## omron.

## General Purpose Relay

## - Arc barrier equipped

■ High dielectric strength (2,000 VAC)

- Long dependable service life assured by AgCdO contacts
- Choose models with single or bifurcated contacts, LED indicator, diode surge suppression, push-to-test button, or RC circuit
- All models meet UL and CSA approvals; VDE, LR, and SEV
approved versions are available


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## Ordering Information

To Order: Select the part number and add the desired coil voltage rating (e.g., LY1-DC6).

| Type | Terminal | Contact form | Part number |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Single contact |  |  | Bifurcated contact |  |  |
|  |  |  | Standard bracket mounting | Upper mounting bracket | Lower mounting bracket | Standard bracket mounting | Upper mounting bracket | Lower mounting bracket |
| Standard | Plug-in/solder | SPDT | LY1 | LY1F | LY1S | - | - | - |
|  |  | DPDT | LY2 | LY2F | LY2S | LY2Z | LY2ZF | LY2ZS |
|  |  | 3PDT | LY3 | LY3F | LY3S | - | - | - |
|  |  | 4PDT | LY4 | LY4F | LY4S | - | - | - |
|  | PCB | SPDT | LY1-0 | - | - | - | - | - |
|  |  | DPDT | LY2-0 | - | - | LY2Z-0 | - | - |
|  |  | 3PDT | LY3-0 | - | - | - | - | - |
|  |  | 4PDT | LY4-0 | - | - | - | - | - |
| LED indicator | Plug-in/solder | SPDT | LY1N | - | - | - | - | - |
|  |  | DPDT | LY2N | - | - | LY2ZN | - | - |
|  |  | 3PDT | LY3N | - | - | - | - | - |
|  |  | 4PDT | LY4N | - | - | - | - | - |
| Diode surge suppression |  | SPDT | LY1-D | - | - | - | - | - |
|  |  | DPDT | LY2-D | - | - | LY2Z-D | - | - |
|  |  | 3PDT | LY3-D | - | - | - | - | - |
|  |  | 4PDT | LY4-D | - | - | - | - | - |
| LED indicator and diode surge suppression |  | SPDT | LY1N-D2 | - | - | - | - | - |
|  |  | DPDT | LY2N-D2 | - | - | LY2ZN-D2 | - | - |
|  |  | 4PDT | LY4N-D2 | - | - | - | - | - |
| RC circuit |  | SPDT | LY1-CR | - | - | - | - | - |
|  |  | DPDT | LY2-CR | - | - | LY2Z-CR | - | - |
| LED indicator and RC circuit |  | SPDT | LY1N-CR | - | - | - | - | - |
|  |  | DPDT | LY2N-CR | - | - | LY2ZN-CR | - | - |

Note: 1. Types with specifications other than those listed are available. Contact your OMRON Sales representative.
2. To order connecting sockets and mounting tracks, see "Accessories" section.

## Ordering Information, continued

| Type | Terminal | Contact form | Part number |  |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Single contact |  |  | Bifurcated contact |  |  |
|  |  |  | Standard bracket mounting | Upper mounting bracket | Lower mounting bracket | Standard bracket mounting | Upper mounting bracket | Lower mounting bracket |
| Push-to-test button | Plug-in/solder | SPDT | LY114 | - | - | - | - | - |
|  |  | DPDT | LY214 | - | - | LY2ZI2 | - | - |
|  |  | 3PDT | LY314 | - | - | - | - | - |
|  |  | 4PDT | LY414 | - | - | - | - | - |
| LED indicator and push-to-test button | Plug-in/solder | DPDT | LY214N | - | - | LY2ZI2N | - | - |
|  |  | 4PDT | LY4I4N | - | - | - | - | - |

Note: 1. Types with specifications other than those listed are available. Contact your OMRON Sales representative.
2. To order connecting sockets and mounting tracks, see "Accessories" section.

## ACCESSORIES

## Connecting Sockets

To Order: Select the appropriate part numbers for sockets, clips, and mounting tracks (if required) from the following charts.

