

## General Purpose

### Power Relay

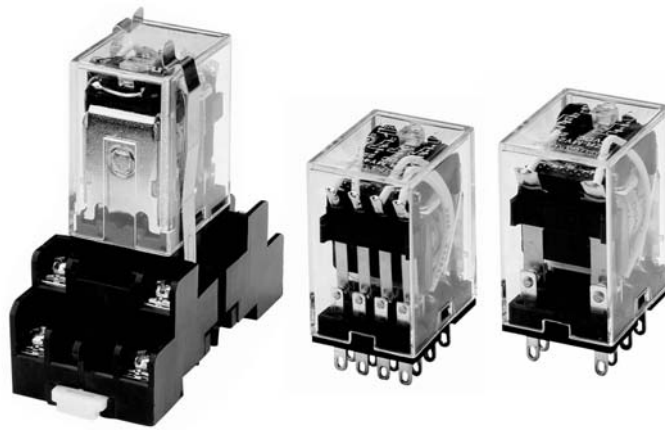
### SZR-MY Series

#### FEATURES

- Small package design
- DPDT has a fine silver contact with 5 A capability
- 4PDT has a gold-plated silver contact with 3 A capability
- High dielectric strength (1,800 Vac)
- High reliability and long life
- Ultra-high sensitivity with quick response time (20 ms max.)
- Options include LED indicator, diode protection, and LED indicator/diode protection
- UL listed, CE certified, CSA certified

#### TYPICAL APPLICATIONS

- Control panels
- Elevator panels
- Machine tools
- Test equipment



SZR-MY Series general-purpose power relays are designed for a wide range of applications including power as well as logic control for factory machines and control panels.

SZR-MY Series relays have a small package design for multiple application needs. Relays are available in two configurations: DPDT with a 5A load and 4PDT with a 3 A load.

One standard and three options are available: LED indicator, internal surge protection diode, and LED indicator/diode protection. Honeywell's global sales and distribution channels ensure a rapid response and excellent customer service.

#### **⚠ WARNING**

##### **PERSONAL INJURY**

DO NOT USE these products as safety or emergency stop devices or in any other application where failure of the product could result in personal injury.

**Failure to comply with these instructions could result in death or serious injury.**

#### **⚠ WARNING**

##### **MISUSE OF DOCUMENTATION**

- The information presented in this product sheet is for reference only. Do not use this document as a product installation guide.
- Complete installation, operation, and maintenance information is provided in the instructions supplied with each product.

**Failure to comply with these instructions could result in death or serious injury.**

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## Power Relays

*SZR-MY Series*

### RELAY MODEL SELECTION GUIDE

| Type                              | Terminal       | Contact | Catalog Listing   |
|-----------------------------------|----------------|---------|-------------------|
| Standard                          | Plug-in/Solder | DPDT    | <b>SZR-MY2-1</b>  |
|                                   |                | 4PDT    | <b>SZR-MY4-1</b>  |
|                                   | PCB            | DPDT    | <b>SZR-MY2-1P</b> |
|                                   |                | 4PDT    | <b>SZR-MY4-1P</b> |
| LED Indicator                     | Plug-in/Solder | DPDT    | <b>SZR-MY2-N1</b> |
|                                   |                | 4PDT    | <b>SZR-MY4-N1</b> |
| DIODE surge suppression           |                | DPDT    | <b>SZR-MY2-D1</b> |
|                                   |                | 4PDT    | <b>SZR-MY4-D1</b> |
| LED indicator + surge suppression |                | DPDT    | <b>SZR-MY2-X1</b> |
|                                   |                | 4PDT    | <b>SZR-MY4-X1</b> |

### SOCKETS – REQUIRED ACCESSORIES

| Relay Contact   | Din-rail Mounting   | Solder Terminal   | PCB Terminal  |
|---|---|---|---|
| <b>DPDT</b><br>For use with<br>SZR-MY2-1, -N1, -<br>D1, -X1 |  <p><b>SZX-SMF-08N</b></p>  |  <p><b>SZX-SMB-08</b></p>  |  <p><b>SZX-SMB-08P</b></p>  |
| <b>4PDT</b><br>For use with<br>SZR-MY4-1, -N1, -<br>D1, -X1 |  <p><b>SZX-SMF-14N</b></p> |  <p><b>SZX-SMB-14</b></p> |  <p><b>SZX-SMB-14P</b></p> |

