Push Button Switches

S2PR Series



Features

- $\bullet \, {\sf Smooth \, operation}$
- · High electrical conductivity
- · Long-lasting durability

Specifications

Actuation distance Actuation force Installation Extended Shock 300 m/s² (= 30 G) in each X, Y, Z direction for 3 times Shock (malfunction) 100 m/s² (= 10 G) in each X, Y, Z direction for 3 times Shock (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 10 minutes Mechanical life cycle (control unit life cycle) (control unit life cycle) Ambient temperature -15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation) Ambient humidity 35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation) Protection structure Approval C∈	Cavias	CODD Caving
Actuation force Installation Extended Shock 300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Shock (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours Vibration 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes Returned: ≥ 1 million operations (20 operations/min) Control unit life cycle Ambient temperature -15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation) Control unit weight Approval CC	Series	S2PR Series
Installation Extended Shock $300 m/s^2 (\approx 30 G)$ in each X, Y, Z direction for 3 times Shock (malfunction) $100 m/s^2 (\approx 10 G)$ in each X, Y, Z direction for 3 times 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes Returned: ≥ 1 million operations (20 operations/min) (control unit life cycle) Ambient temperature -15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)		
Shock 300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 10 minutes Mechanical life cycle (control unit life cycle) Ambient temperature 15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation) Ambient humidity 35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation) Protection structure Control unit: IP52 (IEC standard) Approval $C ∈ E ∈ N ∈ III ∈ O ∈ O ∈ O ∈ O ∈ O ∈ O ∈ O ∈ O ∈$		
Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 10 minutes Mechanical life cycle (control unit life cycle) Returned: ≥ 1 million operations (20 operations/min) Ambient temperature -15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation) Ambient humidity 35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation) Protection structure Control unit: IP52 (IEC standard) Approval C€		
Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours		
hours	,	
minutes Returned: ≥ 1 million operations (20 operations/min) Returned: ≥ 1 million operations (20 operations/min) Ambient temperature Anbient temperature Ambient humidity 35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation) Protection structure Control unit: IP52 (IEC standard) Approval Control unit weight Round: ≈ 14.5 g, Square: ≈ 15.5 g Power supply / current Dielectric strength 110 VAC ~ / 10 A, 250 VAC ~ / 6 A Dielectric strength Insulation resistance ≥ 1,000 MΩ (500 VDC = megger) Contact material AgNi10 Approval Contact material AgNi10 Approval Contact Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 110-220 VAC ~ 50/60 Hz Approval Courrent consumption Approval Contact sistence ≤ 20 mA Contact system HI Contact system Syste	Vibration	
(control unit life cycle) Ambient temperature -15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation) Ambient humidity 35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation) Protection structure Control unit: IP52 (IEC standard) Approval €	Vibration (malfunction)	
Ambient humidity Protection structure Approval C		Returned: ≥ 1 million operations (20 operations/min)
Protection structure Approval C∈ □ ¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬¬	Ambient temperature	-15 to 55 °C, storage: -25 to 65 °C (no freezing or condensation)
Approval Control unit weight Round: ≈ 14.5 g, Square: ≈ 15.5 g Housing weight ≈ 7 g Contact blocks Power supply / current Dielectric strength Dielectric strength Insulation resistance ≥ 1,000 MΩ (500 VDC= megger) Contact resistance ≤ 20 mΩ (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C∈ □ N = HI □ Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC= AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption S = 20 mA Approval C∈ N = HI	Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Control unit weight Round: ≈ 14.5 g, Square: ≈ 15.5 g Housing weight ≈ 7 g Contact blocks 110 VAC ~ / 10 A, 250 VAC ~ / 6 A Power supply / current 110 VAC ~ 50/60 Hz for 1 minute Dielectric strength 2,500 VAC ~ 50/60 Hz for 1 minute Insulation resistance ≥ 1,000 MΩ (500 VDC == megger) Contact resistance ≤ 20 mΩ (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C € Is Num EHI (Image) Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC == AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption ≤ 20 mA Approval C € SNum EHI	Protection structure	Control unit: IP52 (IEC standard)
