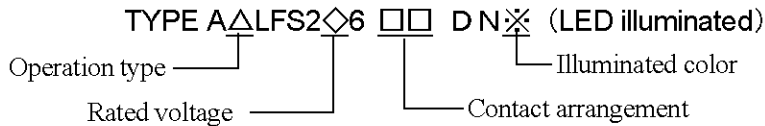


TWS(ϕ 25)SERIES

ILLUMINATED 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	6A	2A
	C	Inductive load (AC15)	10A	—	7A	5A	3A	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 |
|---|---------------|

3. 2 Illumination ratings

- | | |
|------------------------------------|---|
| (1) Rated voltage — (\diamond) | 100/110V AC(1), 115/120V AC(12), 200/220V AC(2), 230/240 AC(24), 380V AC(38), 400/440V AC(4), 480V AC(48) |
|------------------------------------|---|

4. Constructions

- | | |
|--|--|
| (1) Outside view | See attached sheet |
| (2) Degree of protection | |
| (a) Operation units (panel front side) | IP65 (panel front side) |
| (b) Contact block | IP20 |
| (c) Lump terminal | Terminal cover integral structure |
| (3) Operation type — (Δ) | Momentary (Blank), Alternate(O) |
| (4) Button style | Extended with full shroud |
| (5) Contact arrangement — ($\square\square$) | 1a-1b(11), 2a(20), 2b(02), 2a-2b(22), 3a-1b(31), 1a-3b(13), 4a(40), 4b(04) |
| (6) Illuminated color — (\times) | Red (R), Green (G), Yellow(Y), Amber(A), White (W), Pure White(PW) |
| (7) Included LED lamp | LSTD-6 (See attached sheet) |
| (8) Terminal style | M3.5 terminal screw +/- screw head |

(9) Applicable wire / Recommended tightening torque

Applicable wire		Maximum number of installed	Recommended tightening torque(N·m)	Remarks
Solid wire	φ0.5~1.6mm(AWG14~22)	2	1.0~1.3	
	φ1.7~2.0mm(AWG12)	1	1.2~1.3	It's possible to connect to only contact terminals
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	It's possible to connect to only contact terminals

(10) Panel thickness

0.8 to 6mm

(11) 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 100m/s²
 - (b) Damage limits 1,000m/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%)