## Track mounted sockets

| Relay | Socket* | Relay hold-down clip |  | Mounting track |
| :---: | :---: | :---: | :---: | :---: |
|  |  | Standard | RC circuit |  |
| $\begin{aligned} & \hline \text { SPDT } \\ & \text { DPDT } \end{aligned}$ | PTF08A-E | PYC-A1 | Y92H-3 | PFP-100N/PFP-50N \& PFP-M or PFP-100N2 PFP-S (Option spacer) |
| 3PDT | PTF11A |  |  |  |
| 4PDT | PTF14A-E |  |  |  |

* Track mounted socket can be used as a front connecting socket.


## Back connecting sockets

|  | Solder terminal | Wire wrap terminal | Relay hold-down clip |  |  |  | Socket Mounting Plate |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Relay | socket | socket | Standard | Push-to-test | RC circuit | Mtg. plate | 1 | 10 | 12 | 18 |
| SPDT | PT08 | PT08QN | PYC-P | PYC-P2 | PYC-1 | PYC-S | PYP-1 | - | - | PYP-18 |
| 3PDT | PT11 | PT11QN |  |  |  |  | PTP-1-3 | - | PTP-12 | - |
| 4PDT | PT14 | PT14QN |  |  |  |  | PTP-1 | PTP-10 | - | - |

Note: Types PYP-18, PTP-12 and PTP-10 may be cut to any desired length.

| Relay |  |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
|  |  | Relay hold-down clip | Standard | Push-to-test |
|  |  | PYC-P | RYC circuit |  |
| 4PDT | PT11-0 |  |  | PYC-1 |

## Specifications

- CONTACT DATA

| Load | Single contact |  |  |  | Bifurcated contact |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | SPDT |  | DPDT, 3PDT, 4PDT |  | DPDT |  |
|  | Resistive load (p.f. $=1$ ) | Inductive load $\text { (p.f. }=0.4 \text { ) }$ <br> ( $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) | Resistive load $\text { (p.f. }=1 \text { ) }$ | Inductive load $\text { (p.f. }=0.4 \text { ) }$ <br> ( $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) | Resistive load (p.f. =1) | Inductive load $\text { (p.f. }=0.4 \text { ) }$ <br> ( $\mathrm{L} / \mathrm{R}=7 \mathrm{~ms}$ ) |
| Rated load | 15 A at 110 VAC 15 A at 24 VDC | 10 A at 110 VAC <br> 7 A at 24 VDC | 10 A at 110 VAC 10 A at 24 VDC | 7.5 A at 110 VAC <br> 5 A at 24 VDC | 5 A at 110 VAC 5 A at 24 VDC | 4 A at 110 VAC 4 A at 24 VDC |
| Contact material | AgCdO |  |  |  |  |  |
| Carry current | 15 A |  | 10 A |  | 7 A |  |
| Max. operating voltage | $\begin{aligned} & 250 \text { VAC } \\ & 125 \text { VDC } \end{aligned}$ |  |  |  |  |  |
| Max. operating current | 15 A |  | 10 A |  | 7 A |  |
| Max. switching capacity | $\begin{aligned} & \hline 1,700 \mathrm{VA} \\ & 360 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & 1,100 \mathrm{VA} \\ & 170 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 1,100 \mathrm{VA} \\ & 240 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 830 \mathrm{VA} \\ & 120 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 550 \mathrm{VA} \\ & 120 \mathrm{~W} \end{aligned}$ | $\begin{aligned} & \hline 440 \mathrm{VA} \\ & 100 \mathrm{~W} \end{aligned}$ |
| Min. permissible load | $100 \mathrm{~mA}, 5 \mathrm{VDC}$ |  |  |  | $10 \mathrm{~mA}, 5 \mathrm{VDC}$ |  |

