



TFM Series

Time of flight miniaturized Sensor



Time of flight
miniaturized Sensor



features

- Completely filled with resin
- 2 Digital Outputs (Lon)
- Switching Frequency 10 Hz and 80 Hz
- Infrared Laser emission (class 1)
- Wide angle emission
- Output selectable : PNP or Pushpull
- Resolution 1 or 3 mm
- IP67 protection degree and complete protection against electrical damages

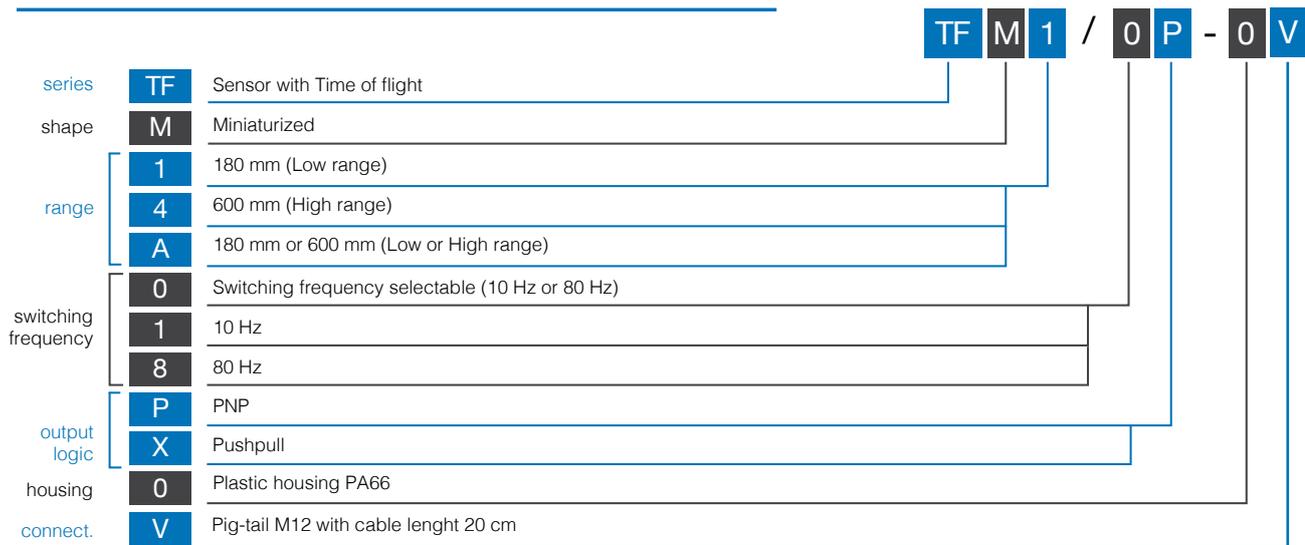
web contents



- Application notes
- Photos
- Catalogue / Manuals



code description



available models

distance	output type	switching frequency	code
0...180 mm (default) 0...600 mm	pushpull	10 (default) / 80 Hz	TFMA/0X-0V
	PNP		TFMA/0P-0V
0...180 mm	pushpull	10 Hz	TFM1/1X-0V
			TFM4/1X-0V
0...180 mm	PNP	80 Hz	TFM1/8X-0V
			TFM1/1P-0V
0...600 mm	PNP	10 Hz	TFM4/1P-0V
			TFM1/8P-0V
0...180 mm		80 Hz	

