*Products for tomorrow...*

7 RELAYS

## Description

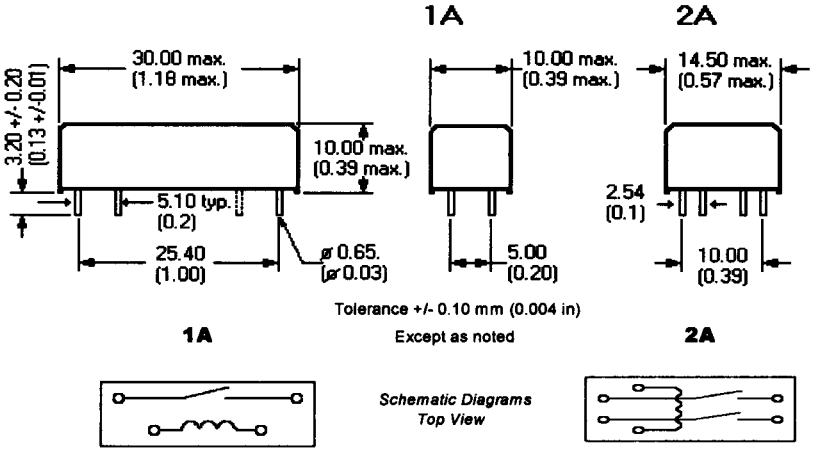
Miniature Reed Relay

## Applications

Test, measurement,
and control equipment

## Features

Up to 4 form A switches available
(dry/mercury wetted) or 1-4 form C switches
Various switch types with high isolation available
Versions with high insulation
resistance ($10^{14}$ Ohm)






*Schematic Diagrams*
*Top View*



## Ordering Information

| MRE | XX- | XX- | HI |
|---|---|---|---|
| *Series* | *Nominal Voltage* | *Contact Type* | *Insulation resistance $10^{14}$ Ohm (only for switch 79)* |
| | 5 | 1A71 | |
| | 12 | 1A74 | |
| | | 1A79 | |

(Adding 2A for 2 poles)

| All data at 20 °C | Contact type | Contact 71 Standard | | | Contact 74 High Current | | | Contact 79 High Insulation Res. | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Contact form | Form 1A | | | Form1A | | | Form1A | | | |
| **Parameter** | **Conditions** | **Sym.** | **Min** | **Typ** | **Max** | **Min** | **Typ** | **Max** | **Min** | **Typ** | **Max** | **Units** |
| **Coil Characteristics*** | | | | | | | | | | | | |
| 5 Volt coil drive | Operating voltage (A/B) | | | 5 | 7.5 | | 5 | 7.5 | | 5 | 7.5 | Volts |
| | Coil resistance | | 306 | 340 | 374 | 306 | 340 | 374 | 193.5 | 215 | 236.5 | Ω |
| | Must Operate Voltage | | 1 | | 3.8 | 1 | | 3.8 | 1 | | 3.8 | Volts |
| | Must Reset voltage | | 1 | | 3.8 | 1 | | 3.8 | 1 | | 3.8 | Volts |
| 12 Volt coil drive | Operating voltage (A/B) | | | 12 | 16 | | 12 | 16 | | 12 | 16 | Volts |
| | Coil resistance | | 1170 | 1300 | 1430 | 1170 | 1300 | 1430 | 810 | 900 | 990 | Ω |
| | Must Operate Voltage | | 2 | | 9 | 2 | | 9 | 2 | | 9 | Volts |
| | Must Reset voltage | | 2 | | 9 | 2 | | 9 | 2 | | 9 | Volts |
| **Contact Ratings** | | | | | | | | | | | | |
| Rated Power | DC/peak AC Resistive | W | | | 10 | | | 30 | | | 25 | Watts |
| Switching Voltage | DC/peak AC Resistive | V | | | 200 | | | 200 | | | 1000 | Volts |
| Switching Current | DC/peak AC Resistive | A | | | 0.5 | | | 1 | | | 1 | Amps |
| Carry Current | DC/peak AC Resistive | A | | | 1.5 | | | 2.5 | | | 2 | Amps |
| Static Contact Res. | 50mV @ 10mA @ nom. volt. | CR | | | 150 | | | 120 | | | 150 | mΩ |
| Dynamic Contact Res. | 0.5V@50mA, 100 Hz | | | | | | | | | | | |
| | and after 1.5ms @ nom. volt. | DCR | | | 200 | | | 200 | | | 200 | mΩ |
| Life expectancy | Switching1.0 V with 10ma | $10^6$ | 1000 | | | 1000 | | | 1000 | | | ops |
| | Rated Loads (consult factory) | | | | | | | | | | | ops |
| Contact material | | | | Ru | | | Rh | | | Rh | | |
| **Relay Specifications** | | | | | | | | | | | | |
| Dielectric Strength | Across contact | | 250 | | | 430 | | | 2500 | | | DCV |
| | Contact to coil | I/O | 1500 | | | 1500 | | | 2500 | | | DCV |
| Capacitance | Across switch | | | 0.2 | | | 0.2 | | | 0.2 | | pf |
| | Between switches | | | 0.3 | | | 0.3 | | | 0.3 | | pf |
| | Switch to coil | | | 2 | | | 2 | | | 2 | | pf |
| Operating time | Including bounce | Top | | | 500 | | | 500 | | | 1000 | µs |
| Release time | No suppression | Trel | | | 50 | | | 50 | | | 50 | µs |
| | Diode suppressed | Trel | | | 300 | | | 300 | | | 300 | µs |
| | Diode and 24V zener | Trel | | | 100 | | | 100 | | | 100 | µs |
| Insulation Resistance | Across switch | IR | $10^{10}$ | $10^{12}$ | | $10^{10}$ | $10^{12}$ | | $10^{10}$ | $10^{12}$ | | Ω |
| | Switch to coil | IR | $10^{12}$ | $10^{14}$ | | $10^{12}$ | $10^{14}$ | | $10^{12}$ | $10^{14}$ | | Ω |
| **Environmental Ratings** | | | | | | | | | | | | |
| Operating temperature | | To | -20 | | 70 | -20 | | 70 | -20 | | 70 | °C |
| Storage temperature | | Ta | -40 | | 100 | -40 | | 100 | -40 | | 100 | °C |
| Soldering time | | | | | 5 | | | 5 | | | 5 | sec |
| Solder temperature | | | | | 260 | | | 260 | | | 260 | °C |
| Cleaning | | | | Fully Sealed | | | Fully Sealed | | | Fully Sealed | | |
| Shock | At 11 ms +/-1ms; 1/2 sine wave | S | | | 50 | | | 50 | | | 50 | Gs |
| Vibration | 10Hz to 2000Hz | G | | | 10 | | | 10 | | | 10 | Gs |

* The coil resistance, Operate and reset characteristics will all change at the rate of 0.4%°C

Note: Other switches available upon request

Note: 4 pole available



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