanation of operating voltage UB	Max. 10% residual ripple, within UB, ~ 50 Hz / 100 Hz
No-load current *[mA]*	≤ 30
Output current *[mA]*	≤ 100
Readiness delay *[ms]*	≤ 300
Reverse polarity protection	Yes
Short circuit protection	Yes
Analog output QA	1 ... 10 V / max. 3 mA
Measured value output	Analog (voltage), IO Link
Protection class	2
Output function	N.O./N.C.
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	2
Warm-up time *[Min.]*	15
Temperature profile *[mm/K]*	0.80
Averaging times	5 Hz/100 ms, 10 Hz/50 ms, 50 Hz/10 ms, 100 Hz/5 ms, 200 Hz/2 ms, 300 Hz/1 ms,
Measured value refresh time	Response time QA + averaging rate
Explanation of thermal response	Reference material white, 90% remission

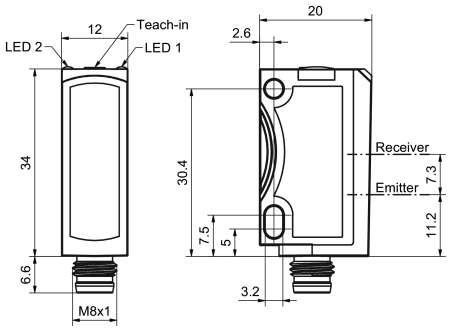
Mechanical data	
Height *[mm]*	34.0
Length *[mm]*	20.0
Width *[mm]*	12.0
Weight *[g]*	~ 10
Front panel material	PMMA
Housing material	ABS
Ambient temperature: operation *[°C]*	-30 ... 50
Ambient temperature: storage *[°C]*	-20 ... 80
Protection class	IP 67, IP 69
Explanation of protection class	with IP 67 / IP 69 plug connected
Vibration and shock resistance	EN IEC 60947-5-2
Connection name	Metal plug M8x1, 4-pin, IO-Link
- Number of pins	4
- Thread	M8x1

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Technical drawings

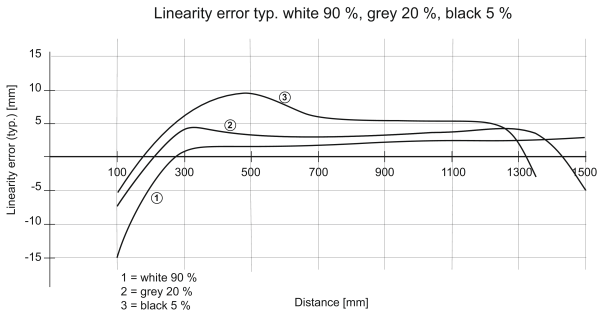
Dimensional drawing

Plug connection



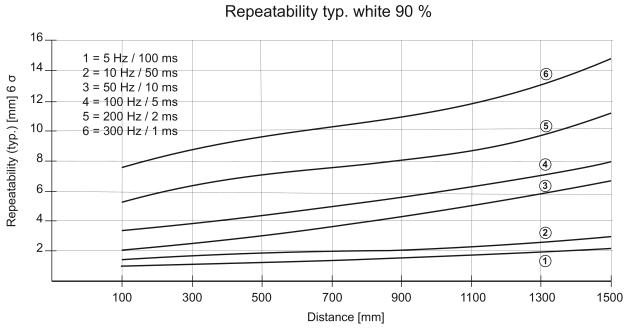
153-13683

Linearity (typ.)



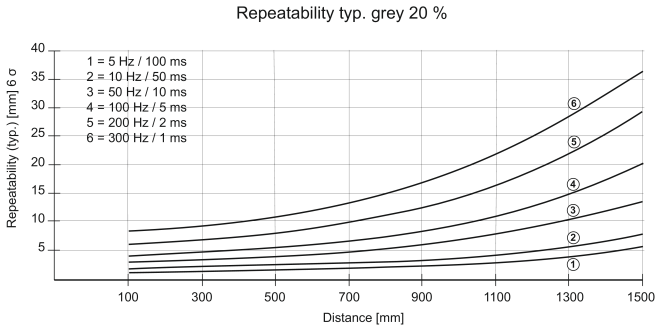
155-03788

Repeatability (typ.) White



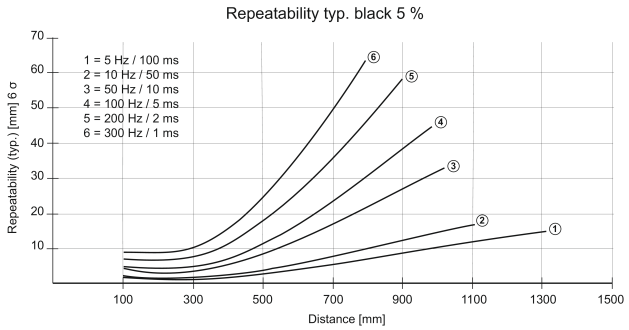
155-03791

Repeatability (typ.) Grey



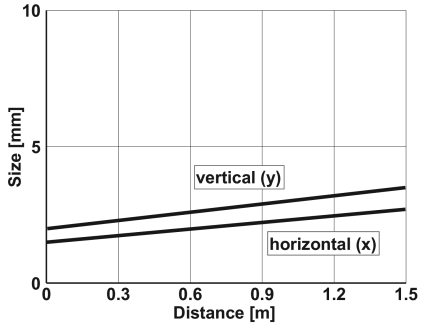
155-03790

Repeatability (typ.) Black



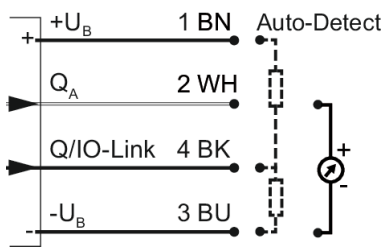
155-03789

Light spot size



155-03668

Connections



154-00575

Product link

https://www.sensopart.com/en/products/details/604-41015