SPECIFICATIONS

ISA3850C
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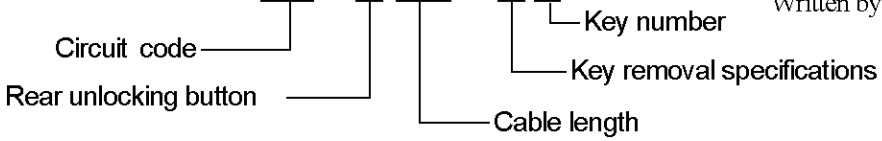
HS5E SERIES SAFETY SWITCH

TYPE HS5E – K□□ 0 ◎ ◇◇– 2 ☆ ※



1. Applicable standards

	IEC60947-5-1
	ISO14119
	EN60947-5-1(TUV approved)
	GS-ET-19 (TUV approved)
	UL508 (UL recognition)
	CSA C22.2 No.14 (c-UL recognition)
	GB/T14048.5(CCC Certified)
Applicable Standards for Use	IEC60204-1/EN60204-1

2. Operating conditions

(1) Ambient temperature	- 25 to + 70°C (no freezing)
(2) Operating humidity	45 to 85% RH (no condensation)
(3) Storage temperature	- 40 to + 80°C (no freezing)
(4) Pollution degree	3 (inside 2)

3. Ratings

3.1 Contact

(1) Rated insulation voltage
250V (IEC60947-5-1)
UL rating: 125V

(2) Thermal current
2.5A (Ambient temperature: 60℃ maximum)
1.5A (Ambient temperature: 60 to 65℃)
1.0A (Ambient temperature: 65 to 70℃)

(3) Rated operating voltage and rated operating current

Rated operating voltage			30V	125V	250V
Rated Operating Current	AC	Resistive load (AC-12)	–	2.5A	1.5A
		Inductive load (AC-15)	–	1.5A	0.75A
	DC	Resistive load (DC-12)	2.5A	1.1A	0.55A
		Inductive load (DC-13)	2.3A	0.55A	0.27A

(4) Minimum applicable load — 3V AC/DC, 5mA (reference value)
(5) Operating frequency — 900 operations / hour

4. Construction

(1) Outside view / Mounting hole layout	See the attached sheet.
(2) Cable length – (◇◇)	3m (03), 5m (05)
(3) Degree of protection	IP65 (IEC60529)
(4) Circuit code– (□□)	VA, VD, DD See the attached sheet.
(5) Housing color	Silver / black
(6) Rear unlocking button– (○)	No(blank), Push button(L)

(7) Rear unlocking button color	Red
(8) Operation type	Operation by an exclusive actuator and an exclusive key
(9) Key removal specifications－（☆）	Removable in all positions(A), Removable in UNLOCK position (B) Removable in LOCK position(C)
(10) Key number－（※）	500(blank), 501-515（501-515）
(11) Electric shock class	Class Ⅱ (IEC61140)

5. Characteristics

(1) Insulation resistance	100 MΩ minimum (500V DC megger)
(2) Impulse withstand voltage	2.5 kV (between LED/solenoid and ground: 0.5 kV)
(3) Contact resistance	500 mΩ maximum (initial value, with 3m cable) 700 mΩ maximum (initial value, with 5m cable)
(4) Vibration resistance	
(a) Operating extremes	10 to 55 Hz, amplitude 0.35 mm minimum
(b) Damage limits	30 Hz, amplitude 1.5 mm minimum
(5) Shock resistance	
(a) Operating extremes	100 m/s^2
(b) Damage limits	1000 m/s^2
(6) Actuator retention force	1400N minimum (GS-ET-19)
(7) Travel (from mounting reference position)	
(a) Actuator total travel	26.4 mm (actuator : HS9Z-A51) 27.7 mm (actuator: HS9Z-A52) 40mm (HS9Z-SH5/SH5L)
(8) Direct opening force	80 N minimum
(9) Direct opening travel	Actuator HS9Z-A51/A5P:11mm minimum Actuator HS9Z-A51A/A52/A52A/A53/A55/SH5/SH5L : 12mm minimum
(10) Actuator operating speed	0.05 to 1.0 m/s
(11) Actuator operating force	
(a) Actuator insertion	6.0 $^{+3.0}_{-2.0}$N(HS9Z-SH5/SH5Loutside), 10.0 $^{\pm5.0}$N (HS9Z-SH5/SH5L)
(b) Actuator removal	11.0 $^{+3.0}_{-2.0}$N(HS9Z-SH5/SH5L outside) 15.0 $^{\pm5.0}$N (HS9Z-SH5/SH5L)
(12) Direct opening Angle (Key)	60 minimum
(13) Operator strength(Key)	1.0 N･m minimum
(14) Conditional short-circuit current	50A (250 V)
(15) Short-circuit protective device	250V AC, 10A, Fast blowing fuse

6. Life

(1) Mechanical life	
(a) Actuator insertion	1,000,000 operations minimum (HS9Z-SH5/SH5L outside) (Operating frequency: 900 operations/hour)
(b) Actuator removal	100,000 operations minimum (HS9Z-SH5/SH5L, Operating frequency: 900 operations/hour)
(2) Electrical life	100,000 operations minimum (Rated load,, Operating frequency: 900 operations/hour) 1,000,000 operations minimum (24V AC/DC, 100mA) (Operating frequency: 900 operations/hour)
(3) Rear unlock button mechanical durability	3,000 operations minimum(HS5L-K□L)