Features

- Small Size
- High sensitive 150mW
- Matching standard 16pin IC socket
- Available in Single side stable & latching type
- Bifurcated contacts
- Environmental friendly product (RoHS compliant)
- Dimensions: 20.2 x 10.2 x 10.6 mm

Application

- Telecommunication Equipment / Security Alarm Systems / Measuring instruments / Medical Monitoring Equipment / Audio Visual Equipment / Flight Simulator / Sensor Control, etc.

Contact Data

Contact Arrangement	2C
Contact Material	Ag Alloy
Contact Rating	1A 125VAC, 2A 30VDC, 3A 30VDC
Max. Switching Power	125VA / 90W
Max. Switching Voltage	250VAC / 220VDC
Max. Switching Current	3A
Contact Resistance	≦100mΩ (at 10mA 30mVDC)
Electrical Endurance	$5x10^4$ (2A 30VDC, Ag contact, Resistive load, at 70℃, 1s on 9s off)
Mechanical Endurance	$1x10^8$

Coil Parameter (at 23℃)

Single Side Stable (Standard type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	4.5	45	2.30	0.30	0.20
5	7.5	125	3.75	0.50	
6	9.0	180	4.50	0.60	
9	13.5	405	6.75	0.90	
12	18.0	720	9.00	1.20	
15	22.5	1125	11.25	1.50	
24	36.0	2880	18.0	2.40	
48	72.0	11520	36.0	4.80	

Single Side Stable (Sensitive type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Pickup Voltage(max) (VDC)	Release Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	4.5	60	2.4	0.30	0.15
5	7.5	167	4.0	0.50	
6	9.0	240	4.8	0.60	
9	13.5	540	7.2	0.90	
12	18.0	960	9.6	1.20	
15	22.5	1500	12.0	1.50	
24	36.0	3840	19.2	2.40	

Coil Parameter (at 23℃)

1 Coil Latching (Standard type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Set Voltage(max) (VDC)	Reset Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	5.4	90	2.25	2.25	0.10
5	9.0	250	3.75	3.75	
6	10.8	360	4.50	4.50	
9	16.2	810	6.75	6.75	
12	21.6	1440	9.00	9.00	
15	27.0	2220	11.25	11.25	
24	43.2	4000	18.00	18.00	0.144

1 Coil Latching (Sensitive type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Set Voltage(max) (VDC)	Reset Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	5.4	120	2.25	2.25	0.075
5	9.0	330	3.75	3.75	
6	10.8	480	4.50	4.50	
9	16.2	1080	6.75	6.75	
12	21.6	1920	9.00	9.00	
15	27.0	3000	11.25	11.25	
24	43.2	7680	18.00	18.00	

Coil Parameter (at 23℃)

2 Coil Latching (Standard type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Set Voltage(max) (VDC)	Reset Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	4.5	45	2.25	2.25	0.20
5	7.5	125	3.75	3.75	
6	9.0	180	4.50	4.50	
9	13.5	405	6.75	6.75	
12	18.0	720	9.00	9.00	
15	22.5	1125	11.25	11.25	
24	36.0	2040	18.00	18.00	0.282

2 Coil Latching (Sensitive type)

Coil Voltage (VDC)		Coil Resistance (Ω±10%)	Set Voltage(max) (VDC)	Reset Voltage(min) (VDC)	Coil Power Consumption (W)
Rated	Max.				
3	4.5	60	2.4	2.4	0.15
5	7.5	167	4.0	4.0	
6	9.0	240	4.8	4.8	
9	13.5	540	7.2	7.2	
12	18.0	960	9.6	9.6	
15	22.5	1500	12.0	12.0	
24	36.0	3840	19.2	19.2	

Operation Condition

Insulation Resistance		1000MΩ min (at 500VDC)
Dielectric Strength	Between Contacts	1000VAC 1min
	Between Contact and Coil	1 coil: 1500VAC 1min 2 coils: 1000VAC 1min
Shock Resistance	Functional	490m/s^2
	Endurance	980m/s^2
Vibration Resistance		10~55Hz double amplitude 1.5mm
Ambient Temperature		-40 ~ +85℃
Operate Time		≦4.5ms
Release Time		≦4ms
Set Time (Latching Type)		≦4.5ms
Reset Time (Latching Type)		≦4.5ms
Relative Humidity		5%~85%
Weight		Approx. 4.5g

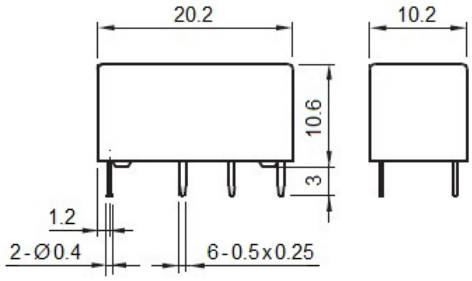
Ordering Information

	TD	-12D	L1	S	-A	(XXX)
Model						
Coil Voltage	3, 5, 6, 9, 12, 15, 24, 48 VDC					
Coil Sort	**Nil**: Single side stable **L1**: 1 coil latching **L2**: 2 coil latching					
Coil Power	**Nil**: Standard **S**:Sensitive					
Contact Material	**Nil**: AgPd/Ag+Gold plated **A**: AgPd/AgPd+Gold plated **D**: Ag+Gold plated/Ag+Gold plated					
Special Code	**Nil**: Standard **XXX**: Customer special requirement					

