

Y090

Product Overview

Y090 series are beautiful in appearance and complete in variety, and can provide a variety of solutions for industrial automation, medical equipment, electric power, machinery and other industry users to provide a variety of solutions.

Specs Products include buttons, signal indicators, emergency stop knob, knob, key knob, mushroom key knob, mushroom knob; $\Phi 22$ installation aperture, widely used.

Performance Using high quality inflaming retarding materials. Switch unit is separated independently and the insulating performance is very well. The product meets standards of IEC60947-5-1, GB14048.5 etc

Structure The switch unit is slow-break and self-cleaning. It uses modular combination mode and you can combine from one to eight switch units optional, so can make the product meet the requirement of many special control circuits.

Protective Degree Protection class IP40



Performance Characteristics

| | |
|---------------------------|--|
| Operating temperature | -25 ~ + 55°C (no freezing) keep the air flowing around illuminated push button |
| Operation Humidity | 45~85%RH (no condensation) |
| Contact Resistor | $\leq 50m\Omega$ |
| Insulation Resistor | $\geq 100M\Omega(500VDC)$ |
| Maximum withstand voltage | 3000V, AC 50Hz, 1min |
| Vibration Resistance | 50Hz, Amplitude 1.0mm |
| Mechanical Life | Momentary knob ≥ 1 million times |
| | key knob, emergency stop button $\geq 200,000$ times Latching knob, selection knob $\geq 500,000$ times |
| Electrical Life | $\geq 50,000$ times |
| Connection | Threaded connection, wire diameter: 2 x 1.5 mm ² max |
| | Pin terminal: 6.3x0.8mm |
| Operating force | 1NO1NC: approx. 8N, 2NO2NC: approx. 14N (button) |
| Operation Travel | Approx. 5.5 mm (button) |

Installation Dimensions and circuit diagram

Installation Dimensions

Circuit Diagram

The switch code is 11.
1, 2 are normal closed;
3, 4 are normal opened;

| Type | A | B | C | Remark |
|------------------|----|----|-----------|--|
| Normal, Key-lock | 50 | 40 | | 1. Unit: mm 2. A and B both refer to the minimum size |
| Selector | 50 | 40 | $\Phi 22$ | |
| Mushroom | 50 | 50 | $\Phi 25$ | |
| Big Mushroom | 70 | 70 | $\Phi 30$ | |

Switch Ratings

| | | | | | | | | |
|------------------------------|---------------|--|-----|------|------|------|------|------|
| Rated Insulation Voltage(Ui) | | 660V | | | | | | |
| Terminal Current (Ith) | | 10A Temperature rise does not exceed the current allowed by the maximum rating | | | | | | |
| Rated Voltage | | 24V | 48V | 110V | 220V | 380V | 500V | |
| Rated Current | AC 50/60Hz | Resistive load | 10A | — | 10A | 6A | — | — |
| | | Inductive load | 10A | — | 6A | 3A | 1.8A | 1.4A |
| | DC | Resistive load | 8A | 4A | 2.2A | 1.1A | — | — |
| | | Inductive load | 4A | 2A | 1.1A | 0.6A | — | — |
| Contact material | | Silver alloy | | | | | | |

Minimum adaptable load: 3VAC/DC 5mA (available range depends on the use environment and load type)

Lamp Ratings

| | | | | |
|--------------------|---|-----------|------------|------------|
| Lamp type | 2-way Illuminated LEDs | | | |
| Rated Voltage | AC/DC 6V | AC/DC 12V | AC/DC 110V | AC/DC 220V |
| | AC/DC 24V | | AC 110V | AC 220V |
| Rated Current | 20mA | | | |
| Lamp Life | 40,000 hours | | | |
| Cover Color | R G Y B W | | | |
| Equivalent circuit | AC/DC: (resistor step-down) | | | |
| | AC: (capacitor step-down) Suitable Frequency: 50~60Hz | | | |

Y090

The Contact Pair's Close-open State Chart of the Selector Switches and Key-lock Switches.

a、The Contact Pair's Close-open State Chart of 2-position Selector Switch.

| | Type | | |
|----|------------|--|--|
| 1 | Y090-11 /2 | | |
| 2 | Y090-02 /2 | | |
| 3 | Y090-20 /2 | | |
| 4 | Y090-22 /2 | | |
| 5 | Y090-13 /2 | | |
| 6 | Y090-31 /2 | | |
| 7 | Y090-04 /2 | | |
| 8 | Y090-40 /2 | | |
| 9 | Y090-42 /2 | | |
| 10 | Y090-24 /2 | | |
| 11 | Y090-06 /2 | | |
| 12 | Y090-60 /2 | | |
| 13 | Y090-33 /2 | | |
| 14 | Y090-15 /2 | | |
| 15 | Y090-51 /2 | | |

