

## MICRO SIL Reed Relays



## DESCRIPTION

MICRO SIL is a compact version of our SIL Reed Relay Series using only 15.2 x 3.81 mm of board space which is half the standard SIL requirement.

## APPLICATIONS

- ATE systems
- Measurement equipment
- Telecommunications
- Security systems

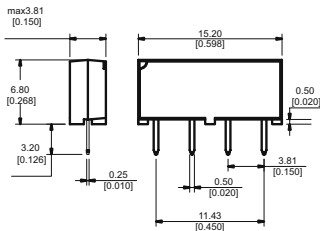
## FEATURES

- Contact Form 1A, 1B and 2A
- Coaxial shield option for 1A
- Internal magnetic shield on all relays
- Diode option available
- High coil resistance option for 1A
- UL available on most models

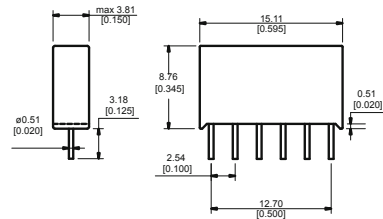
## DIMENSIONS

All dimensions in mm [inch]

Form 1A  
Unspecified Tolerances +/- 0.25 mm



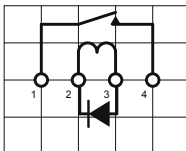
Form 2A  
Unspecified Tolerances +/- 0.127 mm



## PIN OUT

View from top of component

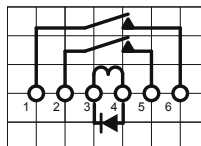
Form 1A  
75



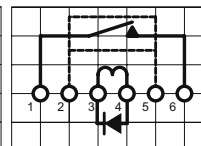
Pitch grid: 3.81 mm [0.15"]

Pin #2 must be positive when internal diode protection is present.

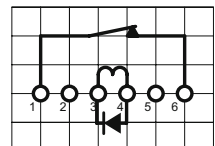
Form 2A  
78



Form 1A/coax  
79



Form 1B  
80



Pitch grid: 2.54 mm [0.1"]

Pin #3 must be positive when internal diode protection is present.

- Notch in case denotes pin #1 in 75 layout; dot stamped over pin #1 for 78, 79 and 80 layouts.

## ORDER INFORMATION

### Part Number Example

MS12 - 1A87 - 75L

**12** is the nominal voltage  
**87** is the switch model  
**L** is the option

| Relay Series   | Nominal Voltage | Contact Form | Switch Model | Pin Out | Options | High Resistance Version |
|----------------|-----------------|--------------|--------------|---------|---------|-------------------------|
| <b>MS</b>      | XX -            | 1A           | 87           | 75      | X       | <b>XX</b>               |
| <b>Options</b> | 05, 12          |              |              |         | L, D    | <b>HR</b>               |
| <b>Options</b> | 05              | 1A coaxial   | 87           | 79      | L, D    |                         |
|                | 05              | 1B           | 87           | 80      | L, D    |                         |
|                | 05              | 2A           | 87           | 78      | L, D    |                         |

## OPTIONS

L = No diode  
D = With diode  
HR = High resistance version (5 Volt option only)

## COIL DATA

| Contact Form                 | Switch Model | Coil Voltage |      | Coil Resistance |      |      | Pull-in Voltage | Drop-out Voltage | Nominal Coil Power |
|------------------------------|--------------|--------------|------|-----------------|------|------|-----------------|------------------|--------------------|
| <b>All Data at 20 °C *</b>   |              | VDC          |      | Ω               |      |      | VDC             | VDC              | mW                 |
|                              |              | Nom.         | Max. | Min.            | Typ. | Max. | Max.            | Min.             | Typ.               |
| <b>1A</b><br>Normally open   | <b>87</b>    | 5            | 7.5  | 250             | 280  | 310  | 3.5             | 0.75             | 90                 |
|                              |              | 5 HR         | 7.5  | 450             | 500  | 550  | 3.5             | 0.75             | 50                 |
|                              |              | 12           | 18   | 630             | 700  | 770  | 8.4             | 1.8              | 205                |
| <b>1A</b><br>coaxial         | <b>87</b>    | 5            | 7.5  | 338             | 375  | 413  | 3.75            | 0.5              | 67                 |
| <b>1B</b><br>Normally closed | <b>87</b>    | 5            | 7.5  | 338             | 375  | 413  | 3.75            | 0.5              | 67                 |
| <b>2A</b><br>2 poles         | <b>87</b>    | 5            | 7.5  | 338             | 375  | 413  | 3.75            | 0.5              | 67                 |

