

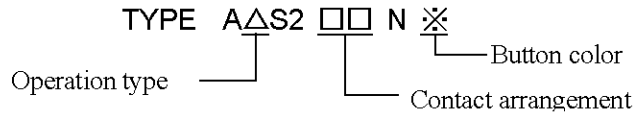
SPECIFICATIONS

No. ISA3443C
Date. Oct.25, 2023

Approved by M.Fujimoto
Checked by Y.Hanaoka
Written by R.Guo

TWS($\phi 25$) SERIES

PUSHBUTTON SWITCH



1. Applicable standard

JIS C 8201-5-1
IEC60947-5-1
EN 60947-5-1 (TUV Approval)
UL508 (UL Listing)
CSA C22.2 No.14 (CSA Certified)
GB/T14048.5(CCC Certification)

2. Operating conditions

- (1) Ambient temperature -25 to +50°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 operating voltage and rated operating current

Rated operating voltage		24V	48V	50V	110V	220V	440V
Rated operating current	A	Resistive load (AC12)	10A	—	10A	10A	2A
	C	Inductive load (AC15)	10A	—	7A	5A	1A
	D	Resistive load (DC12)	10A	5A	—	2.2A	1.1A
	C	Inductive load (DC13)	5A	2A	—	1.1A	0.6A

Note) The operating current is classified according to the JIS C 8201-5-1 closed-circuit and breaking current capacities.

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

4. Constructions

- (1) Outside view See attached sheet
- (2) Degree of protection
 - (a) Operation units (panel front side) IP65
 - (b) Contact block IP20
- (3) Operation type— (△) Momentary(B), Alternate(O)
- (4) Button style Extended
- (5) Contact arrangement— (□□) 1a(10),1b(01),1a-1b(11),2a(20),2b(02),
2a-2b(22),4a(40),4b(04),1a-3b(13),
3a-1b(31),3a(30),3b(03),1a-2b(12), 2a-1b(21)
- (6) Button color—(※) Black(B), Green(G), Red(R), Yellow (Y), Blue (S), White (W)
- (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	φ0.5~1.6mm(AWG14~22)	2	1.0~1.3
	φ1.7~2.0mm(AWG12)	1	1.2~1.3
Strand wire	0.3~2.0mm ² (AWG14~22)	2	1.0~1.3
	2.1~3.5 mm ² (AWG12)	1	1.2~1.3

(9) Panel thickness

0.8 to 6mm

(10) Panel cut-out

φ25.5^{+0.5}mm

5. Characteristics

(1) Contact resistance

50mΩ maximum (initial value)

(2) Insulation resistance

100MΩ minimum(measured with a 500V DC megger)

(3) Dielectric strength

2,500V AC, 1minute

(4) Vibration resistance

(a) Operating extremes

Frequency 5 to 55Hz, Amplitude 0.5mm

(b) Damage limits

Frequency 30Hz, Amplitude 1.5mm

(5) Shock resistance

(a) Operating extremes

100 m/s²

(b) Damage limits

1,000 m/s²

6. Life

(1) Mechanical life(without load)

(a) Momentary

5,000,000 operation minimum

(b) Alternate

500,000 operation minimum

(2) Electrical life (rated load)

(a) Momentary

500,000 operation minimum

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

(b) Alternate

500,000 operation minimum

operating frequency : 900 operations/hour maximum, Duty Rate : 40%