

FT 10-RH

Photoelectric proximity sensor with background suppression



PRODUCT HIGHLIGHTS

- Sub-miniature sensor with precise adjustable background suppression
- Precise and reliable switching behaviour even with varying object surfaces and colours
- Reliable operation even with highly reflective machine parts in the background, thanks to SensoPart ASIC technology
- Static and dynamic teach-in via electronic teach-in button or control line

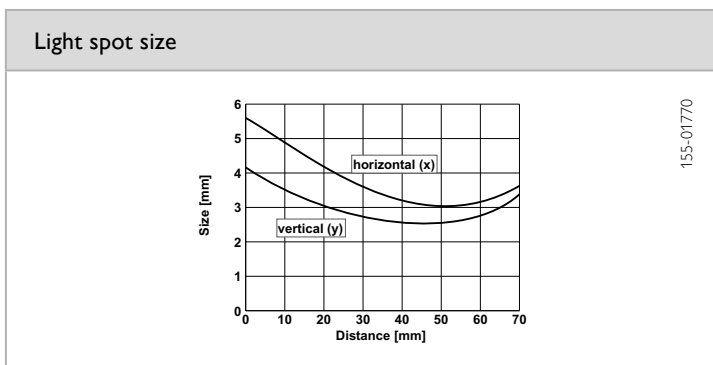
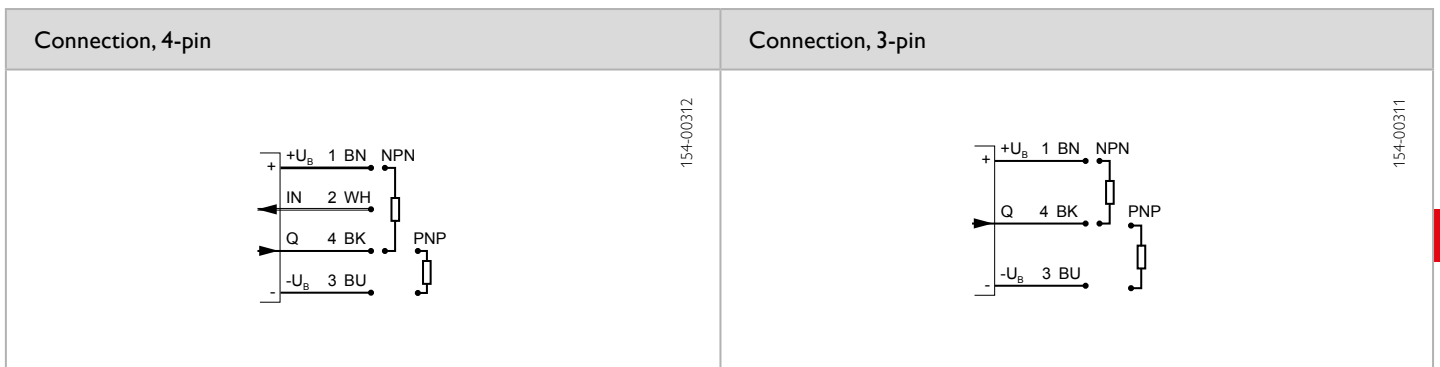
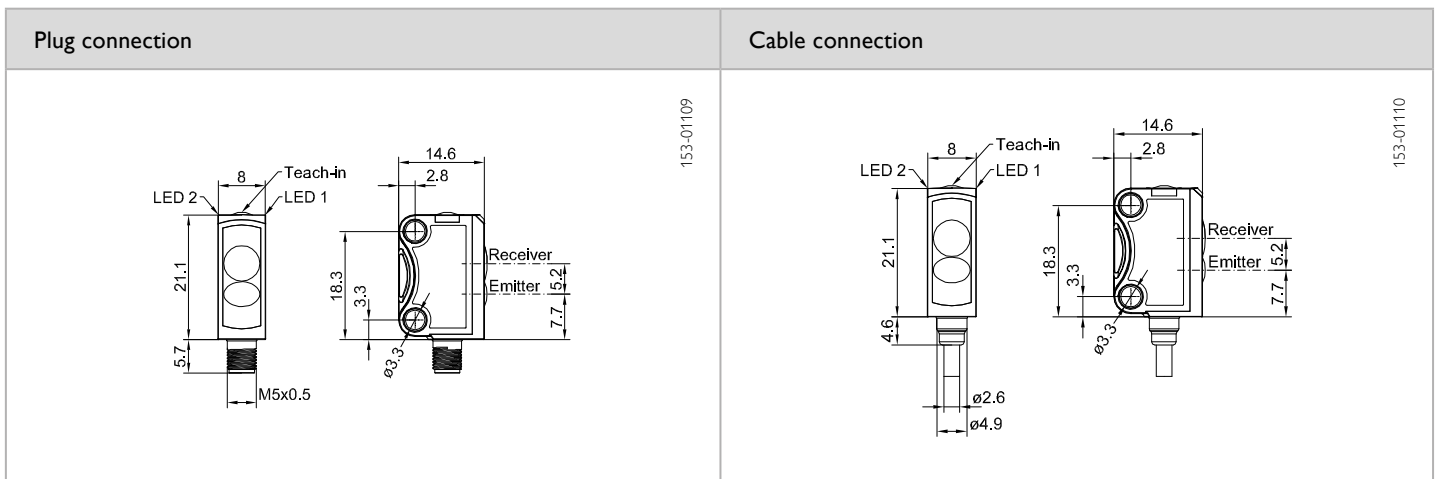
Optical data		Functions	
Scanning distance	5 ... 70 mm ¹	Indicator LED, green	Operating voltage indicator
Adjustment range	10 ... 70 mm ¹	Indicator LED, yellow	Switching output indicator
Used light	LED, red, 650 nm	Scanning distance adjustment	Via Teach-in button and control input ⁵
Light spot size	See diagram	Teach-in modes	Mode 1: during running process Mode 2: during standing process
Repeatability	0,45 mm ^{2,3}	Adjustment possibilities	N.O./N.C. via Teach-in button and control input ⁵ Button lock via control input ⁵
Hysteresis	≤ 2 mm ²	Default settings	Max. range and N.O.
Grey/white shift (18%/90%)	≤ 3 mm ²		
Black/white shift (6%/90%)	≤ 4 mm ²		
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ⁴	Dimensions	21,1 x 14,6 x 8 mm
No-load current, I ₀	≤ 20 mA	Enclosure rating	IP 67 ⁶
Output current, I _e	≤ 50 mA	Material, housing	PUR
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Material, front screen	PMMA
Protection class	2	Type of connection	See Selection Table
Power On Delay	< 300 ms	Ambient temperature: operation	-20 ... +60 °C ⁷
Switching output, Q	PNP/NPN	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (plug device)	approx. 3 g
Switching frequency, f (ti/tp 1:1)	≤ 1000 Hz	Weight (cable device)	approx. 22 g
Response time	500 µs	Weight (pigtail)	approx. 10 g
Control input, IN ³	+U _B = teach-in -U _B = button locked Open = normal operation		

