

FZ1


Fiber Amplifier

◆Characteristic / 特點：


- Small size, 10 mm thickness, can be mounted in a small space. Several amplifiers can be mounted side by side.
/體積薄，厚度只有10mm，使用空間小，多個併排安裝。
- 20-Turns Sensitivity Adjuster. The optimum sensitivity can be set easily.
/多迴轉(20 TURNS)靈敏度調整。
- Off-delay timer adjustable for 0ms, 40ms and 400ms.
/可調整OFF TIMER感應時間(0ms,40ms,400ms)。




Ultra-Slim




L.on/D.on Switch
Easy selection to switch the output operation as either Light-ON or Dark-ON.



Off-delay Timer Switch
Three off-delay timers (0ms, 40ms, 400ms) adjustable.



20-turn Sensitivity Adjuster
Users can adjust the sensitivity more optimum according to different objects.



Fiber Lock Level
Special design for fiber cables fixed. Simple operation and easy maintenance.



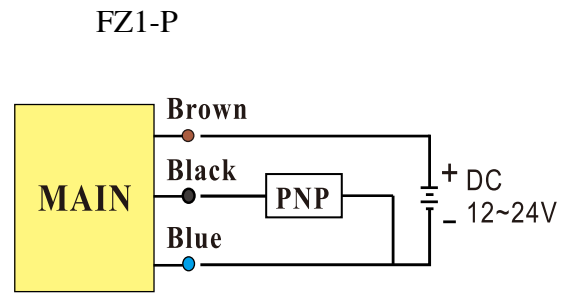
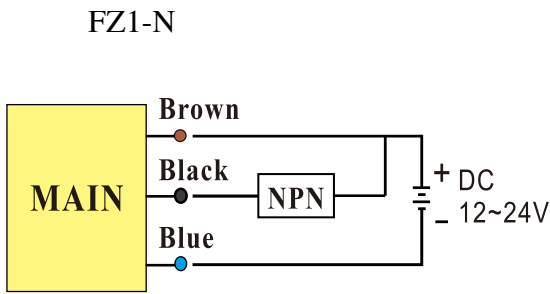
◆Specifications / 規格表：

Model / 型號	Pre-wired Ø4.2	FZ1-N	FZ1-P	FZ1-NI	FZ1-PI
	M8 pigtailed type	FZ1-ND	FZ1-PD	-	-
Emitting light / 發光源	Red LED 680 nm			Infrared LED 850nm	
Operating voltage / 工作電壓	DC12~24V ± 5%				
Current Consumption / 消耗電流	40mA Max.				
Load current / 負載電流	100mA Max.at DC24V				
Output type / 輸出模式	NPN L.on / D.on	PNP L.on / D.on	NPN L.on / D.on	PNP L.on / D.on	PNP L.on / D.on
Protection circuit / 保護電路	Reversed polarity protection, over-current protection				
Response time / 反應時間	1 ms Max.				
Indicators/指示燈	Output indicator : Red LED, Power indicator : Green LED				
Sensitivity adjusrment/靈敏度功能	20 turns trimmer				
Insulation resistance / 隔離阻抗	20MΩ min. (DC500V)				
Voltage withstandabiligy / 絕緣耐壓	AC500V 60Hz for 60 Sec.				
Operating temperature/工作溫度	- 10 °C ~ + 60 °C				
Ambient humidity / 工作溼度	35% ~ 85% RH				
Protection degree / 防水等級	IP64				
Material / 外觀材質	ABS				
Wiring method / 出線方式	FZ1-□	Pre-wired Ø4.2 x 2 M / 3-wires			
	FZ1-□D	M8 pigtailed type / M8 接頭15cm電線式			
Weight / 重量	FZ1-□	Approx. 65g			
	FZ1-□D	Approx. 35g			

