

●/E/N 73 AUTOMOTIVE POWER RELAY

FEATURES

- High Performance
- 4.8 & 6.3 mm Flat terminals
- PC Version Available
- Suitable Couplers available
- Optional Sealing

APPLICATION

- Head Lamp Control
- Starter Motors
- Defogger
- Radiator Fan
- A/C Controls

TECHNICAL DATA FOR CONTACT SIDE:

Model : 73-1A 73-IC

Areas of Application LAMP LOAD RESISTIVE / INDUCTIVE LOAD

1A/1C **Contact Configuration** 1A Silver Tin Oxide Silver Nickel Contact Material 20A (Lamp) 20/10A (Res) Contact Rating at 23°C - 12VDC 2 x 10⁵ 2 x 10⁵ Electrical Life Operations Min. 1 x 10⁶ 1 x 10⁶ Mechanical Life Operations Min. Contact Voltage Current at 10 A (Min) 30mV 30mV

Maximum Switching Current
@ 12.8 VDC For 3 Sec. : 100A 100A

GENERAL DATA FOR COIL SIDE

Nominal Coil Power : 1.3W (Approx)

Operating Power : 0.97W (Approx)

Operate Time* : 10 milli Seconds

Release Time* : 7 milli Seconds

OPERATING CONDITIONS

Ambient Temperature : -30°C to +85°C

Maximum Temperature : 155°C Dielectric Strength : 500VRMS

Insulation Resistance : 100 Meg. Ohms Min. At 500 VDC,

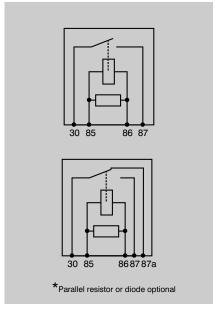
25°C RH 50

Vibration Resistance (without change

in the switching state> $10\mu S$) : 10-500Hz 5g Shock Resistance (without change : 20g, 8mS

in the switching state> 10μ S)

CIRCUIT DIAGRAM



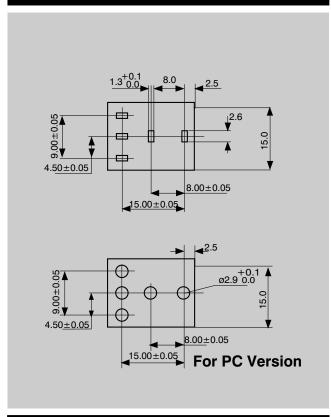


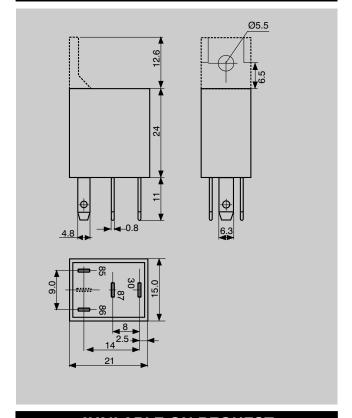
^{*} At nominal voltage without coil suppression (excluding bounce)

HOW TO ORDER PC - XXX 73 12 0 Product Specialities Series PC: PC Version 0-Standrd (without bracket) I - with bracket 0- No Resistor in Parallel to Coil Contact Arrangement 1A - 1 Form A 1 - With Resistor in Parallel to Coil 1C - 1 Form C Contact Material 0 - Silver Tin Oxide 1 - Silver Nickel Nominal Voltage (Refer Coil Data)

COIL DATA *Pick-up Voltage VDC (Max) Nominal Voltage VDC Drop-out Voltage VDC (Min) Coil Resistance Ohms ±10% 06 4.5 0.6 26 12 8.2 1.2 110 430 24 16.4 2.4

DRILLING PATTERN





DIMENSIONS

MECHANICAL DATA

COVER RETENTION

Pull : 20KgF
Push : 20KgF

TERMINAL STRENGTH

Pull : 10KgF
Push : 10KgF

AVAILABLE ON REQUEST

- High temperature winding wire
- Special contacts for higher contact rating
- Cover with notches
- Special coil resistance & pick-up
- Resistor/diode across coil
- For other custom solutions consult factory

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^{**}Lower pick-up Voltages available on request

DATA ON VARIOUS TESTS CONDUCTED FOR OPERATING CONDITIONS*		
TEST	TEST CONDITION	RESULT
Continuous Energisation test at Extreme temperature Conditions	Relay kept at 100 ⁰ C	Relays successfully completed 100000 operations at given load
	Coil Voltage : 14 VDC	
	Load given : 20 A @ 12 VDC	
	Duration : 5 Sec. On, 5 Sec. OFF	
	No. of operation : 50000	
	The above test repeated at - 30°C for 50000 operations	
Thermal cycling	Relay subjected to :-	All operating parameters within the specifications after test
	-30°C to + 100°C in 2 Hrs. with coil ON	
	+100 ⁰ C for 2 Hrs. with coil ON	
	+100°C to - 30°C in 2 Hrs. with 1 Hrs. Coil ON & 1 Hrs. Coil OFF	
	-30 ⁰ C for two Hrs. with Coil ON	
	No. of Cycles : 3	
Shock Voltage	Relay is subjected to :-	
	Max. Voltage : 100VDC	
	Shock Wave : Exponential Damping vibration	After the test, all operating parameters of the relay are within specification.
	Time : 500 micro Sec.	
	Period : 30 Sec.	
	Test Time : 10 Hrs.	
Dropping Impact	Relays dropped from a height of 1 Meter to a concrete floor	No change in operating parameters of the relay.
Jump Start	24 VDC for 1 minute conducting normal current at 23°C	Withstood successfully
Corrosion Resistance	5% Sodium Chloride solution applied to relay for 48 Hrs.	No damage to relay parts
Water Resistance test AS per JIS D 0203 R2	Horizontal Plane:23rev. / Min. Water Pressure:0.03 Mpa Test time:10 Min	No water ingression inside the relay

^{*}Typical values for relays with 12 VDC coil. For higher severity please consult factory