

- ema Catalogue

01 series Φ 16mm control switch

02 series Φ 22/25/30mm control switch

05 series multi-layer LED light tower

Linking your system

More information please visit us: www.ema-electronic.com

ema

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We reserve the right to change technical data without prior notice
Cata.NO.:C125909CN-A

ema

Switches and Light Tower

Catalogue 2010/2011

ema

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- 01 series Φ 16mm control switch
- 02 series Φ 22/25/30mm control switch
- 05 series multi-layer LED light tower



CCC CQC S D N FI
UL US CE RoHS SGS
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RoHS



Laws and rules regarding to the use of chemical raw materials has been gradually regulated in Europe, America, and China since July in 2006. EU(European Union) announced RoHS directive which restricts six kind of harmful substance, lead, mercury, cadmium, chromium , PBB, and PBDE to be applied to any electric and electronic machinery. Products are banned to be sold in those areas if violating the regulations. This directive aims to protect human's health and to recycle the discard motors and electronics equipments handling. Enterprises only focused on environ-ment of producing in the past; however, nowadays many pay attention to the rules of environment security because of the importance of environmental protection consciousness from many countries. With the trend of global green concept, every series of ema meets RoHS directive.

IP Ranking

The first number Prevention of any solid matter			The second number Prevention of water		
IP	Request		IP	Request	
0	No protection		0	No protection	
1	Protection against penetration of solid bodies with dimensions of more than 50mm.		1	Vertical water droplets. No harmful ingress.	
2	Protection against penetration of solid bodies with dimensions of more than 12mm.		2	Showering at 150. No harmful ingress.	
3	Protection against penetration of solid bodies with dimensions of more than 2,5mm.		3	Showering at 600. No harmful ingress.	
4	Protection against penetration of solid bodies with dimensions of more than 1mm.		4	Splashing from any direction. No harmful ingress.	
5	Protection against dust (no harmful deposit)		5	Water jets from any direction 12.5l/min. No harmful ingress.	
6	Total protection against dust(no penetration)		6	Large volumes of water 100l/min.No ingress.	
			7	Immersion up to 1metre deep.No ingress	
			8	Submersion at specified depths exceeding 1 metre. No ingress.	

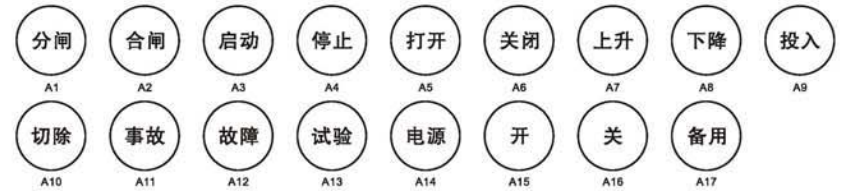
Certifications



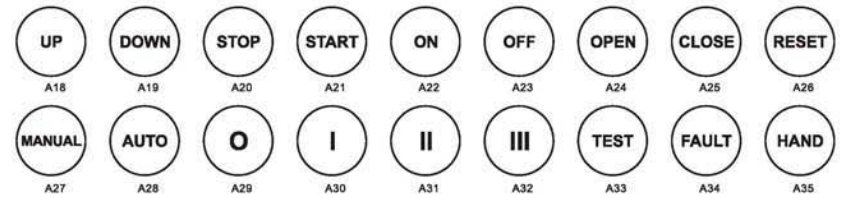
As a reliable partner for our customer, ema test our major products precisely for the safety and obtain related international compliances such as UL, ULC, Semko, Demko, Nemko, Femko, CQC/CCC, and CE as the best guarantee for our products. At the same time, we also acquire the certifications from international quality control system including SGS UKAS and CQC ISO9001:2000, and systemize our quality control method. To follow RoHS directive of EU and the green concept, all products meet RoHS compliance.

