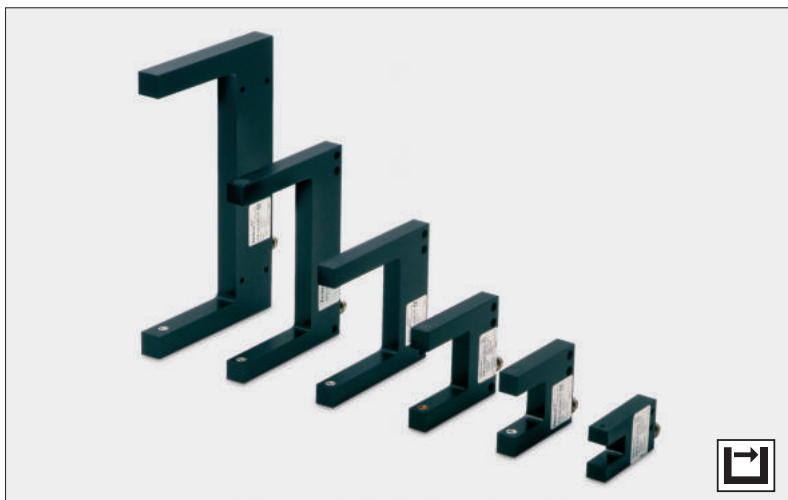


OPTICAL FORK SENSOR SERIES

OFS

Description

- 10 mm to 220 mm fork width
- Aluminium housing
- Plug connection
- Infrared or visible red light source
- High power version available
- Sensitivity adjustment via potentiometer
- Switch selectable light or dark function
- Output indicator
- High tolerance to hostile environments
- 10-35 V dc supply voltage
- 3 wire, NPN or PNP output
- High switching frequency



The OFS series consists of self-contained optical fork sensors that are housed in a durable, U-shaped aluminium housing which operates in thru-beam mode. Available with infrared (OFS), visible red (OFSR) or high power infrared (OFSH) light source. The series consists of a wide variety of fork opening widths, ranging from 10 mm to 220 mm.

The complete series is available as a 3 wire, NPN or PNP transistor

output with a 10-35 V dc supply voltage. All models offer sensitivity adjustment via integral potentiometer and are available with switch selectable light or dark function. The complete series offers a high switching frequency of up to 5000 Hz.

The series is protected against reverse polarity of power supplies and output signals. The output is protected against short circuit and inductive loads.

Technical Data

		010	020	030	050	080	120	220
Supply voltage		10-35 V dc						
Reverse polarity protected		Yes						
Short circuit protected		Yes						
Current consumption		Max. 35 mA						
Maximum output load		200 mA						
Resolution	OFS	0,4 mm						
	OFSR	0,4 mm						
	OFSH	–	1,5 mm				–	
Operation frequency	OFS	2500 Hz	5000 Hz				2500 Hz	
	OFSR	2500 Hz	5000 Hz				2500 Hz	
	OFSH	–	5000 Hz				–	
Response time	OFS	0,2 ms / 0,2 ms	0,1 ms / 0,1 ms				0,2 ms / 0,2 ms	
	OFSR	0,2 ms / 0,2 ms	0,1 ms / 0,1 ms				0,2 ms / 0,2 ms	
	OFSH	–	0,1 ms / 0,1 ms				–	
Output indicator		Yellow LED						
Hysteresis		< 0,2 mm						
Light source	OFS	Infrared (880 nm)						
	OFSR	Visible red (660 nm)						
	OFSH	–	High power infrared (880 nm)				–	
Fork opening width		10 mm	20 mm	30 mm	50 mm	80 mm	120 mm	220 mm
Housing material	Fork housing	Aluminium (black anodised)						
	Lens cover	Glass						

Environmental Data

Vibration	10-55 Hz, 0,5 mm
Shock	30 g
Light immunity, @ 15° incidence	50 000 lux
Temperature, operation	–10 to +60 °C
Temperature, storage	–40 to +80 °C
Sealing class	IP 67
Approvals	CE UK CA

