ECS - INDUSTRIAL CONTROL SWITCH
KEY SELECTOR (SMALL COMPACT SIZE)

1.FEATURES

- Up to 5 different operations.
- Detachable contact block for easy installation and removal. It can meet variety of needs and improve work efficiency.
- IP65 waterproof type. It is designed for liquid and oil prevention and enables to be used in different environment.
- Short contact unit design to save more space.
- The safety design of slide locking holder is not only for easy installation and removal, but also for prevention of inappropriate installation of contact blocks.
- In accordance with the standards of UL, cUL, CE, CCC, and TUV.
- RoHS Compliant
- Halogen Free series available

2.SPECIFICATIONS

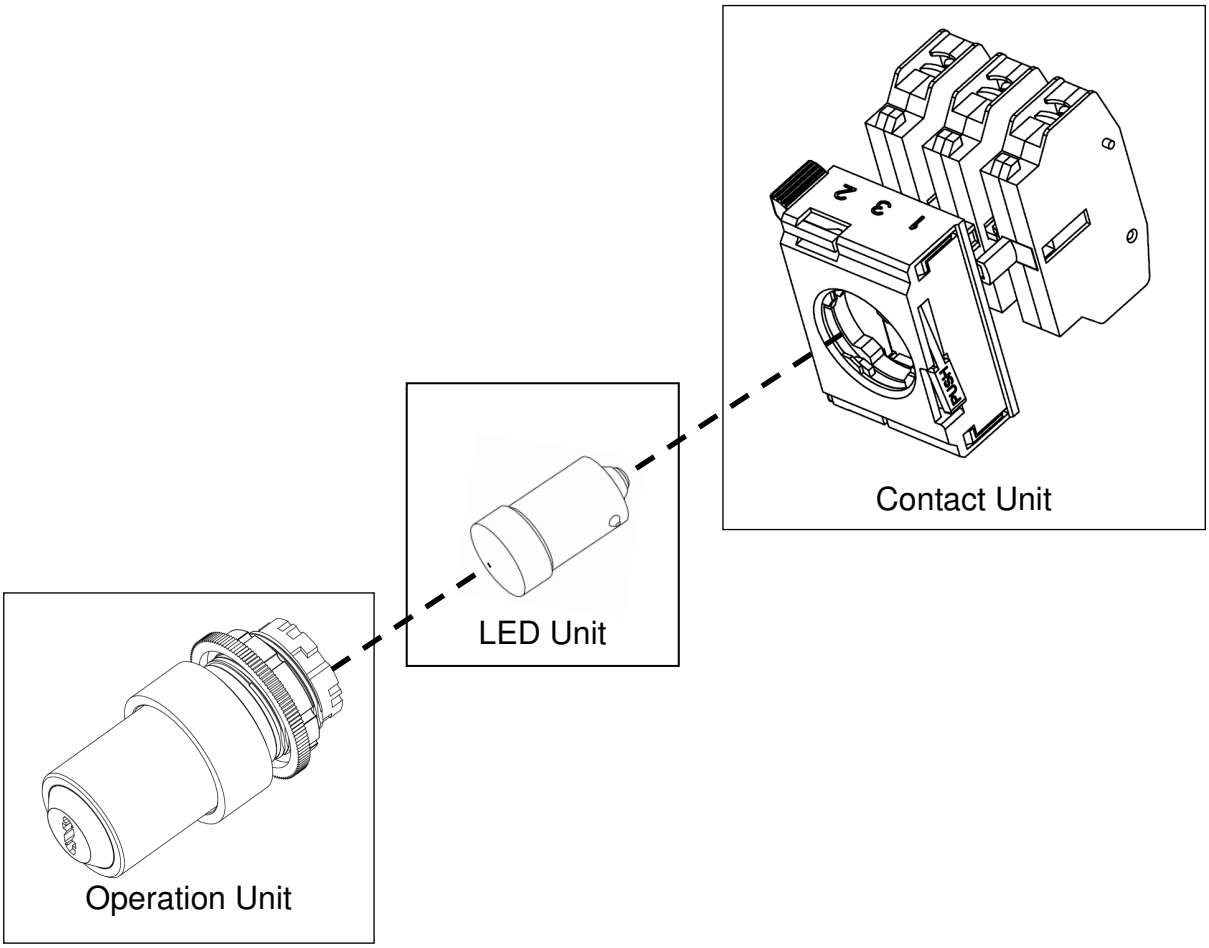
2-1. ELECTRICAL

2-1-1. Rated thermal current	10A
2-1-2. Rated insulation voltage	650V
2-1-3. Utilization category	AC-15(A600) or Ue 240V / Ie 3A Ue 380V / Ie 1.9A DC-13(P600) or Ue 250V / Ie 0.55A
2-1-4. Minimum switching capacity [ref.]	3V DC/AC, 5mA
2-1-5. Dielectric strength	2500V AC, 1 min.
2-1-6. Insulation resistance	100MΩ min. at 500V DC
2-1-7. Contact resistance	50mΩ max. (initial)

2-2. MECHANICAL AND ENVIRONMENTAL

2-2-1. Operating temperature	-25℃ ~ +70℃ (without icing or condensation) -25℃ ~ +55℃ (for illuminated type)
2-2-2. Storage temperature	-40℃ ~ +85℃
2-2-3. Humidity	45% ~ 85% RH
2-2-4. Degree of protection	IP65 (from the front of the panel)
2-2-5. Degree of contamination	3 (IEC 60947-5-1)
2-2-6. Vibration resistance	10-55Hz single amplitude 0.5mm
2-2-7. Shock resistance	100 m/s^2(10G)(malfunction) 1000 m/s^2(100G)(destruction)
2-2-8. Mechanical Life	500,000 operations frequency 1800 operations/hr
2-2-9. Electrical Life	500,000 operations frequency 1800 operations/hr
2-2-10. Operation Force(from 1a1b)[ref.]	0.2 N-m (2- or 3- position type) 0.6 N-m (spring return type)
2-2-11. Connection type	M3.5 screw connection
2-2-12. Direct opening action	Direct opening mechanism of NC contact to open the circuit⊖