01 Series 16mm Control Switches	4-21
02 Series 22/25/30mm Control Switches	22-49
05 Series Multi-Layer LED Light Tower	50-59
Drawing	60

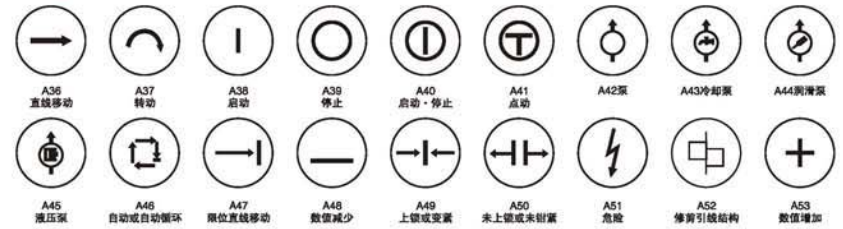
Chinese symbol

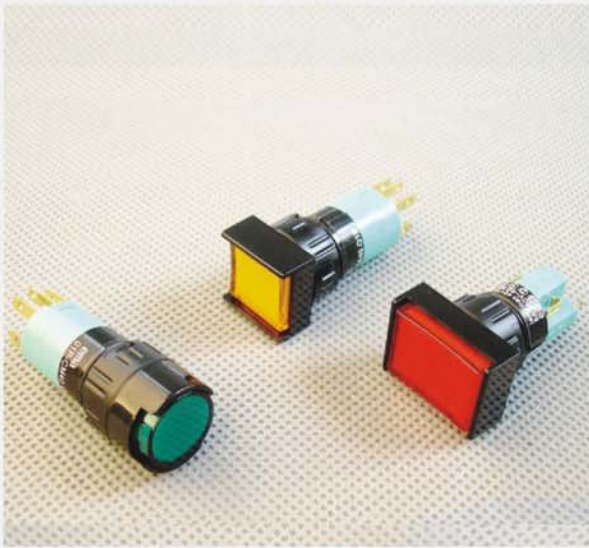


Standard symbol



ISO symbol

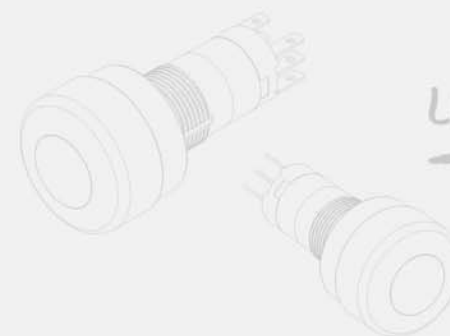




01 series 16mm control switches

01 series control switches

Indicator	8-9
Pushbutton switches	10-11
Selector switches	12-13
Emergency stop switches	14-15
Keylock switches	16-17
Buzzer	18-19
Accessory	20-21



Linking your system

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Features

- Mounting hole diameter 16mm
- Apparent shapes with rectangular 18x24mm, square 18x18mm and round diameter 18mm.
- The rubber-sealed type provided to prevent the liquid penetration in front of panel.
- High bezel that prevents accidental touching
- Illuminated by midget grooved T1 3/4 lamps including incandescent, discharged and LED lamps
- Snap-action which accelerates on-off switching
- Normally closed and normally open contacts in each switch block
- High performance plastics resistant to high-temperature and oil-polluted environments
- UL94V0 class plastics to make self-extinguished

