

# O/E/N 35

## MEDIUM POWER AUTOMOTIVE RELAY

### FEATURES

- Direct PCB Mountable
- Cost Effective
- Suitable for various loads
- Miniature Size

### APPLICATION

- Turn Signal & hazard warning lights
- Flashers
- Wiper Controls
- Head Lamp Control
- Starter Motors
- Security Systems

### TECHNICAL DATA FOR CONTACT SIDE :

| Model                                           | : | 3501/3531                         | 3521                             | 3541                  |
|-------------------------------------------------|---|-----------------------------------|----------------------------------|-----------------------|
| <b>Areas of Application</b>                     |   | <b>RESISTIVE / INDUCTIVE LOAD</b> | <b>INDICATOR LAMP LOAD</b>       | <b>HEAD LAMPLOADS</b> |
| Contact Configuration                           | : | 1A/1C                             | 1A                               | 1A                    |
| Contact Material                                | : | Silver Nickel                     | Palladium copper*/ Silver Nickel | Silver Tin Oxide      |
| Contact Rating at 23°C - 12VDC                  | : | 12A/8A(Res.)                      | 360W (Lamp)                      | 20A (Lamp)            |
| 24VDC                                           | : | 6A / 4A (Res.)                    | 180W (Lamp)                      | 10A (Lamp)            |
| Electrical Life Operations Min.                 | : | 1 x 10 <sup>5</sup>               | 1 x 10 <sup>6</sup>              | 2 x 10 <sup>5</sup>   |
| Mechanical Life Operations Min.                 | : | 1 x 10 <sup>7</sup>               | 1 x 10 <sup>7</sup>              | 1 x 10 <sup>7</sup>   |
| Contact Voltage Drop at 10 A (Min)              | : | 60mV                              | 100mV                            | 60mV                  |
| Maximum Switching Current @ 12.8 VDC For 3 Sec. | : | 50A                               | 50A                              | 50A                   |

\*The moving contact (PdCu) must be connected to positive polarity

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### GENERAL DATA FOR COIL SIDE

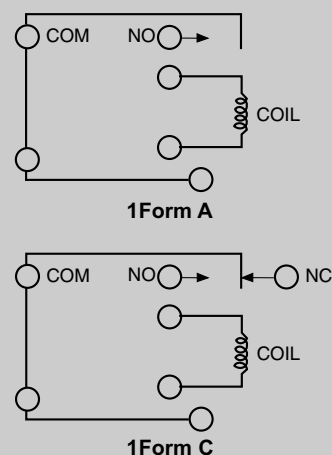
|                    |   |                  |
|--------------------|---|------------------|
| Nominal Coil Power | : | 1.6W (Approx)    |
| Operating Power    | : | 1.9W (Approx)    |
| Operate Time**     | : | 10 milli Seconds |
| Release Time**     | : | 5 milli Seconds  |

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

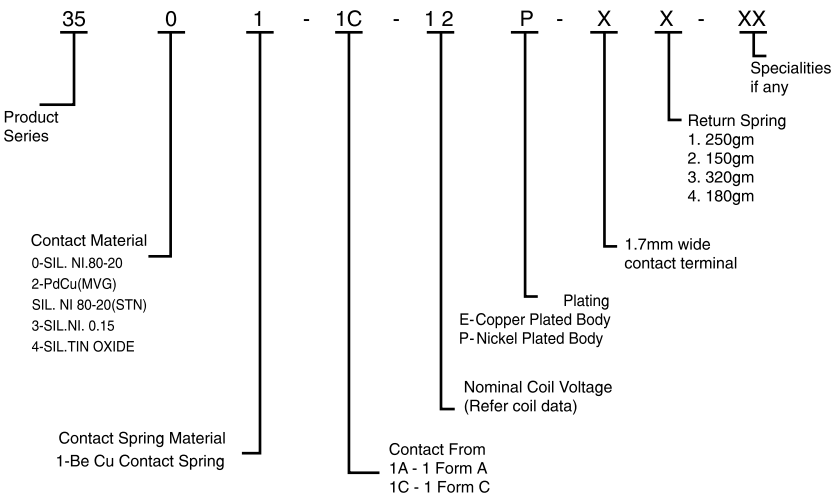
### OPERATING CONDITIONS

|                                                               |   |                                           |
|---------------------------------------------------------------|---|-------------------------------------------|
| Ambient Temperature                                           | : | -40°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 switching state>10μS) | : | 10-100Hz 20 - 40g                         |
| Shock Resistance (without Change in switching state>10μS)     | : | 30g, 8mS                                  |

### CIRCUIT DIAGRAM



HOW TO ORDER

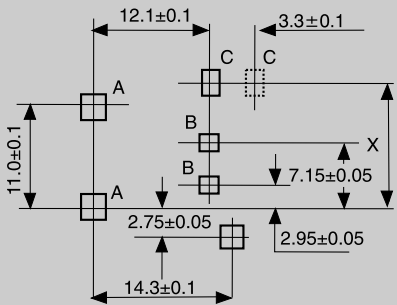


COIL DATA

| Nominal Voltage VDC | *Pick-up Voltage VDC (Max) | Drop-out Voltage VDC (Min) | Coil Resistance Ohms ± 10% |
|---------------------|----------------------------|----------------------------|----------------------------|
| 6                   | 5                          | 0.6                        | 35                         |
| 9                   | 7                          | 0.9                        | 55                         |
| 12                  | 9                          | 1.2                        | 88                         |
| 18                  | 14                         | 1.8                        | 260                        |
| 24                  | 18                         | 2.4                        | 400                        |
| 48                  | 36                         | 4.8                        | 1700                       |

\*\*Lower pick-up Voltages available on request

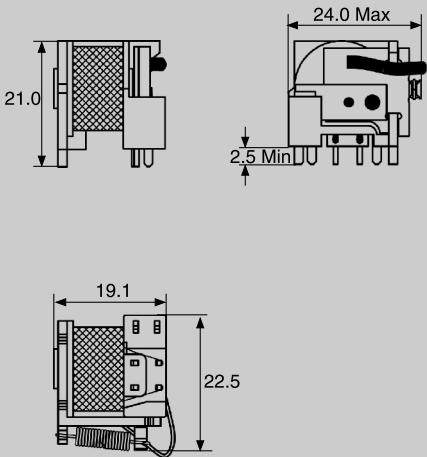
DRILLING PATTERN



|                                                  | DIM - X   | SLOT - A   | SLOT - B   | SLOT - C          |
|--------------------------------------------------|-----------|------------|------------|-------------------|
| Std. Relay with 1.7 wide contact terminal (Std.) | 13.15±0.1 | 1.7±0.1 SQ | 1.1±0.1 SQ | 2.0±0.1 x 1.1±0.1 |

Note:  
Slot C given in dotted line is only to Std.1 form-C version. For holes in place of slots use Ø2.3 holes instead of slots A Ø1.3 holes instead of slots B & 2.1 holes instead of slots C

DIMENSIONS



AVAILABLE ON REQUEST

- Special contacts for higher contact rating
- Extra braided wire
- High temperature winding wire
- Special coil resistance & pick-up
- For other custom solutions consult factory