

FT 10-BF

BlueLight-Photoelectric diffuse sensor with background suppression, fixed focus



PRODUCT HIGHLIGHTS

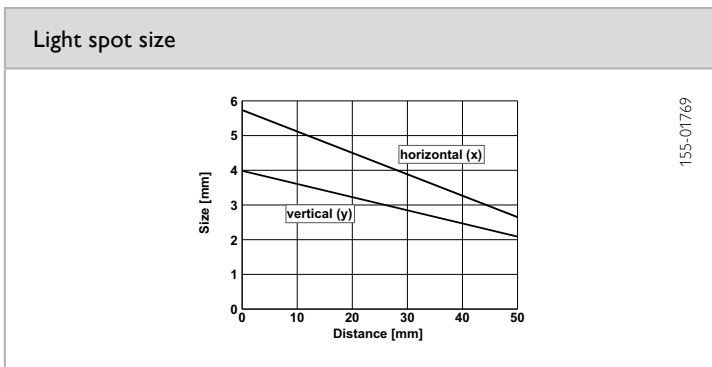
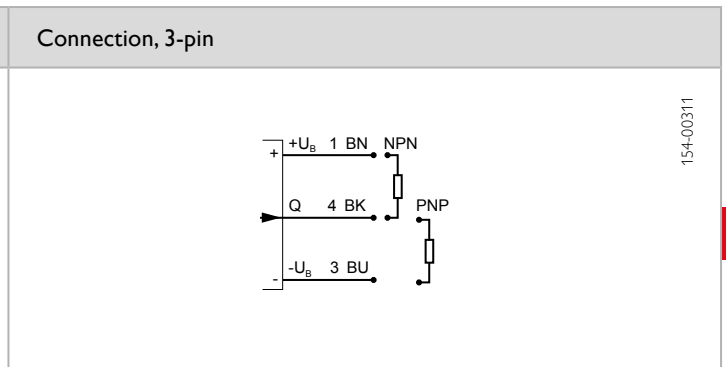
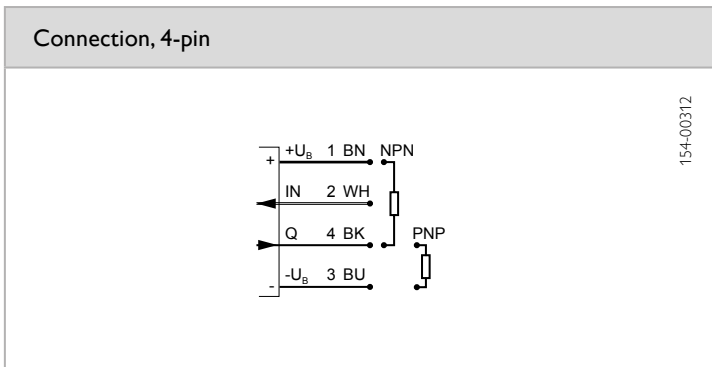
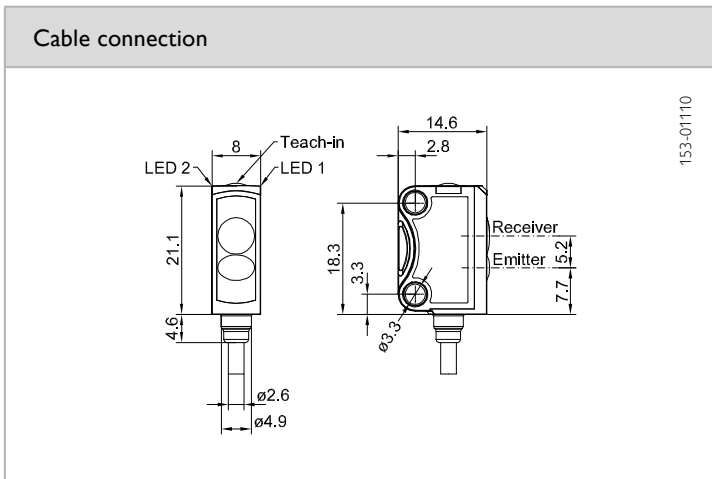
- Sub-miniature sensor with BlueLight technology and precise fixed background suppression
- Reliable switching behaviour with strongly light-absorbing and transparent objects, e.g. solar wafers in every process phase
- Reliable operation without reflector - even with critical surfaces
- Tamper-proof sensor design - no misalignment possible
- Simple mounting and adjustment through innovative dovetail clamp mounting

Optical data		Functions	
Scanning distance	2 ... 30 mm ¹ / 2 ... 50 mm ¹	Indicator LED, green	Operating voltage indicator
Optimum scanning distance	15 ... 20 mm	Indicator LED, yellow	Switching output indicator
Used light	LED, blue, 450 nm	Adjustment possibilities	N.O. / N.C. via control input ³
LED risk group (DIN 62471)	2		
Light spot size	See diagram		
Ambient light	EN 60947-5-2		
Electrical data		Mechanical data	
Operating voltage +U _B	10 ... 30V DC ²	Dimensions	21,1 x 14,6 x 8 mm
No-load supply current I ₀	≤ 20 mA	Enclosure rating	IP 67 ⁴
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 ... +50 °C ⁵
Switching output, Q	PNP/NPN (see selection table)	Ambient temperature: storage	-20 ... +80 °C
Output function	N.O./N.C.	Weight (cable device)	Approx. 22 g
Switching frequency, f (ti/tp 1:1)	1000 Hz	Weight (pigtail)	Approx. 10 g
Response time	500 μs		
Control input, IN ³	+U _B = N.C. -U _B / Open = N.O.		

¹ Reference material white, 90 % reflectivity ² Max. residual ripple 10 %, within U_B, approx. 50 Hz/100 Hz ³ Only 4-pin design ⁴With connected IP 67 plug ⁵ UL: -20 ... +30 °C

Scanning distance	Switching output	Type of connection	Part number	Article number
2 ... 30 mm ¹	PNP	Cable, 2 m, 4-wire	FT 10-BF2-PS-K4	600-11026
2 ... 30 mm ¹	NPN	Cable, 2 m, 4-wire	FT 10-BF2-NS-K4	600-11029
2 ... 30 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-BF2-PS-KM4	600-11027
2 ... 30 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-BF2-NS-KM4	600-11030
2 ... 30 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-BF2-PS-KM3	600-11028
2 ... 30 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-BF2-NS-KM3	600-11031
2 ... 50 mm ¹	PNP	Cable, 2 m, 4-wire	FT 10-BF3-PS-K4	600-11036
2 ... 50 mm ¹	NPN	Cable, 2 m, 4-wire	FT 10-BF3-NS-K4	600-11039
2 ... 50 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-BF3-PS-KM4	600-11037
2 ... 50 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 4-pin	FT 10-BF3-NS-KM4	600-11040
2 ... 50 mm ¹	PNP	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-BF3-PS-KM3	600-11038
2 ... 50 mm ¹	NPN	Pigtail, 200 mm with M8 plug, 3-pin	FT 10-BF3-NS-KM3	600-11041

Including dovetail clamp mounting MBD F 10 for all types



Accessories

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