















# 16/22mm Flush mounting stainless steel control switches

This series adopts flush-mounting design above the panel. Thanks to stainless steel housing, the switch features high strength and abrasion resistance. The apperance is beautiful and small. The touch is smoothly moving. Upon round shape, the illuminated items are equipped with high-brightness LEDs, that lifetime offers 50,000 hours at least. Embedded sealing struction, the protection rating up to IP67. The products can widely used for machinery, instrument, automation, transpotation, smart building, aviation, military, medical devices and more.

# 16/22mm Flush Mounting Stainless Steel Control Switches

16mm Control Switches 132-133

22mm Control Switches 134-135

Linking your system

www.ema-electronic.com



## www.ema-electr

#### **Features**

- Support 16m/m、22m/m flush-mounting holes
- Flat and round shape. Metal texture. Beautiful apperance
- Red/Yellow/Green/Blue/White LEDs color for your choice
- Illuminated light mode: Single dot、Ring
- Abrasion resistance, high strength, and high hardness with stainless steel housing
- Embedded high-brightness LEDs. Long lifetime
- The protection rating in front of panel up to IP67

#### **Applications**

- Industry: Machinery、Instrument、Factory equipment
- Pubilc Field: Ticket-gate machine, Vendor machine, Car parking entrance
- Control System: Panel control, Smart device

### **Technical Specifications**

- Connected setting Connact block 2.8 x 0.5mm
- Contact rating 16mm: 250VAC/3A, 22mm: 250VAC/5A
- Contact resistance ≤50m Ω
- Insulation resistance ≥ 100m Ω
- Dielectric strength 2000VAC 50Hz, 1m
- Mechanical lifetime More than 1,000,000
- Electrical lifetime More than 50,000
- Thickness of panel 1...6mm
- Nut tougue 5...14N/m
- Operating pressure 5.5N
- LED lifetime 50,000 h
- Pushbutton material Stainless steel
- Housing material
  Stainless steel
- Storage temperature -40°C ~ +80°C
- Operation temperature -25°C ~ +55°C

#### **Installation Panel**

- Mounting Sequence: Put the actuator through the panel hole. Tighten the nut below the panel. The torque is 5...14 N/m
- The thickness of panel is 1...8mm

#### **Hole Dimension**

| Cut-out Category   | Hole Dimension |
|--------------------|----------------|
| A: 16mm round hole | 16mm           |
| B: 22mm round hole | 22.5mm         |

#### Front view and bottom of contact block

#### 16m/m mounting hole

| Illuminated Ring | Illuminated Single dot                     | Non-Illuminated |
|------------------|--|-----------------|
|                  | Φ5 (1) (1) (1) (1) (1) (1) (1) (1) (1) (1) |                 |

#### 22m/m mounting hole

| Illuminated Ring       | Illuminated Single dot | Non-Illuminated |
|------------------------|------------------------|-----------------|
| © 18<br>© 13.5<br>28.5 | 28.5                   | Φ18<br>28.5     |

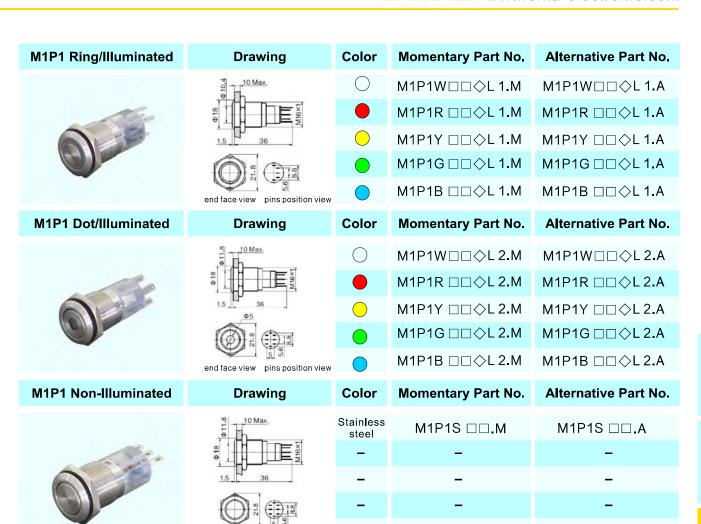


- 16mm and 22mm flush mounting
- Stainless steel housing for abrasion resistance, high strength, high hardness
- Offer illuminated and non-illuminated metal switches
- Light mode: Single dot and ring
- Round and flush head shape. Beautiful appearance
- Protection up to IP67 above front panel



