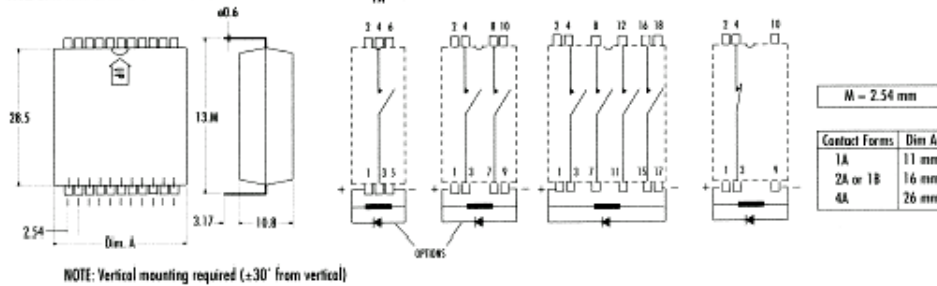


3582.745X RELAY SERIES

HG-Wetted relay



MECHANICAL DIMENSIONS



FEATURES

- Vertical mounting required
- High reliability bounce free switching
- Outgoing quality level <50 PPM
- Long operation life at low levels ($>1 \times 10^9$ operations)
- Stable contact resistance throughout life
- Switching voltage up to 1000V with reduced power
- 50W switching capability, up to 500 V
- Switching speed up to 200 Hz
- Automatic board processing
- Epoxy molded package

APPLICATIONS

- Automatic test equipment
- Process control
- Industrial
- Telecom
- Datacom
- High-end security systems
- Signaling
- Metering

HG Reed
Relays
Universal
package
Datasheet
MHMG

ORDERING INFORMATION

3582 745X XX X

1 = 1 form A
2 = 2 form A
4 = 4 form A
9 = 1 form B

Nominal coil Voltage
05 = 5V
12 = 12V
24 = 24V
48 = 48V

Version
1 = Standard
3 = Diode

COIL PARAMETERS

| Type | Contact form | Coil Resistance ($\pm 10\%$) | Operate Voltage | Release Voltage | Nominal Voltage | Maximum Voltage | Nominal Input Power |
|---------------|--------------|--------------------------------|-----------------|-----------------|-----------------|-----------------|---------------------|
| 3582 7451 05X | 1 Form A | 77 Ω | 3.75V | 0.5V | 5V | 12V | 324 mW |
| 3582 7451 12X | 1 Form A | 490 Ω | 9V | 1.3V | 12V | 31V | 294 mW |
| 3582 7451 24X | 1 Form A | 1870 Ω | 18V | 2.6V | 24V | 61V | 308 mW |
| 3582 7451 48X | 1 Form A | 7130 Ω | 38V | 5.3V | 48V | 120V | 323 mW |
| 3582 7452 05X | 2 Form A | 32 Ω | 3.75V | 0.4V | 5V | 9V | 781 mW |
| 3582 7452 12X | 2 Form A | 184 Ω | 9V | 0.9V | 12V | 23V | 783 mW |
| 3582 7452 24X | 2 Form A | 744 Ω | 18V | 2V | 24V | 47V | 774 mW |
| 3582 7452 48X | 2 Form A | 2850 Ω | 38V | 3.9V | 48V | 92V | 808 mW |
| 3582 7454 05X | 4 Form A | 20 Ω | 3.75V | 0.4V | 5V | 9V | 1250 mW |
| 3582 7454 12X | 4 Form A | 126 Ω | 9V | 1V | 12V | 23V | 1143 mW |
| 3582 7454 24X | 4 Form A | 510 Ω | 18V | 2.1V | 24V | 43V | 1200 mW |
| 3582 7454 48X | 4 Form A | 1920 Ω | 38V | 4.2V | 48V | 95V | 1200 mW |
| 3582 7459 05X | 1 Form B | 75 Ω | 3.75V | 0.5V | 5V | 6V | 333 mW |
| 3582 7459 12X | 1 Form B | 507 Ω | 9V | 1.3V | 12V | 15V | 284 mW |
| 3582 7459 24X | 1 Form B | 1850 Ω | 18V | 2V | 24V | 30V | 311 mW |
| 3582 7459 48X | 1 Form B | 7100 Ω | 38V | 3.9V | 48V | 60V | 325 mW |

