SMARTRANGE

F 92
Distance sensors

High-performance and cost-efficient.

You are looking for a precise distance measuring device at a reasonable price? You need a very good ease of use and a superior optical performance? The SmartRange F 92 is the solution for

- measuring and positioning tasks in automation, as needed e.g. for coils and different lengths of material

- the type classification of sub-assemblies, e.g. in the automotive industry and the automotive supply industry

- reliable and precise robot control

- the packaging industry

- the steel industry

- the timber industry

Positioning of robots

Measurement of coils

Automobile production

Storage techniques and materials handling

Features

- *Large scanning distances and working ranges (proximity version up to 6 m on white objects, 30 m on reflector)*

- *High repeatability*

- *High measuring rates*

- *Very good cost-performance ratio*

- *Optional red pilot laser*

- *2 PNP signal outputs*

- *1 analogue output 4 ... 20 mA*

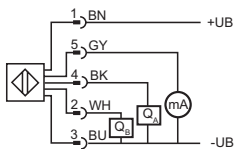- *All outputs in the measuring range freely adjustable*

- *Standard M12 plug*

Technical data	FT 92 ILA	FR 92 ILA
Optical data		
Measuring range	0.2 ... 6 m (grey 18 %)	0.2 ... 30 m (reflector RL250)
Measuring laser	IR 900 nm, laser protection class 1	IR 900 nm, laser protection class 1
Diameter of light spot	5 x 10 mm @ 3 m	15 x 20 mm @ 10 m
Repeatability	± 10 mm / ± 15 mm (depending on mode of operation)	± 5 mm / ± 10 mm (depending on mode of operation)
Linearity	± 40 mm	± 60 mm
Pilot laser	Red 650 nm, laser protection class 2	Red 650 nm, laser protection class 2
Switching points	Freely adjustable(Teach-in)	Freely adjustable(Teach-in)
Switching hysteresis	30 mm (fixed)	30 mm (fixed)
Electrical data		
Operating voltage	18 ... 30 V DC integrated polarity reversal protection	18 ... 30 V DC integrated polarity reversal protection
Residual ripple	10 % within Ub	10 % within Ub
Current consumption	< 3 W at 25° C	< 3 W at 25° C
Outputs Q1/Q2	PNP, 100 mA	PNP, 100 mA
Protection class	▢	▢
Short-circuit protection/polarity reversal protection	Yes (all outputs)/Yes	Yes (all outputs)/Yes
Analogue output	4 ... 20 mA	4 ... 20 mA
Mechanical data		
Casing material	ABS shock-resistant	ABS shock-resistant
Protection standard	IP67	IP67
Ambient temperature range	-10 ... +50 °C	-10 ... +50 °C
Plug connection	Plug M12 5-pin	Plug M12 5-pin
Accessories		
Cable	5-pin standard M12 cable , e.g. L5-2m-W-PUR (Art. 902-51613)	5-pin standard M12 cable , e.g. L5-2m-W-PUR (Art. 902-51613)
Mounting component		e.g. MSP F90 (Art. 599-91002)
Reflector		e.g. RL 250 (Art. 904-51578)

Wiring diagram

Dimensional drawing