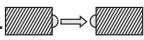



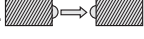



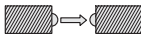



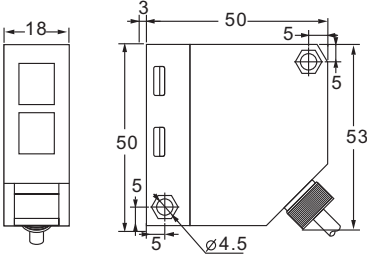
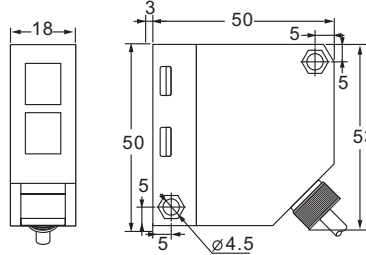


FS50 Series Photoelectric Sensor





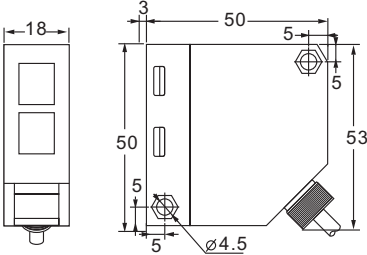
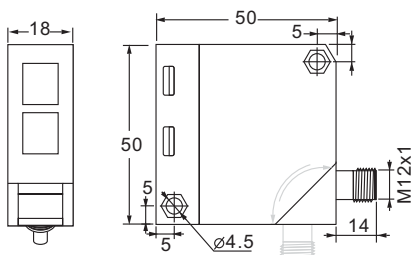
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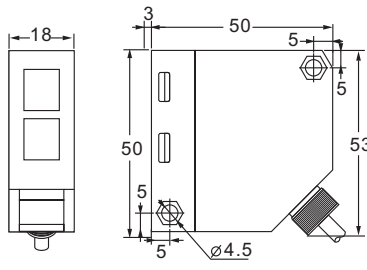
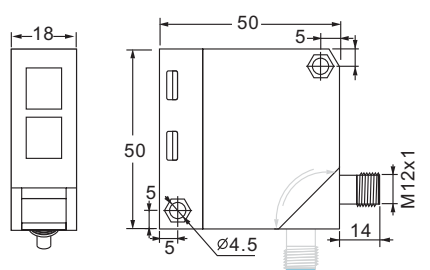
FS50 DC PHOTOELECTRIC SENSORS

Type	FS50	FS50	
Sensing mode	Through-beam mode	Through-beam mode	
Sensing picture			
Switching distance(sn)	20m	40m	
Picture			
Nominal Voltage	10-30VDC	10-30VDC	
Residual Ripple	≤10%	≤10%	
Tolerance	±10%Sn	±10%Sn	
Hysteresis	10%	10%	
Emission	Infrared(880nm)	Infrared(880nm)	
Output	NPN or PNP (programmable)	NPN or PNP (programmable)	
Contact	NO or NC (programmable)	NO or NC (programmable)	
Max. Output Current	200mA	200mA	
Absorption At 30VDC	40mA	40mA	
Voltage Drop(Sensor On)	≤2.0V(I=100mA)	≤2.0V(I=100mA)	
Yellow LED	Output indicator	Output indicator	
Green LED	Supply indicator	Supply indicator	
Sensitivity Adjustment	Trimmer 1 tum	Trimmer 1 tum	
Switching Frequency	200 Hz	200 Hz	
Response Time	5mS	5mS	
Start Up Delay	100mS	100mS	
Short Circuit Protection	Yes	Yes	
Electric Protections	Yes	Yes	
Temperature Limits	-10 ~ +60°C	-10 ~ +60°C	
Light Immunity	>10.000Lux	>10.000Lux	
Protection Degree	IP65	IP65	
Housing Material	PBT	PBT	
Sensing object	-	-	
Wiring diagram number(see page 23-10)			
10-30V DC	Through-beam mode	Emitter : Receiver	F1STP50020MDEI2A2 C2 F1STP50020MDSI4A2 C1
	Diffuse mode		
	Retro-reflective mode		
	Retro-reflective mode (With Polarizing Filters)		
12-24VDC/ 24V-240VAC	Through-beam mode	Emitter : Receiver	
	Diffuse mode		
	Retro-reflective mode		
	Retro-reflective mode (With Polarizing Filters)		
Dimensions (unit: mm)			
Connect	2m PVC Cable (φ 4 4x0.25mm ²)	2m PVC Cable (φ 4 4x0.25mm ²)	
Weight	Approx.160 g	Approx.160 g	

