

FT 25-RLAP-1500-PNSUL-KL4

Ordering information

Designation for ordering FT 25-RLAP-1500-PNSUL-KL4

Part number 604-41017

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., pig-tail 150 mm with plug M12 4-pin, IP 67 & IP 69, IO-Link

Components supplied Operating manual, Sensor, Laser warning signs



Optical data	
Resolution [mm]	0.350
Explanation of resolution	QA, 12 Bit
Linearity [mm]	15.00
Explanation of linearity	Specification $\pm$; 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 $\leq$ [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	White reference material, 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

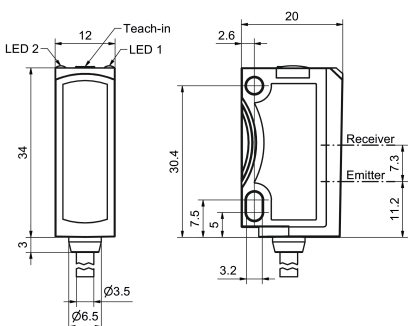
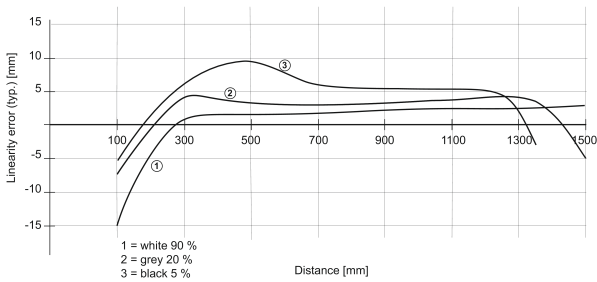
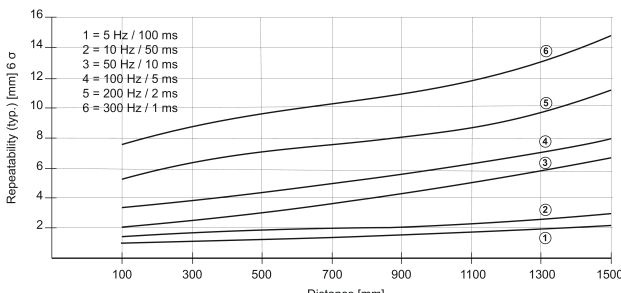
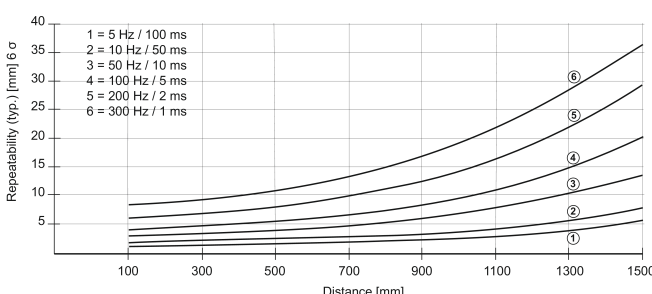
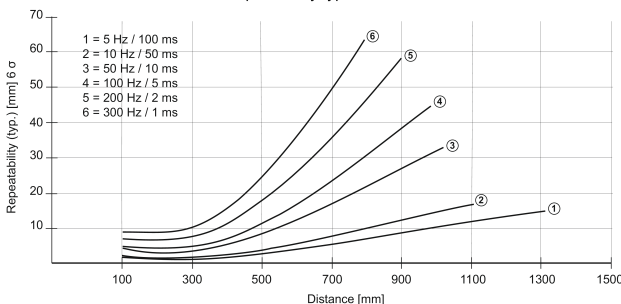
IO-Link	
Data storage	Yes
Communication mode	COM 2
Length of the process data [Bit]	32
Min. cycle time [ms]	4.0
SIO mode	is supported
IO link specification	1.1

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]	0.50
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

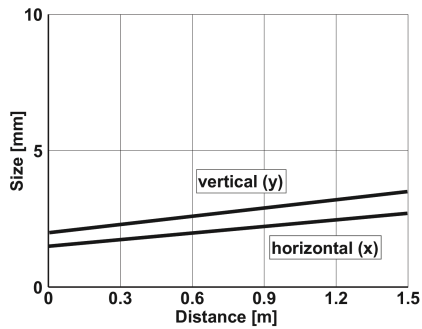
Mechanical data	
Height [mm]	34.0
Length [mm]	20.0
Width [mm]	12.0
Weight [g]	~ 20
Front panel material	PMMA
Housing material	ABS
Ambient temperature: operation [°C]	-20 ... 50
Ambient temperature: storage [°C]	-20 ... 80
Protection class	IP 67, IP 69
Explanation of protection class	with IP 67 / IP 69 plug connected
Vibration and shock resistance	EN IEC 60947-5-2
Connection name	Pigtail, 150 mm with plug, M12x1, 4-pin, IO-Link
- Number of pins	4
- Thread	M12x1

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Technical drawings

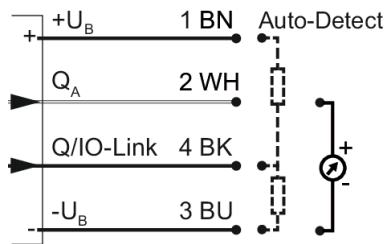
Dimensional drawing	Cable connection 	155-13884
Linearity (typ.)	Linearity error typ. white 90 %, grey 20 %, black 5 % 	155-03788
Repeatability (typ.) White	Repeatability typ. white 90 % 	155-03791
Repeatability (typ.) Grey	Repeatability typ. grey 20 % 	155-03790
Repeatability (typ.) Black	Repeatability typ. black 5 % 	155-03789

Light spot size



155-03668

Connections



154-00575

Product link

<https://www.sensopart.com/en/products/details/604-41017>