B、The Contact Pair's Close-open State Chart of 3-position Selector Switch.

| | Type | | | |
|----|------------|--|--|--|
| 1 | Y090-11 /3 | | | |
| 2 | Y090-02 /3 | | | |
| 3 | Y090-20 /3 | | | |
| 4 | Y090-22 /3 | | | |
| 5 | Y090-13 /3 | | | |
| 6 | Y090-31 /3 | | | |
| 7 | Y090-04 /3 | | | |
| 8 | Y090-40 /3 | | | |
| 9 | Y090-42 /3 | | | |
| 10 | Y090-24 /3 | | | |
| 11 | Y090-06 /3 | | | |
| 12 | Y090-60 /3 | | | |
| 13 | Y090-33 /3 | | | |
| 14 | Y090-15 /3 | | | |
| 15 | Y090-51 /3 | | | |

Note: 1. express open state, express close state.
 2. If you need other contact state, please tell us.

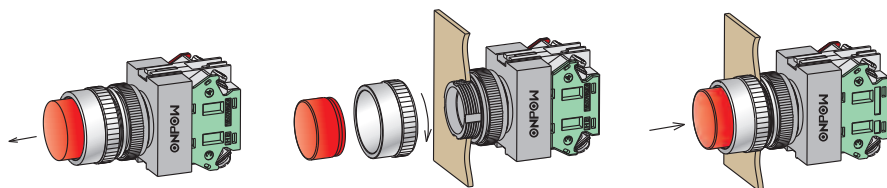
Y090

Y090 Series model description


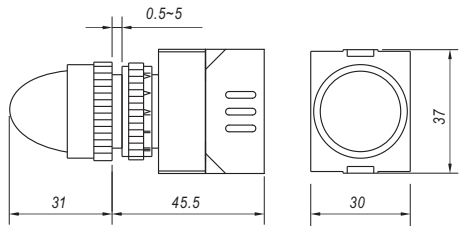

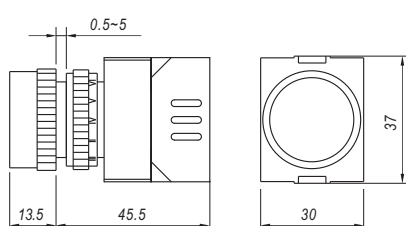

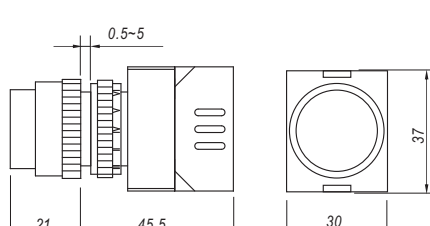

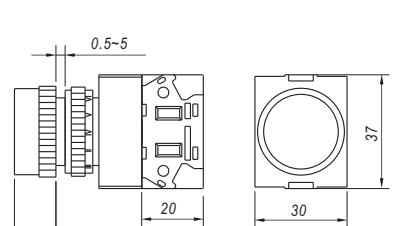

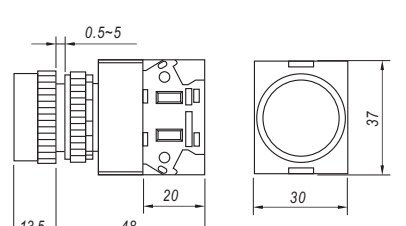
Y090- / / / /

| Symbol | Symbol name | Specify |
|--------|---|--|
| Y090 | Series No. | Series number; if you need economic type, please add "E" at the end, i.e.: Y090E |
| | Contact structure | one group of switching elements 11(1NO1NC) / 10(1NO) / 01(1NC) / 20(2NO) / 02(2NC) |
| | | two groups of switching elements 22(2NO2NC) / 40(4NO) / 04(4NC) / 31(3NO1NC) / 13(1NO3NC) 30(3NO) / 03(3NC) / 21(2NO1NC) / 12(1NO2NC) |
| | | Three groups of switching elements configuration and so on, can choose the combination according to the need |
| | Operation type | No letter means Momentary D: Signal indicator / BD: Ball signal indicator / Z: latching button / G: High button / M: Mushroom button / ZM: latching mushroom button / TS: Emergency stop button / X: Rotary knob / XB: Knob / Y: Key Knob / YM: Mushroom Key Knob / M: Continuous Buzzer / S: Flashing Light / SM: Flashing Intermittent Buzzer |
| | Selector button and key button operation position | 2: Two position / 3: Three position |
| | Selector Knob and Key Knob operation Type | 1 maintain / 2 half return / 3 self return |
| | Lamp color | R: Red / G: Green / Y: Yellow / B: Blue / W: White / N: Black |
| | Lamp voltage | 6V / 12V / 24V / 110V / 220V / 380V / No letter means no light |


