

Description

- Time-of-Flight measurement sensor
- Max. range 15 m
- Range on A4 white paper 6 m
- Compact rectangular housing (50x50 mm)
- 5 m cable connection
- IRED based for robustness and easy alignment
- Two transistor outputs (NPN or PNP) for 'end stop alarm' or 'inside-outside' alarm
- Teach in push button configuration of analogue and digital outputs
- Response time / sensitivity rotary selector
- Rotary selector for current 4-20 mA or voltage 0-10 V analogue output
- Power, signal level and 2 output indicators



The SPTF 3000 series is a high performance Time-of-Flight measurement sensor line housed in a compact rectangular housing, with a 5 m cable connection. The sensors are available with or without analogue output, and with either two NPN or two PNP transistor outputs.

The unit is calibrated using two teach-in push buttons and two rotary selectors, located on the top control panel. The teach-in function sets the interval of the range measurement: distance point that corresponds to 0V/4mA and distance point that corresponds to 10V/20mA. The teach-in is also used to set the distance points at which each of the digital output switches.

The two digital outputs can be used to set a 'high' (near distance point) and a 'low' alarm (far distance point). The outputs can also be configured to indicate whether an object is inside or outside a set range interval. The control input enables the teach-in calibration to be set remotely.

The sensitivity and response time of the sensor is selected via a 3-position rotary mode selector. The current output, 4-20 mA, or voltage output, 0-10 V, is selectable by a rotary selector. The range is 6 m against an A4 white paper target and up to max. 15m against 1 m² or larger, white target.

Technical Data

		SPTF 3000
Supply voltage		15-30 V dc
Voltage ripple		Max. 15 %
Output	Digital	200 mA / 30 V
	Analogue	Voltage: $Z_{load} \geq 1k\Omega$ Current: $Z_{load} \leq 600\Omega$
Reverse polarity protected		Yes
Short circuit protected		Yes
Current consumption		< 60 mA
Max. response time / range	M1	10 ms / 2 m
	M2	50 ms / 4 m
	M3	500 ms / 6 m
Power on indicator		Green LED
Output indicators		Yellow LED
Signal status indicator		Red LED
Light source		Infrared (880 nm)
Opening angle		+/- 1,5°
Emission angle		+/- 1,5°
Housing material	Sensor housing	Polycarbonate / ABS
	Front lens	Polycarbonate
Cable, PVC Ø 4,9 mm		5 / 6 x 0,20 mm ²

Environmental Data

Vibration	10-55 Hz, 0,5 mm
Shock	30 g
Light immunity @ 15° incidence	20 000 lux
Temperature, operation	-20 to +55 °C
Temperature, storage	-40 to +80 °C
Sealing class	IP 67
Approvals	CE

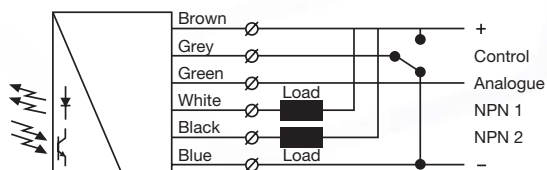
Available Types

	Type	Power Supply	Digital Output	Connection	5 m cable	Range
				Analogue Output	Order Reference	
Time-of-Flight	3015	15-30 V dc	2 x NPN	4-20 mA / 0-10 V	SPTF 3015 5	6 m
	3115		2 x NPN	None	SPTF 3115 5	
	3215		2 x PNP	4-20 mA / 0-10 V	SPTF 3215 5	
	3315		2 x PNP	None	SPTF 3315 5	

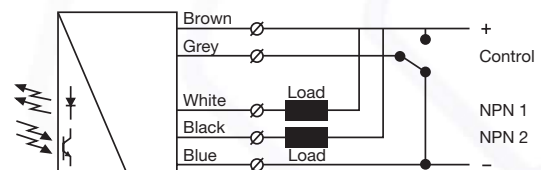
Connections

	Cable
Supply +	Brown
Supply -	Blue
Analogue output (4-20 mA / 0-10 V)	Green
Control input	Grey
Digital output 1 (NPN, PNP)	White
Digital output 2 (NPN, PNP)	Black

