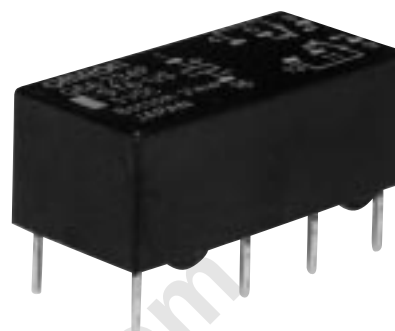




## Low Signal Relay

**G6A**

- High sensitivity – can be driven by digital circuits
- Low-profile design allows use in 12.70 mm (0.50 in) PC board rack
- Surge withstand voltage meets FCC Part 68 regulation
- Units can be mounted side by side due to low magnetic leakage
- Special models available for ultrasonic cleaning and low thermoelectromotive force
- Unique moving loop (permanent magnet) armature reduces relay size, magnetic interference, and contact bounce time
- Single or double coil winding types available



## Ordering Information

To Order: Select the part number and add the desired coil voltage rating, (e.g., G6A-274P-ST-US-DC12).

### ■ NON-LATCHING

| Type             | Contact form | Part number             |                         |
|------------------|--------------|-------------------------|-------------------------|
|                  |              | AgPd (Au clad)          | Ag (Au clad)            |
| Standard         | DPDT         | <b>G6A-234P-ST-US</b>   | <b>G6A-274P-ST-US</b>   |
|                  | 4PDT         | <b>G6A-434P-ST-US</b>   | <b>G6A-474P-ST-US</b>   |
| High-sensitivity | DPDT         | <b>G6A-234P-ST15-US</b> | <b>G6A-274P-ST15-US</b> |
|                  | 4PDT         | <b>G6A-434P-ST20-US</b> | <b>G6A-474P-ST20-US</b> |
| Low-sensitivity  | DPDT         | <b>G6A-234P-ST40-US</b> | <b>G6A-274P-ST40-US</b> |
|                  | 4PDT         | <b>G6A-434P-ST40-US</b> | <b>G6A-474P-ST40-US</b> |

### ■ LATCHING

#### Single coil

| Type     | Contact form | Part number            |                        |
|----------|--------------|------------------------|------------------------|
|          |              | AgPd (Au clad)         | Ag (Au clad)           |
| Standard | DPDT         | <b>G6AU-234P-ST-US</b> | <b>G6AU-274P-ST-US</b> |
|          | 4PDT         | <b>G6AU-434P-ST-US</b> | <b>G6AU-474P-ST-US</b> |

#### Dual coil

| Type            | Contact form | Part number              |                          |
|-----------------|--------------|--------------------------|--------------------------|
|                 |              | AgPd (Au clad)           | Ag (Au clad)             |
| Standard        | DPDT         | <b>G6AK-234P-ST-US</b>   | <b>G6AK-274P-ST-US</b>   |
|                 | 4PDT         | <b>G6AK-434P-ST-US</b>   | <b>G6AK-474P-ST-US</b>   |
| Low-sensitivity | DPDT         | <b>G6AK-234P-ST40-US</b> | <b>G6AK-274P-ST40-US</b> |
|                 | 4PDT         | <b>G6AK-434P-ST40-US</b> | <b>G6AK-474P-ST40-US</b> |

Note: Other options available for ST10 ultra high reliability, high temperature 85°C (185°F), ST1 reverse coil polarity, BS British standard. Contact your OMRON sales representative for details.

# G6A **OMRON** G6A

## Specifications

### ■ CONTACT DATA

| Type                    | G6A-234P-ST(15, 40)-US, G6A-434P-ST(20, 40)-US<br>G6AK-234P-ST(40)-US, G6AK-434P-ST(40)-US<br>G6AU-234P-ST-US, G6AU-434P-ST-US |                                             | G6A-274P-ST(15, 40)-US, G6A-474P-ST(20, 40)-US<br>G6AK-274P-ST(40)-US, G6AK-474P-ST(40)-US<br>G6AU-274P-ST-US, G6AU-474P-ST-US |                                             |
|-------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------|---------------------------------------------|
| Load                    | Resistive load (p.f. = 1)                                                                                                      | Inductive load (p.f. = 0.4)<br>(L/R = 7 ms) | Resistive load (p.f. = 1)                                                                                                      | Inductive load (p.f. = 0.4)<br>(L/R = 7 ms) |
| Rated load              | 0.30 A at 125 VAC,<br>1 A at 30 VDC                                                                                            | 0.20 A at 125 VAC,<br>0.50 A at 30 VDC      | 0.50 A at 125 VAC,<br>2 A at 30 VDC                                                                                            | 0.25 A at 125 VAC,<br>1 A at 30 VDC         |
| Contact material        | AgPd (Au clad)                                                                                                                 | AgPd (Au clad)                              | Ag (Au clad)                                                                                                                   | Ag (Au clad)                                |
| Carry current           | 3 A                                                                                                                            | 3 A                                         | 3 A                                                                                                                            | 3 A                                         |
| Max. operating voltage  | 250 VAC, 220 VDC                                                                                                               | 250 VAC, 220 VDC                            | 250 VAC, 220 VDC                                                                                                               | 250 VAC, 220 VDC                            |
| Max. operating current  | 2 A                                                                                                                            | 1 A                                         | 2 A                                                                                                                            | 1 A                                         |
| Max. switching capacity | 125 VA, 60 W                                                                                                                   | 62.50 VA, 30 W                              | 125 VA, 60 W                                                                                                                   | 62.50 VA, 30 W                              |
| Min. permissible load   | 10 $\mu$ A, 10 mVDC                                                                                                            | 10 $\mu$ A, 10 mVDC                         | 10 $\mu$ A, 10 mVDC                                                                                                            | 10 $\mu$ A, 10 mVDC                         |