Available Types

Type	Fork Opening Size		Control Feature	Light Source		Infrared	Visible Red	Infrared (high power)
	Width	Depth		Output				
OFS 010	10 mm	17 mm	Sensitivity pot. and light/dark switch	NPN/PNP	DO/LO (NO/NC)	OFS 010 NP3S T3	OFSR 010 NP3S T3	–
OFS 020	20 mm	25 mm		NPN/PNP	DO/LO (NO/NC)	OFS 020 NP3S T3	OFSR 020 NP3S T3	OFSH 020 NP3S T3
OFS 030	30 mm	35 mm		NPN	DO/LO (NO/NC)	OFS 030 N3S T3	OFSR 030 N3S T3	OFSH 030 N3S T3
				PNP	DO/LO (NO/NC)	OFS 030 P3S T3	OFSR 030 P3S T3	OFSH 030 P3S T3
OFS 050	50 mm	55 mm		NPN	DO/LO (NO/NC)	OFS 050 N3S T3	OFSR 050 N3S T3	OFSH 050 N3S T3
				PNP	DO/LO (NO/NC)	OFS 050 P3S T3	OFSR 050 P3S T3	OFSH 050 P3S T3
OFS 080	80 mm			NPN	DO/LO (NO/NC)	OFS 080 N3S T3	OFSR 080 N3S T3	OFSH 080 N3S T3
				PNP	DO/LO (NO/NC)	OFS 080 P3S T3	OFSR 080 P3S T3	OFSH 080 P3S T3
OFS 120	120 mm	60 mm		NPN	DO/LO (NO/NC)	OFS 120 N3S T3	OFSR 120 N3S T3	–
				PNP	DO/LO (NO/NC)	OFS 120 P3S T3	OFSR 120 P3S T3	–
		205 mm		NPN	DO/LO (NO/NC)	OFS 120-205 N3S T3	OFSR 120-205 N3S T3	–
				PNP	DO/LO (NO/NC)	OFS 120-205 P3S T3	OFSR 120-205 P3S T3	–
OFS 220	220 mm	110 mm		NPN	DO/LO (NO/NC)	OFS 220 N3S T3	OFSR 220 N3S T3	–
				PNP	DO/LO (NO/NC)	OFS 220 P3S T3	OFSR 220 P3S T3	–

Note: Different size models are available upon request.

Connections

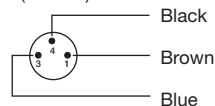
	M8 Plug / Cable
Supply +	Pin 1 / Brown
Supply –	Pin 3 / Blue
Output	Pin 4 / Black

3 pin, M8

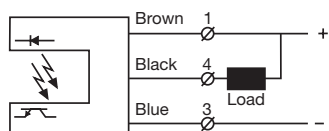
Sensor Plug (Male)



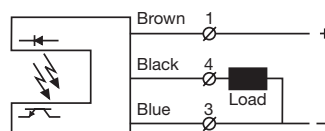
Cable Plug (Female)