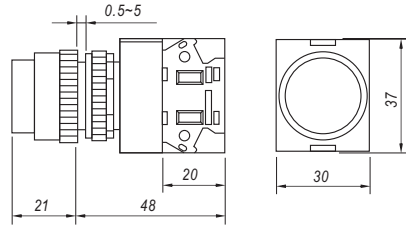

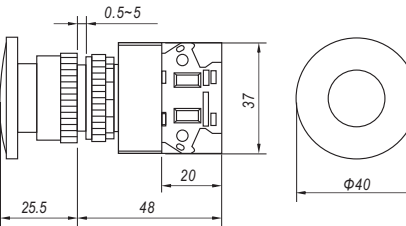

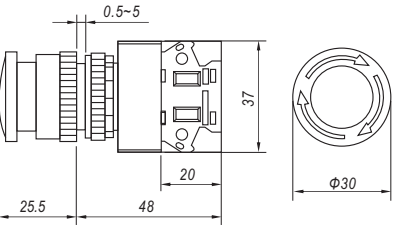

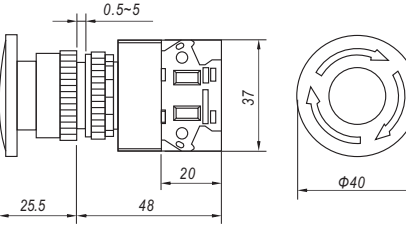


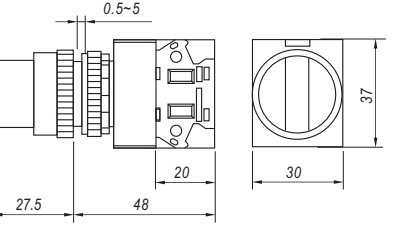
Instruction





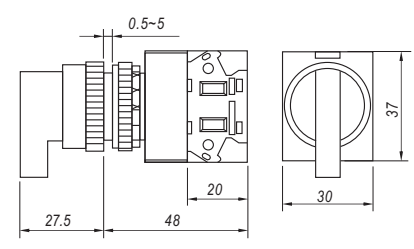

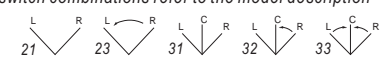
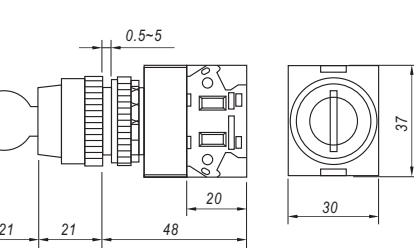

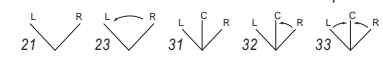
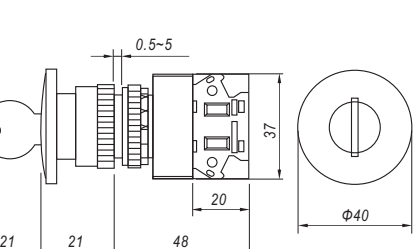

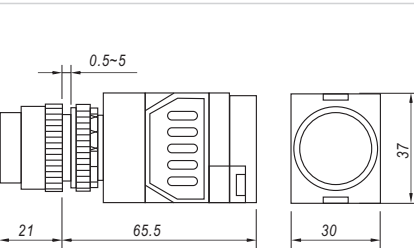
, Take out the head with a starter, and unscrew the aluminum screw.
 , Then put the switch into the panel's hole.
 , Screw the screw, then put the head onto the switch.

| Product Picture | Description | Dimension |
|--|--|---|
|  <p>Domed Pilot Lamp Y090-BD/△/▲</p> | <p>LED color R G Y B W LED voltage 6V / 12V / 24V / 110V / 220V / 380V IP degree IP40 Accessory T04 Sign Frame</p> |  |
|  <p>Fast Installation Pilot Lamp Y090-DS/△/▲</p> | <p>LED color R G Y B W LED voltage 6V / 12V / 24V / 110V / 220V / 380V IP degree IP40 Accessory T04 Sign Frame</p> |  |
|  <p>Pilot Lamp Y090-D/△/▲</p> | <p>LED color R G Y B W LED voltage 6V / 12V / 24V / 110V / 220V / 380V IP degree IP40 Accessory T04 Sign Frame</p> |  |
|  <p>Fast Installation Flat Head (can be illuminated) Y090-□ ■ S/△/▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description Operation Z: Latching / No letter: Momentary LED color R G Y B W N LED voltage 6V / 12V / 24V / 110V / 220V / 380V IP degree IP40 Accessory Seal cover T01 / Sign frame T04 / Protective cover T17</p> |  |
|  <p>Flat Head (can be illuminated) Y090-□ ■ /△/▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description Operation Z: Latching / No letter: Momentary LED color R G Y B W N LED voltage 6V / 12V / 24V / 110V / 220V / 380V IP degree IP40 Accessory Seal cover T01 / Sign frame T04 / Protective cover T17</p> |  |