### ■ COIL DATA

#### Standard non-latching DPDT (G6A-234P-ST-US, G6A-274P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance ( $\Omega$ ) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage      | Power consumption (mW) |
|---------------------|--------------------|------------------------------|----------------------------------|-------------|---------------------------------------|-----------------|----------------------|------------------------|
|                     |                    |                              | Armature OFF                     | Armature ON |                                       |                 |                      |                        |
| 3                   | 66.70              | 45                           | 0.07                             | 0.07        | 70% max.                              | 10% min.        | 200% at 23°C (73°F)  | Approx. 200            |
| 5                   | 40                 | 125                          | 0.20                             | 0.18        |                                       |                 |                      |                        |
| 6                   | 33.30              | 180                          | 0.29                             | 0.26        |                                       |                 |                      |                        |
| 9                   | 22.20              | 405                          | 0.63                             | 0.57        |                                       |                 |                      |                        |
| 12                  | 16.70              | 720                          | 1.10                             | 1.06        |                                       |                 |                      |                        |
| 24                  | 8.30               | 2,880                        | 4.50                             | 4.10        |                                       |                 | 150% at 70°C (158°F) | Approx. 235            |
| 48                  | 4.90               | 9,750                        | 13.70                            | 12.50       |                                       |                 |                      |                        |

#### High-sensitivity non-latching DPDT (G6A-234P-ST15-US, G6A-274P-ST15-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance ( $\Omega$ ) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage | Power consumption (mW) |
|---------------------|--------------------|------------------------------|----------------------------------|-------------|---------------------------------------|-----------------|-----------------|------------------------|
|                     |                    |                              | Armature OFF                     | Armature ON |                                       |                 |                 |                        |
| 1.50                | 100                | 15                           | 0.02                             | 0.02        | 80% max.                              | 10% min.        | 200%            | Approx. 150            |
| 3                   | 50                 | 60                           | 0.09                             | 0.08        |                                       |                 |                 |                        |
| 4.50                | 33.30              | 135                          | 0.22                             | 0.20        |                                       |                 |                 |                        |
| 5                   | 30                 | 167                          | 0.25                             | 0.21        |                                       |                 |                 |                        |
| 6                   | 25                 | 240                          | 0.35                             | 0.31        |                                       |                 |                 |                        |
| 9                   | 16.70              | 540                          | 0.80                             | 0.70        |                                       |                 |                 |                        |
| 12                  | 12.50              | 960                          | 1.35                             | 1.25        |                                       |                 |                 |                        |
| 24                  | 6.30               | 3,840                        | 5.60                             | 5.10        |                                       |                 |                 |                        |
| 48                  | 3.20               | 15,000                       | 22.50                            | 20.00       |                                       |                 |                 |                        |

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of  $\pm 10\%$ .

# G6A OMRON G6A

## ■ COIL DATA (continued)

### Low-sensitivity non-latching DPDT (G6A-234P-ST40-US, G6A-274P-ST40-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage                                 | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|---------------------------------------|-----------------|-------------------------------------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                       |                 |                                                 |                        |
| 3                   | 133.30             | 22.50               | 0.03                             | 0.02        | 70% max.                              | 10% min.        | 150% at 23°C (73°F)<br><br>110% at 70°C (158°F) | Approx. 400            |
| 5                   | 80                 | 62.50               | 0.08                             | 0.07        |                                       |                 |                                                 |                        |
| 6                   | 66.70              | 90                  | 0.11                             | 0.10        |                                       |                 |                                                 |                        |
| 9                   | 44.30              | 203                 | 0.27                             | 0.23        |                                       |                 |                                                 |                        |
| 12                  | 33.30              | 360                 | 0.52                             | 0.43        |                                       |                 |                                                 |                        |
| 24                  | 16.70              | 1,440               | 2.10                             | 1.80        |                                       |                 |                                                 |                        |
| 48                  | 8.30               | 5,760               | 7.50                             | 6.40        |                                       |                 |                                                 |                        |