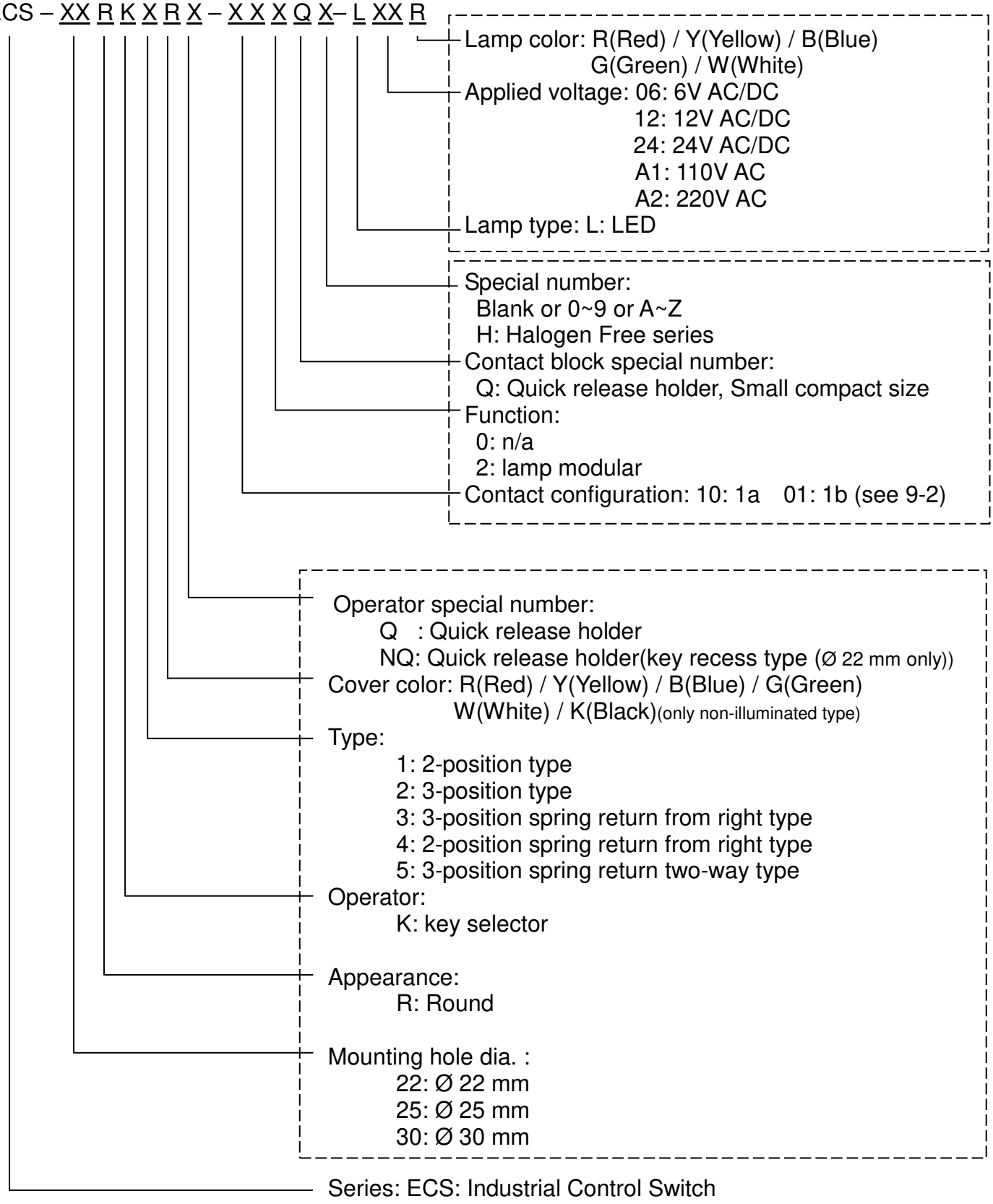
3.CONSTRUCTION



■ Operation unit, LED unit, and contact unit (contact blocks) can be sold separately. Please see [4.Part numbering system] for operation unit part number. For other accessories (LED lamp, contact block, etc.), please refer to accessory part in catalog.

4. PART NUMBERING SYSTEM

ECS – XX R K X R X – X X X Q X– L XX R



5. INSTALLATION

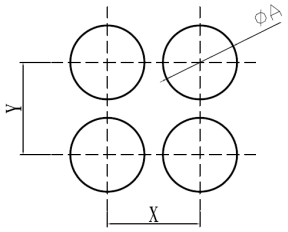
5-1. Panel thickness

■The panel thickness must be 1 to 6 mm.

■Take into consideration about the thickness of accessories (such as name plate, switch guard, etc.) while using.

5-2. Panel cutout

■ Cutout diameter and distance



