

FT 90 ILA

Distance sensor



PRODUCT HIGHLIGHTS

- Long scanning distance (up to 10 m on white objects)
- High repeatability
- High measurement rates
- Open interfaces ensure maximum compatibility (SSI-compatible, RS422)
- Profibus and DeviceNet via gateway
- Switchable red-light pilot laser
- 2 switching outputs

Optical data		Functions	
Operating range	0.5 ... 10 m ¹	Indicator LED, green	Operating voltage indicator
Measurement range	9.5 m	Indicator LED, yellow	Switching output indicator
Type of light	Infrared, 905 nm (measurement laser) Laser, red, 650 nm (pilot laser)	Scanning distance adjustment	Via Teach-in button and control input
Laser Class (IEC 60825-1)	1 (measurement laser) 1 (pilot laser)		
Resolution	0.1 mm or 0.125 mm		
Linearity	± 8 mm		
Repeatability	± 4 mm		
Electrical data		Mechanical data	
Operating voltage, +U _B	18 ... 30V DC ²	Dimensions	93 × 93 × 42 mm
Output current, I _e	≤ 100 mA	Enclosure rating	IP 67 ³
Plausibility output, Q _p	50 mA	Material, housing	ABS, impact-resistant
Service output, Q _s	50 mA	Material, front screen	PMMA
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection, Q	Type of connection	See selection table
Protection Class	2	Ambient temperature: operation	-10 ... +50 °C (-20 ... +50 °C in continuous operation)
Power On Delay	≤ 12 ms	Ambient temperature: storage	-30 ... +75 °C
Switching output, Q ₁ / Q ₂	PNP	Weight	230 g
Output function	N.O.	Vibration and impact resistance	EN 60947-5-2
Switching frequency f (ti/tp 1:1) Q	≤ 300 Hz		
Analogue output	4 ... 20 mA		
Response time Q _A	10 ms		
Temperature drift	< ± 5 mm absolute		
Serial interface	RS422 or SSI-compatible (GREY / BINARY) adjustable		
Bus interface	Profibus or DeviceNet, each via gateway (accessory)		
Cable length / m	< 25 / < 50 / < 100 / < 200 / < 400		
Cycle rate	< 500 kHz / < 400 kHz / < 300 kHz / < 200 kHz / < 100 kHz		

¹ Reference material: Kodak white, 90 % ² 10 % ripple, within U_B ³ With connected IP 67 plug

Type of connection	Part number	Article number
Plug, M16x1, 12-pin	FT 90 ILA-S2-Q12	591-91000

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