- COIL DATA

1- and 2-pole types - AC

| Rated voltage (V) | Rated current (mA) |  | Coil <br> resistance <br> ( $\Omega$ ) | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature OFF | Armature ON |  |  |  |  |
|  | 50 Hz | 60 Hz |  |  | (\% of rated voltage) |  |  |  |  |
| 6 | 214.10 | 183 | 12.20 | 0.04 | 0.08 | 80\% max. | $30 \%$ min. | 110\% | $\begin{aligned} & \hline \text { Approx. } \\ & 1.00 \text { to } 1.20 \\ & (60 \mathrm{~Hz}) \end{aligned}$ |
| 12 | 106.50 | 91 | 46 | 0.17 | 0.33 |  |  |  |  |
| 24 | 53.80 | 46 | 180 | 0.69 | 1.30 |  |  |  |  |
| 50 | 25.70 | 22 | 788 | 3.22 | 5.66 |  |  |  |  |
| 100/110 | 11.70/12.90 | 10/11 | 3,750 | 14.54 | 24.60 |  |  |  | Approx. |
| 110/120 | 9.90/10.80 | 8.40/9.20 | 4,430 | 19.20 | 32.10 |  |  |  | 0.90 to 1.10 |
| 200/220 | 6.20/6.80 | 5.30/5.80 | 12,950 | 54.75 | 94.07 |  |  |  | (60 Hz) |
| 220/240 | 4.80/5.30 | 4.20/4.60 | 18,790 | 83.50 | 136.40 |  |  |  |  |

1- and 2-pole types - DC

| Rated voltage (V) | Rated current (mA) | Coil resistance ( $\Omega$ ) | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature | Armature |  |  |  |  |
|  |  |  | OFF | ON | (\% of rated voltage) |  |  |  |
| 6 | 150 | 40 | 0.16 | 0.33 | 80\% max. | 10\% min. | 110\% | Approx. <br> 0.90 |
| 12 | 75 | 160 | 0.73 | 1.37 |  |  |  |  |
| 24 | 36.90 | 650 | 3.20 | 5.72 |  |  |  |  |
| 48 | 18.50 | 2,600 | 10.60 | 21 |  |  |  |  |
| 100/110 | 9.10/10 | 11,000 | 45.60 | 86.20 |  |  |  |  |

Note: 1. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}\left(73^{\circ} \mathrm{F}\right)$ with tolerances of $+15 \%,-20 \%$ for AC rated current, and $\pm 15 \%$ for DC rated coil resistance.
2. The AC coil resistance and inductance are reference values at 60 Hz .
3. The performance characteristics are measured at a coil temperature of $23^{\circ} \mathrm{C}\left(73^{\circ} \mathrm{F}\right)$.
4. Class B coil insulation is available.

## COIL DATA(continued)

3-pole type - AC

| Rated voltage (V) | Rated current (mA) |  | Coil resistance$(\Omega)$ | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature OFF | Armature ON |  |  |  |  |
|  | 50 Hz | 60 Hz |  |  | (\% of rated voltage) |  |  |  |  |
| 6 | 310 | 270 | 6.70 | 0.03 | 0.05 | 80\% max. | $30 \%$ min. | 110\% | $\begin{aligned} & \text { Approx. } \\ & 1.60 \text { to } 2.00 \\ & (60 \mathrm{~Hz}) \end{aligned}$ |
| 12 | 159 | 134 | 24 | 0.12 | 0.21 |  |  |  |  |
| 24 | 80 | 67 | 100 | 0.44 | 0.79 |  |  |  |  |
| 50 | 38 | 33 | 410 | 2.24 | 3.87 |  |  |  |  |
| 100/110 | 15.90/18.30 | 13.60/15.60 | 2,300 | 10.50 | 18.50 |  |  |  |  |
| 120 | 17.30 | 14.8 | 2,450 | 11.50 | 20.60 |  |  |  |  |
| 200/220 | 10.50/11.60 | 9.00/9.90 | 8,650 | 34.80 | 59.50 |  |  |  |  |
| 240 | 9.40 | 8 | 10,400 | 38.60 | 74.60 |  |  |  |  |

3-pole type - DC

| Rated voltage (V) | Rated current (mA) | Coil resistance ( $\Omega$ ) | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature | Armature |  |  |  |  |
|  |  |  |  |  | (\% of rated voltage) |  |  |  |
| 6 | 234 | 25.70 | 0.11 | 0.21 | 80\% max. | 10\% min. | 110\% | Approx. <br> 1.40 |
| 12 | 112 | 107 | 0.45 | 0.98 |  |  |  |  |
| 24 | 58.60 | 410 | 1.89 | 3.87 |  |  |  |  |
| 48 | 28.20 | 1,700 | 8.53 | 13.90 |  |  |  |  |
| 100/110 | 12.70/13 | 8,500 | 29.60 | 54.30 |  |  |  |  |