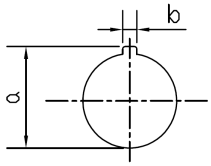
Unit: mm

	22R / 25R	22Q / 25Q	30R
A	22.3/25.3 $^{+0.4}_{-0}$	22.3/25.3 $^{+0.4}_{-0}$	30.5 $^{+0.5}_{-0}$

Unit: mm

	22R / 25R	22Q / 25Q	30R	Long Lever Selector Switch Emergency Stop Switch
X	50	50	50	50
Y	55	55	65	55

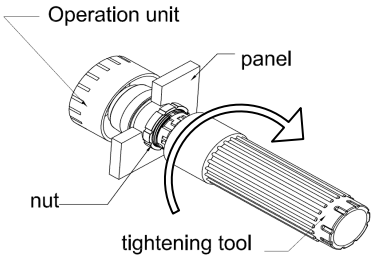
■ Key recess cutout (Ø22mm only)



Unit: mm

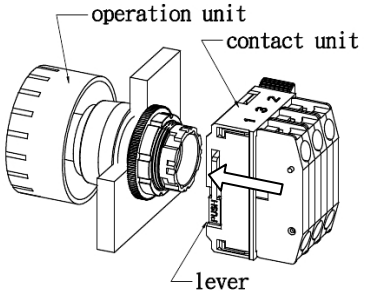
Mounting Hole(Ø)	a	b
22	24.1 $^{+0.5}_{-0}$	3.2 $^{+0.2}_{-0}$

■ Panel installation



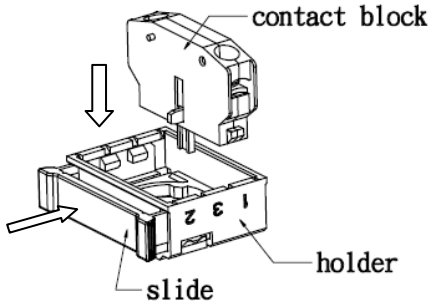
1. Place the operation unit through panel mounting hole.
2. Install the nut by using tightening tool.
3. Make sure the operation unit fix on the panel firmly.