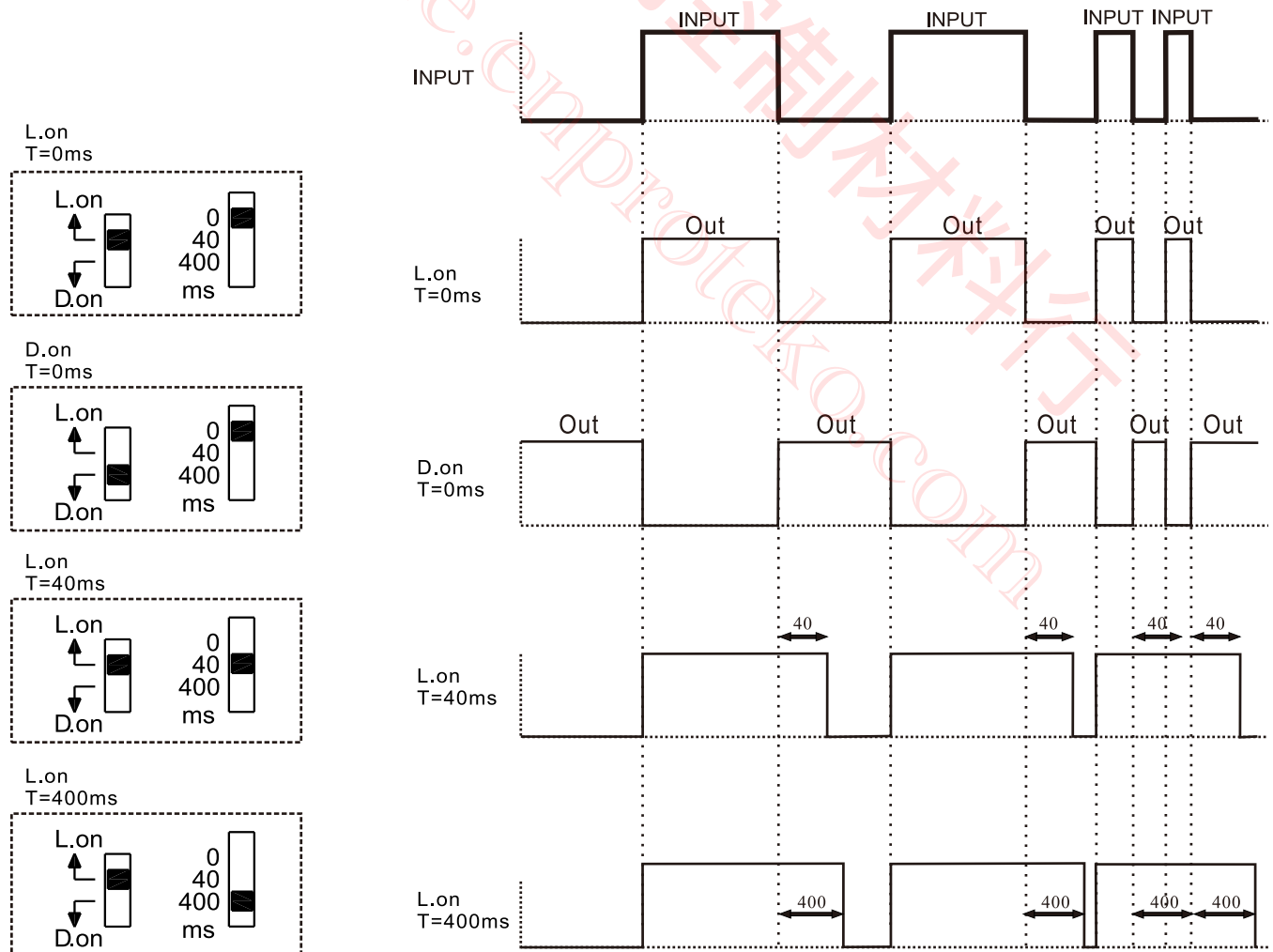
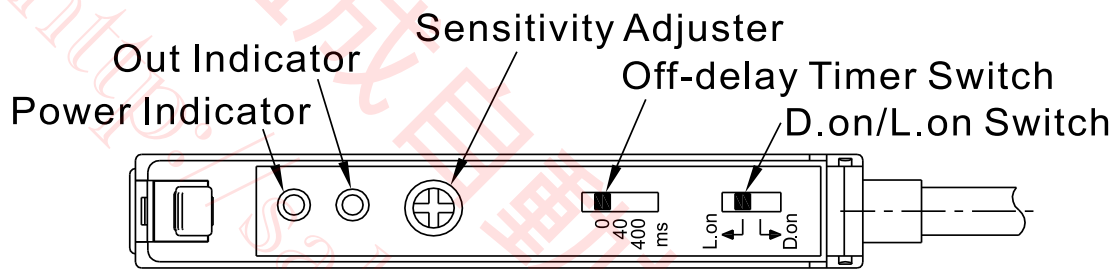
Fiber Amplifier