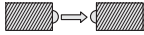
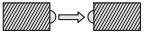




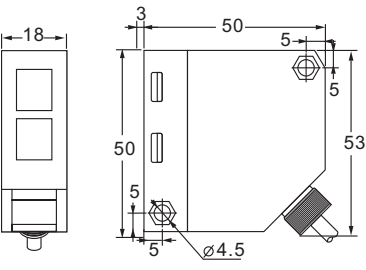
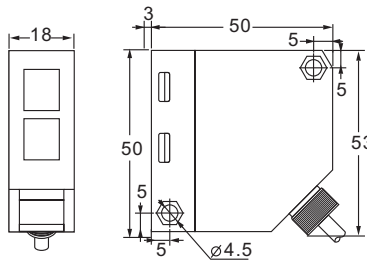
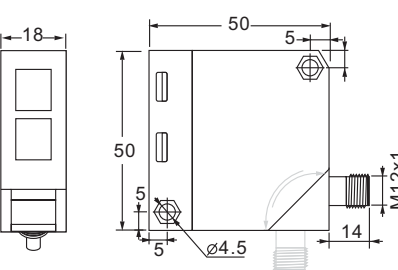
FS50 DC PHOTOELECTRIC SENSORS

Type		FS50		FS50	
Sensing mode		Diffuse mode		Diffuse mode	
Sensing picture					
Switching distance(sn)		20cm-1.8m	30cm-2m	100mm-400mm	20cm-1m
Picture					
Nominal Voltage		10-30VDC		10-30VDC	
Residual Ripple		≤10%		≤10%	
Tolerance		±10%Sn		±10%Sn	
Hysteresis		10%		10%	
Emission		Infrared(880nm)		Infrared(880nm)	
Output		NPN or PNP (programmable)		NPN or PNP (programmable)	
Contact		NO or NC (programmable)		NO or NC (programmable)	
Max. Output Current		200mA		200mA	
Absorption At 30VDC		40mA		40mA	
Voltage Drop(Sensor On)		≤2.0V(I=100mA)		≤2.0V(I=100mA)	
Yellow LED		Output indicator		Output indicator	
Green LED		Supply indicator		Supply indicator	
Sensitivity Adjustment		Trimmer 1 tum		Trimmer 1 tum	
Switching Frequency		200 Hz		200 Hz	
Response Time		5mS		5mS	
Start Up Delay		100mS		100mS	
Short Circuit Protection		Yes		Yes	
Electric Protections		Yes		Yes	
Temperature Limits		-10 ~ +60°C		-10 ~ +60°C	
Light Immunity		>10.000Lux		>10.000Lux	
Protection Degree		IP65		IP65	
Housing Material		PBT		PBT	
Sensing object		20cmx20cm white paper		10cmx10cm white paper	20cmx20cm white paper
Wiring diagram number(see page 23-10)					
10-30V DC	Through-beam mode	Emitter : Receiver			
	Diffuse mode	F1SDP501800DSI4A2 C1	F1SDP502000DSI4A2 C1	F1SDP500400DSIEA4 C3	F1SDP501000DSIEA4 C3
	Retro-reflective mode				
	Retro-reflective mode (With Polarizing Filters)				
12-24VDC/ 24V-240VAC	Through-beam mode	Emitter : Receiver			
	Diffuse mode				
	Retro-reflective mode				
	Retro-reflective mode (With Polarizing Filters)				
Dimensions (unit: mm)					
Connect		2m PVC Cable (φ 4 4x0.25mm ²)		M12 Euro style	
Weight		Approx.160 g		Approx.85g	







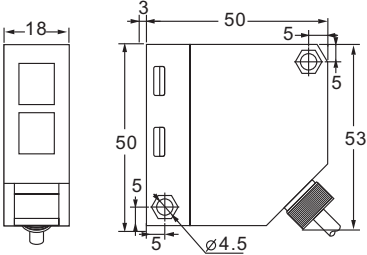
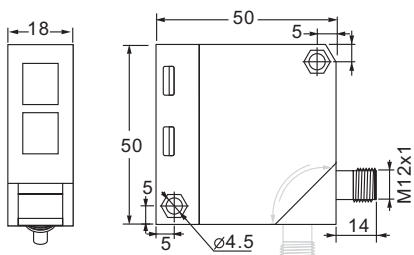
FS50 DC PHOTOELECTRIC SENSORS

