

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

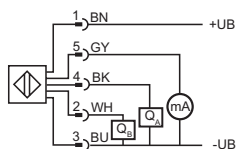


Features

- 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 I	IR 900 nm, laser protection class I
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 ... 30V DC integrated polarity reversal protection	18 ... 30V 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