Wiring Diagrams



NxS / NP3S
Load as NPN

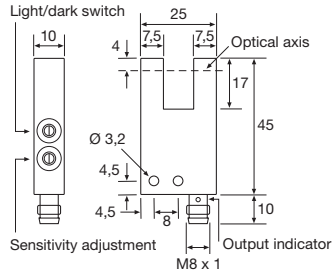


PxS / NP3S
Load as PNP

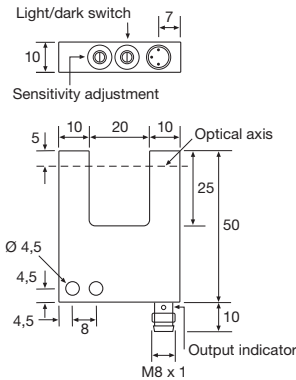
OPTICAL FORK SENSOR SERIES

OFS

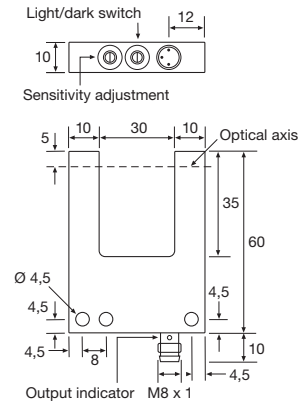
Dimensions and Descriptions



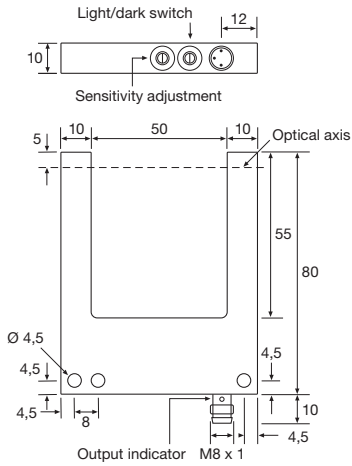
OFS 010



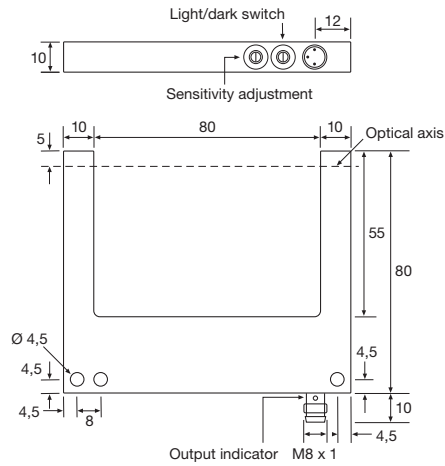
OFS 020



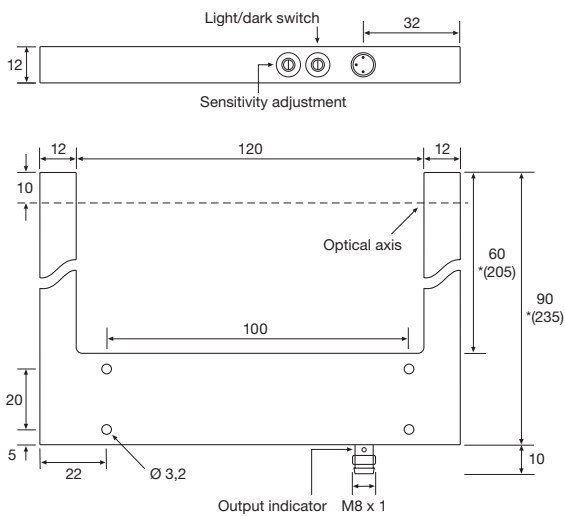
OFS 030



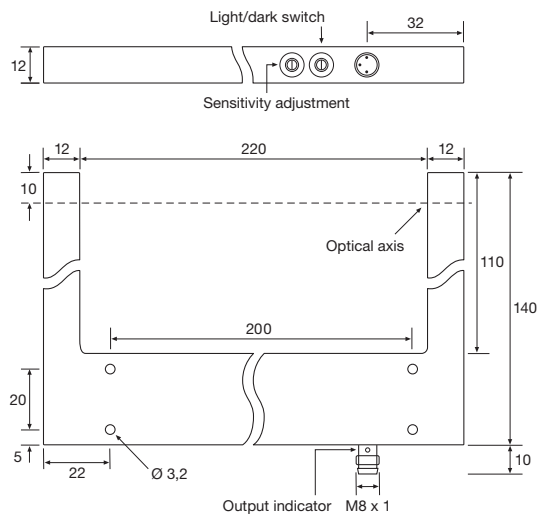
OFS 050



OFS 080



OFS 120
*(OFS 120-205)



OFS 220

(Units in mm)

Telco reserves the right to change specifications without notice.