O/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**
Contact Configuration	:	1A	1A/1C
Contact Material	:	Silver Tin Oxide	Silver Nickel
Contact Rating at 23°C - 12VDC	:	20A (Lamp)	20/10A (Res)
Electrical Life Operations Min.	:	2×10^5	2×10^5
Mechanical Life Operations Min.	:	1×10^6	1×10^6
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

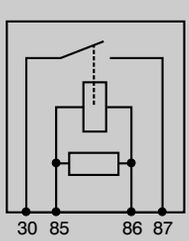
Nominal Coil Power	:	1.3W (Approx)
Operating Power	:	0.97W (Approx)
Operate Time*	:	10 milli Seconds
Release Time*	:	7 milli Seconds

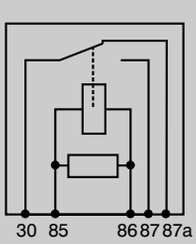
* At nominal voltage without coil suppression (excluding bounce)

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

CIRCUIT DIAGRAM





*Parallel resistor or diode optional

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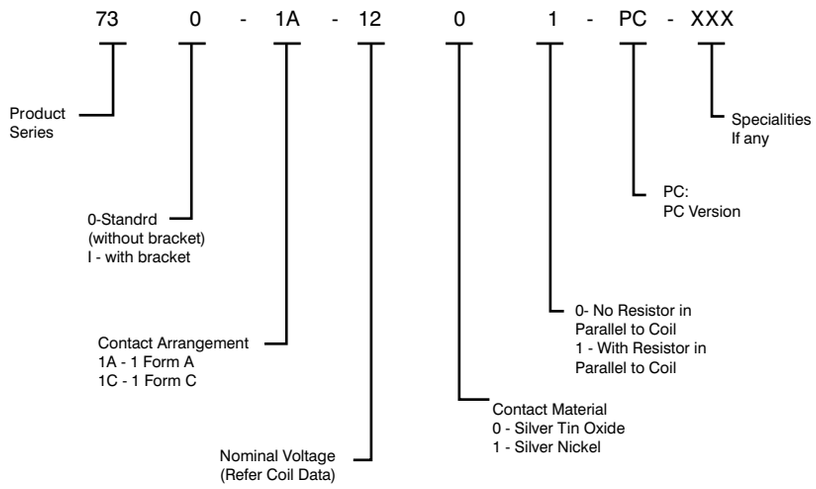
HOW TO ORDER

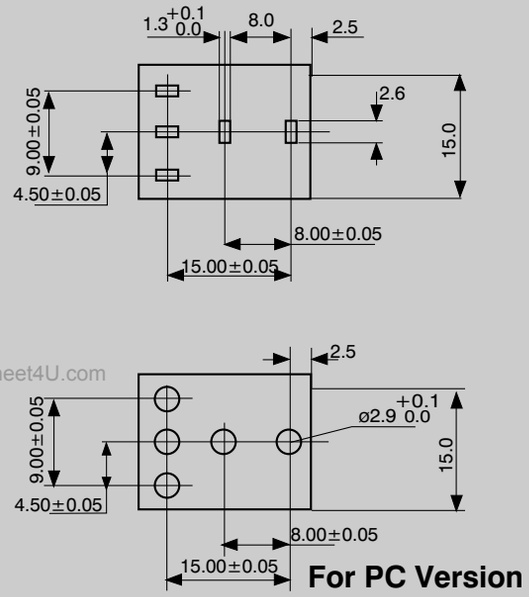


COIL DATA

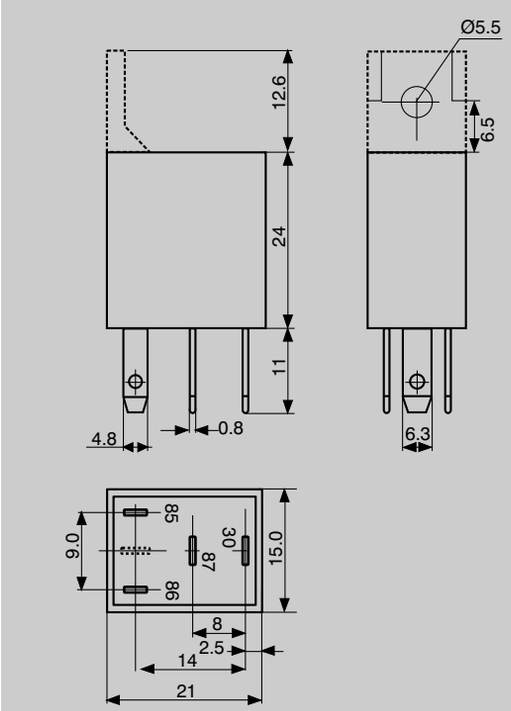
Nominal Voltage VDC	*Pick-up Voltage VDC (Max)	Drop-out Voltage VDC (Min)	Coil Resistance Ohms ±10%
06	4.5	0.6	26
12	8.2	1.2	110
24	16.4	2.4	430

**Lower pick-up Voltages available on request

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**

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 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^{0}C for 50000 operations	Relays successfully completed 100000 operations at given load
Thermal cycling	Relay subjected to :- -30^{0}C to + 100^{0}C in 2 Hrs. with coil ON +100^{0}C for 2 Hrs. with coil ON +100^{0}C to - 30^{0}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	All operating parameters within the specifications after test
Shock Voltage	Relay is subjected to :- Max. Voltage : 100VDC Shock Wave : Exponential Damping vibration Time : 500 micro Sec. Period : 30 Sec. Test Time : 10 Hrs.	After the test, all operating parameters of the relay are within specification.
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^{0}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