TAKEX

POWER UNIT

PS3N・PS3N-SR
PS3F・PS3F-SR

Instruction Manual

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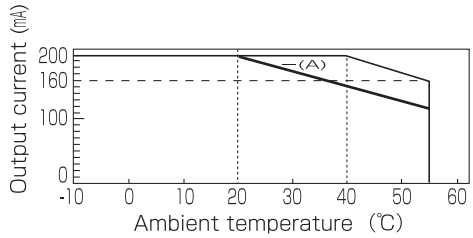
SPECIFICATIONS

Models	PS3N	PS3N-SR	PS3F	PS3F-SR
Power supply	AC100～240V ±10% 50/60Hz			
Current consumption	10W or less			
Input	NPN open collector (※1) Mode : L		NPN open collector (※1) Mode : H/L Selectable Response : 20μs (※2)	
Operating mode	AND		AND, CLOCK AND (On, Off delay, One shot, No timer) Time interval : 0.1～1s, 1～10s	
Output mode	● Relay 1C Rating : 2A(AC250V)or less (Non-inductive load)	● Triac 1a Photocoupler Load voltage : AC75～250V Load current : 2Arms Residual voltage : 1.5Vrms	● Relay 1C Rating : 2A(AC250V)or less (Non-inductive load) ● NPN open collector Rating : 100mA(DC30V)or less Residual voltage : 1V or less	● Triac 1a Photocoupler Load voltage : AC75～250V Load current : 2Arms Residual voltage : 1.5Vrms ● NPN open collector Rating : 100mA(DC30V)or less Residual voltage : 1V or less
Sensor power	DC12V ±10% 200mA (Max) (Short circuit protection) (※3)			
Response time	10 ms or less	12 ms or less	● Relay : 10ms or less ● NPN open collector ON/OFF : 0.1ms or less	● Triac : 12ms or less ● NPN open collector ON/OFF : 0.1ms or less
LED indicator	POWER : Power (Green LED) OUTPUT : Operation (Red LED)			
Material	Case : ABS			
Connection	Terminal connections (Available Screw M3.5)			
Weight (Max.)	120 g		150 g	
Attachment	Instruction manual		Instruction manual, Screwdriver	

(※1) Voltage input (Max 30V)
L : 3V or less
H : 8V or less

(※2) Minimum input time to trigger one-shot output.

(※3) Refer to the derating chart below when ambient temperature is higher than 40℃. (A) shows the derating curve when using two or more units contiguously.



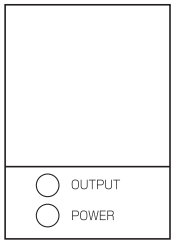
(※4) ● The value of between input and output of case, power supply, relay contacts output or triac output.
● Internal circuit 0V (sensor power) is connected to operating power through condenser (0.001μF).

AMBIENT CONDITIONS

Operating temp.	−10～+55℃ (※3)
Storage temp.	−40～+70℃
Humidity	35～85%RH
Protection rating	I P20
Vibration	10～55Hz, 1.5㎜ Amplitude, 2Hr. 3 directions
Dielectric withstanding	AC1500V 1 min (※4)
Shock	100 m/s² 3 times, 3 directions
Insulation resistance	DC500V 20MΩ (min) (※4)

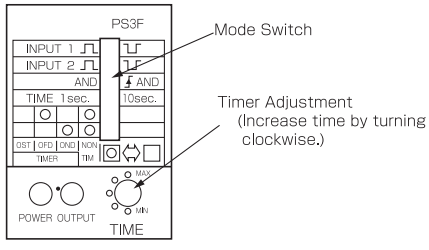
PANEL DESCRIPTION

PS3N
PS3N-SR



OUTPUT : Operation (Red)
POWER : Power (Green)

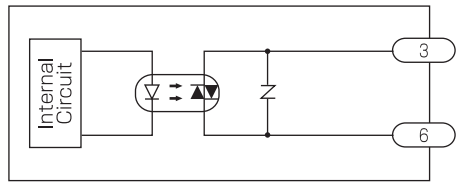
PS3F
PS3F-SR



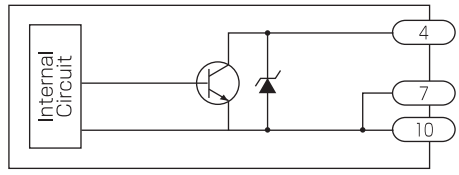
OUTPUT : Operation (Red)
POWER : Power (Green)

OUTPUT CIRCUIT

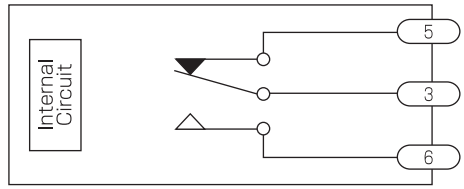
● Triac output (PS3N-SR、PS3F-SR)