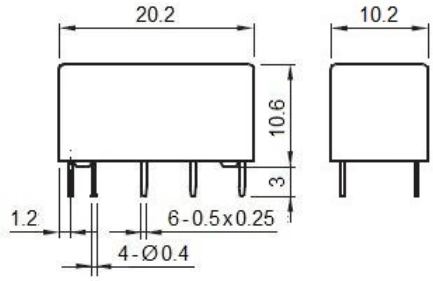
Dimensions (UNIT: mm)

Outline Dimensions

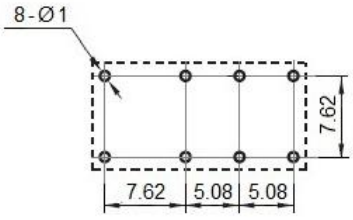
TD type (Single side stable & 1 coil latching)

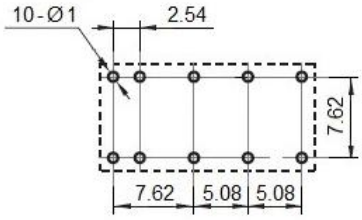


TD type (2 coil latching)

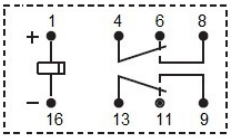


Mounting (Bottom views)





Wiring Diagram (Bottom views)



For latching, diagram shows the "reset position
Energize terminals 1 and 16 to "set"
Reverse energize terminals 1 and 16 to "reset"

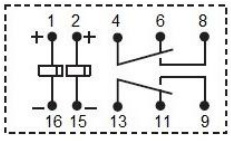
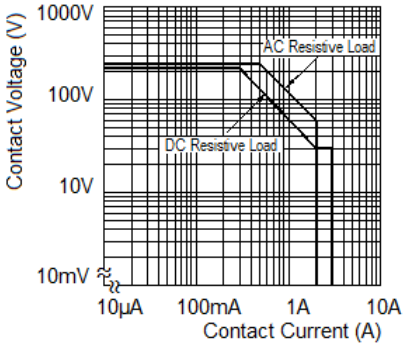


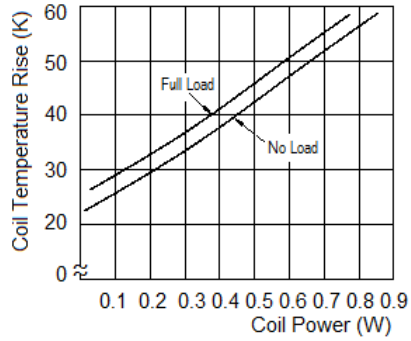
Diagram shows the "reset position
Energize terminals 1 and 16 to "set"
Energize terminals 2 and 15 to "reset"

Engineering Data

Maximum Switching Power



Coil Temperature Rise



Test conditions:
Resistive load, at 70℃, 1s on 9s off.

Remark: 1) In case of no tolerance shown in outline dimension: outline dimension ≦1mm, tolerance should be ±0.2mm; outline dimension >1mm and ≦5mm, tolerance should be ±0.3mm; outline dimension >5mm, tolerance should be ±0.5mm.
2) The tolerance without indicating for PCB layout is always ±0.1mm.

Notice

1. The data shown above are initial values.
2. Relay is on the “reset” or “set” status when being released from stock, with the consideration of shock risen from transit and relay mounting, relay would be changed to “set” or “reset” status, therefore, when application (connecting the power supply), please reset the relay to “set” or “reset” status on request.
3. Do not energize voltage to “set” coil and “reset” coil simultaneously. And also long energized time (more than 1 min) should be avoided.
4. Normally the load terminals are not suitable for reflow solder, wave solder or tin solder, we suggest use spot welding. Load terminals shall be prevented from assemble stress, or freely move.
5. Relays used for metering measuring applications are usually made with dust proof structure, while most relays could be made specially per customer’s specific requirements. No longer than 6 months’ storage time is recommended for this kind of relay, and please pay attention to the storage environment. To ensure contact reliability, we will keep contact status be closed when delivery if no special required by customer.

Disclaimer

The specification is for reference only. See to”Terminology and Guidelines” for more information. Specifications subject to change without notice. We could not evaluate all the performance and all the parameters for every possible application. Thus the user should be in a right position to choose the suitable product for their own application. If there is any query, please contact IOEC for the technical service. However, it is the user’s responsibility to determine which product should be used only.