# General Purpose

## Power Relays

*SZR-MY Series*

### CONTACT RATINGS

| Type                           | DPDT                      |   | 4PDT                      |   |
|--------------------------------|---------------------------|---|---------------------------|---|
| Load                           | Resistive Load (p.f. = 1) | Inductive load (p.f. = 0.4, L/R = 7 ms) | Resistive Load (p.f. = 1) | Inductive load (p.f. = 0.4, L/R = 7 ms) |
| <b>Ratings</b>                 |                           |   |                           |   |
| <b>Rated load</b>              | 220 Vac, 5A<br>24 Vdc, 5A | 220 Vac, 2A<br>24 Vdc, 2A               | 220 Vac, 3A<br>24 Vdc, 3A | 220 Vac, 0.8 A<br>24 Vdc, 1.5 A         |
| <b>Carry current</b>           | 5A                        |   | 3A                        |   |
| <b>Max. operating voltage</b>  | 250 Vac, 125 Vdc          |   | 250 Vac, 125 Vdc          |   |
| <b>Max. operating current</b>  | 5 A                       |   | 3 A                       |   |
| <b>Max. switching capacity</b> | 1,100 VA, 120 W           | 440 VA, 48 W                            | 660 VA, 72 W              | 176 VA, 16 W                            |
| <b>Min. permissible load</b>   | 1 mA, 5 Vdc               |   | 1 mA, 1 Vdc               |   |

### COIL RATINGS

|         | Rated Voltage (V) | Rated Current (mA) |         | Coil resistance (Ω) | Coil Inductance (H) |             | Pick-up Voltage (V) | Dropout Voltage (V) | Maximum Voltage (V) | Power Consumption (W)                |             |      |                                      |
|---------|-------------------|--------------------|---------|---------------------|---------------------|-------------|---------------------|---------------------|---------------------|--------------------------------------|-------------|------|--------------------------------------|
|         |                   | 50 Hz              | 60 Hz   |                     | Armature OFF        | Armature ON |                     |                     |                     |                                      |             |      |                                      |
| AC      | 6                 | 214.1              | 183     | 12.2                | 0.04                | 0.08        | Max.<br>75 %        | Min.<br>30%         | 110%                | Approx.<br>1.0 W to 1.2 W<br>(60 Hz) |             |      |                                      |
|         | 12                | 106.5              | 91      | 46                  | 0.17                | 0.33        |                     |                     |                     |                                      |             |      |                                      |
|         | 24                | 53.8               | 46      | 180                 | 0.69                | 1.3         |                     |                     |                     |                                      |             |      |                                      |
|         | 50                | 25.7               | 22      | 788                 | 3.22                | 5.66        |                     |                     |                     | Max.<br>75%                          | Min.<br>10% | 110% | Approx.<br>0.9 W to 1.1 W<br>(60 Hz) |
|         | 100/110           | 11.7/12.9          | 10/11   | 3,750               | 14.54               | 24.6        |                     |                     |                     |                                      |             |      |                                      |
|         | 110/120           | 9.9/10.8           | 8.4/9.2 | 4,430               | 19.2                | 32.1        |                     |                     |                     |                                      |             |      |                                      |
|         | 200/220           | 6.2/6.8            | 5.3/5.8 | 12,950              | 54.75               | 94.07       |                     |                     |                     |                                      |             |      |                                      |
| 220/240 | 4.8/5.3           | 4.2/4.6            | 18,790  | 83.5                | 136.4               |             |                     |                     |                     |                                      |             |      |                                      |
| DC      | 6                 | 150                |         | 40                  | 0.17                | 0.33        | Max.<br>75%         | Min.<br>10%         | 110%                | Approx.<br>0.9 W                     |             |      |                                      |
|         | 12                | 75                 |         | 160                 | 0.73                | 1.37        |                     |                     |                     |                                      |             |      |                                      |
|         | 24                | 36.9               |         | 650                 | 3.2                 | 5.72        |                     |                     |                     |                                      |             |      |                                      |
|         | 48                | 18.5               |         | 2,600               | 10.6                | 21.0        |                     |                     |                     |                                      |             |      |                                      |
|         | 100/110           | 9.1/10             |         | 11,000              | 45.6                | 86.2        |                     |                     |                     |                                      |             |      |                                      |

Note 1: The rated current and coil resistance are measured at a coil temperature of 23 °C [73.4 °F] with tolerances of +15%, -20% for AC rated current and ± 15% for DC coil resistance.

Note 2: The rated current of N1 and X1 types is 4 mA higher than the value in the table above.

