O/E/N 74

AUTOMOTIVE POWER RELAY

FEATURES

- High performance
- 6.3mm Flat Terminals
- Current rating up to 40A
- Suitable Couplers available
- Optional Sealing

APPLICATION

- Horn Control
- Starter Motors
- Defogger
- Radiator Fan
- A/C Controls
- Security Systems

TECHNICAL DATA FOR CONTACT SIDE :

Model		:	**74**	**74-SC**
Areas of Application			**RESISTIVE / INDUCTIVE/HEAD LAMP/CAPACITIVE LOADS**	
Contact Configuration		:	1A/1C	1A/1C
Contact Material		:	Silver Nickel	Silver Nickel / Silver Tin Oxide*
Contact Rating at 23°C - 12VDC (Res.)	NO	:	30	40
	NC	:	20	30
Electrical Life Operations Min.		:	2×10^5	2×10^5
Mechanical Life Operations Min.		:	1×10^6	1×10^6
Contact Voltage Drop at 10 A (Min)		:	50mV	50mV
Maximum Switching Current @ 12.8 VDC For 3 Sec.		:	120A	150A

*Under introduction

GENERAL DATA FOR COIL SIDE

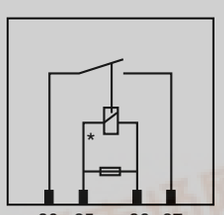
Nominal Coil Power	:	1.6W (Approx)
Operating Power	:	1.8W (Approx)
Operate Time**	:	15 milli Seconds
Release Time**	:	15 milli Seconds

** At nominal voltage without coil suppression (excluding bounce)

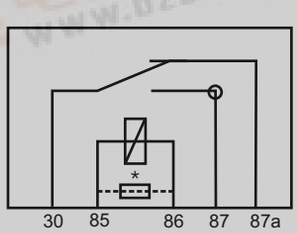
OPERATING CONDITIONS

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)	:	10-2000Hz 4.4g
Shock Resistance (without change in the switching state>10μS)	:	30g, 8mS

CIRCUIT DIAGRAM



1 Form A



1 Form C

* parallel resistor or diode optional

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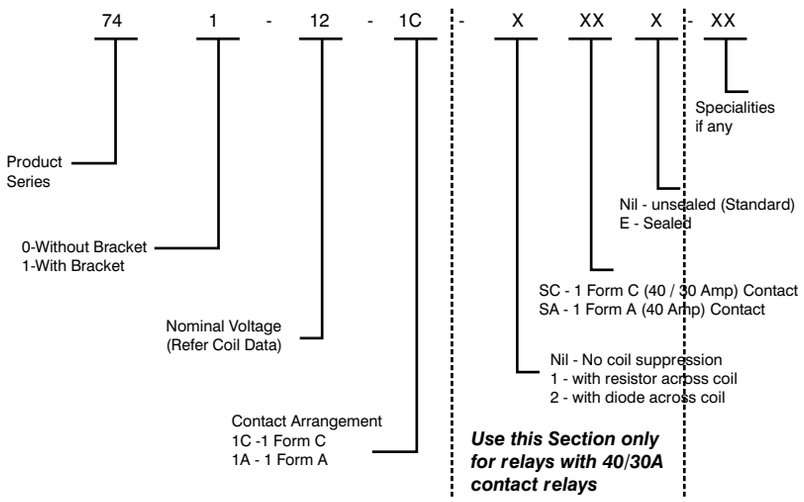
HOW TO ORDER