\* The pull-in / drop-out voltages and coil resistance will change at the rate 0.4% / °C

**MICRO SIL**  
**Reed Relays**

## RELAY DATA

| All Data at 20° C                                          | Switch Model →<br>Contact Form →                                   | Switch 87<br>Form A                  |                                      |             |                           |
|------------------------------------------------------------|--------------------------------------------------------------------|--------------------------------------|--------------------------------------|-------------|---------------------------|
| Contact Ratings                                            | Conditions                                                         | Min.                                 | Typ.                                 | Max.        | Units                     |
| Switching Power                                            | Any DC combination of V & A not to exceed their individual max.'s  |                                      |                                      | 10          | W                         |
| Switching Voltage                                          | DC or peak AC                                                      |                                      |                                      | 200         | V                         |
| Switching Current                                          | DC or peak AC                                                      |                                      |                                      | 0.5         | A                         |
| Carry Current                                              | DC or peak AC                                                      |                                      |                                      | 1.0         | A                         |
| Static Contact Resistance                                  | w/ 0.5 V & 50mA                                                    |                                      |                                      | 150         | mΩ                        |
| Dynamic Contact Resistance                                 | Measured w/ 0.5 V & 50mA , 1.5 ms after closure                    |                                      |                                      | 200         | mΩ                        |
| Insulation Resistance                                      | Across Contacts<br>Coil - Contact                                  | 10 <sup>10</sup><br>10 <sup>13</sup> | 10 <sup>12</sup><br>10 <sup>14</sup> |             | Ω                         |
| Breakdown Voltage                                          | Across Contacts<br>Contact - Shield<br>Contacts and shield to coil | 225<br>1000<br>1500                  |                                      |             | VDC                       |
| Operation Time incl. Bounce                                | Nominal voltage                                                    |                                      |                                      | 0.5         | ms                        |
| Release Time                                               | with no coil suppression<br>with diode suppression                 |                                      |                                      | 0.1<br>0.35 | ms                        |
| Capacitance - across open contact                          | No shield<br>Shield floating<br>Shield guarded                     |                                      | 0.1<br>0.7<br>< 0.1                  |             | pF                        |
| Open contacts to coil                                      | No shield<br>Shield floating<br>Shield guarded                     |                                      | 0.8<br>0.8<br>0.4                    |             |                           |
| Contact to shield                                          | Contact open and shield floating                                   |                                      | 0.8                                  |             |                           |
| Life Expectance                                            |                                                                    |                                      |                                      |             |                           |
| Switch Voltage 5V - 10 mA                                  | DC <10 pF stray cap.                                               |                                      | 1000                                 |             | 10 <sup>6</sup><br>Cycles |
| For other load requirements, see test section on Page 120. |                                                                    |                                      |                                      |             |                           |
| Environmental Data                                         |                                                                    |                                      |                                      |             |                           |
| Shock Resistance                                           | 1/2 sinus wave duration 11 ms                                      |                                      |                                      | 50          | g                         |
| Vibration Resistance                                       | From 10 - 2000 Hz                                                  |                                      |                                      | 20          | g                         |
| Ambient Temperature                                        | 10°C/ minute max. allowable                                        | -20                                  |                                      | 70          | °C                        |
| Stock Temperature                                          | 10°C/ minute max. allowable                                        | -35                                  |                                      | 95          | °C                        |
| Soldering Temperature                                      | 5 sec. wave soldering                                              |                                      |                                      | 260         | °C                        |

# AMEYA360

## Components Supply Platform

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