### Standard non-latching 4PDT (G6A-434P-ST-US, G6A-474P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage                                      | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|---------------------------------------|-----------------|------------------------------------------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                       |                 |                                                      |                        |
| 3                   | 120                | 25                  | 0.05                             | 0.05        | 70% max.                              | 10% min.        | 150% at 23°C (73°F)<br><br>110% max. at 70°C (158°F) | Approx. 360            |
| 5                   | 72.50              | 69                  | 0.14                             | 0.12        |                                       |                 |                                                      |                        |
| 6                   | 60                 | 100                 | 0.20                             | 0.17        |                                       |                 |                                                      |                        |
| 9                   | 40                 | 225                 | 0.45                             | 0.38        |                                       |                 |                                                      |                        |
| 12                  | 30                 | 400                 | 0.80                             | 0.68        |                                       |                 |                                                      |                        |
| 24                  | 15                 | 1,600               | 3.20                             | 2.70        |                                       |                 |                                                      |                        |
| 48                  | 7.50               | 6,400               | 12.80                            | 10.90       |                                       |                 |                                                      |                        |

### High-sensitivity non-latching 4PDT (G6A-434P-ST20-US, G6A-474P-ST20-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage           | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|---------------------------------------|-----------------|---------------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                       |                 |                           |                        |
| 3                   | 66.70              | 45                  | —                                | —           | 70% max.                              | 10% min.        | 200% max. at 50°C (122°F) | Approx. 200            |
| 5                   | 40                 | 125                 | —                                | —           |                                       |                 |                           |                        |
| 6                   | 33.30              | 180                 | —                                | —           |                                       |                 |                           |                        |
| 9                   | 22.20              | 405                 | —                                | —           |                                       |                 |                           |                        |
| 12                  | 16.70              | 720                 | —                                | —           |                                       |                 |                           |                        |
| 24                  | 8.30               | 2,880               | —                                | —           |                                       |                 |                           |                        |
| 48                  | 4.20               | 11,520              | —                                | —           |                                       |                 |                           |                        |

### Low-sensitivity non-latching 4PDT (G6A-434P-ST40-US, G6A-474P-ST40-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Pick-up voltage<br>% of rated voltage | Dropout voltage | Maximum voltage                                      | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|---------------------------------------|-----------------|------------------------------------------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                       |                 |                                                      |                        |
| 3                   | 133.30             | 22.50               | 0.04                             | 0.02        | 70% max.                              | 10% min.        | 150% at 23°C (73°F)<br><br>110% max. at 70°C (158°F) | Approx. 400            |
| 5                   | 80                 | 62.50               | 0.12                             | 0.09        |                                       |                 |                                                      |                        |
| 6                   | 66.70              | 90                  | 0.17                             | 0.13        |                                       |                 |                                                      |                        |
| 9                   | 44.30              | 203                 | 0.42                             | 0.30        |                                       |                 |                                                      |                        |
| 12                  | 33.30              | 360                 | 0.70                             | 0.52        |                                       |                 |                                                      |                        |
| 24                  | 16.70              | 1,440               | 2.80                             | 2.20        |                                       |                 |                                                      |                        |
| 48                  | 8.30               | 5,760               | 10.20                            | 8.60        |                                       |                 |                                                      |                        |

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

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## ■ COIL DATA (continued)

### Standard single coil latching DPDT (G6AU-234P-ST-US, G6AU-274P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Set pick-up voltage<br>% of rated voltage | Reset pick-up voltage<br>% of rated voltage | Maximum voltage      | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|-------------------------------------------|---------------------------------------------|----------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                           |                                             |                      |                        |
| 3                   | 33.70              | 89                  | 0.15                             | 0.11        | 70% max.                                  | 70% max.                                    | 200% at 23°C (73°F)  | Approx. 100            |
| 5                   | 20                 | 250                 | 0.44                             | 0.35        |                                           |                                             |                      |                        |
| 6                   | 16.70              | 360                 | 0.64                             | 0.48        |                                           |                                             |                      |                        |
| 9                   | 11.10              | 810                 | 1.38                             | 1.07        |                                           |                                             |                      |                        |
| 12                  | 8.30               | 1,440               | 2.50                             | 2           |                                           |                                             |                      |                        |
| 24                  | 4.20               | 5,760               | 9.20                             | 7.20        |                                           |                                             |                      |                        |
| 48                  | 2.50               | 19,000              | 28.50                            | 22          |                                           |                                             | 150% at 70°C (158°F) | Approx. 120            |

