



# Relays & Solenoids

## TTI\_PCB Relays

Detailed product specifications are available on: [us.100y.com.tw](http://us.100y.com.tw)



### MAIN FEATURES

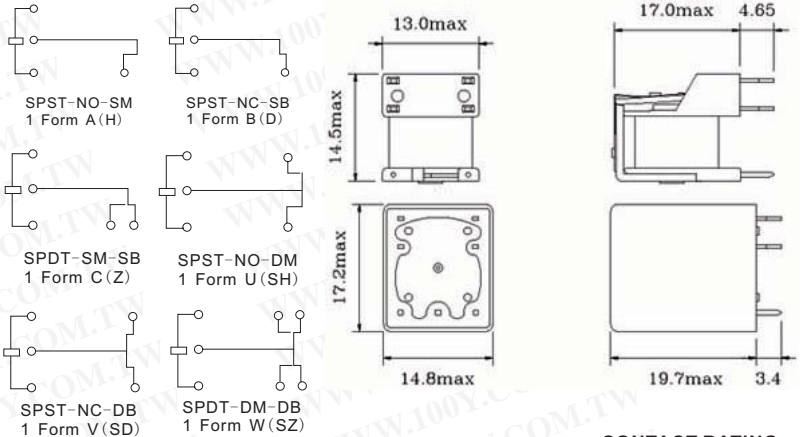
- Single CONTACT and double CONTACT Types offer switching capacity by 15A in small size for exclusive automobile control relay switching box use.
- PC board terminal.
- Simple magnetic circuit to meet mass production for low cost offer. Standard type is open type without dust cover. If dust cover required, suitable cased relay can be prepared.
- Operating ambient temperature range covers from -40°C by 85°C at no current on relay's CONTACTS.

### APPLICATIONS

- Car control switching box (alarm system, automatic door locking) wiper motor Reversing, window Lifter, Flashers or turning signals, Air conditioning, Fuel pump control system, etc.

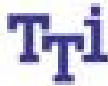
### PERFORMANCE (at initial value)

Item	Type	TRM
Contact Resistance		100mΩ Max.
Operation Time		6msec Max.
Release Time		3msec Max.
Dielectric Strength Between coil & contact Between contacts		500VAC 50/60HZ (1 minute) 1000VAC 50/60HZ (1 minute)
Surge Resistiveness		2000V (between coil & contact 140 usec)
Insulation Resistance		100 MΩ Min. (500VDC)
Max. ON/OFF Switching Mechanically Electrically		300 operation/min 30 operation/min
Operating Ambient Temperature		-40°C to +85°C (No water condensation and no water drop)
Operating Humidity		98% RH at 20°C
Coil Temperature Rise		60 deg. Max. (at rated coil voltage)
Vibration Endurance Error Operation		10 to 55Hz Double Amplitude 1.5mm 10 to 55Hz Double Amplitude 1.5mm
Shock Endurance Error Operation		100G Min. 10G Min.
Life Expectancy Mechanically Electrically		10x10 <sup>6</sup> ops. Min. (no load) 10x10 <sup>4</sup> ops. Min. (at rated coil voltage)
Weight		abt. 12grs. (sealed), 8grs. (open Frame)



### CONTACT RATING

Item	Type	TRM	
		SH (1U), SD (1V), SZ (1W)	H (1A), D (1B), Z (1C)
Contact Capacity		2x10A 120VAC	10A 120VAC
Resistive Load (cosΦ=1)		2x10A 28VAC 2x20A 14VDC	10A 28VDC 20A 14VDC
Rated Carrying current		10A	10A
Max. Allowable Voltage		380VAC, 75VDC	380VAC, 75VDC
Max. Allowable current		10A	10A
Max. Allowable Power Force		2x1200VA, 2x280W	1200VA, 280W
Referenced Min. Applicable Load		5VDC 10mA	5VDC 10mA
Inductive Load (cos=0.4 L/R=7msec)		2A 120VAC 5A 12VDC	1A 120VAC 3A 12VDC
Contact Material		Ag Alloy	



Part No.	Product No.	Manufacturer	Description	Outline L*W*H	Contact Arrangement	Contact Rating	Coil Voltage	Type
23045	TRM-12D-H	TTI	TTI Relay	14.5*13.0*17.0mm	1 From A	1A 120VAC/12VDC	12VDC	TRM
23046	TRM-12D-SA-SH	TTI	TTI Relay	14.5*13.0*17.0mm	1 From U	2A 120VAC/12VDC	12VDC	TRM
23048	TRM-12D-SA-SZ	TTI	TTI Relay	14.5*13.0*17.0mm	1 From W	2A 120VAC/12VDC	12VDC	TRM
23049	TRM-12D-SC-SH	TTI	TTI Relay	14.5*13.0*17.0mm	1 From U	2A 120VAC/12VDC	12VDC	TRM
23050	TRM-12D-ZF	TTI	TTI Relay	14.5*13.0*17.0mm	1 From C	1A 120VAC/12VDC	12VDC	TRM
23051	TRM-12VDC-SC-SH	TTI	TTI Relay	14.5*13.0*17.0mm	1 From U	2A 120VAC/12VDC	12VDC	TRM
23052	TRM-24VDC-SC-SH	TTI	TTI Relay	14.5*13.0*17.0mm	1 From U	2A 120VAC/12VDC	24VDC	TRM

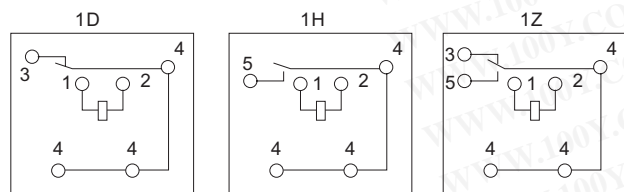


### MAIN FEATURES

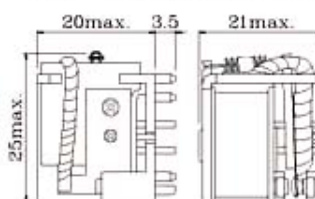
- Subminiature, PCB Mounting.
- Heavy Duty, Silver Alloy Contacts up to 30A or 45A.
- 1 Form A, 1 Form B or 1 Form C.
- Two different spacing arrangements of terminals are available to meet the world standards.
- Used for Automotives, Industrial Control, Household Appliances and Heavy Loads, etc.

### TYPICAL APPLICATIONS IN AUTOMOTIVE INDUSTRY

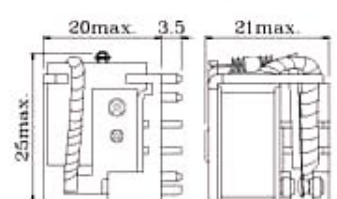
- Direction Indicators
- Interval Wipers Control
- Fuel Pump Control
- Ventilation Motor
- Hazard Lights
- Heater Control
- Rear Window Heating
- Air Conditioning
- Central door lock
- Anti-lock braking system
- Self tension adjustment
- Window lifter
- Seat positioning
- Flashes or turning signals
- Car alarm system
- Initial value control
- Automatic mirror adjustment
- Sliding roof



### Open - European Footprint



### Open - US Footprint



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