4-pole type - AC

| Rated voltage (V) | Rated current (mA) |  | Coil resistance$(\Omega)$ | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature OFF | $\begin{aligned} & \text { Armature } \\ & \text { ON } \end{aligned}$ |  |  |  |  |
|  | 50 Hz | 60 Hz |  |  | (\% of rated voltage) |  |  |  |  |
| 6 | 386 | 330 | 5 | 0.02 | 0.04 | 80\% max. | $30 \%$ min. | 110\% | $\begin{aligned} & \text { Approx. } \\ & 1.95 \text { to } 2.50 \\ & (60 \mathrm{~Hz}) \end{aligned}$ |
| 12 | 199 | 170 | 20 | 0.10 | 0.17 |  |  |  |  |
| 24 | 93.60 | 80 | 78 | 0.38 | 0.67 |  |  |  |  |
| 50 | 46.80 | 40 | 350 | 1.74 | 2.88 |  |  |  |  |
| 100/110 | 22.50/25.50 | 19/21.80 | 1,800 | 10.50 | 17.30 |  |  |  |  |
| 120 | 19.00 | 16.40 | 2,200 | 9.30 | 19 |  |  |  |  |
| 200/220 | 11.50/13.10 | 9.80/11.20 | 6,700 | 33.10 | 57.90 |  |  |  |  |
| 240 | 11.00 | 9.50 | 9,000 | 33.20 | 63.40 |  |  |  |  |

## 4-pole type - DC

| Rated voltage (V) | Rated current (mA) | Coil <br> resistance <br> ( $\Omega$ ) | Coil inductance (ref. value) (H) |  | Pick-up voltage | Dropout voltage | Maximum voltage | Power consumption (VA, W) |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  |  | Armature | Armature |  |  |  |  |
|  |  |  | OFF | ON | (\% of rated voltage) |  |  |  |
| 6 | 240 | 25 | 0.09 | 0.21 | 80\% max. | 10\% min. | 110\% | Approx. <br> 1.50 |
| 12 | 120 | 100 | 0.39 | 0.84 |  |  |  |  |
| 24 | 69 | 350 | 1.41 | 2.91 |  |  |  |  |
| 48 | 30 | 1,600 | 6.39 | 13.60 |  |  |  |  |
| 100/110 | 15/15.90 | 6,900 | 32 | 63.70 |  |  |  |  |

Note: 1. The rated current and coil resistance are measured at a coil temperature of $23^{\circ} \mathrm{C}\left(73^{\circ} \mathrm{F}\right)$ with tolerances of $+15 \%,-20 \%$ for AC rated current, and $\pm 15 \%$ for DC rated coil resistance.
2. The AC coil resistance and inductance are reference values at 60 Hz .
3. The performance characteristics are measured at a coil temperature of $23^{\circ} \mathrm{C}\left(73^{\circ} \mathrm{F}\right)$.
4. Class B coil insulation is available.

## - CHARACTERISTICS

| Contact resistance |  | $50 \mathrm{~m} \Omega$ max. |
| :---: | :---: | :---: |
| Operate time |  | 25 ms max. |
| Release time |  | 25 ms max. |
| Operating frequency | Mechanically | 18,000 operations/hour |
|  | Under rated load | 1,800 operations/hour |
| Insulation resistance |  | $100 \mathrm{M} \Omega \mathrm{min}$. (at 500 VDC ) |
| Dielectric strength |  | $2,000 \mathrm{VAC}, 50 / 60 \mathrm{~Hz}$ for 1 minute <br> $1,000 \mathrm{VAC}, 50 / 60 \mathrm{~Hz}$ for 1 minute between contacts of same polarity |
| Vibration | Mechanical durability | 10 to $55 \mathrm{~Hz}, 1.00 \mathrm{~mm}$ ( 0.04 in ) double amplitude |
|  | Malfunction durability | 10 to $55 \mathrm{~Hz}, 1.00 \mathrm{~mm}$ ( 0.04 in ) double amplitude |
| Shock | Mechanical durability | 1,000 m/s ${ }^{2}$ (approx. 100 G ) |
|  | Malfunction durability | $200 \mathrm{~m} / \mathrm{s}^{2}$ (approx. 20 G ) |
| Ambient temperature | Operating | $-40^{\circ}$ to $70^{\circ} \mathrm{C}\left(-40^{\circ}\right.$ to $\left.158^{\circ} \mathrm{F}\right)$ |
| Humidity |  | 35 to 85\% RH |
| Service Life | Mechanically | AC: 50 million operations min. (at operating frequency of 18,000 operations/hour) DC: 100 million operations min. (at operating frequency of 18,000 operations/hour) |
|  | Electrically | See "Characteristic Data" |
| Weight |  | SPDT, DPDT: Approx. 40 g (1.41 oz), 3PDT: Approx. 50 g (1.76 oz) 4PDT: Approx. 70 g (2.47 oz) |