Housing weight ≈ 7 g Contact blocks Power supply / current 110 VAC ~ / 10 A, 250 VAC ~ / 6 A Dielectric strength 2,500 VAC ~ 50/60 Hz for 1 minute Insulation resistance ≥ 1,000 MΩ (500 VDC == megger) Contact resistance ≤ 20 mΩ (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C∈ № . Th. HI Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC == AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption ≤ 20 mA Approval C∈ . Th. HI	Approval	(§ © III a / P S S S S S S S S S
Contact blocks Power supply / current Dielectric strength Diele	Control unit weight	Round : ≈ 14.5 g, Square: ≈ 15.5 g
Power supply / current Dielectric strength Dielectric strength 2,500 VAC ~ 50/60 Hz for 1 minute Insulation resistance ≥ 1,000 MΩ (500 VDC= megger) Contact resistance ≤ 20 mΩ (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C∈ S → N = FIL Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC= AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption Approval C∈ N = FIL	Housing weight	≈7 g
Dielectric strength 2,500 VAC \sim 50/60 Hz for 1 minute Insulation resistance \geq 1,000 M Ω (500 VDC= megger) Contact resistance \leq 20 m Ω (initial) Electrical life cycle \geq 100,000 operations (20 operations/min) AgNi10 Approval \subset 6 S SN IN ERI \subset Weight Modular type: \approx 10 g, Singular type: \approx 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC \sim 50/60 Hz, 12-24 VDC= AC voltage type: 110-220 VAC \sim 50/60 Hz \subset Current consumption \subset 20 mA Approval \subset 5 SN IN ERIC	Contact blocks	
Insulation resistance ≥ 1,000 M Ω (500 VDC= megger) Contact resistance ≤ 20 m Ω (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C	Power supply / current	110 VAC~ / 10 A, 250 VAC~ / 6 A
Contact resistance ≤ 20 mΩ (initial) Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C∈ № . FN Ell (♦) Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC~ 50/60 Hz Current consumption ≤ 20 mA Approval C∈ . FN Ell (♦)	Dielectric strength	2,500 VAC \sim 50/60 Hz for 1 minute
Electrical life cycle ≥ 100,000 operations (20 operations/min) Contact material AgNi10 Approval C∈ S - SN. ERIC Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC~ 50/60 Hz Current consumption ≤ 20 mA Approval C∈ SN. ERIC	Insulation resistance	≥ 1,000 MΩ (500 VDC== megger)
Contact material AgNi10 Approval C∈ S - SN_s - ENL Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption Approval C∈ SN_s - ENL	Contact resistance	≤ 20 mΩ (initial)
Approval Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage AC/DC voltage type: 12-24 VAC~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC~ 50/60 Hz Current consumption ≤ 20 mA Approval C€ SN = FII	Electrical life cycle	≥ 100,000 operations (20 operations/min)
Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g LED blocks Rated voltage Rated voltage AC/DC voltage type: 12-24 VAC~ 50/60 Hz, 12-24 VDC= AC voltage type: 110-220 VAC~ 50/60 Hz Current consumption ≤ 20 mA Approval C€ • \$\$\mathrm{N}_{tot}\$ ERI	Contact material	AgNi10
LED blocks Rated voltage AC/DC voltage type: 12-24 VAC~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC~ 50/60 Hz Current consumption ≤ 20 mA Approval C € • \$\\$\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\	Approval	(€) III 20/18
Rated voltage AC/DC voltage type: 12-24 VAC ~ 50/60 Hz, 12-24 VDC = AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption ≤ 20 mA Approval C€ → N is FII	Weight	Modular type: ≈ 10 g, Singular type: ≈ 11 g
AC voltage type: 110-220 VAC ~ 50/60 Hz Current consumption ≤ 20 mA Approval C€ •¶ In [H]	LED blocks	
Approval C€ ₀ SN to Eff.	Rated voltage	
110000	Current consumption	≤ 20 mA
Weight AC/DC voltage type: \approx 11 g, AC voltage type: \approx 12 g	Approval	C € c Mus ERI
	Weight	AC/DC voltage type: \approx 11 g, AC voltage type: \approx 12 g