◆Wiring diagrams :



◆Operation timing chart :

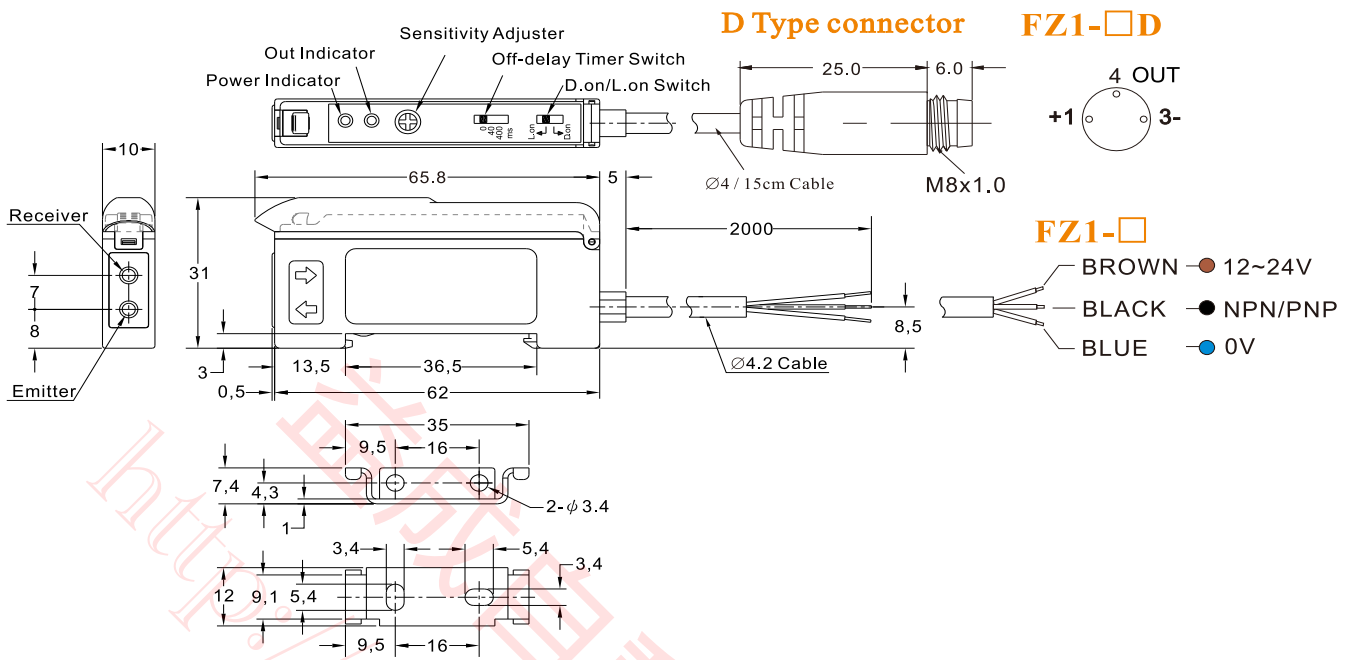


Fiber
Photo Sensor
Area Sensor
Ultrasonic Sensors
Inductive Proximity Sensor
Capacitive Proximity Sensor
Timer / Counter
Others
Accessories

