FT 25-RA-170-PNSUL-M4M



Ordering information

Designation for ordering	FT 25-RA-170-PNSUL-M4M
Part number	**604-41009**
Order text	Working range 30...200 mm, red light, analogue 1...10 V, teach-in, Auto-detect, N.O./N.C, metal connector M8x1, 4-pin, IO-Link
Components supplied	Operating manual, Sensor

Optical data	
Setting range *[mm]*	30 ... 200
Explanation of the setting range	Reference material 5...90% remission
Resolution *[mm]*	0.680
Explanation of resolution	12 Bit
Linearity *[mm]*	2.00
Explanation of linearity	± 2 mm, reference material gray, 20% remission
Repeatability *[mm]*	≤ 1.00
Explanation of repeatability	Reference material gray, 20% remission, under constant ambient conditions
Light source	LED
Light color	Red
Wavelength *[nm]*	632
Light spot size *[mm]*	See diagram
Switching frequency ≤ *[Hz]*	≤ 1,000
Explanation of switching frequency	ti/tp 1:1

Functions	
Display, LED yellow	Switching output indicator
Display, LED green	Operating voltage indicator
Setting options	Analogue measurement range QA Invertible analogue characteristic curve Switching output Q (switching window) N.O. / N.C. via teach-in button Wide range of setting options for service and process data via IO-Link
Default settings	Analogue output QA (1...10 V): 30...200 mm Switching output Q, N.O. detection range: 30...200 mm
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]*	24
Min. cycle time *[ms]*	2.7
SIO mode	is supported
IO-Link specification	1.1

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Electrical data

Operating voltage UB *[V DC]*	13 ... 30
No-load current *[mA]*	≤ 30
Output current *[mA]*	≤ 100
Readiness delay *[ms]*	≤ 300
Reverse polarity protection	Yes
Short circuit protection	Yes
Response time Q *[µs]*	≤ 500
Response time QA *[µs]*	≤ 3400.0
Analog output QA	1 ... 10 V / max. 3 mA
Analog output QA voltage *[V]*	1 ... 10
Measured value output	Analog (voltage), IO Link
Protection class	2
Max. capacitive load *[nF]*	10
Output function	N.O./N.C.
Switching output Q	1x 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	1
Warm-up time *[Min.]*	10
Temperature profile *[mm/K]*	0.20

Mechanical data

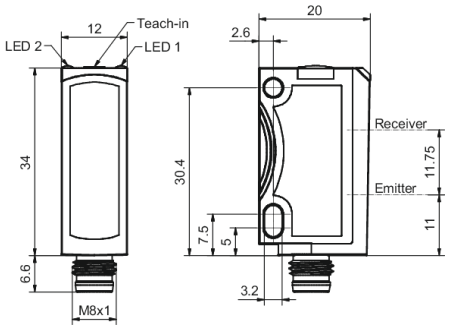
Height *[mm]*	34.0
Length *[mm]*	20.0
Width *[mm]*	12.0
Weight *[g]*	~ 10
Front panel material	PMMA
Housing material	ABS
Ambient temperature: operation *[°C]*	-20 ... 60
Explanation of operation at ambient air temperature	UL: -20…+50 °C
Ambient temperature: storage *[°C]*	-20 ... 80
Protection class	IP 67, IP 69
Explanation of protection class	with IP 67 / IP 69 plug connected
Vibration and shock resistance	EN 60947-5-2
Connection name	Metal plug M8x1, 4-pin
- Number of pins	4
- Thread	M8x1
Housing type	Cuboidal

Technical drawings

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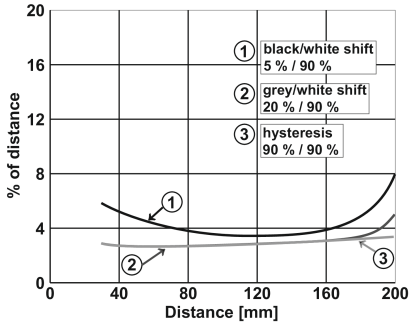
Dimensional drawing

Plug connection



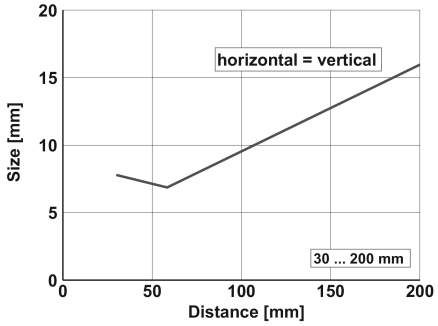
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Scanning properties



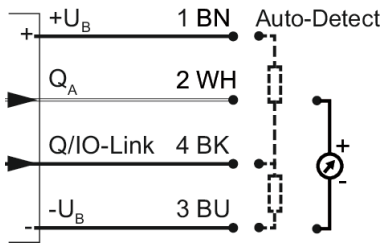
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Light spot size



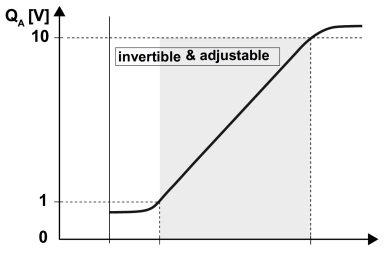
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Connections



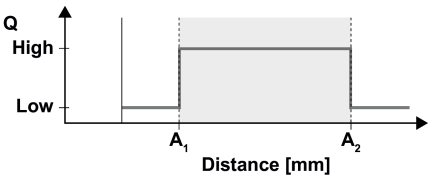
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Characteristic curves



155-01661

Output and analog characteristic curve



155-01681

Product link

https://www.sensopart.com/en/products/details/604-41009