J

Ø 22 / 25 mm

Selector Switches

S2SR Series



Features

- $\bullet \, {\sf Smooth \, operation}$
- · High electrical conductivity
- · Long-lasting durability

Specifications

Series	S2SR Series
Actuation angle	2-position: [Spring return] 60° ±5° , 90° ±5° [Maintained] 90° ±5° 3-position: [Spring return] 60° ±5° , 45° ±5° [Maintained] 90° ±5° , 45° ±5°
Actuation force	0.5 kgf (4.9 N) (per 1 contact)
Installation	Extended
Shock	300 m/s 2 (\approx 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s 2 (\approx 10 G) in each X, Y, Z direction for 3 times
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Mechanical life cycle (control unit life cycle)	≥ 100,000 operations (20 operations/min)
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	Control unit: IP52 (IEC standard)
Approval	(\$\frac{1}{2}\) \(\text{\text{\$\infty}}\) \(\text{\text{\$\infty}}\) \(\text{\text{\$\infty}}\) \(\text{\text{\$\infty}}\)
Control unit weight	Standard head type: \approx 19 g Shark-head type: \approx 16 g
Housing weight	≈7g
Contact blocks	
Power supply / current	110 VAC~ / 10 A, 250 VAC~ / 6 A
Dielectric strength	2,500 VAC~ 50/60 Hz for 1 minute
Insulation resistance	≥ 1,000 MΩ (500 VDC== megger)
Contact resistance	≤ 20 mΩ (initial)
Electrical life cycle	≥ 100,000 operations (20 operations/min)
Contact material	AgNi10
Approval	(\$\frac{1}{2}\) [] [] 20 (\$\frac{1}{2}\) [] 3 (\$\frac{1}{2}\)
Weight	Modular type: ≈ 10 g, Singular type: ≈ 11 g
LED blocks	
Rated voltage	AC/DC voltage type: 12-24 VAC \sim 50/60 Hz, 12-24 VDC== AC voltage type: 110-220 VAC \sim 50/60 Hz
Current consumption	≤ 20 mA
Approval	C€ c¶ us EFI
Weight	AC/DC voltage type: ≈ 11 g, AC voltage type: ≈ 12 g



Key Selector Switches

S2KR Series



Features

- $\bullet \, {\sf Smooth \, operation}$
- · High electrical conductivity
- · Long-lasting durability

Specifications

Series	S2KR Series
Actuation angle	2-position: [Spring return] 60° ±5° [Maintained] 90° ±5° 3-position: [Spring return] 60° ±5° [Maintained] 90° ±5°
Actuation force	0.5 kgf (4.9 N) (per 1 contact)
Installation	Extended
Shock	300 m/s 2 (\approx 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s 2 (\approx 10 G) in each X, Y, Z direction for 3 times
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Mechanical life cycle (control unit life cycle)	≥ 100,000 operations (20 operations/min)
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation)
Protection structure	Control unit: IP52 (IEC standard)
Approval	(§ ©)H] ₂₀ (Re o 🖫) €
Control unit weight	≈ 37 g
Housing weight	≈7g
Contact blocks	
Power supply / current	110 VAC~ / 10 A, 250 VAC~ / 6 A
Dielectric strength	2,500 VAC \sim 50/60 Hz for 1 minute
Insulation resistance	≥ 1,000 MΩ (500 VDC== megger)
Contact resistance	≤ 20 mΩ (initial)
Electrical life cycle	≥ 100,000 operations (20 operations/min)
Contact material	AgNi10
Approval	(₹9)] 31 (#7) [#7]
Weight	Modular type: ≈ 10 g, Singular type: ≈ 11 g



