



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 x 10 ⁵ | 2 x 10 ⁵ |
| Mechanical Life Operations Min. | : | 1 x 10 ⁶ | 1 x 10 ⁶ |
| Contact Voltage Drop at 10 A (Min) | : | 50mV | 50mV |
| Maximum Switching Current @ 12.8 VDC For 3 Sec. | : | 120A | 150A |

*Under introduction

www.DataSheet4U.com

GENERAL DATA FOR COIL SIDE

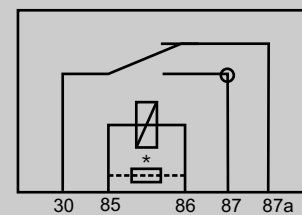
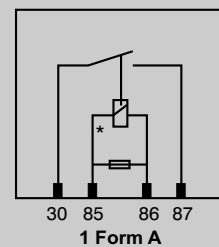
| | | |
|--------------------|---|------------------|
| Nominal Coil Power | : | 1.6W (Approx) |
| Operating Power | : | 1.8W (Approx) |
| Operate Time** | : | 15 milli Seconds |
| Release Time** | : | 15 milli Seconds |

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

OPERATING CONDITIONS

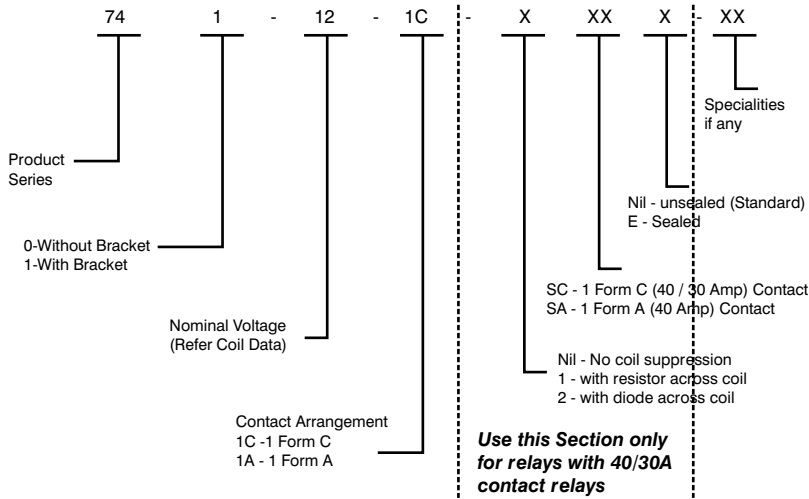
| | | |
|---|---|---|
| Ambient Temperature | : | -30°C to +85°C |
| Maximum Temperature | : | 155°C |
| Dielectric Strength | : | 500VRMS |
| Insulation Resistance | : | 100 Meg. Ohms Min. At 500 VDC, 25°C RH 50 |
| Vibration Resistance (without change in the switching state > 10μS) | : | 10-2000Hz 4.4g |
| Shock Resistance (without change in the switching state > 10μS) | : | 30g, 8mS |

CIRCUIT DIAGRAM



* parallel resistor or diode optional

HOW TO ORDER



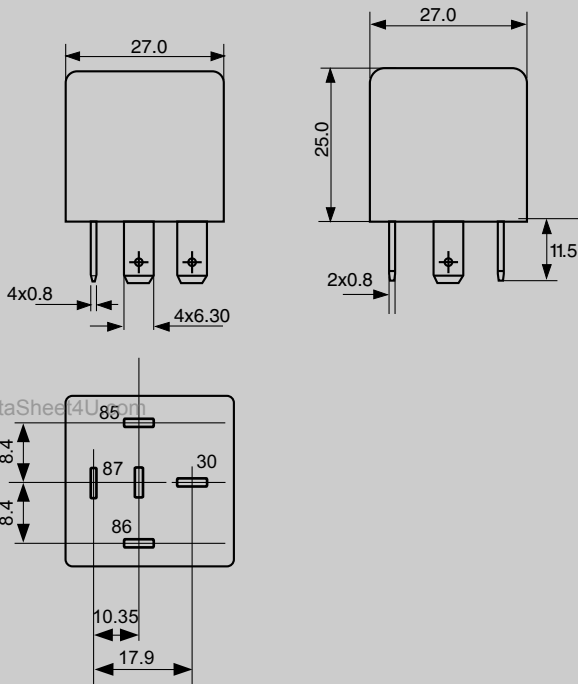
COIL DATA

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

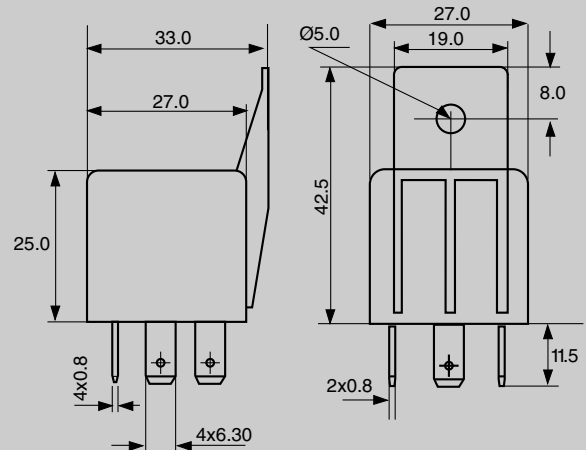
***Lower pick-up Voltages available on request

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°C 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°C for 50000 operations | Relays successfully completed 100000 operations at given load |
| Thermal cycling | Relay subjected to :- -30°C to + 100°C in 2 Hrs. with coil ON +100°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°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 nominal 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 | Horizontal Plane:23rev. / Min. Water Pressure:0.03 Mpa Test time:10 Min | No water ingress inside the relay |

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

OPTIONAL SPECIAL CIRCUITRY