### Standard dual coil latching DPDT (G6AK-234P-ST-US, G6AK-274P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             |              |             | Set pick-up voltage | Reset pick-up voltage | Maximum voltage           | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|--------------|-------------|---------------------|-----------------------|---------------------------|------------------------|
|                     |                    |                     | Set coil                         |             | Reset coil   |             |                     |                       |                           |                        |
|                     |                    |                     | Armature OFF                     | Armature ON | Armature OFF | Armature ON |                     |                       |                           |                        |
|                     |                    |                     | % of rated voltage               |             |              |             |                     |                       |                           |                        |
| 3                   | 66.70              | 45                  | 0.04                             | 0.03        | 0.03         | 0.04        | 70% max.            | 70% max.              | 200% at 23°C (73°F)       | Approx. 200            |
| 5                   | 36                 | 139                 | 0.11                             | 0.08        | 0.08         | 0.11        |                     |                       |                           | Approx. 180            |
| 6                   | 30                 | 200                 | 0.16                             | 0.12        | 0.12         | 0.16        |                     |                       |                           |                        |
| 9                   | 20                 | 450                 | 0.38                             | 0.28        | 0.28         | 0.38        |                     |                       |                           |                        |
| 12                  | 15                 | 800                 | 0.60                             | 0.45        | 0.45         | 0.60        |                     |                       |                           |                        |
| 24                  | 7.50               | 3,200               | 2.10                             | 1.50        | 1.50         | 2.10        |                     |                       | 150% max. at 70°C (158°F) | Approx. 200            |
| 48                  | 4.20               | 11,520              | 8.50                             | 6.30        | 6.30         | 8.50        |                     |                       |                           |                        |

### Dual coil latching low-sensitivity DPDT (G6AK-234P-ST40-US, G6AK-274P-ST40-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             |              |             | Set pick-up voltage | Reset pick-up voltage | Maximum voltage                 | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|--------------|-------------|---------------------|-----------------------|---------------------------------|------------------------|
|                     |                    |                     | Set coil                         |             | Reset coil   |             |                     |                       |                                 |                        |
|                     |                    |                     | Armature OFF                     | Armature ON | Armature OFF | Armature ON |                     |                       |                                 |                        |
|                     |                    |                     | % of rated voltage               |             |              |             |                     |                       |                                 |                        |
| 3                   | 120                | 25                  | 0.02                             | 0.01        | 0.01         | 0.02        | 70% max.            | 70% max.              | 150% max.<br>at 23°C<br>(73°F)  | Approx. 360            |
| 5                   | 72.50              | 69                  | 0.05                             | 0.04        | 0.04         | 0.05        |                     |                       |                                 |                        |
| 6                   | 60                 | 100                 | 0.07                             | 0.05        | 0.05         | 0.07        |                     |                       |                                 |                        |
| 9                   | 40                 | 225                 | 0.16                             | 0.12        | 0.12         | 0.16        |                     |                       |                                 |                        |
| 12                  | 30                 | 400                 | 0.28                             | 0.20        | 0.20         | 0.28        |                     |                       |                                 |                        |
| 24                  | 15                 | 1,600               | 1.10                             | 0.75        | 0.75         | 1.10        |                     |                       |                                 |                        |
| 48                  | 7.50               | 6,400               | 4                                | 2.90        | 2.9          | 4           |                     |                       | 110% max.<br>at 70°C<br>(158°F) |                        |

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

# G6A OMRON G6A

## ■ COIL DATA (continued)

### Standard single coil latching 4PDT (G6AU-434P-ST-US, G6AU-474P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             | Set pick-up voltage<br>% of rated voltage | Reset pick-up voltage | Maximum voltage                                 | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|-------------------------------------------|-----------------------|-------------------------------------------------|------------------------|
|                     |                    |                     | Armature OFF                     | Armature ON |                                           |                       |                                                 |                        |
| 3                   | 106.80             | 28.10               | 0.03                             | 0.02        | 70% max.                                  | 70% max.              | 150% at 23°C (73°F)<br><br>110% at 70°C (158°F) | Approx. 320            |
| 5                   | 64                 | 78.10               | 0.08                             | 0.06        |                                           |                       |                                                 |                        |
| 6                   | 53.30              | 112.50              | 0.11                             | 0.08        |                                           |                       |                                                 |                        |
| 9                   | 35.60              | 253                 | 0.25                             | 0.18        |                                           |                       |                                                 |                        |
| 12                  | 26.70              | 450                 | 0.45                             | 0.32        |                                           |                       |                                                 |                        |
| 24                  | 13.30              | 1,800               | 1.80                             | 1.30        |                                           |                       |                                                 |                        |
| 48                  | 6.70               | 7,200               | 7.00                             | 5.20        |                                           |                       |                                                 |                        |