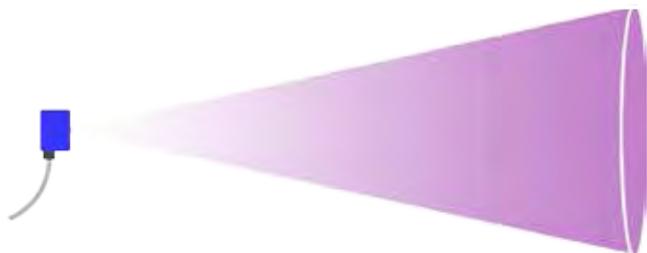


technical specifications

Time of flight
miniaturized Sensor

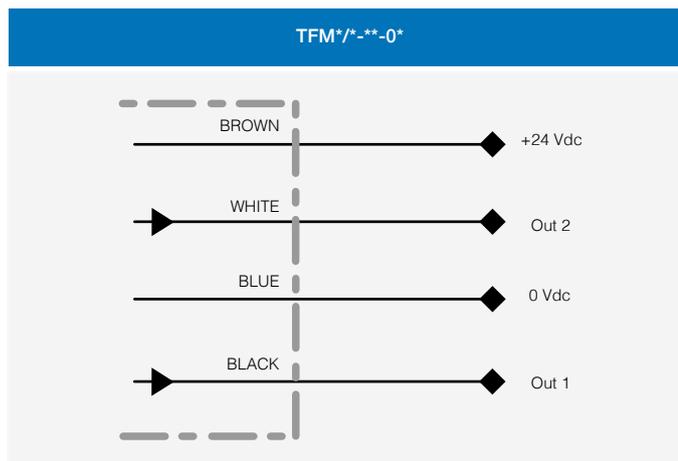
	TFM1/1*-0V	TFM4/1*-0V	TFM1/4*-0V
detection range	0...180 mm (white 90% - gray 18% - black 6%)	0...600 mm (white 90%) 0...350 mm (gray 18%) 0...300 mm (black 6%)	0...180 mm (white 90%) 0...140 mm (gray 18%) 0...110 mm (black 6%)
resolution	1 mm	3 mm	1 mm
hysteresis	± 4 mm	± 6 mm	± 12 mm
emission	LASER infrared 850 nm (LASER class1)		
spot dimension	divergent (25°) wide angle		
operating voltage	24 Vdc ± 20%		
ripple	< 10%		
no-load current	< 40 mA		
output current	50 mA		
leakage current	≤ 10 µA (Vdc max.)		
output voltage drop	2.0 V max. (II = 50 mA)		
output type	2 outputs selectable: PNP / Pushpull		
switching frequency	≤ 10 Hz		≤ 80 Hz
supply electrical protections	polarity reversal, transient		
output electrical protections	short circuit (auto reset), over voltage pulses		
temperature range	-10°...+50° C		
temperature storage	-30°...+90° C		
umidity	< 80%		
interference to external light	TBD		
standard conformity	EN60947-5-2		
housing material	plastic (PA66) + ABS		
optic material	glass		
LED indicators	Green : RUN (sensor working, target inside the detection distance) Orange 1 : OUTPUT 1 Red: WARNING : target out of operative range Yellow 2 : OUTPUT 2		
protection degree	IP67		
weight	26 g (pig-tail version)		

spot diameter

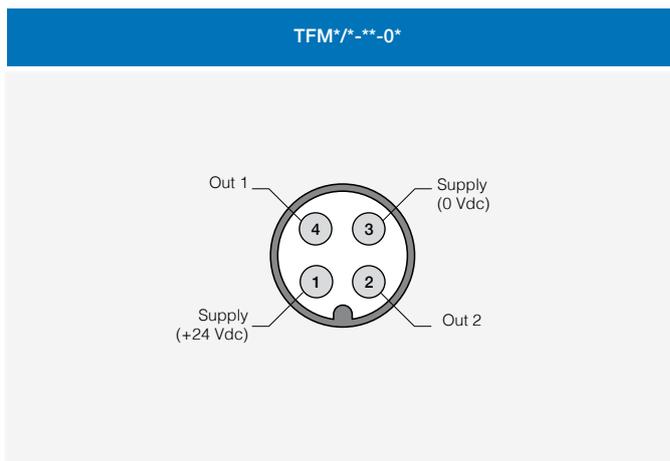


distance (mm)	spot dimension (mm)
50	22
100	44
200	88
300	133
400	177
500	222
600	240

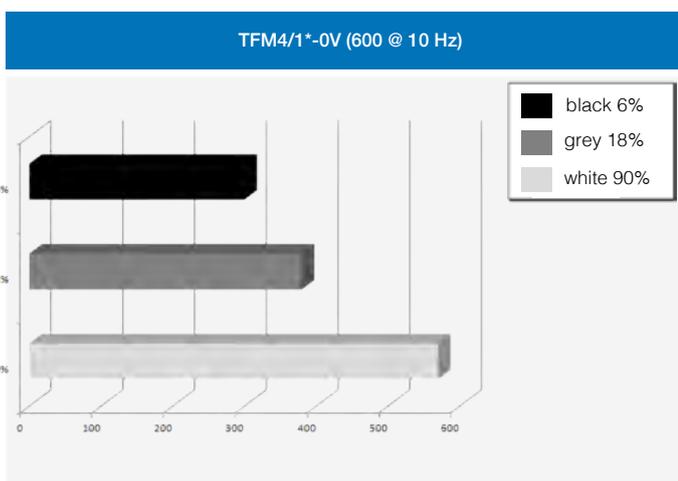
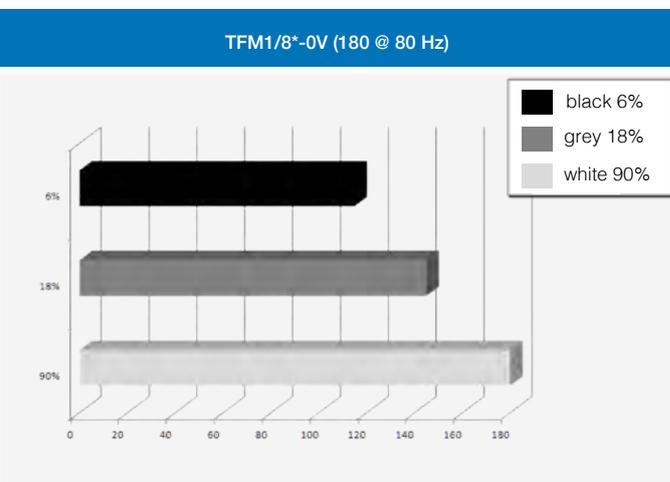
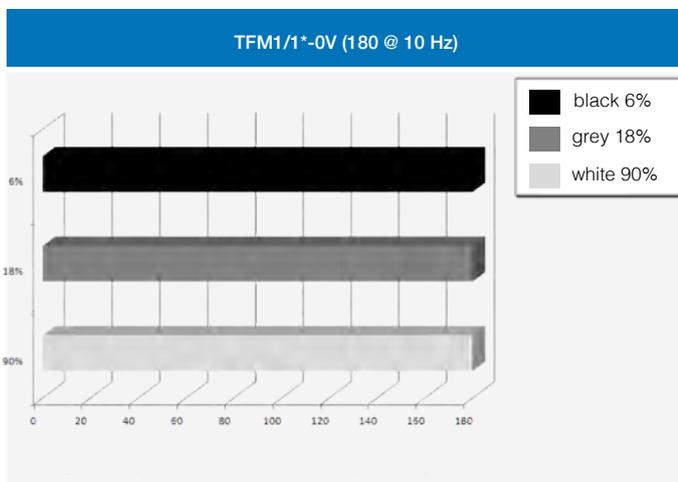
wiring diagrams