I/O Push Button Switches

S2TR Series



Features

- $\bullet \, {\sf Smooth \, operation}$
- · High electrical conductivity
- · Long-lasting durability

Specifications

Series	S2TR Series
Actuation distance	5.0 to 5.5 mm
Actuation force	0.5 kgf (4.9 N) (per 1 contact)
Installation	Extended
Shock	300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s 2 (\approx 10 G) in each X, Y, Z direction for 3 times
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Mechanical life cycle (control unit life cycle)	≥ 1 million operations (20 operations/min)
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation)
Protection structure	Control unit: IP50 (IEC standard)
Approval	(€ © 31) 31 31 31 31 31 31 31 31 31 31 31 31 31
Control unit weight	≈ 14.5 g
Housing weight	≈7g
Contact blocks	
Power supply / current	110 VAC~ / 10 A, 250 VAC~ / 6 A
Dielectric strength	2,500 VAC \sim 50/60 Hz for 1 minute
Insulation resistance	≥ 1,000 MΩ (500 VDC== megger)
Contact resistance	\leq 20 m Ω (initial)
Electrical life cycle	≥ 100,000 operations (20 operations/min)
Contact material	AgNi10
Approval	(€) III 3 (P3)
Weight	Modular type: ≈ 10 g, Singular type: ≈ 11 g
LED blocks	
Rated voltage	AC/DC voltage type: 12-24 VAC \sim 50/60 Hz, 12-24 VDC== AC voltage type: 110-220 VAC \sim 50/60 Hz
Current consumption	≤ 20 mA
Approval	C€ c PL us ERI
Weight	AC/DC voltage type: ≈ 11 g, AC voltage type: ≈ 12 g



Mushroom-Head Push Button Switches

S2BR Series



Features

- Smooth operation
- · High electrical conductivity
- · Long-lasting durability

Specifications

Series \$2BR Series Actuation distance 5.0 to 5.5 mm Actuation force 0.5 kgf (4.9 N) (per 1 contact) Installation Extended Shock 300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Mechanical life cycle (control unit life cycle) ≥ 1 million operations (20 operations/min)	
Actuation force $0.5 \text{ kgf } (4.9 \text{ N}) \text{ (per 1 contact)}$ Installation Extended Shock $300 \text{ m/s}^2 (\approx 30 \text{ G}) \text{ in each X, Y, Z direction for 3 times}$ Shock (malfunction) $100 \text{ m/s}^2 (\approx 10 \text{ G}) \text{ in each X, Y, Z direction for 3 times}$ Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Websation 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Mechanical life cycle $\geq 1 \text{ million operations} (20 \text{ operations/min})$	
Installation Extended Shock 300 m/s² (≈ 30 G) in each X, Y, Z direction for 3 times Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 3 times Wechanical life cycle ≥ 1 million operations (20 operations/min)	
Shock $300 \text{ m/s}^2 (\approx 30 \text{ G}) \text{ in each X, Y, Z direction for 3 times}$ Shock (malfunction) $100 \text{ m/s}^2 (\approx 10 \text{ G}) \text{ in each X, Y, Z direction for 3 times}$ Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 3 times	
Shock (malfunction) 100 m/s² (≈ 10 G) in each X, Y, Z direction for 3 times Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction fours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 3 times Mechanical life cycle ≥ 1 million operations (20 operations/min)	
Vibration 1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction Mechanical life cycle ≥ 1 million operations (20 operations/min)	
hours Vibration (malfunction) 1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direct minutes Mechanical life cycle ≥ 1 million operations (20 operations/min)	
minutes Mechanical life cycle ≥ 1 million operations (20 operations/min)	ction for 2
	ction for 10
(*** *** *** ***, ***,	
Ambient temperature -15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)	
Ambient humidity 35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)	
Protection structure Control unit: IP52 (IEC standard)	
Approval CE & W IS EN CO PS	
Control unit weight $\approx 21 \mathrm{g}$	
Housing weight $\approx 7 \text{ g}$	
Contact blocks	
Power supply / current 110 VAC \sim / 10 A, 250 VAC \sim / 6 A	
Dielectric strength 2,500 VAC \sim 50/60 Hz for 1 minute	
Insulation resistance ≥ 1,000 MΩ (500 VDC== megger)	
Contact resistance $\leq 20 \text{ m}\Omega$ (initial)	
Electrical life cycle ≥ 100,000 operations (20 operations/min)	
Contact material AgNi10	
Approval CE & W EHL PS	
Weight Modular type: ≈ 10 g, Singular type: ≈ 11 g	