Technical Specifications

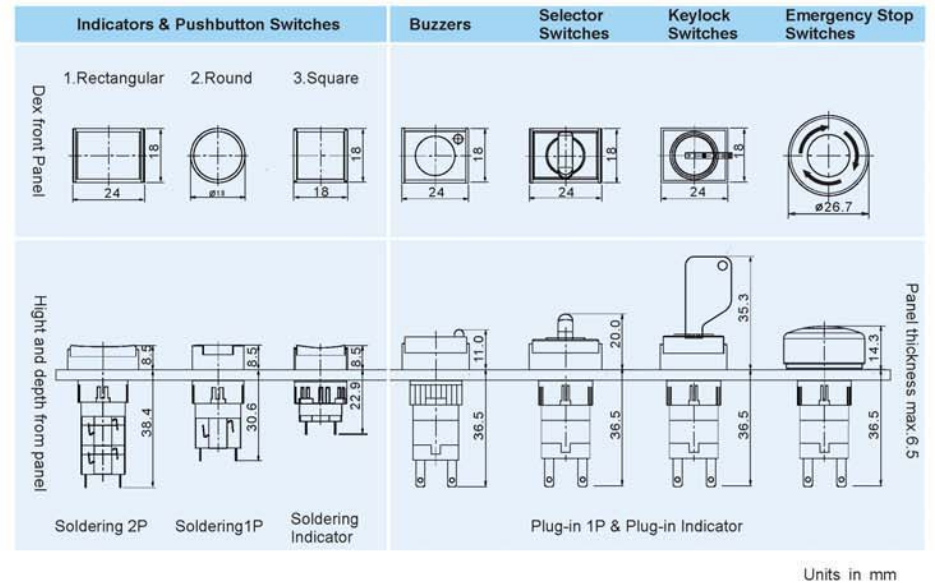
- Contact materials: gold flushed silver
- Breaking capacity: 250VAC/5A (p.f. ≥ 0.9)
- Contact resistance: < 50MΩ
- Electrical lifetime:
 - 5A/250VAC 50,000 operations
 - 4A/250VAC 60,000 operations
 - 2A/250VAC 200,000 operations
 - 1A/250VAC 400,000 operations
- Maximal insulation: 2500VAC, 50Hz, 1min between all terminals and plastic case
- Insulation resistance: ≥ 10¹⁰MΩ at 500VDC
- Soldering heat resistance: 300°C/5s
- Operating temperature: -25°C ~ +55°C
- Storage temperature: -40°C ~ +85°C
- Case materials: high-performance plastics resistant to high temperature and Oil-polluted environments, self-extinguished.

Mounting

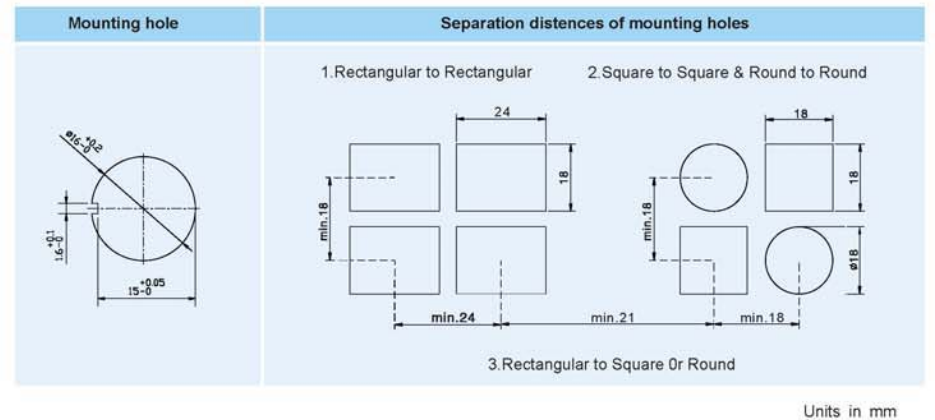


Apparent shapes and Panel cutting

■ Apparent shapes



■ Panel cutting





- Mounting hole diameter 16mm
Apparent shapes with rectangular 18X24mm, square 18X18mm and round diameter 18mm
- Illuminated by midget grooved T1 3/4 lamps including incandescent, discharged and LED lamps
- The lifetime of LED with high brightness up to 5000 hours



Coding Principle

01 P - R I 40 . Q + R + L 24
I II III IV V VI VII VIII IX

I: Series code	01 Series with 16mm diameter mounting hole		
II: Main category	P=Indicators		
III: Front shape	C=Round	S=Square	R=Rectangular
IV: Function code	I=Indicators		
V: Protection rating	40=Standard	65=Rubber-sealed	
VI: Terminal type	S=Soldering	Q=Plug-in	
VII: Cap color	R=Red, Y=Yellow, O=Orange, G=Light Green, V=Deep Green, B=Blue, W=White, K=Black		
VIII: Light source	L=LED lamp D=Incandescent lamp A=Discharged lamp Omission=Without lamp		
IX: Operating voltage	06=6VDC 12=12VDC 24=24VDC 11=110VAC 22=220VAC		

Note 1: Available colors of LED are red, yellow, green, blue, white
The standard matches between cap and LED are as followed:
R→Red LED Y→Yellow LED O→Yellow LED G→Green LED V→Green LED B→Blue LED W→Yellow LED

