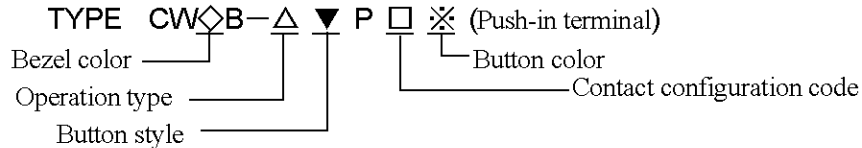


FLUSH SILHOUETTE SWITCHES

CW SERIES PUSHBUTTONS



1. Applicable standard

JIS C8201-5-1
 IEC60947-5-1
 EN60947-5-1(TÜV Certified)
 UL508 (UL Listing)
 CSA C22.2 NO.14 (c-UL Listing)
 GB/T14048.5(CCC Certified)

2. Operating conditions

- | | |
|-------------------------|-------------------------------|
| (1) Ambient temperature | -25 to +60°C (no freezing) |
| (2) Relative humidity | 45 to 85%RH (no condensation) |
| (3) Storage temperature | -40 to +80°C (no freezing) |
| (4) Pollution degree | 3 |

3. Ratings

- | | |
|---|------|
| (1) Rated insulation voltage | 300V |
| (2) Rated thermal current | 10A |
| (3) Rated operating voltage and rated operating current | |

<Specifications 1 >

<Specifications 2 >

| Rated operating voltage | | 24V | 48V | 50V | 110V | 220V | 24V | 48V | 50V | 110V | 220V | |
|-------------------------|----|------------------------|-----|-----|------|------|------|------|------|------|-------|-------|
| Rated operating current | AC | Resistive load (AC-12) | 10A | - | 10A | 10A | 6A | 5A | - | 5A | 5A | 3A |
| | | Inductive load (AC-15) | 10A | - | 7A | 5A | 3A | 5A | - | 3.5A | 2.5A | 1.5A |
| | DC | Resistive load (DC-12) | 10A | 5A | - | 2.2A | 1.1A | 5A | 2.5A | - | 1.1A | 0.55A |
| | | Inductive load (DC-15) | 5A | 2A | - | 1.1A | 0.6A | 2.5A | 1A | - | 0.55A | 0.3A |

Note 1) AC inductive load : PF=0.6 to 0.7, DC inductive load : L/R=7msec maximum

- | | |
|-----------------------------|----------------------------------|
| (4) Minimum applicable load | 3V AC/DC · 5mA (reference value) |
|-----------------------------|----------------------------------|

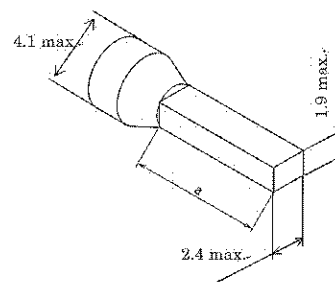
4. Constructions

- | | |
|--|--|
| (1) Outside view and contact operation | See attached sheet |
| (2) Bezel style | Round flush |
| (3) Operation type — (△) | Momentary(M), Alternate(A) |
| (4) Degree of protection | IP65 (panel front), IP20 (terminal) (When used with rubber boot (CW9Z-D11, -D12) : IP66, IP67, UL Type-4X (panel front)) |
| (5) Contact material | Silver |
| (6) Contact configuration code — (□) | 1a (10), 1b (01), 1a-1b(11), 1a-2b(12), 2a(20), 2b(02), Momentary only: 2a-1b(21), 2a-2b (22), 3a(30), 3b(03) |

| | |
|--|--|
| (7) Bezel color — (◇) | Black (1), Metallic (4) |
| (8) Button type — (▼) | Flat (1), Extended (2) |
| (9) Button color — (※) | Red (R), Green (G), Yellow(Y), White (W), Blue (S), Black(B) |
| (10) Terminal style | Push-in terminal |
| (11) Applicable wire | 0.25 to 1.5 mm ² (AWG24 to AWG16) |
| (12) Wire strip length (Stranded and solid wire) | 8±1 mm |
| (13) Ferrule terminal size (Weidmüller) | W2.4×H1.9 |

A size (conductor length)

- Ferrule without insulation cover
 - 0.25mm² 5 to 10mm
 - 0.5 to 1.0mm² 6 to 10mm
 - 1.5mm² 8 to 10mm
- Ferrule with insulation cover
 - 0.25 to 1.0mm² 6 to 10mm
 - 1.5mm² 8 to 10mm



* Pin crimp terminals cannot be used.

| | |
|-------------------------------|--|
| (14) No. of connectable wires | 2 |
| | Note) Only one wire can be inserted into one wire port. |
| (15) Panel thickness | 0.8 to 3.2 mm |
| (16) Panel cut-out | $\phi 22.3 \begin{smallmatrix} +0.4 \\ 0 \end{smallmatrix}$ mm |
| (17) Weight (approx.) | 37g (CW1B-MIP30※, 3 contacts) |

5. Characteristics

| | |
|------------------------------------|--------------------------------------|
| (1) Contact resistance | 50mΩ maximum (initial value) |
| (2) Insulation resistance | 100MΩ minimum (500V DC megger) |
| (3) Overvoltage category | II |
| (4) Impulse withstand voltage | 2.5kV |
| (5) Vibration resistance | |
| (a) Operating extremes | Frequency 5 to 55Hz, Amplitude 0.5mm |
| (b) Damage limits | Frequency 30Hz, Amplitude 1.5mm |
| (6) Shock resistance | |
| (a) Operating extremes | 100 m/s ² |
| (b) Damage limits | 1,000 m/s ² |
| (7) Mounting nut torque tightening | 1.2 N·m |

6. Life**(1) Mechanical life**

2,000,000 operations minimum (momentary, single contact)

1,000,000 operations minimum (momentary, double contact)

250,000 operations minimum (alternate, single contact)

100,000 operations minimum (alternate, double contact)

(2) Electrical life (rated load)

50,000 operations minimum (rated operating voltage: specifications1)

100,000 operations minimum (rated operating voltage: specifications2)

Switching frequency: 1,800 operations/hour (momentary, single contact)

Switching frequency : 900 operations/hour (alternate, single contact)

25,000 operations minimum (rated operating voltage: specifications1)

50,000 operations minimum (rated operating voltage: specifications2)

Switching frequency: 1,800 operations/hour (momentary, double contact)

Switching frequency : 900 operations/hour (alternate, double contact)