| Product Picture | Description | Dimension |
|--|---|---|
|  <p>Long Head (can be illuminated) Y090-□■G/△▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description</p> <p>Operation Z: Latching / No letter: Momentary</p> <p>LED color R G Y B W N</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V / 380V</p> <p>IP degree IP40</p> <p>Accessory Protective cover T16</p> |  |
|  <p>Mushroom Push button (can be illuminated) Y090-□■M/△▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 01: 1NC Other switch combinations refer to the model description</p> <p>Operation Z: Latching / No letter: Momentary</p> <p>LED color R G Y</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V / 380V</p> <p>IP degree IP40</p> <p>Accessory Protective cover T16</p> |  |
|  <p>Emergency Pushbutton (can be illuminated) Y090-□TSA/△▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 02: 2NC Other switch combinations refer to the model description</p> <p>LED color R G</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V / 380V</p> <p>IP degree IP40</p> <p>Accessory Warning ring T14-2260 / T26 protection ring</p> |  |
|  <p>Emergency Pushbutton (can be illuminated) Y090-□TS/△▲</p> | <p>Contact 11: 1NO1NC / 10: 1NO / 02: 2NC Other switch combinations refer to the model description</p> <p>LED color R G</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V / 380V</p> <p>IP degree IP40</p> <p>Accessory Warning ring T14-2260 / T26 protection ring</p> |  |
|  <p>Selector Switch (can be illuminated) Y090-□X/◇◆/△▲</p> | <p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left momentary can be customized) Contact, pls refer to "contact on/off chart"</p> <p>LED color R G Y N</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V / 380V</p> <p>IP degree IP40</p> <p>Accessory T04 sign frame</p> |  |



| Product Picture | Description | Dimension |
|---|---|---|
|  <p>Lever Selector Switch Y090-□XB/◇◆/△</p> | <p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left mementary can be customized) Contact, pls refer to "contact on/off chart"</p> <p>LED color R G N</p> <p>IP degree IP40</p> <p>Accessory T04 sign frame</p> |  |
|  <p>Key-lock Switch Y090-□Y/◇◆</p> | <p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left mementary can be customized) Contact, pls refer to "contact on/off chart"</p> <p>IP degree IP40</p> <p>Accessory T04 sign frame</p> |  |
|  <p>Mushroom Key-lock Switch Y090-□YM/◇◆/△</p> | <p>Contact 11: 1NO1NC / 20: 2NO / 02: 2NC Other switch combinations refer to the model description</p> <p>Operation </p> <p>(32 Default right momentary, left mementary can be customized) Contact, pls refer to "contact on/off chart"</p> <p>LED color R G</p> <p>IP degree IP40</p> <p>Accessory T04 sign frame</p> |  |
|  <p>Buzzer Y090-M/▲ Y090-S/△/▲ Y090-SM/△/▲</p> | <p>LED color R</p> <p>LED voltage 6V / 12V / 24V / 110V / 220V</p> <p>IP degree IP40</p> <p>Rated sound intensity 75dB (1m) (rated voltage)</p> <p>Frequency 2.3kHz 300Hz</p> |  |



Y090

Product Outline of Economical Type

Refer to Y090 product selection

| P/N | Fast Installation Pilot Lamp Y090E-DS/ / / | Round Pilot Lamp Y090E-D/ / | Domed Pilot Lamp Y090E-BD/ / | Fast Installation Flat Head (can be illuminated) Y090E- S/ / / Y090E- S/ / / |
|-------|---|--------------------------------|---------------------------------|--|
| Shape | | | | |

| P/N | Flat Head (can be illuminated) Y090E- / / / Y090E- / / / | Long Head (can be illuminated) Y090E- G/ / Y090E- G/ / | Mushroom Pushbutton (can be illuminated) Y090E- M/ / Y090E- M/ / | 30mm Emergency Pushbutton (can be illuminated) Y090E- TSA/ / Y090E- TSA/ / |
|-------|--|--|--|--|
| Shape | | | | |

| P/N | 40mm Emergency Pushbutton (can be illuminated) Y090E- TS/ / Y090E- TS/ / | Selector Switch (can be illuminated) Y090E- X/ / / Y090E- X/ / / | Lever Switch Y090E- XB/ / | Key-lock Switch Y090E- Y/ / |
|-------|--|--|------------------------------|--------------------------------|
| Shape | | | | |

| P/N | Mushroom Key-lock Switch Y090E- YM / / | | | |
|-------|---|--|--|--|
| Shape | | | | |