FZ1

Fiber Amplifier

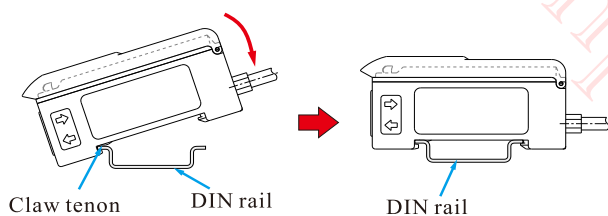
◆Dimensions/外型尺寸圖：



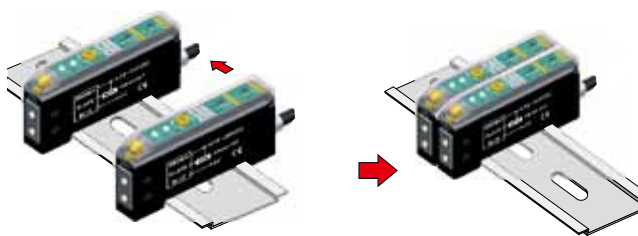
◆Fiber amplifier mounting/detaching operation：

1. Mounting / 安裝

(1) To mount each amplifier to the attached mounting bracket or DIN rail in sequence.



(2) To connect two amplifiers close together by sliding the amplifier bodies.



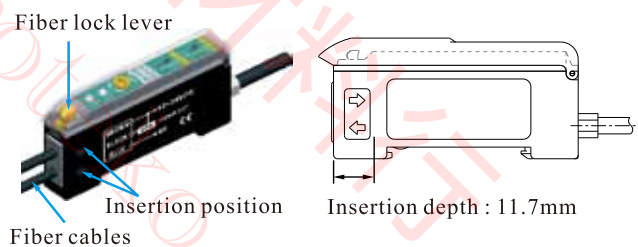
2. Detaching / 卸下

To detach the amplifiers in sequence by sliding the amplifier bodies. Don't detach two amplifiers at a time.

◆Fiber cables fixing operation：

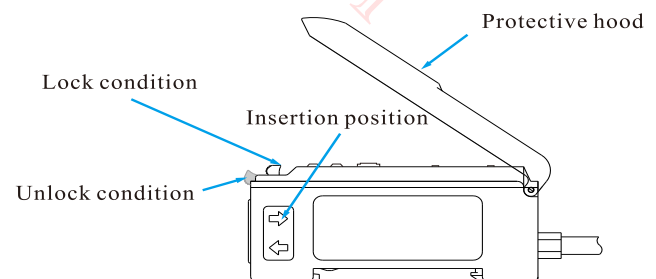
1. Insert the fiber cables / 插入光纖

Open the protective hood and tilt the fiber lock lever to release the lock condition. Referring to the side seal of insertion position, fully insert the fiber cables into the mounting holes until the limit. Pull the fiber lock lever back to lock the cables.



2. Pull out the fiber cables / 拔出光纖

Open the protective hood and tilt the fiber lock lever to release the lock condition. Pull the fiber cables straight out from the mounting holes.























































⚠ Be sure to switch off the power supply when mounting or detaching the amplifier.

⚠ To protect the fiber cables from incorrect operation, be sure to tilt the fiber lock lever to release the lock condition before pulling out the fiber cables.