Note: Data shown are of initial value.

## ■ CHARACTERISTIC DATA

## Maximum switching capacity

LY1


LY2


LY3, LY4


LY2Z


## Electrical service life



LY2


Rated operating current (A)

LY3, LY4


LY2Z


## Dimensions

Unit: mm (inch)

## RELAYS

LY1

Terminal
arrangement
(Bottom view)

LY2



Terminal arrangement (Bottom view)


LY1-0, LY2-0, LY3-0, LY4-0


Note: The above drawing shows LY2-0. With LY1-0, dimension " $*$ " should read as 6.35 (.25).

Mounting holes for LY1-0, LY2-0, LY3-0, LY4-0 (Bottom view)



Note: The above drawing shows LY1F. With LY2F, dimension "*" should read as eight 3.05 mm ( 0.12 in ) dia. holes.


LY1S, LY2S


Round hole


Rectangular hole


Note: The above drawing shows LY2S-US. With LY1S-US, dimension " $\star$ " should read as eight $2.03 \mathrm{~mm}(0.08 \mathrm{in})$ dia. holes.


LY4S



Round hole


Rectangular hole


## ACCESSORIES

Unit: mm (inch)
Track mounted sockets (UL File No. E87929) (CSA Report No. LR31928)


Track mounting sockets (UL File No. E87929) (CSA Report No. LR31928)


Terminal arrangement/ mounting holes
(Top view)
Mounting height of relay with socket
(Applies to all PTF $\square$ sockets)


Note: 1. UL/CSA does not apply to wire wrap (Q) type sockets.
2. Values in brackets for LY $\square \mathrm{CR}$.

Back connecting socket (UL File No. E87929) (CSA Report No. LR31928)
PT08

Terminal arrangement
(Bottom view)

Terminal arrangement (Bottom view)


Back connecting socket (UL File No. E87929) (CSA Report No. LR31928)


Terminal arrangement
(Bottom view)


Mounting height of relay with socket (Applies to all PT sockets)


Note: Values in brackets for LY $\square$ CR.

Back connecting socket (UL File No. E87929) (CSA Report No. LR31928)

PT08QN
Panel cut-out and terminal arrangement are the same as Type PT08.

PT11QN
Panel cut-out and terminal
arrangement are the same
as Type PT11.

PT14QN
Panel cut-out and terminal arrangement are the same as Type PT14.


Back connecting socket (UL File No. E87929) (CSA Report No. LR31928)

PT08-0
Terminal arrangement is the same as Type PT08.

Mounting holes
(Bottom view)


PT11-0
Terminal arrangement is the same as Type PT11.

## Mounting holes

(Bottom view)


Back connecting socket (UL File No. E87929) (CSA Report No. LR31928)

## PT14-0

Terminal arrangement is the same as Type PT14.


Mounting holes
(Bottom view)


## ACCESSORIES (continued)

Unit: mm (inch)

## Relay hold-down clips

PYC-A1
For PTF $\square$ A socket


PYC-S
For relay mounting plates
(Applicable to Type PYP-1 and PYP-18 socket mounting plates only.)

(Applicable to Type PYP-1 and PYP-18
socket mounting plates only.)