### Standard dual coil latching 4PDT (G6AK-434P-ST-US, G6AK-474P-ST-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             |              |             | Set pick-up voltage | Reset pick-up voltage | Maximum voltage     | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|--------------|-------------|---------------------|-----------------------|---------------------|------------------------|
|                     |                    |                     | Set coil                         |             | Reset coil   |             |                     |                       |                     |                        |
|                     |                    |                     | Armature OFF                     | Armature ON | Armature OFF | Armature ON |                     |                       |                     |                        |
|                     |                    |                     | % of rated voltage               |             |              |             |                     |                       |                     |                        |
| 3                   | 106.80             | 28.10               | 0.03                             | 0.02        | 0.02         | 0.03        | 70% max.            | 70% max.              | 150% at 23°C (73°F) | Approx. 320            |
| 5                   | 64                 | 78.10               | 0.08                             | 0.06        | 0.06         | 0.08        |                     |                       |                     |                        |
| 6                   | 53.30              | 112.50              | 0.11                             | 0.08        | 0.08         | 0.11        |                     |                       |                     |                        |
| 9                   | 35.60              | 253                 | 0.25                             | 0.18        | 0.18         | 0.25        |                     |                       |                     |                        |
| 12                  | 26.70              | 450                 | 0.45                             | 0.32        | 0.32         | 0.45        |                     |                       |                     |                        |
| 24                  | 13.30              | 1,800               | 1.80                             | 1.30        | 1.30         | 1.80        |                     |                       |                     |                        |
| 48                  | 6.70               | 7,200               | 7.00                             | 5.20        | 5.20         | 7.00        |                     |                       |                     |                        |

### Dual coil latching low-sensitivity 4PDT (G6AK-434P-ST40-US, G6AK-474P-ST40-US)

| Rated voltage (VDC) | Rated current (mA) | Coil resistance (Ω) | Coil inductance (ref. value) (H) |             |              |             | Set pick-up voltage | Reset pick-up voltage | Maximum voltage                                                       | Power consumption (mW) |
|---------------------|--------------------|---------------------|----------------------------------|-------------|--------------|-------------|---------------------|-----------------------|-----------------------------------------------------------------------|------------------------|
|                     |                    |                     | Set coil                         |             | Reset coil   |             |                     |                       |                                                                       |                        |
|                     |                    |                     | Armature OFF                     | Armature ON | Armature OFF | Armature ON |                     |                       |                                                                       |                        |
| 3                   | 120                | 25                  | 0.02                             | 0.02        | 0.02         | 0.02        | 70% max.            | 70% max.              | 150% max.<br>at 23°C<br>(73°F)<br><br>110% max.<br>at 70°C<br>(158°F) | Approx. 360            |
| 5                   | 72.50              | 69                  | 0.07                             | 0.05        | 0.05         | 0.07        |                     |                       |                                                                       |                        |
| 6                   | 60                 | 100                 | 0.09                             | 0.08        | 0.08         | 0.09        |                     |                       |                                                                       |                        |
| 9                   | 40                 | 225                 | 0.18                             | 0.14        | 0.14         | 0.18        |                     |                       |                                                                       |                        |
| 12                  | 30                 | 400                 | 0.30                             | 0.23        | 0.23         | 0.30        |                     |                       |                                                                       |                        |
| 24                  | 15                 | 1,600               | 1.20                             | 0.82        | 0.82         | 1.20        |                     |                       |                                                                       |                        |
| 48                  | 7.50               | 6,400               | 4.40                             | 3.20        | 3.20         | 4.40        |                     |                       |                                                                       |                        |

Note: The rated current and coil resistance are measured at a coil temperature of 23°C (73°F) with a tolerance of ±10%.

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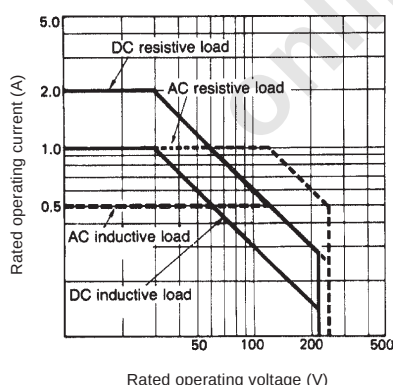
## ■ CHARACTERISTICS