5-3. Operation unit and contact unit installation



1. Fix the operation unit on the panel.
2. Press the lever and connect the operation unit with contact unit.
3. Release the lever.

5-4. LED lamp installation



1. Open the slide.
2. Contact block needs to fit with holder position correctly.
3. Close the slide completely.

(If you are unable to close the slide completely, please check the correctness of contact block installation.)

6. PACKAGING

6-1. ECS product is packed without assembly (packed by set), 10 sets per box.

6-2. Label information

(1) part number
(2) Lot number
(3) Quantity
(4) Tester number
(5) Date code
(6) QC inspection stamp
(7) Company mark
(8) Company name
(9) Notice

7. DIMENSIONS

7-1. See attached drawings

8. OPTIONS

8-1. Key recess type operation unit is available (Ø 22mm only)

8-2. Ø22mm and Ø25mm type have the same structure. Different thickness of O-rings can be ordered separately to fit into Ø22mm and Ø25mm hole in the panel.

8-3. LED Specification

LED Type	BA9S-T8
Durability(reference)	Approx. 50,000 Hrs.
Voltage	Printed on the LED

8-4. For other accessories (name plate, control box, and etc.), please refer to accessory part in the catalog.

9. REMARK

9-1. Safety Certification

Safery Standard	Certification
UL-508 CSA C22.2 NO.14	UL / cUL , file NO. E155181
EN60947-5-1 EN60947-5-5 (Emergency Stop Switch)	R50363071 R50362996
CCC GB14048.5	CQC2018010305138937

9-2. Contact Configuration

Code	Contact block		without function block	with function block
	NO	NC		
10	1	0	●	●
01	0	1	●	●
11	1	1	●	●
20	2	0	●	●
02	0	2	●	●
12	1	2	●	
21	2	1	●	
30	3	0	●	
03	0	3	●	

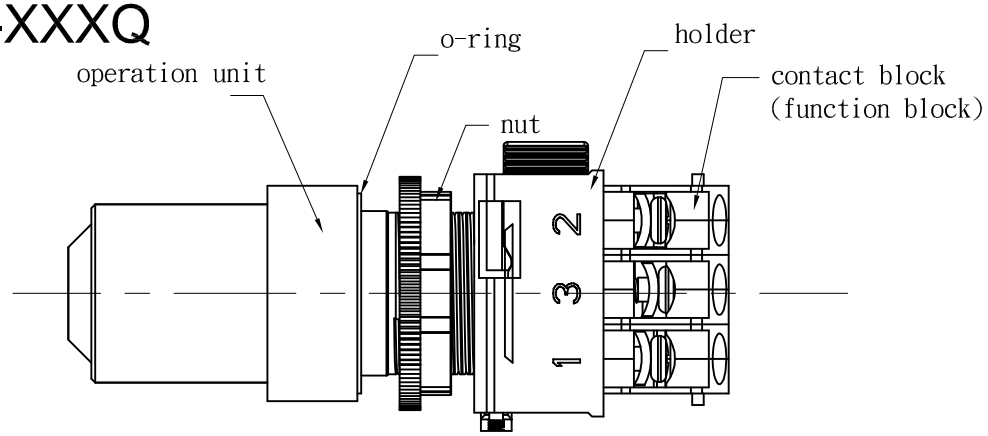
Remark:

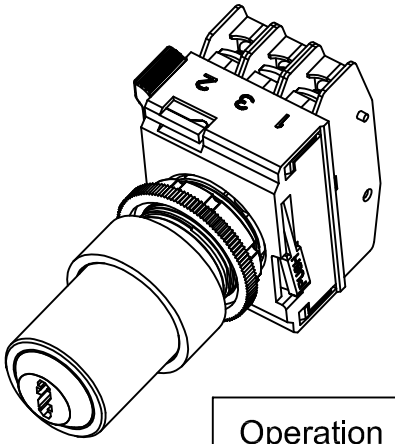
- The colors of contact block are the followings: 1 NO:blue, 1 NC: red
- Maximum 3 contact blocks for every contact unit.