RELAY PARAMETERS

| Relay Specifications | Conditions | Symbol | Min | Typ | Max | Units | |
|---|-------------------------------|--------------------------------|------------------|-----------|------|-------------|-------|
| Insulation Resistance | Across open contact | IR | 10^8 | 10^{11} | | Ω | |
| | Contact to contact | IR | 10^{10} | 10^{12} | | Ω | |
| | Contact to coil | IR | 10^{10} | 10^{12} | | Ω | |
| Capacitance | at 500V, 25°C, 10%RH | | | 0.7 | | pF | |
| | Across Open Contacts | | | 2 | | pF | |
| | Open contact to coil | | | 3 | | pF | |
| Dielectric Strength | Closed contact to Coil | | | | | VDC/Peak AC | |
| | Between Contacts | I/O | 2000 | | | VAC | |
| | Contact to Contact | I/O | 1000 | | | VAC | |
| Operate Time | Contact to Coil | I/O | 1000 | | | VAC | |
| | At V.nom 10Hz Sq. Wave 1 F. A | T _{op} | | 1.6 | | ms | |
| | At V.nom 10Hz Sq. Wave 2 F. A | T _{op} | | 1.8 | | ms | |
| | At V.nom 10Hz Sq. Wave 4 F. A | T _{op} | | 1.95 | | ms | |
| | At V.nom 10Hz Sq. Wave 1 F. B | T _{op} | | 1.9 | | ms | |
| | Release Time | Zener-diode suppression 1 F. A | T _{rel} | | 1.6 | | ms |
| Zener-diode suppression 2 F. A | | T _{rel} | | 1.6 | | ms | |
| Zener-diode suppression 4 F. A | | T _{rel} | | 1.75 | | ms | |
| Zener-diode suppression 1 F. B | | T _{rel} | | 1.6 | | ms | |
| Environmental Ratings | | Conditions | Symbol | Min | Typ | Max | Units |
| | | Storage Temperature | T _a | -40 | | +105 | °C |
| | Operating Temperature | T _o | -38 | | +75 | °C | |
| Soldering Temperature | | | | | +260 | °C | |
| Vibration Resistance (Survival) | 10 Hz - 500 Hz | G | | | 10 | g | |
| Shock Resistance (Survival) | 11 \pm 1 ms, 1/2 Sine Wave | S | | | 30 | g | |
| Weight: 1A 8.3g. 2A 12g. 4A 20g. 1B 12.5g | | | | | | | |

SWITCHING PARAMETERS

| Contact Ratings | Conditions | Symbol | Min | Typ | Max | Units |
|---------------------------|-------------------------------------|----------------|------|-----|-----|-------------------|
| Switching Voltage | Max DC/Peak AC Resist | V ₁ | | | 500 | Volts |
| Switching Current | Max DC/Peak AC Resist | I ₁ | | | 2 | Amps |
| Carry Current (24 h) | Max DC/Peak AC Resist | I _c | | | 3 | Amps |
| Contact Rating | Max DC/Peak AC Resist | | | | 50 | Watts |
| Life Expectancy | Signal Level 1.0V, 10mA Rated Loads | | 1000 | | | $\times 10^6$ Ops |
| | 50V, 1A | | 2 | | | $\times 10^6$ Ops |
| | 500V, 100mA | | 50 | | | $\times 10^6$ Ops |
| Static Contact Resistance | 50mV, 10mA | CR | | 40 | 100 | m Ω |
| Contact Mat. Hg content | | | | 40 | | mg |

NOTE: All parameters at 25°C unless otherwise stated