Type	FS50	FS50
Sensing mode	Retro-reflective mode	Retro-reflective mode
Sensing picture	 (With Polarizing Filters)	 (With Polarizing Filters)
Switching distance(sn)	6m	6m
Picture	 CE	 CE
Nominal Voltage	10-30VDC	10-30VDC
Mains Frequency	≤10%	≤10%
Tolerance	±10%Sn	±10%Sn
Hysteresis	10%	10%
Emission	Red(660nm)	Red(660nm)
Output	NPN or PNP (programmable)	NPN or PNP (programmable)
Max. Output Current	NO or NC (programmable)	NO or NC (programmable)
Power consumption	200mA	200mA
Yellow LED	40mA	40mA
Green LED	≤2.0V(I=100mA)	≤2.0V(I=100mA)
Sensitivity Adjustment	Output indicator	Output indicator
Switching Frequency	Supply indicator	Supply indicator
Response Time	Trimmer 1 tum	Trimmer 1 tum
Start Up Delay	200 Hz	200 Hz
Temperature Limits	5mS	5mS
Light Immunity	100mS	100mS
Protection Degree	Yes	Yes
Housing Material	Yes	Yes
Sensing object	-10 ~ +60°C	-10 ~ +60°C
Wiring diagram number(see page 23-10)	>10.000Lux	>10.000Lux
	IP65	IP65
	PBT	PBT
	D83 Dirror	D83 Dirror
10-30V DC	Through-beam mode	Emitter : Receiver
	Diffuse mode	
	Retro-reflective mode	
	Retro-reflective mode (With Polarizing Filters)	F1SLP506000DSR4A2 C1
12-24VDC/ 24V-240VAC	Through-beam mode	Emitter : Receiver
	Diffuse mode	
	Retro-reflective mode	
	Retro-reflective mode (With Polarizing Filters)	F1SLP506000DSREA4 C3
Dimensions (unit: mm)		
Connect	2m PVC Cable (φ 4 4x0.25mm ²)	2m PVC Cable (φ 4 4x0.25mm ²)
Weight	Approx.160 g	Approx.160 g

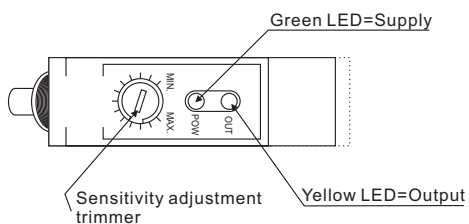
FS50 AC/DC PHOTOELECTRIC SENSOR

<p>FS50</p> <p>Through-beam mode</p>  <p>20m</p>	<p>FS50</p> <p>Through-beam mode</p>  <p>40m</p>	<p>FS50</p> <p>Through-beam mode</p>  <p>20m</p>
 <p style="text-align: right;">CE</p>	 <p style="text-align: right;">CE</p>	 <p style="text-align: right;">CE</p>
12-240VDC / 24-240VAC	12-240VDC / 24-240VAC	12-240VDC / 24-240VAC
50/60Hz	50/60Hz	50/60Hz
$\pm 10\%Sn$	$\pm 10\%Sn$	$\pm 10\%Sn$
10%	10%	10%
Infrared(880nm)	Infrared(880nm)	Infrared(880nm)
Relay SPDT	Relay SPDT	Relay SPDT
3A/30V AC, 1A/220V AC	3A/30V AC, 1A/220V AC	3A/30V AC, 1A/220V AC
<2.5VA	<2.5VA	<2.5VA
Output indicator	Output indicator	Output indicator
Supply indicator	Supply indicator	Supply indicator
Trimmer 1 tum	Trimmer 1 tum	Trimmer 1 tum
10 Hz	10 Hz	10 Hz
20mS	20mS	20mS
$\leq 300mS$	$\leq 300mS$	$\leq 300mS$
-10 ~ +60°C	-10 ~ +60°C	-10 ~ +60°C
>10.000Lux	>10.000Lux	>10.000Lux
IP65	IP65	IP65
PBT	PBT	PBT
-	-	-
<p>F3STP50020MUEI2B2 C5</p> <p>F3STP50020MURI5B2 C4</p>	<p>F3STP50040MUEI2B2 C5</p> <p>F3STP50040MURI5B2 C4</p>	<p>F3STP50020MUEIEB4 C6</p> <p>F3STP50020MURIEB4 C6</p>
		