PYC-P
For PT $\square$ socket


Relay hold-down clips

PYC-P2
For push-to-test button type with PT $\square$ socket


Y92H-3
For RC circuit type

PYC-1
For RC circuit type


Mounting track/end plate/spacer
PFP-100N/PFP-50N mounting track



PFP-M end plate


PFP-100N2 mounting track


PFP-S spacer


* This dimension is $14.99 \mathrm{~mm}(0.59 \mathrm{in})$ on both ends in the case of PFP-100N, but on one end in the case of PFP-50N.
** $L=$ Length
PFP-50N$L=497.84 \mathrm{~mm}(19.60 \mathrm{in})$
PFP-100N $\qquad$ $\mathrm{L}=990.60 \mathrm{~mm}(39.00 \mathrm{in})$
PFP-100N2 $\qquad$ $\mathrm{L}=990.60 \mathrm{~mm}(39.00 \mathrm{in})$
*** A total of twelve $24.89 \times 4.57 \mathrm{~mm}(0.98 \times 0.18 \mathrm{in})$ elliptic holes are provided, with six holes cut from each end of the track at a pitch of 9.91 ( 0.39 ) between holes.

Socket mounting plates [ $\mathrm{t}=1.52$ (.06)]


|  | Number of socket specs. |  |  |  |
| :--- | :--- | :--- | :--- | :--- |
| Socket needed | 1 | 10 | 12 | 18 |
| PT08, PT08QN | PYP-1 | - | - | PYP-18 |
| PT11, PT11QN | PTP-1-3 | - | PTP-1-2 | - |
| PT14, PT14QN | PTP-1 | PTP-10 | - | - |



PTP-10


PTP-12


## RELAY OPTIONS

## LED Indicator

Specifications and dimensions same as the Standard Type with the following exception. With the LED indicator type, the rated current is approximately 0 to 5.0 mA higher than the Standard Type.

Terminal arrangement/Internal connections (Bottom view)

## LY2N

DC coil rating type


AC coil rating type


Note: 1. The coil terminals 10 and 11 of Type LY3N become (-) and (+) and terminals 13 and 14 of Type LY4N become (-) and (+), respectively.
2. Pay special attention to the polarities when using the $D C$ type.

## Diode Surge Suppression

Specifications and dimensions same as the Standard Type with the following exception. Ambient operating temperature: $-25^{\circ}$ to $40^{\circ} \mathrm{C}$ (-13 ${ }^{\circ}$ to $104^{\circ} \mathrm{F}$ )

## Without Diode



With Diode


## Terminal arrangement/Internal connections (Bottom view)

LY2(N)-D(2)

LY2-D
6, 12, 24, 48 100/110 VDC


LY2N-D2
6, 12, 24, 48 VDC


LY2N-D2
100/110 VDC


Note: 1. Pay special attention to the polarities when using the DC type.
2. The release time is somewhat longer, but satisfies the standard specifications of 25 ms .
3. The reverse-breakdown voltage of the diode is 1,000 VDC.
4. Available on DC versions only.

## RELAY OPTIONS

## RC Circuit

Specifications and dimensions same as the Standard Type with the following exceptions.

## Characteristic Data

## Without RC circuit



LY1-CR, LY2(Z)-CR


LY2(Z)-CR


Note: 1. The above drawing shows $L Y 2(Z)-C R$. With $L Y 1-C R$, "*" should read eight 2.03 mm ( 0.08 in ) dia. holes.
2. Available on $A C$ versions only.

Push-to-test Button
Specifications and dimensions same as the Standard Type with the following exceptions.
LY $\square 12$
LY112, LY212


Note: Type LY112 has the same dimensions and appearances as Type LY212 shown except that dimension "*" is 2.03 mm ( 0.08 in ) dia. holes