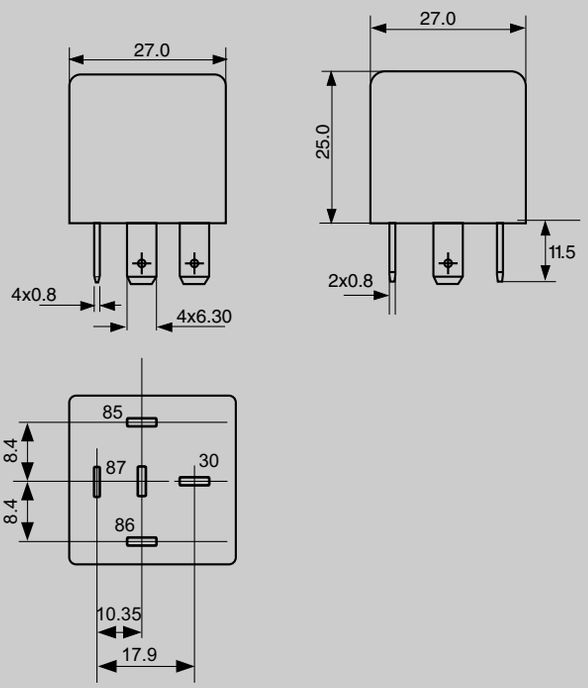
COIL DATA

Nominal Voltage VDC	***Pick-up Voltage VDC (Max)	Drop-out Voltage VDC (Min)	Coil Resistance Ohms (± 10%)
12	8	1.2	85
24	17	2.4	305

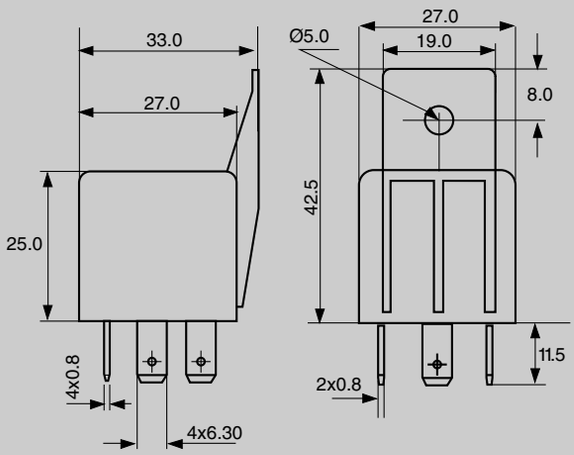
***Lower pick-up Voltages available on request

DIMENSIONS

Relay without Bracket



Relay with Bracket



MECHANICAL DATA

COVER RETENTION

Pull	:	20KgF
Push	:	20KgF

TERMINAL STRENGTH

Pull	:	10KgF
Push	:	10KgF

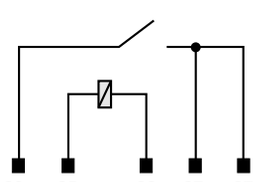
AVAILABLE ON REQUEST

- High temperature winding wire
- Special Contact arrangements
- Special coil resistance & pick-up
- Resistor / Diode across coil
- **For other custom solutions consult factory**

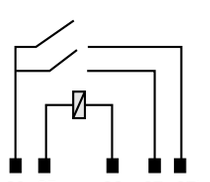
DATA ON VARIOUS TESTS CONDUCTED FOR OPERATING CONDITIONS		
TEST	**TEST CONDITION**	**RESULT**
Continuous Energisation test at Extreme temperature Conditions	Relay kept at 100^0C Coil Voltage : 14 VDC Load given : 25 A @ 12 VDC Duration : 5 Sec. On, 5 Sec. OFF No. of operation : 50000 The above test repeated at - 30^0C for 50000 operations	Relays successfully completed 100000 operations at given load
Thermal cycling	Relay subjected to :- -30^0C to + 100^0C in 2 Hrs. with coil ON +100^0C for 2 Hrs. with coil ON +100^0C to - 30^0C in 2 Hrs. with 1 Hrs. Coil ON & 1 Hrs. Coil OFF -30^0C 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 nominal current at 23^0C	Withstood successfully
Corrosion Resistance	5% Sodium Chloride solution applied to relay for 48 Hrs.	No damage to relay parts
Water Resistance test	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

OPTIONAL SPECIAL CIRCUITRY



1 FORM A (2 PINS 87)



1 FORM U (under introduction)