| Type                                 |                        | Non-latching                                                                         | Latching                                |
|--------------------------------------|------------------------|--------------------------------------------------------------------------------------|-----------------------------------------|
| Contact resistance                   |                        | 50 mΩ max.                                                                           |                                         |
| Operate (set) time                   | DPDT                   | 5 ms max. (mean value: approx. 3 ms)                                                 | 5 ms max. (mean value: approx. 2.50 ms) |
|                                      | 4PDT                   | 7 ms max. (mean value: approx. 3.80 ms)                                              | 7 ms max. (mean value: approx. 3.30 ms) |
| Release (reset) time                 | DPDT                   | 3 ms max. (mean value: approx. 1.20 ms)                                              | 5 ms max. (mean value: approx. 2.50 ms) |
|                                      | 4PDT                   | 5 ms max. (mean value: approx. 1.30 ms)                                              | 7 ms max. (mean value: approx. 2.70 ms) |
| Bounce time                          | Operate                | Actual value approx. 0.50 ms                                                         |                                         |
|                                      | Release                | Actual value approx. 0.50 ms                                                         |                                         |
| Operating frequency                  | Mechanical             | 36,000 operations/hour                                                               |                                         |
|                                      | Electrical             | 1,800 operations/hour (under rated load)                                             |                                         |
| Insulation resistance                |                        | 1,000 MΩ min. (at 500 VDC)                                                           |                                         |
| Dielectric strength (see note 2)     |                        | 1,000 VAC, 50/60 Hz for 1 minute between coil and contacts                           |                                         |
|                                      |                        | 1,000 VAC, 50/60 Hz for 1 minute between contacts of different poles                 |                                         |
|                                      |                        | 1,000 VAC, 50/60 Hz for 1 minute between contacts of same pole                       |                                         |
|                                      |                        | 250 VAC, 50/60 Hz for 1 minute between set and reset coils                           |                                         |
| Surge withstand voltage (see note 3) |                        | 1,500 V 10 x 160 μs (conforms to FCC Part 68)                                        |                                         |
| Vibration                            | Mechanical durability  | 10 to 55 Hz; 5 mm (0.20 in) double amplitude                                         |                                         |
|                                      | Malfunction durability | 10 to 55 Hz; 3.30 mm (0.13 in) double amplitude                                      |                                         |
| Shock                                | Mechanical durability  | 1,000 m/s <sup>2</sup> (Approx. 100 G)                                               |                                         |
|                                      | Malfunction durability | DPDT: 500 m/s <sup>2</sup> (Approx. 50 G); 4PDT: 300 m/s <sup>2</sup> (Approx. 30 G) |                                         |
| Ambient temperature                  |                        | -40° to 70°C (-40° to 158°F)                                                         |                                         |
| Humidity                             |                        | 45% to 85% RH                                                                        |                                         |
| Service life (see note 4)            | Mechanical             | 100 million operations min. (at 36,000 operations/hour)                              |                                         |
|                                      | Electrical             | See "Characteristic Data"                                                            |                                         |
| Weight                               | DPDT                   | Approx. 3.5 g (0.12 oz)                                                              |                                         |
|                                      | 4PDT                   | Approx. 6.0 g (0.21 oz)                                                              |                                         |

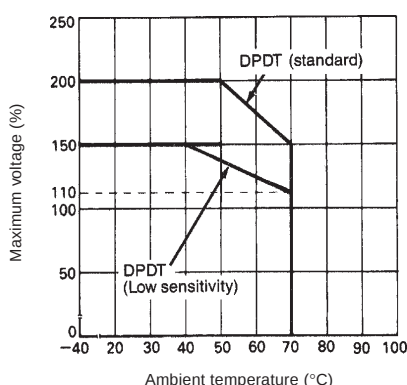
- Note: 1. Data shown are of initial value.  
2. The dielectric strength of Type G6A-2D34P-ST-US is 500 VAC when the relay is not energized.  
3. The surge withstand of Type G6A-2D34P-ST-US is 1,000 V 10 x 160 μs when the relay is not energized.  
4. The mechanical service life of Type G6A-2D34P-ST-US is 10,000,000 operations min.

## ■ CHARACTERISTIC DATA

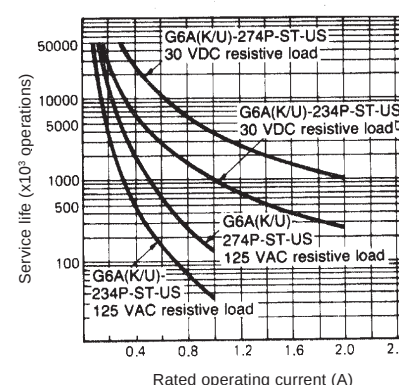
Maximum switching capacity  
DPDT



Ambient temperature vs.  
maximum voltage (reference only)