Note 2: Available colors of discharged lamps are red and green.
The standard matches between cap and lamp are as followed:
W, R, Y, O→Red lamp G, B, V→Green lamp

Order information

Order No.	
01P-RI40.Q	01P-CI40.S
01P-RI65.Q	01P-CI65.S
01P-RI40.S	01P-SI40.Q
01P-RI65.S	01P-SI65.Q
01P-CI40.Q	01P-SI40.S
01P-CI65.Q	01P-SI65.S



- Mounting hole diameter 16mm
Apparent shapes with rectangular 18X24mm, square 18X18mm and round diameter 18mm
- High bezel that prevents accidental touching
- Illuminated by midget grooved T1 3/4 lamps including incandescent, discharged and LED lamps
- Snap-action which accelerates on-off switching
- Normally closed and normally open contacts in each switch block
- Actuating travel: 3mm
- Mechanical lifetime: Momentary 2X10⁶ operations; Alternative 1X10⁶ operations

RoHS

Coding Principle

01 P - R A 40 . Q 1P + R + L 24
I II III IV V VI VII VIII IX X

I: Series code	01 Series with 16mm diameter mounting hole		
II: Main category	P=Pushbutton Switches		
III: Front shape	C=Round	S=Square	R=Rectangular
IV: Function code	M=Momentary A=Alternative		
V: Protection rating	40=Standard	65=Rubber-sealed	
VI: Terminal type	S=Soldering	Q=Plug-in	
VII: Contact mode	1P=1A1B	2P=2A2B	
VIII: Cap color	R=Red, Y=Yellow, O=Orange, G=Light Green, V=Deep Green, B=Blue, W=White, K=Black		
IX: Light source	L=LED lamp D=Incandescent lamp A=Discharged lamp Omission=Without lamp		
X: Operating voltage	06=6VDC 12=12VDC 24=24VDC 11=110VAC 22=220VAC		

Note 1: Available colors of LED are red, yellow, green, blue, white
The standard matches between cap and LED are as followed:
R→Red LED Y→Yellow LED O→Yellow LED G→Green LED V→Green LED B→Blue LED W→Yellow LED

Note 2: Available colors of discharged lamps are red and green.
The standard matches between cap and lamp are as followed:
W, R, Y, O→Red lamp G, B, V→Green lamp

Order information

Order No.	
01P-RM40.Q1P	01P-CA40.S1P
01P-RM65.Q1P	01P-CA65.S1P
01P-RA40.Q1P	01P-CM40.S2P
01P-RA65.Q1P	01P-CM65.S2P
01P-RM40.S1P	01P-CA40.S2P
01P-RM65.S1P	01P-CA65.S2P
01P-RA40.S1P	01P-SM40.Q1P
01P-RA65.S1P	01P-SM65.Q1P
01P-RM40.S2P	01P-SA40.Q1P
01P-RM65.S2P	01P-SA65.Q1P
01P-RA40.S2P	01P-SM40.S1P
01P-RA65.S2P	01P-SM65.S1P
01P-CM40.Q1P	01P-SA40.S1P
01P-CM65.Q1P	01P-SA65.S1P
01P-CA40.Q1P	01P-SM40.S2P
01P-CA65.Q1P	01P-SM65.S2P
01P-CM40.S1P	01P-SA40.S2P
01P-CM65.S1P	01P-SA65.S2P

01 Series 16mm Control Switches
02 series 22/25/30mm Control Switches
05 series Multi-Layer Light tower
Drawing



- Mounting hole diameter 16mm
Apparent shapes with rectangular 18X24mm, square 18X18mm and round diameter 18mm
- Snap-action which accelerates on-off switching
- Normally closed and normally open contacts in each switch block
- Actuating travel: 2 positions L 90° and V 90°
- Mechanical lifetime: 50000 operations



Coding Principle

01 S - R A 40 . Q 1P * L
I II III IV V VI VII VIII

I: Series code	01 Series with 16mm diameter mounting hole		
II: Main category	S=Selector Switches		
III: Front shape	C=Round	S=Square	R=Rectangular
IV: Function code	M=2 way Momentary	A=2 way Alternative	
V: Protection rating	40=Standard	65=Rubber-sealed	
VI: Terminal type	S=Soldering	Q=Plug-in	
VII: Contact mode	1P=1A1B	2P=2A2B	
VIII: Knob type	L=L type 90°	V=V type 90°	