¹ Reference material white, 90 % reflectivity ² At maximum scanning distance ³ In constant environmental conditions ⁴ Max. 10 % ripple within U_B, ~ 50 Hz / 100 Hz

⁵ Only 4-pin design ⁶ With connected IP 67 plug ⁷ UL: -20 ... +30 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
5 ... 70 mm ¹	PNP	Plug, M5x0.5, 4-pin	FT 10-RH-PS-E4	600-11000
5 ... 70 mm ¹	NPN	Plug, M5x0.5, 4-pin	FT 10-RH-NS-E4	600-11004
5 ... 70 mm ¹	PNP	Cable, 2 m, 4-wire	FT 10-RH-PS-K4	600-11001
5 ... 70 mm ¹	NPN	Cable, 2 m, 4-wire	FT 10-RH-NS-K4	600-11005
5 ... 70 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-RH-PS-KM4	600-11002
5 ... 70 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-RH-NS-KM4	600-11006
5 ... 70 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-RH-PS-KM3	600-11003
5 ... 70 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-RH-NS-KM3	600-11007

Including dovetail clamp mounting MBD F 10 for all types



Reference material	Detection range
White (90 %)	5 ... 70 mm
Grey (18 %)	8 ... 70 mm
Black (6 %)	8 ... 70 mm

Accessories	
Connection cables	From Page A-38
Brackets	From Page A-4