#### **Coding Principle**

| Pushbutton Switche                               | s M1/M2 M                 | 2     | Р         | 1          | G          | А                 | В          | 3        | L                   | 1         |     | М |
|--|---------------------------|-------|-----------|------------|------------|-------------------|------------|----------|---------------------|-----------|-----|---|
| Part No.   | Part No. Code Description |       |           |            |            |                   |            |          |                     |           |     |   |
| M  | Classification            | : M   | =Flush m  | ounting    | stainless  | steel co          | ntrol swit | tches    |                     |           |     |   |
| 2  | Mounting size             | : 1=  | =16m/m    | 2=22m      | ı/m        |                   |            |          |                     |           |     |   |
| P1   | Cap style                 | : P′  | 1=Flat bu | tton       |            |                   |            |          |                     |           |     |   |
| G  | Light color               | : R:  | =Red, Y=  | :Yellow, ( | G=Green    | , B=B <b>l</b> ue | , W=Whi    | te, S=St | ain <b>l</b> ess st | eel surfa | ace |   |
| AB   | Contact mode              | : AE  | B=1NO/1   | NC, 2A2I   | B=2NO/2    | 2NC               |            |          |                     |           |     |   |
| 3 Operating voltage: 3=24VDC, 4=110VAC, 5=220VAC |                           |       |           |            |            |                   |            |          |                     |           |     |   |
| L  | Light source              | : L=  | ELED lam  | np         |            |                   |            |          |                     |           |     |   |
| 1  | Light mode                | : 1=  | Ring, 2=  | Central o  | dot        |                   |            |          |                     |           |     |   |
| .M   | Function mode             | e : M | =Momen    | tary, A=A  | Alternativ | е                 |            |          |                     |           |     |   |



Remark: 1. Contact Mode: AB=1NO/1NC, 2A2B=2NO/NC 2. Lamp Voltage: 3=24VDC, 4=110VAC, 5=220VAC L=LED lamp

| M2P1 Ring/Illuminated | Drawing   | Color              | Momentary Part No. | Alternative Part No. |
|-----------------------|---|--------------------|--------------------|----------------------|
|                       | L value: Momentary Part:35.8 Maintained Part:40.8  end face view pins position view |                    | M2P1W□□◇L 1.M      | M2P1W□□◇L 1.A        |
|                       |   |                    | M2P1R □□◇L 1.M     | M2P1R □□◇L 1.A       |
|                       |   |                    | M2P1Y □□◇L 1.M     | M2P1Y □□◇L 1.A       |
|                       |   |                    | M2P1G □□◇L 1.M     | M2P1G □□◇L 1.A       |
|                       |   |                    | M2P1B □□◇L 1.M     | M2P1B □□◇L 1.A       |
| M2P1 Dot/Illuminated  | Drawing   | Color              | Momentary Part No. | Alternative Part No. |
|                       | L value: Momentary Part:35.8 Maintained Part:40.8 end face view pins position view  |                    | M2P1W□□◇L 2.M      | M2P1W□□◇L 2.A        |
|                       |   |                    | M2P1R □□◇L 2.M     | M2P1R □□◇L 2.A       |
|                       |   |                    | M2P1Y □□◇L 2.M     | M2P1Y □□◇L 2.A       |
|                       |   |                    | M2P1G □□◇L 2.M     | M2P1G □□◇L 2.A       |
|                       |   |                    | M2P1B □□◇L 2.M     | M2P1B □□◇L 2.A       |
| M2P1 Non-Illuminated  | Drawing   | Color              | Momentary Part No. | Alternative Part No. |
|                       | L value : Momentary Part:35.8 Maintained Part:40.8                                  | Stainless<br>steel | M2P1S □□.M         | M2P1S □□.A           |
|                       |   | -                  | -                  | -                    |
|                       |   | _                  | -                  | -                    |
|                       |   | -                  | -                  | -                    |
|                       | end face view pins position view  | _                  | _                  | _                    |

Remark: 1. Contact Mode: AB=1NO/1NC, 2A2B=2NO/NC 2. Lamp Voltage: 3=24VDC, 4=110VAC, 5=220VAC

ema | 134