

Specifications

| Contact Model | Standard Contact | | |
|------------------------------------|--|--|--|
| | RY2 - DPDT Slim | RM2 - DPDT Wide | RY4 - 4PDT |
| Contact Material | Gold-plated silver | Silver | Gold-plated silver |
| Contact Resistance ¹ | 50 mΩ maximum | 30 mΩ maximum | 50 mΩ maximum |
| Minimum Applicable Load | 24V DC, 5 mA; 5V DC, 10 mA (reference value) | 24V DC, 10 mA; 5V DC, 20 mA (reference value) | 24V DC, 5 mA; 5V DC, 10 mA (reference value) |
| Operating Time ² | 20 ms maximum | | |
| Release Time ² | 20 ms maximum | | |
| Power Consumption (approx.) | AC: 1.1 VA (50 Hz), 1 VA (60 Hz) DC: 0.8W | AC: 1.4 VA (50 Hz), 1.2 VA (60 Hz) DC: 0.9W | AC: 1.4 VA (50 Hz), 1.2 VA (60 Hz) DC: 0.9W |
| Insulation Resistance | 100 MΩ minimum (500V DC megger) | | |
| Dielectric Strength | Between live and dead parts: | | |
| | 1500V AC, 1 minute | 2000V AC, 1 minute | 2000V AC, 1 minute |
| | Between contact and coil: | | |
| | 1500V AC, 1 minute | 2000V AC, 1 minute | 2000V AC, 1 minute |
| | Between contacts of different poles: | | |
| | 1500V AC, 1 minute | 2000V AC, 1 minute | 2000V AC, 1 minute |
| Dielectric Strength | Between contacts of the same pole: | | |
| | 1000V AC, 1 minute | 1000V AC, 1 minute | 1000V AC, 1 minute |
| Operating Frequency | Electrical: 1800 operations/h maximum Mechanical: 18,000 operations/h maximum | | |
| Vibration Resistance | Damage limits: 10 to 55 Hz, amplitude 0.5 mm Operating extremes: 10 to 55 Hz, amplitude 0.5 mm | | |
| Shock Resistance | Damage limits: 1000 m/s ² Operating extremes: 100 m/s ² (DPDT Slim), 200 m/s ² (4PDT, DPDT Wide) | | |
| Mechanical Life | 50,000,000 operations | | |
| Electrical Life | 200,000 operations (220V AC, 3A) | 500,000 operations (220V AC, 5A) | 100,000 operations (220V AC, 5A) 200,000 operations (220V AC, 3A) |
| Operating Temperature ³ | -25 to +55°C (no freezing) | -25 to +45°C (no freezing) | -25 to +55°C (no freezing) ⁴ |
| Operating Humidity | 45 to 85% RH (no condensation) | | |
| Weight (approx.) | 23g | 35g | 34g |



Note: Above values are initial values.

1. Measured using 5V DC, 1A voltage drop method
2. Measured at the rated voltage (at 20°C), excluding contact bouncing
Release time of relays with diode: 40 ms maximum

3. For use under different temperature conditions, refer to Continuous Load Current vs. Operating Temperature Curve. The operating temperature range of relays with indicator or diode is -25 to +40°C.
4. When the total current of 4 contacts is less than 15A, the operating temperature range is -25 to +70°C.

Switches & Pilot Lights

Signaling Lights

AC Coil Ratings

| Voltage (V) | Rated Current (mA) ±15% at 20°C | | | | Coil Resistance (Ω) ±10% at 20°C | | Operation Characteristics (against rated values at 20°C) | | |
|-------------|---------------------------------|------------------|-----------|------------------|----------------------------------|------------------|--|----------------|-----------------|
| | AC 50Hz | | AC 60Hz | | DPDT Slim | DPDT Wide & 4PDT | Max. Continuous Applied Voltage | Pickup Voltage | Dropout Voltage |
| | DPDT Slim | DPDT Wide & 4PDT | DPDT Slim | DPDT Wide & 4PDT | | | | | |
| 6 | 170 | 240 | 150 | 200 | 18.8 | 9.4 | | | |
| 12 | 86 | 121 | 75 | 100 | 76.8 | 39.3 | | | |
| 24 | 42 | 60.5 | 37 | 50 | 300 | 153 | | | |
| 110 | 9.6 | — | 8.4 | — | 6,950 | — | | | |
| 110-120 | — | 9.4-10.8 | — | 8.0-9.2 | — | 4,290 | | | |
| 120 | 8.6 | — | 7.5 | — | 8,100 | — | | | |
| 220 | 4.7 | — | 4.1 | — | 25,892 | — | | | |
| 220-240 | — | 4.7-5.4 | — | 4.0-4.6 | — | 18,820 | | | |
| 240 | 4.9 | — | 4.3 | — | 26,710 | — | | | |