Electrical service life  
DPDT



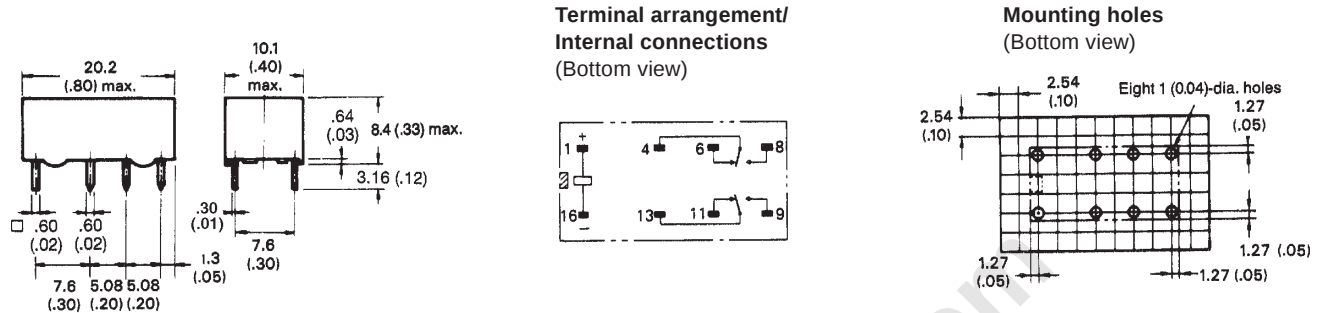
# G6A G6A

## Dimensions

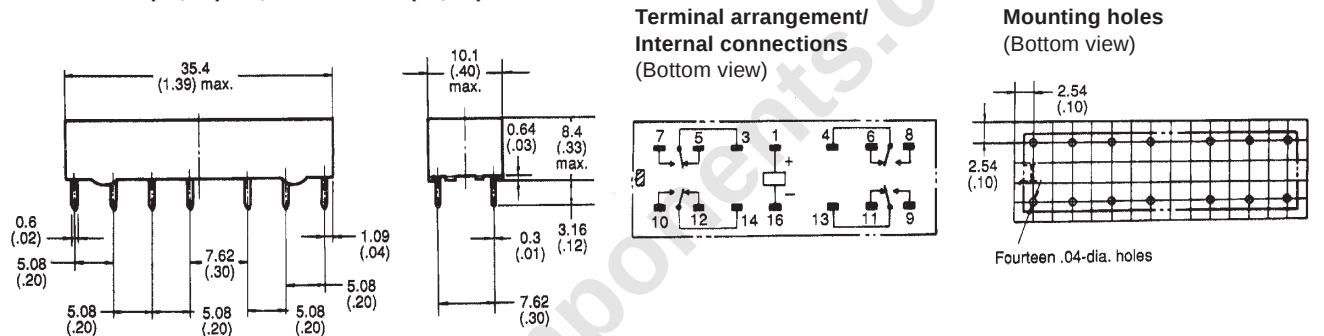
Unit: mm (inch)