Emergency Switches

S2ER Series



Features

- $\bullet \, {\sf Smooth \, operation}$
- · High electrical conductivity
- · Long-lasting durability

Specifications

Series	S2ER Series
Actuation distance	5.0 to 5.5 mm
Actuation angle	40° ±7°
Actuation force	0.5 kgf (4.9 N) (per 1 contact)
Installation	Extended
Shock	300 m/s 2 (\approx 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s 2 (\approx 10 G) in each X, Y, Z direction for 3 times
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Mechanical life cycle (control unit life cycle)	≥ 100,000 operations (20 operations/min)
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage : 35 to 85 %RH (no freezing or condensation)
Protection structure	Control unit: IP52 (IEC standard)
Approval	CE III (III) (III) (PS)
Control unit weight	D30: ≈ 22.5 g D40: ≈ 22.5 g D60: ≈ 27 g
Housing weight	≈7g
Contact blocks	
Power supply / current	110 VAC~ / 10 A, 250 VAC~ / 6 A
Dielectric strength	2,500 VAC \sim 50/60 Hz for 1 minute
Insulation resistance	≥ 1,000 MΩ (500 VDC== megger)
Contact resistance	≤ 20 mΩ (initial)
Electrical life cycle	≥ 100,000 operations (20 operations/min)
Contact material	AgNi10
Approval	(\$\frac{2}{3}\) [H] 20 [Me] 3)
Weight	Modular type: ≈ 10 g, Singular type: ≈ 11 g
LED blocks	
Rated voltage	AC/DC voltage type: 12-24 VAC \sim 50/60 Hz, 12-24 VDC== AC voltage type: 110-220 VAC \sim 50/60 Hz
Current consumption	≤ 20 mA
Approval	C€ c P 3 us EFI
Weight	AC/DC voltage type: \approx 11 g, AC voltage type: \approx 12 g



Pilot Lights

L2RR Series



Features

- High luminance LED
- Available in various colors
- · Long-lasting durability

Specifications

Series	L2RR Series
Installation	Extended
Shock	300 m/s 2 (\approx 30 G) in each X, Y, Z direction for 3 times
Shock (malfunction)	100 m/s 2 (\approx 10 G) in each X, Y, Z direction for 3 times
Vibration	1.5 mm amplitude at frequency of 10 to 55 Hz (for 1 min) in each X, Y, Z direction for 2 hours
Vibration (malfunction)	1.5 mm amplitude at frequency of 10 to 55Hz (for 1 min) in each X, Y, Z direction for 10 minutes
Ambient temperature	-15 to 55 °C, storage : -25 to 65 °C (no freezing or condensation)
Ambient humidity	35 to 85 %RH, storage: 35 to 85 %RH (no freezing or condensation)
Protection structure	Light unit: IP52 (IEC standard)
Approval	C € c SN us EHL @C
Light unit weight	≈ 15.5 g
Housing weight	≈7g
LED blocks	
Rated voltage	AC/DC voltage type: 12-24 VAC \sim 50/60 Hz, 12-24 VDC== AC voltage type: 110-220 VAC \sim 50/60 Hz
Current consumption	≤ 20 mA
Approval	C€ c PX us EFIC
Weight	AC/DC voltage type: ≈ 11 g, AC voltage type: ≈ 12 g