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*SZR-MY Series*

### SPECIFICATIONS

|                              |                        |   |
|------------------------------|------------------------|---|
| Contact material             |                        | Silver  |
| Contact resistance           |                        | Max. 50 MOhm  |
| Operate time                 |                        | Max. 20 ms  |
| Release time                 |                        | Max. 20 ms  |
| Operating frequency          | Mechanical             | 18,000 operations per hour  |
|                              | Electrical             | 1,800 operations per hour   |
| Insulation resistance        |                        | Min. 100 Mw at 500 Vdc  |
| Dielectric withstand voltage |                        | 1,800 Vac 50 Hz/60 Hz for one minute between non-continuous current carrying terminals and between coil thermals and contact terminals                                  |
| Vibration resistance         | Mechanical durability  | 10 Hz to 55 Hz at double amplitude of 1.0 mm  |
|                              | Malfunction durability | 10 Hz to 55 Hz at double amplitude of 1.0 mm  |
| Shock resistance             | Mechanical durability  | 1,000 m/s <sup>2</sup> (approx. 100 g)  |
|                              | Malfunction durability | 200 m/s <sup>2</sup> (approx. 20 g)   |
| Service life                 | Mechanical             | AC: Min. 50 million operations (at operating frequency of 18,000 operations/hour)<br>DC: Min. 100 million operations (at operating frequency of 18,000 operations/hour) |
|                              | Electrical             | DPDT: Min. 500,000 operations (at operating frequency of 1,800 operations/hour)<br>4PDT: Min. 200,000 operations (at operating frequency of 1,800 operations/hour)      |
| Weight                       |                        | Approximately 35 g  |

Note 1: The data shown above are of initial value

### CHARACTERISTIC DATA



# General Purpose

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*SZR-MY Series*

### HOLDING CLIPS

- Holding clips are included with the sockets
- Holding clips for the SMF-08N and SMF-14N cannot be removed once inserted
- Holding clips for all SMB sockets are wire for easy removal
- Holding clips are to be inserted into the slots provided on the socket

### DIMENSIONS (For reference only – mm/in)

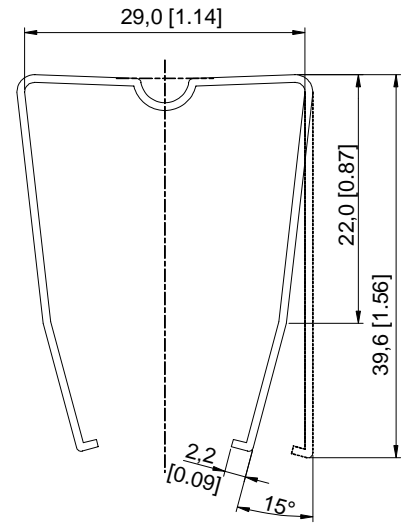
**Figure 1. Dimensions**

For SZX-SMF-08N and SZX-SMF-14N sockets



**Figure 2. Dimensions**

For all SZX-SMB sockets



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## Power Relays

*SZR-MY Series*

### CATALOG LISTING MATRIX



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*SZR-MY Series*

**FIGURE 3. DIMENSION, CIRCUIT DIAGRAM, TERMINAL ARRANGEMENT, AND MOUNTING HOLE FOR SZR-MY2-1, SZR-MY2-N1, SZR-MY2-D1, and SZR-MY2-X1**



**FIGURE 4. DIMENSION, CIRCUIT DIAGRAM, TERMINAL ARRANGEMENT, AND MOUNTING HOLE FOR SZR-MY2-1P and SZR-MY4-1P**



The circuit diagram is the same with standard type of SZR-MY2-1 or the SZR-MY4-1

# General Purpose

## Power Relays

## SZR-MY Series

**FIGURE 5. DIMENSION, CIRCUIT DIAGRAM, TERMINAL ARRANGEMENT, AND MOUNTING HOLE FOR SZR-MY4-1, SZR-MY4-N1, SZR-MY4-D1, and SZR-MY4-X1**