Relays & Sockets

Timers

DC Coil Ratings

| Voltage (V) | Rated Current (mA) ±15% at 20°C | | Coil Resistance (Ω) ±10% at 20°C | | Operation Characteristics (against rated values at 20°C) | | |
|-------------|---------------------------------|------------------|----------------------------------|------------------|--|----------------|-----------------|
| | DPDT Slim | DPDT Wide & 4PDT | DPDT Slim | DPDT Wide & 4PDT | Max. Continuous Applied Voltage | Pickup Voltage | Dropout Voltage |
| 6 | 128 | 150 | 47 | 40 | 110% | 80% maximum | 10% minimum |
| 12 | 64 | 75 | 188 | 160 | | | |
| 24 | 32 | 36.9 | 750 | 650 | | | |
| 48 | 18 | 18.5 | 2,660 | 2,600 | | | |
| 100-110 | — | 8.2-9.0 | — | 12,250 | | | |
| 110 | 8 | — | 13,800 | — | | | |

Contact Ratings

| Maximum Contact Capacity | | | | | | |
|--------------------------|--------------------|-------------------------|---------------------|-------------|-----------|-----------|
| Contact | Continuous Current | Allowable Contact Power | | Rated Load | | |
| | | Resistive Load | Inductive Load | Voltage (V) | Res. Load | Ind. Load |
| DPDT Slim (RY2) | 3A | 660 VA AC 90W DC | 176 VA AC 45W DC | 110V AC | 3A | 1.5A |
| | | | | 220V AC | 3A | 0.8A |
| | | | | 30V DC | 3A | 1.5A |
| DPDT Wide (RM2) | 5A | 1100VA AC 150W DC | 440VA AC 75W DC | 110V AC | 5A | 2.5A |
| | | | | 220V AC | 5A | 2A |
| | | | | 30V DC | 5A | 2.5A |
| 4PDT (RY4) | 5A | 1200 VA AC 150W DC | 288 VA AC 60W DC | 240V AC | 5A | 1.2A |
| | | | | 30V DC | 5A | 2A |

Note: Inductive load for the rated load — $\cos \phi = 0.3$, L/R = 7 ms

TÜV Ratings

| Voltage | DPDT Slim | DPDT Wide | 4PDT |
|---------|-----------|-----------|------|
| 240V AC | 3A | 5A | 5A |
| 30V DC | 3A | 5A | 5A |

AC: $\cos \phi = 1.0$, DC: L/R = 0 ms

UL Ratings

| Voltage | Resistive | | | General use | | |
|---------|-----------|-----------|------|-------------|-----------|------|
| | DPDT Slim | DPDT Wide | 4PDT | DPDT Slim | DPDT Wide | 4PDT |
| 240V AC | 3A | 5A | 5A | 0.8A | 2A | 5A |
| 120V AC | — | — | — | 1.5A | 2.5A | — |
| 100V DC | 0.2A | 0.4A | 0.2A | 0.2A | — | 0.2A |
| 30V DC | 3A | 5A | 5A | 3A | — | 5A |

CSA Ratings

| Voltage | Resistive | | | General use | | |
|---------|-----------|-----------|------|-------------|-----------|------|
| | DPDT Slim | DPDT Wide | 4PDT | DPDT Slim | DPDT Wide | 4PDT |
| 240V AC | 3A | 5A | 5A | 0.8A | 2A | 5A |
| 120V AC | 3A | 5A | — | 1.5A | 2.5A | — |
| 100V DC | — | — | — | 0.2A | 0.4A | 0.2A |
| 30V DC | 3A | 5A | 5A | 1.5A | 2.5A | 1.5A |

Contactors

Terminal Blocks

Circuit Breakers