### ■ NON-LATCHING

G6A-234P-ST(15, 40)-US, G6A-274P-ST(15, 40)-US

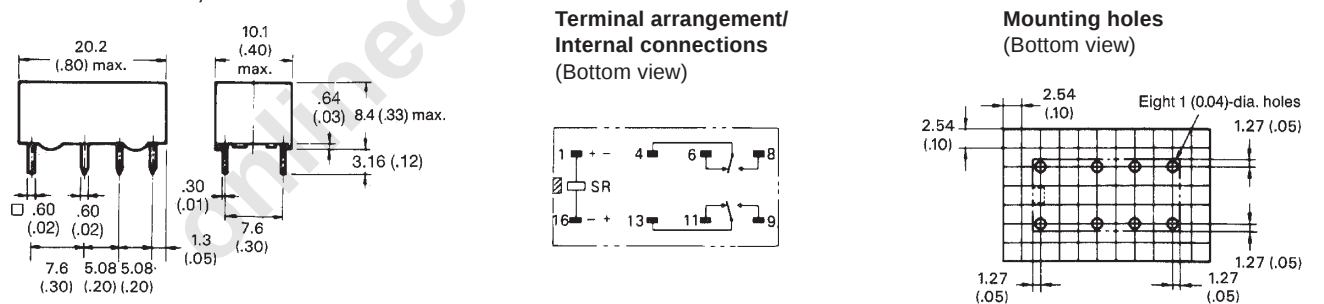


G6A-434P-ST(20, 40)-US, G6A-474P-ST(20, 40)-US

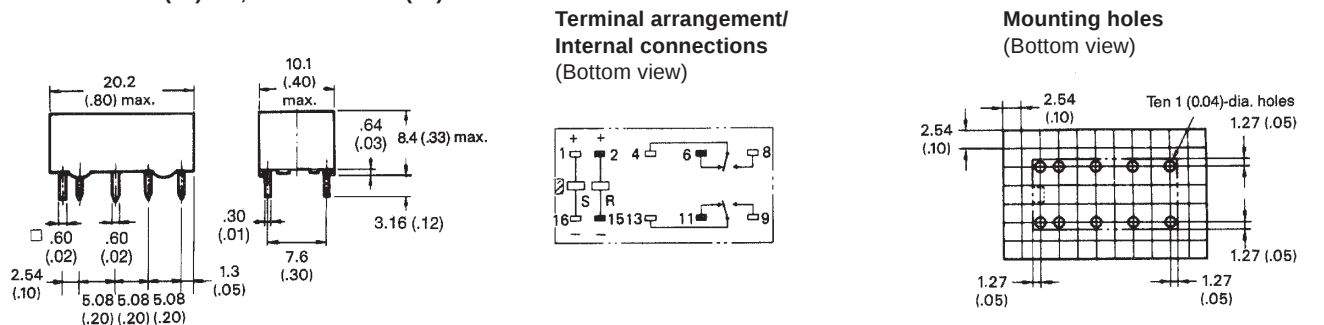


### ■ LATCHING

G6AU-234P-ST-US, G6AU-274P-ST-US



G6AK-234P-ST(40)-US, G6AK-274P-ST(40)-US



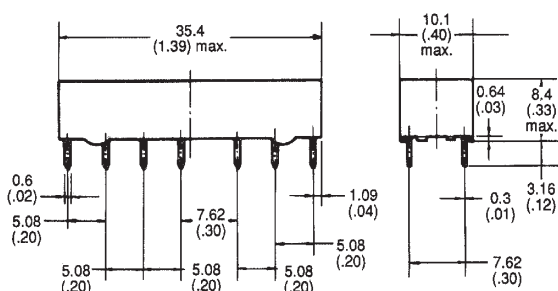
Note: and indicate mounting orientation marks.

G6A

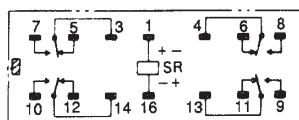
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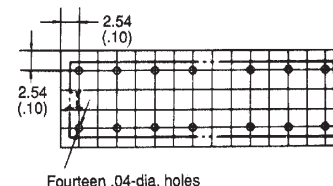
**G6AU-434P-ST-US, G6AU-474P-ST-US**



**Terminal arrangement/  
Internal connections**  
(Bottom view)

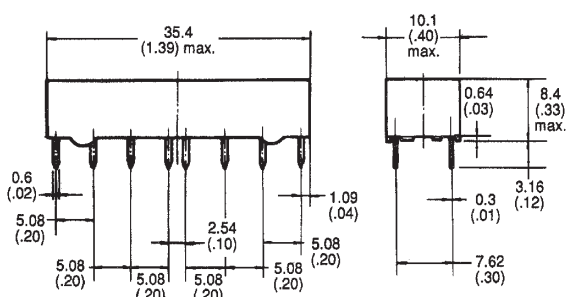


**Mounting holes**  
(Bottom view)

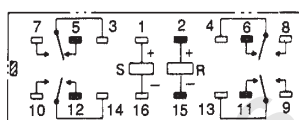


Fourteen .04-dia. holes

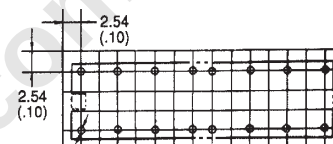
**G6AK-434P-ST(40)-US, G6AK-474P-ST(40)-US**



**Terminal arrangement/  
Internal connections**  
(Bottom view)



**Mounting holes**  
(Bottom view)



Sixteen .04-dia. holes

Note: and indicate mounting orientation marks.

**■ APPROVALS**

UL (File No. E41515)/CSA (File No. LR24825)

| Type                                                   | Contact form | Coil rating | Contact ratings                                    |
|--------------------------------------------------------|--------------|-------------|----------------------------------------------------|
| G6A-234P-ST-US<br>G6A-234P-ST40-US<br>G6A-234P-ST15-US | DPDT         | 1 to 48 VDC | 0.60 A, 125 VAC<br>1 A, 30 VDC<br>0.60 A, 110 V+DC |
| G6A-274P-ST-US<br>G6A-274P-ST40-US<br>G6A-274P-ST15-US |              |             | 0.60 A, 125 VAC<br>2 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6A-434P-ST-US<br>G6A-434P-ST20-US<br>G6A-434P-ST40-US |              |             | 0.60 A, 125 VAC<br>1 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6A-474P-ST-US<br>G6A-474P-ST20-US<br>G6A-474P-ST40-US | 4PDT         | 1 to 48 VDC | 0.60 A, 125 VAC<br>2 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6AK-234P-ST(40)-US<br>G6AU-234P-ST-US                 |              |             | 0.60 A, 125 VAC<br>1 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6AK-274P-ST(40)-US<br>G6AU-274P-ST-US                 |              |             | 0.60 A, 125 VAC<br>2 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6AK-434P-ST(40)-US<br>G6AU-434P-ST(40)-US             | 4PDT         | 1 to 48 VDC | 0.60 A, 125 VAC<br>1 A, 30 VDC<br>0.60 A, 110 VDC  |
| G6AK-474P-ST(40)-US<br>G6AU-474P-ST(40)-US             |              |             | 0.60 A, 125 VAC<br>2 A, 30 VDC<br>0.60 A, 110 VDC  |

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

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