**FIGURE 6. CIRCUIT DRAWING FOR SZR-MY2- and SZR-MY4-**





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SZR-MY Series

## SOCKETS

FIGURE 7. SZX-SMF-08N

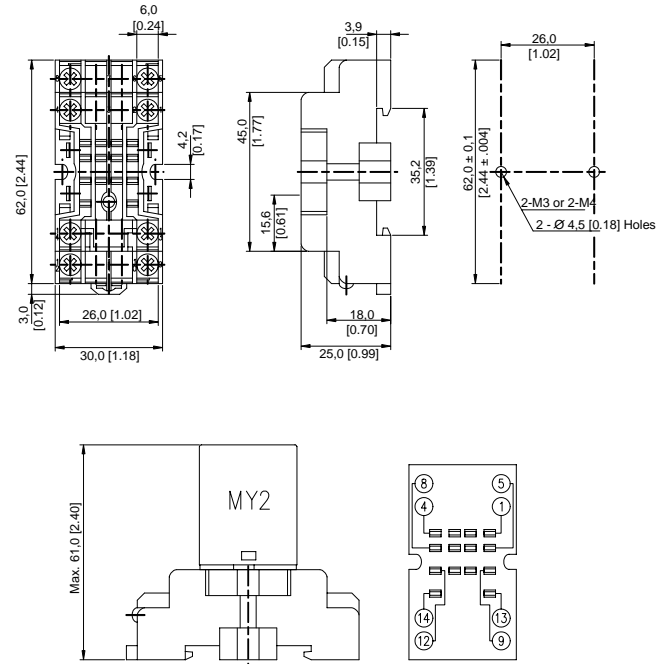


FIGURE 8. SZX-SMF-14N

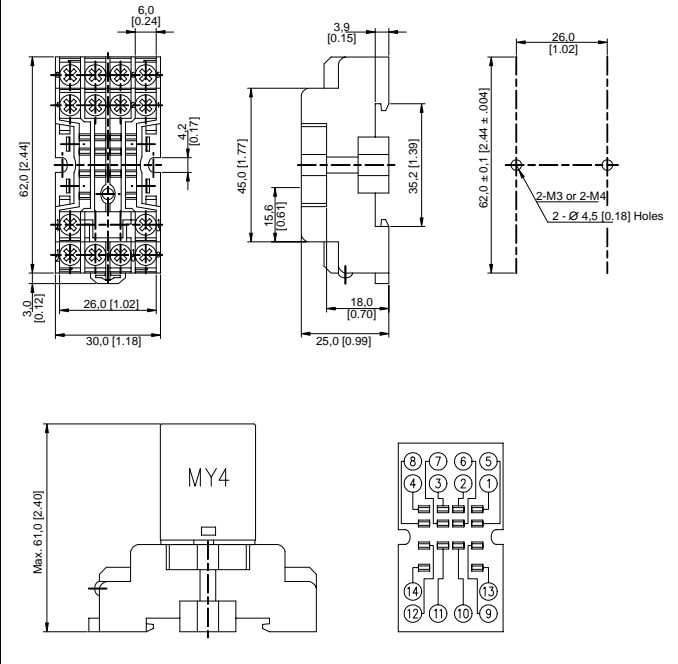


FIGURE 9. SZX-SMB-08

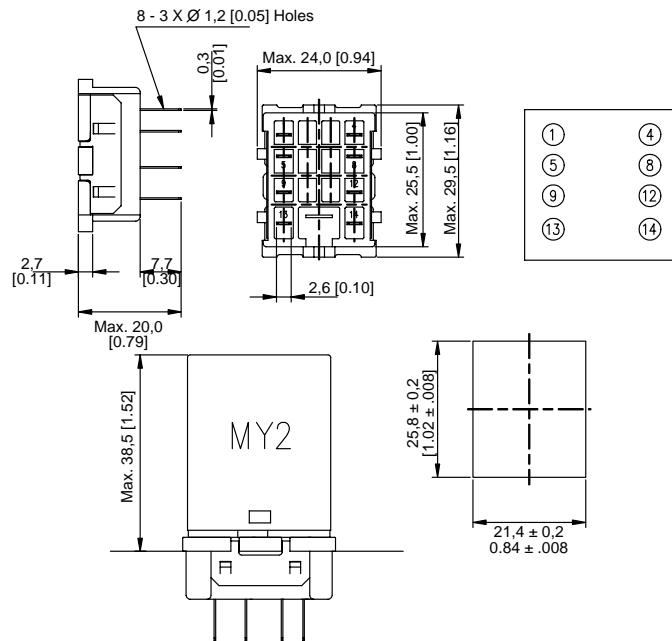
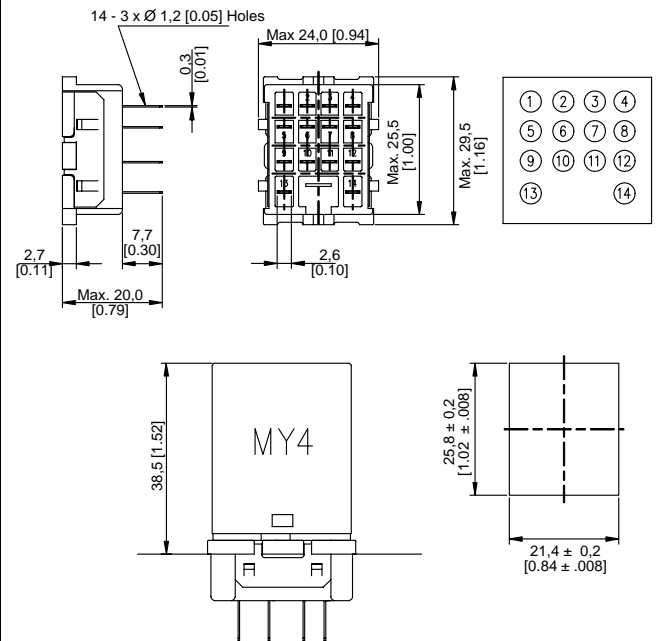


FIGURE 10. SZX-SMB-14



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*SZR-MY Series*

**FIGURE 11. SZX-SMB-08P**



**FIGURE 12. SZX-SMB-14P**



## WARRANTY/REMEDY

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