

FLS 18 / FLE 18

Through-beam laser sensor



PRODUCT HIGHLIGHTS

- Operating range: 50 m
- Red light laser, 650 nm
- Transmitter beam can be focused according to application
- Accuracy adjustable via beam spot size
- Smallest detectable part: 0.03 mm
- Switching frequency, 6000 Hz
- Metal M18 threaded sleeve

Optical data		Functions	
Operating range	0 ... 50 m	Indicator LED, green	Operating voltage indicator
Type of light	Laser, red, 650 nm	Indicator LED, yellow	Switching output indicator
Laser Class (IEC 60825-1)	1	Indicator LED, red	Contamination indicator
		Sensitivity adjustment	Via 18-step potentiometer
		Default settings	Max. operating range
Electrical data		Mechanical data	
Operating voltage, +U _B	10 ... 30V DC ¹	Dimensions	See dimensional drawings
No-load current, I ₀	≤ 25 mA	Enclosure rating	IP 65 ²
Output current, I _e	≤ 200 mA	Material, housing	Brass, nickel-plated
Protective circuits	Reverse-polarity protection, U _B / short-circuit protection (Q)	Type of connection	See selection table
Protection Class	2	Ambient temperature: operation	-10 ... +50 °C
Power On Delay	≤ 300 ms	Ambient temperature: storage	-20 ... +80 °C
Switching output, Q	PNP	Weight (plug device)	85 g
Output function	N.O./N.C. (see selection table)	Weight (cable device)	190 g
Switching frequency, f (ti/tp 1:1)	≤ 6000 Hz		
Response time	83 μs		
Control input, Test	< 2V: transmitter off > 10V or Open: transmitter on		

¹ 10 % ripple, within U_B ² With connected IP 65 plug

Transmitter / receiver	Switching output	Type of connection	Part number	Article number
Transmitter	–	Plug, M12x1, 4-pin	FLS 18-L4	580-51406
Receiver	PNP (N.O./N.C.)	Plug, M12x1, 4-pin	FLE 18-L4	580-51410
Receiver	PNP (N.C.)	Plug, M12x1, 4-pin	FLE 18-L4-15	580-51411
Transmitter	–	Cable, 3 m, 4-wire	FLS 18	580-51407
Receiver	PNP (N.O./N.C.)	Cable, 3 m, 4-wire	FLE 18	580-51412
Receiver	PNP (N.C.)	Cable, 3 m, 4-wire	FLE 18-15	580-51413

Accessories

Connection cables
Brackets

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<p>Plug connection (transmitter): FLS 18-L4</p>	<p>Cable connection, (transmitter): FLS 18</p>
<p>max. 5 64 37 9 24 M18x1 M12x1</p>	<p>max. 5 64 37 9 24 11.5 M18x1 ø5</p>

<p>Plug connection (receiver): FLE 18-L4 / FLE 18-L4-15</p>	<p>Cable connection, (receiver): FLE 18 / FLE 18-15</p>
<p>75 48 24 M18x1 M12x1 Poti LEDs</p>	<p>75 48 24 11.5 M18x1 ø5 Poti LEDs</p>

<p>Connection, 4-pin (transmitter)</p>	<p>Connection, 4-wire (transmitter)</p>
<p>1 BN +U_B 2 WH Test 3 BU -U_B 4</p>	<p>BN +U_B WH Test BU -U_B</p>

<p>Connection, 4-pin (receiver): FLE 18-L4</p>	<p>Connection, 4-wire (receiver): FLE 18</p>
<p>1 BN +U_B 2 WH 3 BU -U_B 4 BK PNP</p> <p>2: 4: </p>	<p>BN +U_B WH BU -U_B BK PNP</p> <p>WH: BK: </p>

<p>Connection, 4-pin (receiver): FLE 18-L4-15</p>	<p>Connection, 4-wire (receiver): FLE 18-15</p>
<p>1 BN +U_B 2 WH 3 BU -U_B 4 BK PNP</p> <p>2: 4: </p>	<p>BN +U_B WH BU -U_B BK PNP</p> <p>WH: BK: </p>