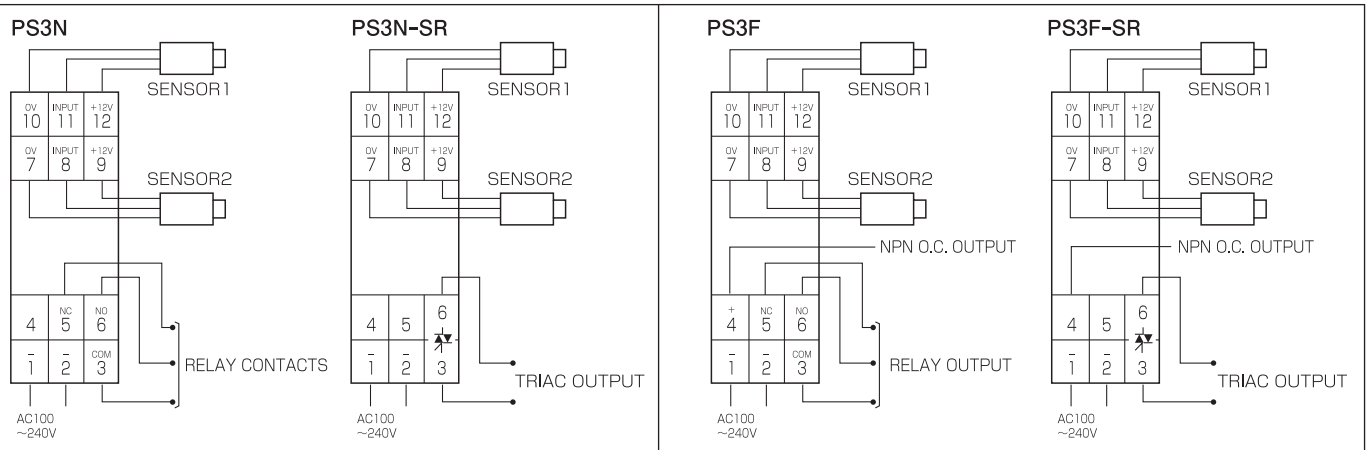
● NPN-Open collector outout (PS3F、PS3F-SR)



● Relay output (PS3N、PS3F)



WIRING



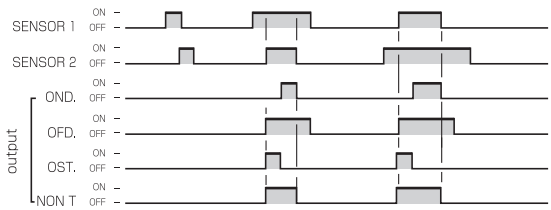
FUNCTIONS OF MODE SWITCHES

● INPUT 1 / INPUT 2

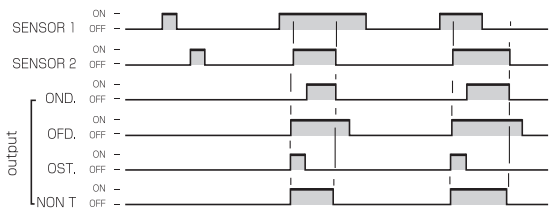
Selection switch for input signal.
⎍ : H input — Output is on.
⎎ : L input — Output is on.

● AND / AND

Logic function switch.
When the switch is set to AND side ;

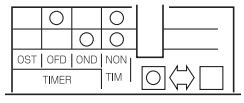


When the switch is set to AND side ;



● TIME 1 sec / 10sec

Selection switch for time interval
1 sec : 0.1～1 s adjustable
10sec : 1～10 s adjustable

● 

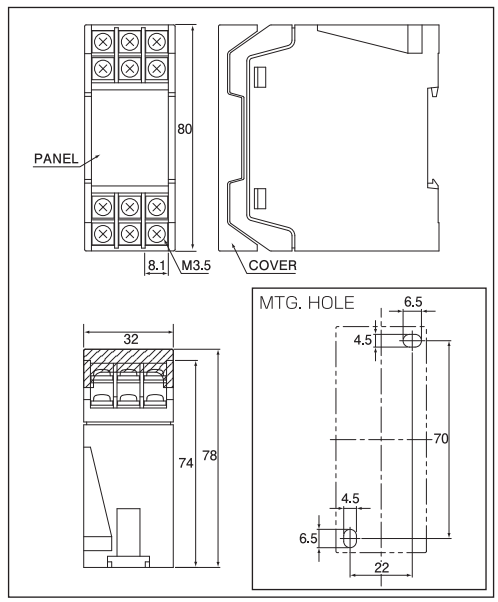
…Timer function switch.
Select the switch for each output mode desired.

NOTES

- Make sure all connections are corrent before turning power on. The internal circurity can be damaged.
- Never cycle on/off continually.
- Normal operation makes low osillating noise.
- Connect an auxiliary relay for longer life. The internal relay can not be replaced.
- Short circuit protection isn't built in open collector.
- Insert a surge absorber or a diode to protect output circuit in case of using relay output for inductive.
- Short circuit protection is built in Sensor. Power light of sensor is off in short load. Turn off power supply and get rid of the cause of failure.
- This power unit slightly produces heat. Treat carefully in installation.
- Keep an interval of ten millimeters between power units. Refer to the derating chart in case of adhesion installation.
- Don't wire together with power lines.
- Keep a space of ten centimeters between this power unit and high power line or electromagnetic relay.

DIMENSONS

(unit : mm)



- The guarantee period of this product is one year after the delivery.
- If any defect is found during the guarantee period, Takenaka will repair or replace the defective product.
- This product is an industrial sensor which issues an output upon detecting an object. It does not have any function to prevent accidents, death or injuries.
- Takenaka will not held responsible for any damage or loss incurred due to accidents, faulty installation, abuse, misuse, improper maintenance or acts of God including lightning surge.