plug



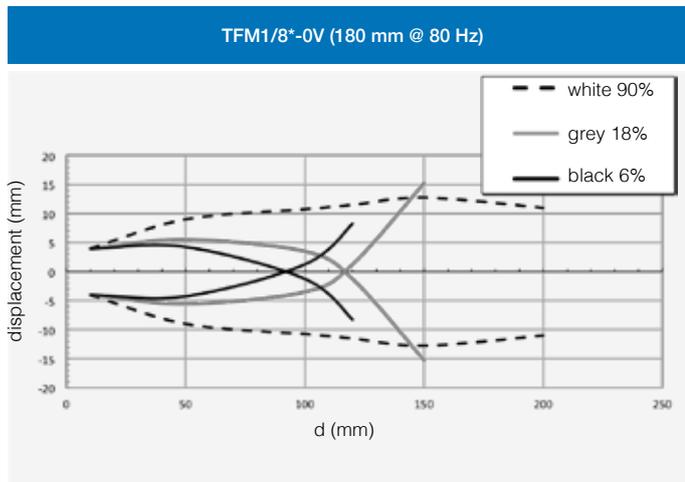
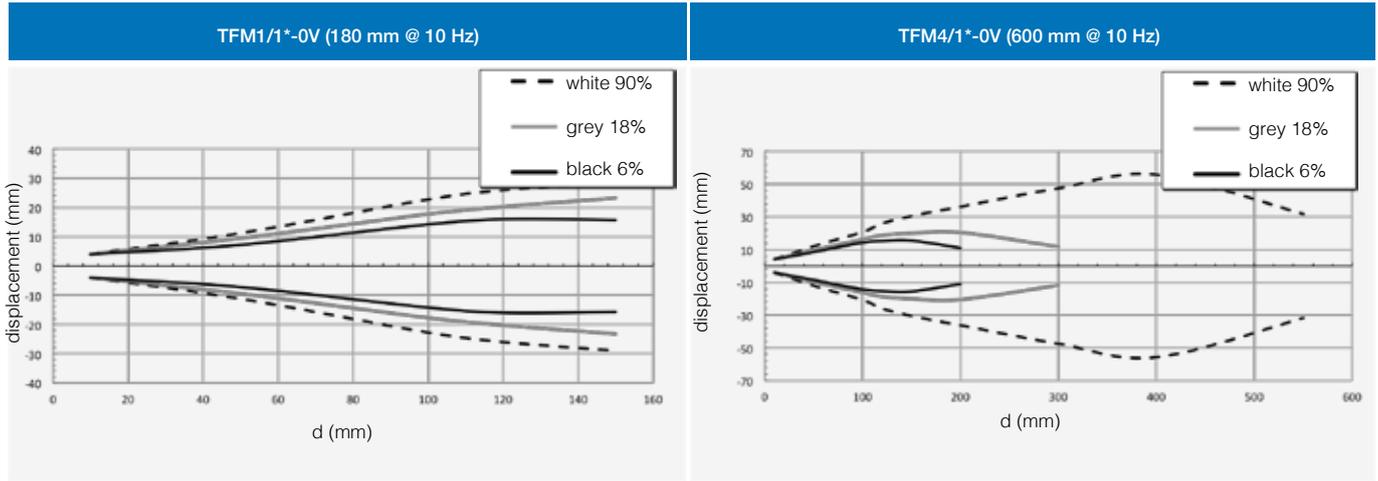
response diagrams





response diagrams

Time of flight
miniaturized Sensor



dimensions (mm)