Order information

Order No.	
01S-RM40.Q1P	01S-CA40.S1P
01S-RM65.Q1P	01S-CA65.S1P
01S-RA40.Q1P	01S-CM40.S2P
01S-RA65.Q1P	01S-CM65.S2P
01S-RM40.S1P	01S-CA40.S2P
01S-RM65.S1P	01S-CA65.S2P
01S-RA40.S1P	01S-SM40.Q1P
01S-RA65.S1P	01S-SM65.Q1P
01S-RM40.S2P	01S-SA40.Q1P
01S-RM65.S2P	01S-SA65.Q1P
01S-RA40.S2P	01S-SM40.S1P
01S-RA65.S2P	01S-SM65.S1P
01S-CM40.Q1P	01S-SA40.S1P
01S-CM65.Q1P	01S-SA65.S1P
01S-CA40.Q1P	01S-SM40.S2P
01S-CA65.Q1P	01S-SM65.S2P
01S-CM40.S1P	01S-SA40.S2P
01S-CM65.S1P	01S-SA65.S2P

01 Series
16mm Control
Switches

02 series
22/25/30mm
Control Switches

05 series
Multi-Layer
Light Tower

Drawing



- Mounting hole diameter 16mm, Front size is round diameter 26mm
- Cladding cover design to meet the requirement of European system
- There are only red LED and red discharged lamp available in illuminated emergency switch
- Snap-action which accelerates on-off switching
- Normally closed and normally open contacts in each switch block
- Mechanical lifetime: 50000 operations



Coding Principle

01 S — C E 40 . Q 1P * R + L 12
 I II III IV V VI VII VIII IX X

I: Series code	01 Series with 16mm diameter mounting hole		
II: Main category	S=Emergency Stop Switches		
III: Front shape	C=Round		
IV: Function code	E=Rotate to reset		
V: Protection rating	40=Standard	65=Rubber-sealed	
VI: Terminal type	S=Soldering	Q=Plug-in	
VII: Contact mode	1P=1A1B	2P=2A2B	
VIII: Light color	R=Red		
IX: Light source	L=LED lamp	A=Discharged lamp	Omission=Without lamp
X: Operating voltage	06=6VDC 12=12VDC 24=24VDC 11=110VAC 22=220VAC		

Order information

Order No.	
01S-CE40.Q1P	01S-CE65.S1P
01S-CE65.Q1P	01S-CE40.S2P
01S-CE40.S1P	01S-CE65.S2P



- Mounting hole diameter 16mm
Apparent shapes with rectangular 18X24mm, square 18X18mm and round diameter 18mm
- Snap-action which accelerates on-off switching
- Normally closed and normally open contacts in each switch block
- Actuating travel: 2 positions L 90° and V 90°
- Mechanical lifetime: 50000 operations



Coding Principle

01 K - R A 40 . Q 1P * L2
I II III IV V VI VII VIII

I: Series code	01 Series with 16mm diameter mounting hole		
II: Main category	K=Keylock Switches		
III: Front shape	C=Round	S=Square	R=Rectangular
IV: Function code	M=2 Way Momentary	A=2 Way Alternative	
V: Protection rating	40=Standard	65=Rubber-sealed	
VI: Terminal type	S=Soldering	Q=Plug-in	
VII: Contact mode	1P=1A1B	2P=2A2B	
VIII: Inlet type	L1=L type 90° one inlet V1=V type 90° one inlet	L2=L type 90° two inlets V2=V type 90° two inlets	

