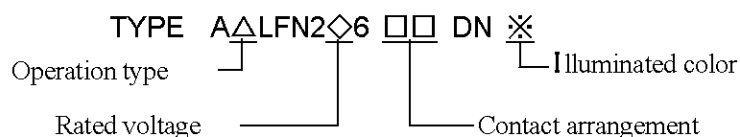


No. ISA4160B
 Date. November 30, 2023
 Approved by M.Fujimoto
 Checked by Y.Hanaoka
 Written by F.Takai

φ30 TWN SERIES ILLUMINATED PUSHBUTTON SWITCH



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 +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(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 JIS C 8201-5-1 making and breaking current capacities.

- | | |
|---|--|
| (4) Minimum applicable load (reference value) | 3V AC/DC, 5mA |
| (5) Rated voltage — (◇) | 100/110V AC(1), 200/220V AC(2), 400/440V AC(4) |

4. Constructions

- | | |
|--|--|
| (1) Outside view | See attached sheet |
| (2) Operation type — (△) | Momentary (blank), Alternate(O) |
| (3) Degree of protection | |
| (a) Operation units (panel front side) | IP65 |
| (b) Contact block | IP20 |
| (c) Lump terminal | Terminal cover integral structure |
| (4) Contacts arrangement — (□□) | 1a-1b(11),2a(20),2b(02), 4a (40), 4b (04), 2a-2b (22),
3a-1b (31), 1a-3b (13) |
| (5) Button style | Round extended (Full shroud) |
| (6) Illuminated color — (※) | Red (R),Green (G),Amber(A),Yellow(Y),Blue(S),Pure white (PW) |

- (7) Included LED lamp LSRD-6(See attached sheet)
 (8) Lamp base BA9S/13
 (9) Terminal style M3.5 terminal screw +/- screw head
 (10) Applicable wire / Recommended tightening torque

Applicable wire		Maximum number of installed	Recommended tightening torque(N·m)	Remarks
Solid wire	ϕ 0.5~1.6mm (AWG14~22)	2	1.0~1.3	It's possible to connect to only contact terminals
	ϕ 1.7~2.0mm (AWG12)	1	1.2~1.3	
Strand wire	0.3~2.0mm ² (AWG14~22)	2	1.0~1.3	It's possible to connect to only contact terminals
	2.1~3.5 mm ² (AWG12)	1	1.2~1.3	

- (11) Panel thickness 0.8 to 7.5mm
 (12) Panel cut-out ϕ 30.5^{+0.5}

5. Characteristics

- (1) Contact resistance 50m Ω maximum (initial value)
 (2) Insulation resistance 100M Ω 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
 (a) Momentary 2,500,000 operation minimum
 (b) Alternate 500,000 operation minimum (3,4contacts : 250,000 operation minimum)
 (2) Electrical life (Load condition 220V AC/3A(AC-15))
 (3)
 (a) Momentary 500,000 operation minimum
 (Operating frequency: 1,800 operations/hour maximum Duty Rate: 40%)
 (b) Alternate 500,000 operation minimum(3,4contacts : 250,000 operation minimum)
 (Operating frequency: 900 operations/hour maximum Duty Rate: 40%)

No. ISA4590

Date. July -4, 2022

Approved by Y.Onishi

Checked by Tos.Matsumoto

Written by Tom.Matsumoto

MINIATURE LED LAMP

TYPE LSRD- ○
└─ Rated voltage

1. Operating conditions

- | | | |
|-------------------------|-----------------------------|--|
| (1) Ambient temperature | -25 to +55°C (no freezing) | (Based on applicable IDEC control unit in which this product is mounted) |
| (2) Relative humidity | 45 to 85% (no condensation) | |
| (3) Altitude | 2000m maximum | |

2. Ratings

Rated voltage —(○)		24V AC/DC (2)	12V AC/DC (1)	6V AC/DC (6)
Operating voltage		24V AC/DC±10%	12V AC/DC±10%	6V AC/DC±10%
Rated current	DC	7mA	7mA	10mA
	AC	8mA	8mA	14mA

3. Constructions

- | | |
|--------------------------------------|----------------------------|
| (1) Outside view, equivalent circuit | See attached sheet |
| (2) Base | Based on JIS C7709 BA9S/13 |
| (3) Lamp base surface preparation | SuCu plating |
| (4) Weight | Approx.2g |

4. Characteristics

- | | |
|--|--|
| (1) Vibration Resistance, Shock Resistance | Based on applicable IDEC control unit in which this product is mounted |
| (2) Chromaticity range (X, Y) | (0.302, 0.331)-(0.306, 0.310)-(0.323, 0.326)-(0.320, 0.350) |