Reflective Fiber Optics Specifications

FIBER

FZ1-N

Features	Shape	Detecting Distance (mm)	*FZ1-N	Smallest detectable object(metal wire)	Minimum bend radius	Weight(g)	Model
	 M6		90	Ø0.2	R25	43	PR-610
	 M4					40	FRB-410
	 Ø3					40	FRB-310-Q
	 M6		120	Ø0.5	R40	43	FRX-610
	 M6		70	Ø0.1	R25	40	PRC-610
	 M4		30	Ø0.05	R15	35	PRC-410
	 M3					33	PRC-310
	 Ø3					33	PRC-310-Q
	 Ø1					30	FRC7-110-Q20
	 Ø1		7	Ø0.05	R15	30	PRC4-110
	 M6		80	Ø0.02	R25	40	PRH-610
	 Ø5		70	Ø0.2	R2	40	FRH-510
	 M4					40	FRZ-410
	 Ø3		20	Ø0.1	R1	40	FRZ-310-Q
	 M4					40	FRW-410
	 Square		20	Ø0.1	R1	40	FRW-11
			70	Ø0.2	R2	35	PRY-67TZ
	 M6		70	Ø0.2	R2	45	PRY-610
	 M3		5	Ø0.05	R10	33	FTE-410
	 M4					35	FRA-410
						33	FRE-310
						33	FRE-310Q
	 Ø2					33	FRE-210
	 M4		25	Ø0.1	R15	33	FRS-410
	 M3					33	PRD-410
						33	FRS-310
	 Ø2					35	PRD-310
	 M4					33	PRS-210
	 M3		60	Ø0.05	R15	40	FRJ-410
	 M3					40	FRJ-310
 10x10		25	Ø1.0	R25	40	FR-10ML	
 15x15		20	Ø1.0	R25	45	FR-15MLD	
 25 x 19		70	Ø1.0	R25	60	PR-20ML	
 38 x 19		70	Ø1.0	R25	36	FR-30ML	
 58 x 23		60	Ø2.0	R25	40	FR-50ML	

Fiber

Photo Sensor

Area Sensor

Ultrasonic Sensors

Inductive Proximity Sensor

Capacitive Proximity Sensor

Timer / Counter

Others

Accessories

FIBER

Thrubeam Fiber Optics Specifications

FZ1-N

Features	Shape	Detecting Distance (mm)	*FZ1-N	Smallest detectable object(metal wire)	Minimum bend radius	Weight(g)	Model
Photo Sensor	M6		500	Ø0.5	R25	52	FT-610
	M4					45	PT-410
	M3					45	PT-310
	M4					35	FTB-410
	M3					35	FTB-310
Area Sensor	Ø2					35	FTB-210
	M4					40	FTJ-410
Ultrasonic Sensors	N4		700	Ø1.0	R40	42	FTX-410
	N4		600	Ø0.5	R25	40	PTH-410
	M3		30	Ø0.03	R10	35	FTA-310
Ø2	33					FTA-210	
Ø1	32					FTE-110	
Inductive Proximity Sensor	M6		300	Ø0.5	R2	47	FTY-610
	M4					45	PTY-410
	M3					40	PTY-310
	M4					40	FTZ-410
Capacitive Proximity Sensor	M3			Ø0.5	R2	40	FTZ-310
	M4					35	FTW-410
	Square					40	FTW2-11
Timer / Counter	M6		250	Ø0.5	R2	40	FTY-67TZ
	M4		250	Ø0.5	R2	42	FTY-77TZ
	Ø1.5		80	Ø0.05	R1	50	FTW2-475D
Others	M4		130	Ø0.05	R15	35	FTS-410
	M3					35	PTS2-310
	M3					35	PTD-310
	Ø2					33	PTS-210
	Ø2					33	PTD-210
Accessories	Ø1		100	Ø0.1	R15	30	PTC4-110
	Ø2					33	PTC4-210
	10x10		500	Ø1.0	R15	35	FT-10ML
	15x15		400	Ø1.0	R25	55	FT-15MLD
	19x25		500	Ø1.0	R60	95	PT-20ML
	38x19		300	Ø1.0	R60	62	FT-30ML
	58x23		300	Ø2.0	R60	65	FT-50ML