Order information

Order No.	
01K-RM40.Q1P	01K-CA40.S1P
01K-RM65.Q1P	01K-CA65.S1P
01K-RA40.Q1P	01K-CM40.S2P
01K-RA65.Q1P	01K-CM65.S2P
01K-RM40.S1P	01K-CA40.S2P
01K-RM65.S1P	01K-CA65.S2P
01K-RA40.S1P	01K-SM40.Q1P
01K-RA65.S1P	01K-SM65.Q1P
01K-RM40.S2P	01K-SA40.Q1P
01K-RM65.S2P	01K-SA65.Q1P
01K-RA40.S2P	01K-SM40.S1P
01K-RA65.S2P	01K-SM65.S1P
01K-CM40.Q1P	01K-SA40.S1P
01K-CM65.Q1P	01K-SA65.S1P
01K-CA40.Q1P	01K-SM40.S2P
01K-CA65.Q1P	01K-SM65.S2P
01K-CM40.S1P	01K-SA40.S2P
01K-CM65.S1P	01K-SA65.S2P

01 Series 16mm Control Switches
02 series 22/25/30mm Control Switches
05 series Multi-Layer Light Tower
Drawing



- Mounting hole diameter 16mm
Apparent shapes with rectangular 18X24mm, square 18X18mm and round diameter 18mm
- 70dB at a distance 30cm



编码说明

01 B — R I 40 . Q * 24 FR
I II III IV V VI VII VIII

I:主系列码	01系列安装孔径16mm		
II:主体功能	B=蜂鸣器		
III:外观形状	R=长方框	S=正方框	C=圆框
IV:致动模式	C=连续声	I=间歇声	
V:防护等级	40=标准型		
VI:端脚类别	S=焊端	Q=插端	
VII:使用电压	06=6VDC 12=12VDC 24=24VDC		
VIII:带灯类别	R=红色LED FR=闪红LED 省略=不带灯		

注：仅长方框带灯




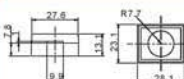

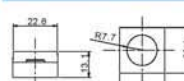

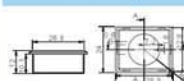






产品主件订货号

订货号	
01B-RC40.Q *◇◇	01B-CC40.Q
01B-RI40.Q *◇◇	01B-CI40.Q
01B-RC40.S *◇◇	01B-CC40.S
01B-RI40.S *◇◇	01B-CI40.S
01B-RC40.Q	01B-SC40.Q
01B-RI40.Q	01B-SI40.Q
01B-RC40.S	01B-SC40.S
01B-RI40.S	01B-SI40.S

Note: ◇Assembled lamps
Consumption current max: 7mA

Accessories

Order No.	Anti-twisting Ring	Description	Drawing
01Z-100		Enhance the anti-twisting torque while working	
Order No.	Rectangular Protective Cover	Description	Drawing
01Z-200.R		Suitable to rectangular cover	
Order No.	Square Protective Cover	Description	Drawing
01Z-200.S		Suitable to square cover	
Order No.	PCB Plug-in Base	Description	Drawing
01Z-300		Only for plug in switches	
Order No.	Blind Plug	Description	Drawing
01Z-400		预留孔使用	
Order No.	Connector	Description	Drawing
01Z-500		Only for plug in switches	-
Order No.	Insulation Cover	Description	Drawing
01Z-600		Only for plug in switches	-
Order No.	Mounting Tool	Description	Drawing
01Z-T01		Max torque force not exceeding 0.5Nm	-
Order No.	Lenses Remover	Description	Drawing
01Z-T02		Easily pull lenses, lamps can be changed before mounting panels	-

Order No.	Lamp Remover	Description	Drawing
01Z-T03		Easily pull lenses	-
Order No.	Metallic Screw Nut	Description	Drawing
01Z-NU.M		Metallic screw nut can be used if the panel is excessively thick	-
Order No.	Rectangular Dust Wrapper	Description	Drawing
01Z-700.R		Suitable to rectangular cover	
Order No.	Square Dust Wrapper	Description	Drawing
01Z-700.S		Suitable to square cover	
Order No.	Rectangular Flush-mounting Cover	Description	Drawing
01Z-800.R		Suitable to rectangular cover	
Order No.	Square Flush-mounting Cover	Description	Drawing
01Z-800.S		Suitable to square cover	
Order No.	空白急停标示圈	Description	Drawing
01Z-900.0(N)		External diameter: 45mm, "N" represents that 3M paster is not attached	
Order No.	急停标示圈	Description	Drawing
01Z-900.1(N)		External diameter: 45mm, "N" represents that 3M paster is not attached	

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