## LY312



APPROVALS
UL recognized type (File No. E41643)

| Type | Contact form | Coil ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| LY | SPDT | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 120 \text { VDC } \end{aligned}$ | $15 \mathrm{~A}, 240$ VAC (Inductive) |
|  |  |  | $15 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | TV-5 (ACTV) |
|  |  |  | 1/2 HP, 120 VAC (Motor) |
| LY $\square$ | DPDT |  | $13 \mathrm{~A}, 120 \mathrm{VAC}$ (Resistive) |
|  |  |  | $12 \mathrm{~A}, 240 \mathrm{VAC}$ (Inductive) |
|  |  |  | $10 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | TV-3 (ACTV) |
|  |  |  | 1/2 HP, 120 VAC (Motor) |
| LY | $\begin{aligned} & \text { 3PDT } \\ & \text { 4PDT } \end{aligned}$ |  | $10 \mathrm{~A}, 240 \mathrm{VAC}$ (Inductive) |
|  |  |  | $10 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | 1/2 HP, 240 VAC (Motor) |

## CSA certified type (File No. LR31928)

| Type | Contact form | Coil ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| LY $\square$ | SPDT | 6 to 240 VAC 6 to 120 VDC | $15 \mathrm{~A}, 120 \mathrm{VAC}$ (Inductive) |
|  |  |  | $10 \mathrm{~A}, 240 \mathrm{VAC}$ (Inductive) |
|  |  |  | $15 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | TV-5 (ACTV) |
| LY $\square$ | DPDT |  | $13 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | $12 \mathrm{~A}, 120 \mathrm{VAC}$ (Inductive) |
|  |  |  | $10 \mathrm{~A}, 240$ VAC (Inductive) |
|  |  |  | 1/3 HP, 120 VAC (Motor) |
|  |  |  | TV-3 (ACTV) |
| LY $\square$ | 3PDT |  | $10 \mathrm{~A}, 240$ VAC (Inductive) |
|  | 4PDT |  | $10 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |

VDE approved type (File No. 9903 [SPDT, DPDT \& 3PDT], File No. 9947 [4PDT])

| Type | Contact form | Coil ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| LY -VD | SPDT | $\begin{aligned} & 6,12,24,50, \\ & 110,220 \text { VAC } \\ & \text { and } 6,12,24, \\ & 48,110 \text { VDC } \end{aligned}$ | $10 \mathrm{~A}, 220$ VAC (Resistive) |
|  |  |  | $10 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | $7 \mathrm{~A}, 220$ VAC (Inductive) |
|  |  |  | $7 \mathrm{~A}, 28 \mathrm{VDC}$ (Inductive) |
| LY $\square$-VD | $\begin{aligned} & \hline \text { DPDT } \\ & \text { 3PDT } \\ & \text { 4PDT } \end{aligned}$ |  | $7 \mathrm{~A}, 220$ VAC (Resistive) |
|  |  |  | $7 \mathrm{~A}, 28 \mathrm{VDC}$ (Resistive) |
|  |  |  | $4 \mathrm{~A}, 220$ VAC (Inductive) |
|  |  |  | 4 A, 28 VDC (Inductive) |

LR (Lloyd's Register) approved type (File No. 562KOB-204523)

| Type | Contact form | Coil ratings | Contact ratings |
| :--- | :--- | :--- | :--- |
| LY $\square$ | DPDT | 6 to 240 VAC | 7.5 A, 230 VAC (Inductive) |
|  | 4PDT | 6 to 110 VDC | 5 A, 24 VDC (Inductive) |

SEV listed type (File No. D7 91/82 [2- \& 4-pole], D 91/204a [1- \& 3-pole])

| Type | Contact form | Coil ratings | Contact ratings |
| :---: | :---: | :---: | :---: |
| LY $\square$-SV | SPDT | $\begin{aligned} & 6 \text { to } 240 \text { VAC } \\ & 6 \text { to } 110 \text { VDC } \end{aligned}$ | $15 \mathrm{~A}, 220$ VAC (Resistive) |
|  |  |  | 15 A, 24 VDC (Resistive) |
| LY $\square$-SV | DPDT |  | $10 \mathrm{~A}, 220 \mathrm{VAC}$ (Resistive) |
|  | $\begin{aligned} & \text { 3PDT } \\ & \text { 4PDT } \end{aligned}$ |  | $10 \mathrm{~A}, 24 \mathrm{VDC}$ (Resistive) |

Note: 1. The rated values approved by each of the safety standards (e.g., UL, CSA, VDE, and SEV) may be different from the performance characteristics individually defined in this catalog.
2. In the interest of product improvement, specifications are subject to change.