<p>2m PVC Cable(ϕ 4 5x0.30mm²)</p> <p>Approx.160 g</p>	<p>2m PVC Cable(ϕ 4 5x0.30mm²)</p> <p>Approx.160 g</p>	<p>M12 Euro style</p> <p>Approx.35g</p>

FS50 PHOTOELECTRIC SENSORS

Type	FS50	FS50
Sensing mode	Retro-reflective mode	Retro-reflective mode
Sensing picture		
Switching distance(sn)	10m	10m
Picture		
Nominal Voltage	12-240VDC / 24-240VAC	12-240VDC / 24-240VAC
Mains Frequency	50/60Hz	50/60Hz
Tolerance	±10%Sn	±10%Sn
Hysteresis	10%	10%
Emission	Infrared(880nm)	Infrared(880nm)
Output	Relay SPDT	Relay SPDT
Max. Output Current	3A/30V AC, 1A/220V AC	3A/30V AC, 1A/220V AC
Power consumption	<2.5VA	<2.5VA
Yellow LED	Output indicator	Output indicator
Green LED	Supply indicator	Supply indicator
Sensitivity Adjustment	Trimmer 1 tum	Trimmer 1 tum
Switching Frequency	10 Hz	10 Hz
Response Time	20mS	20mS
Start Up Delay	≤300mS	≤300mS
Temperature Limits	-10 ~ +60°C	-10 ~ +60°C
Light Immunity	>10.000Lux	>10.000Lux
Protection Degree	IP65	IP65
Housing Material	PBT	PBT
Sensing object	D83 Mirror	D83 Mirror
Wiring diagram number		
Wiring diagram number(see page 23-10)		
10-30V DC	Through-beam mode Diffuse mode Retro-reflective mode Retro-reflective mode (With Polarizing Filters)	Emitter : Receiver
12-24VDC/ 24V-240VAC	Through-beam mode Diffuse mode Retro-reflective mode Retro-reflective mode (With Polarizing Filters)	Emitter : Receiver
		F3SLP50010MURI5B2 
		F3SLP50010MURIEB4 
Dimensions (unit: mm)		
Connect	2m PVC Cable (φ 4.5x0.30mm ²)	M12 Euro style
Weight	Approx.160 g	Approx.85g

Sensitivity adjustment

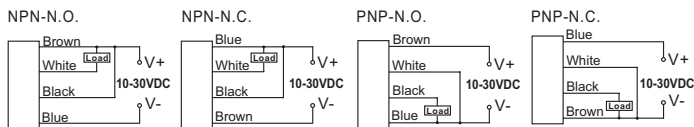


Note: The trimmer just needs one turn.

- 1) SENSITIVITY INCREASE
Screw the trimmer towards right towards position "+"
- 2) SENSITIVITY DECREASE
Screw the trimmer towards left towards position "-"

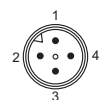
Wiring diagrams

C1 Wiring diagrams(DC)



C3 Connection with connector (DC)

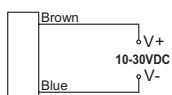
Euro style(M12)



View of quadripole male connector.

Output	Contact numbers			
	1	2	3	4
NPN N.O.	+	N.O.	-	+
NPN N.C.	-	N.C.	+	+
PNP N.O.	+	-	-	N.O.
PNP N.C.	-	-	+	N.C.
Emitter	+	-	-	-

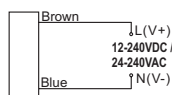
C2 Emitter(DC)



C4 Wiring diagrams(AC/DC)

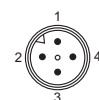


C5 Emitter(AC/DC)



C6 Connection with connector (AC/DC)

Euro style(M12)



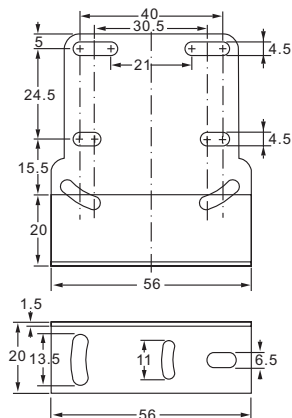
View of quadripole male connector.

Output	Contacts numbers			
	1	2	3	4
Relay	L(+)	Com	N(-)	N.O.
Emitter	L(+)	-	N(-)	-
Wire colors	Brown	White	Blue	Black

Note: Photoelectric sensor not suitable for use with 90° connectors.

Accessories

• Brackets



• Reflectors D83

