

# SPECIFICATION

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φ30 TWN SERIES PUSHBUTTON SWITCH  
 TYPE ABN 4◇ □□ ※  
 Operation type ———— Button color  
                                   Contact arrangement

1. Applicable standard
- JIS C8201-5-1
  - IEC60947-5-1
  - EN60647-5-1 (TUV Rheinland Certified)
  - UL508 (UL Listing)
  - CSA C22.2 (CSA Certified)
  - GB/T14048.5 (CCC Certified)

2. Operating conditions
- (1) Ambient temperature -25 to +70°C (no freezing)
  - (2) Relative humidity 45 to 85% (no condensation)
  - (3) Storage temperature -40 to +80°C (no freezing)

3. Ratings
- (1) Rated insulation voltage 600V
  - (2) Thermal current 10A
  - (3) Rated voltage and rated current

		Rated operating voltage						
		24V	48V	50V	110V	220V	440V	
Rated operating current	A	Resistive load (AC-12)	10A	—	10A	10A	6A	2A
	C	Inductive load (AC-15)	10A	—	7A	5A	3A	1A
	D	Resistive load (DC-12)	10A	5A	—	2.2A	1.1A	—
	C	Inductive load (DC-13)	5A	2A	—	1.1A	0.6A	—

Note) The operating current is classified according to the IEC60947-5-1 making and breaking current capacities.

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

4. Constructions
- (1) Outside view See attached sheet
  - (2) Operation type Momentary
  - (3) Degree of protection
    - (a) Operation units (panel front side) IP65
    - (b) Contact block IP20
  - (4) Contact arrangement— (□□) 1a(10),1b(01),1a-1b(11),2a(20),2b(02),3a(30),3b(03).2a-1b(21), 1a-2b (12), 4a (40), 4b (04), 2a-2b (22),3a-1b (31), 1a-3b (13)
  - (5) Operation type— (4◇) Jumbo mushroom with shallow shroud(4G)  
Jumbo mushroom with deep shroud (4F)
  - (6) Button color (Bright type)—(※) Red(R), Green(G),Black(B), Yellow(Y)
  - (7) Terminal style M3.5 terminal screw +/- screw head

## (8) Applicable wire / Recommended tightening torque

Applicable wire		Maximum number of installed	Recommended tightening torque (N·m)
Solid wire	$\phi 0.5 \sim 1.6\text{mm}$ (AWG14~22)	2	1.0~1.3
	$\phi 1.7 \sim 2.0\text{mm}$ (AWG12)	1	1.2~1.3
Strand wire	$0.3 \sim 2.0\text{mm}^2$ (AWG14~22)	2	1.0~1.3
	$2.1 \sim 3.5 \text{ mm}^2$ (AWG12)	1	1.2~1.3

(9) Panel thickness 0.8 to 7.5mm

(10) Panel cut-out  $\phi 30.5^{+0.5}\text{mm}$ 

## 5. Characteristics

(1) Contact resistance 50 m $\Omega$  maximum (initial value)(2) Insulation resistance 100M $\Omega$  minimum (measured with a 500V DC megger)

(3) Dielectric strength 2,500V AC, 1minute

(4) Vibration resistance

(a) Operating extremes Frequency 5 to 55 Hz, Amplitude 0.5mm

(b) Damage limits Frequency 30Hz, Amplitude 1.5mm

(5) Shock resistance

(a) Operating extremes 100 m/s<sup>2</sup>(b) Damage limits 1,000 m/s<sup>2</sup>

## 6. Life

(1) Mechanical life(without load) 5,000,000 operation minimum

(2) Electrical life (rated load) 500,000 operation minimum

Operating frequency: 1,800 operations/hour maximum Duty Rate: 40%