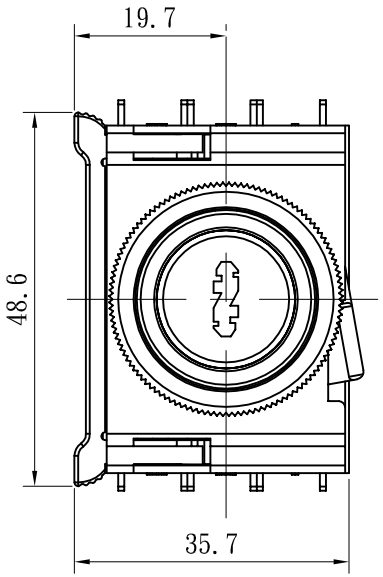
9-3. CAUTION

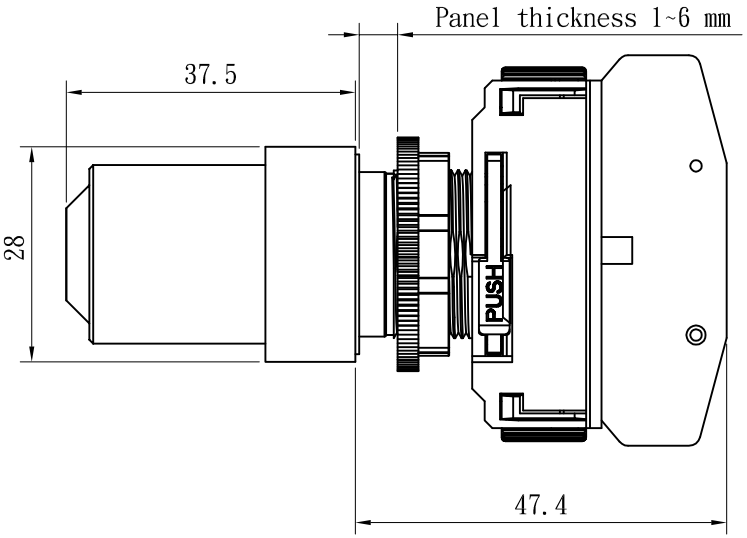
- To prevent injury, this device must be disconnected from all power sources prior to wiring and other initiating work.
- Use tightening tool when installing the operation unit in the panel cutout. Do not use pliers and do not tighten excessively, otherwise the operation unit may be damaged.
- Make sure contact blocks are firmly fixed on contact holder during assembly. It will avoid contact blocks separated from holder during operation.

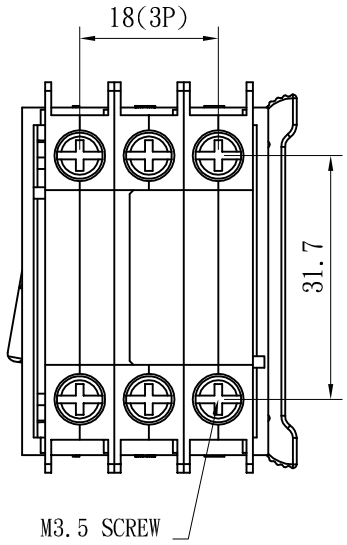
ECS-22RKXXX-XXXQ











Operation	type	angle
2-position		90°
3-position		45°
3-position spring retrun form right		45°
2-position spring retrun form right		90°
3-position spring retrun form two-way		45°

NO.	DETAILS	ALTERED BY	DATE

NORMAL TOLERANCE	
RANGE	TOLERANCE
0-1	±0.1
1-4	±0.3
4-16	±0.5
16-63	±0.8
63-250	±1.0
X.	±5°
X.X	±2.5°

EXCEL CELL ELECTRONIC CO., LTD.

CHECK	Allen Shi	DESIGN	Alice Lin	DRAWN	Alice Lin	UNIT	MM (INCH)
						SCALE	1:1
						SIZE	A4
						PROJECTION	

PART NUMBER	ECS-22RKXXX-XXXQ
PART NAME	ECS
TYPE	KEY SELECTOR
FILE NAME	76922RKXXQA.DWG
EDITION	A