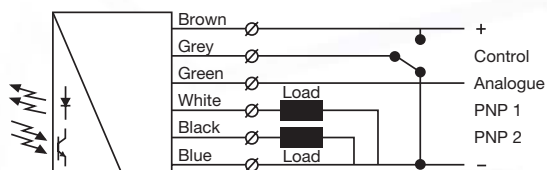
Wiring Diagrams



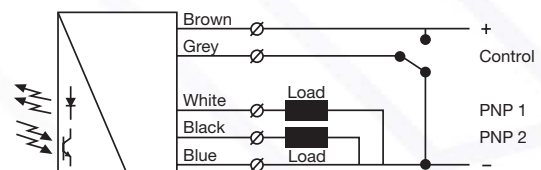
SPTF 3015



SPTF 3115

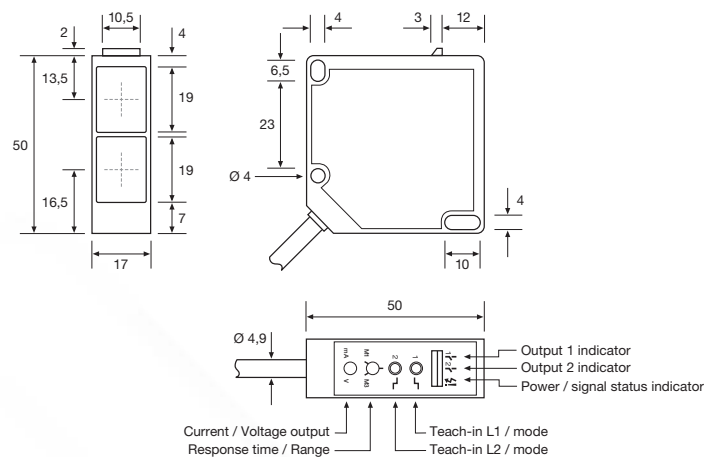


SPTF 3215

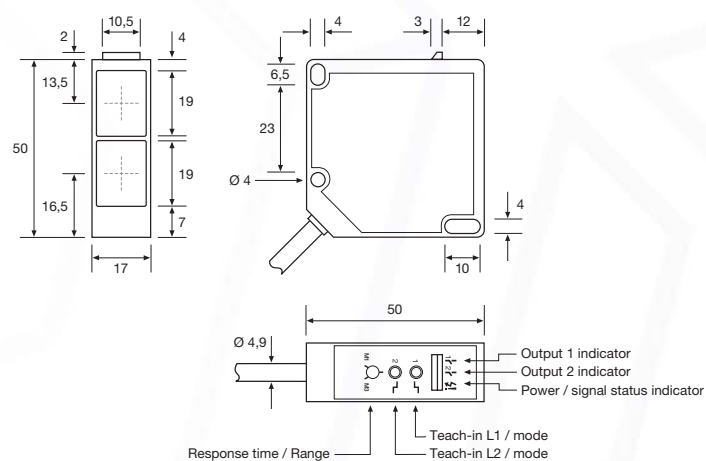


SPTF 3315

Dimensions and Descriptions



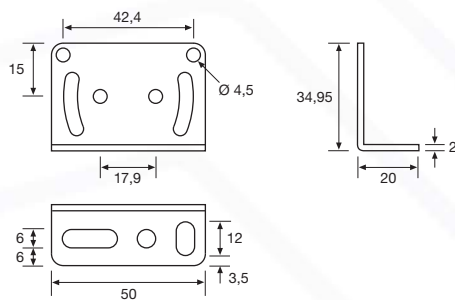
SPTF 3015 / 3215 5



SPTF 3115 / 3315 5

(Units in mm)

Mounting Bracket



TR SP35-50 L
Stainless Steel AISI 304
(Included with each unit)

(Units in mm)