



# M22 TYPE



## FEATURES

### ■Applicable standards

JIS C8151 Indicators for Industrial Use, JIS C4521 Button Switches for Control Use, JIS C4520 General Rules for Control Switches, and JEM1248 Indicators

### ■Small and light-weight

This is an illuminated type compact pushbutton switch with an LED indicator. It has become much lighter than a transformer or resistor type switch with a incandescent lamp.

### ■The lamp can be directly illuminated with power source of 110 / 220 V

### ■Free of mislighting

Mislighting is prevented by inductive voltage.

### ■Easy wiring work

The Faston connection method is used to enable rapid wiring work.

### ■Energy and maintenance work saving

LEDs are used for energy saving and maintenance saving.

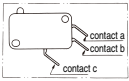
### ■Cable release

The model with a cable release B50 is useful for resetting the thermal relay in the control center or the like.

## SPECIFICATIONS (RATINGS, PERFORMANCE)

Specification	Type	M22 TYPE
Rated insulation voltage (Ui)		250V AC / DC
Rated operating voltage (Uth)		24, 110, 125, 220V AC / DC
Rated current-carrying capacity		18mA
Rated withstand voltage		2,500V AC / 1 min.
Lighting impulse	Between five parts (L-L) Live part to assembly mounting panel (L-A)	≧3,000V / 3 times for each pole (1.2 / 50 μs) ≧7,000V / 3 times for each pole (1.2 / 50 μs)
Operating temperature		-20 to 40°C
Storing temperature		-30 to 85°C
Heat resistance		Allowed to stand at 75°C for 24 hours
Recognizable distance		Illuminance on mounting panel at distance of 10m: 1,000 LX
Panel thickness		2 to 4mm
Shock resistance		490 m/S <sup>2</sup> or more
Terminal connection		Faston terminal #187 series: 0.5 to 2.27 mm <sup>2</sup>

## SPECIFICATION AND PERFORMANCE OF MICROSWITCH

Contact	250V AC 15A (resistance load) 250V AC 10A (inductive load: cose = 0.6 to 0.7)
	125V DC 0.6A (resistance load) 125V DC 0.6A (inductive load: L/R = 7ms)
Contact pushing load	3.9N
Mechanical life	10,000,000 operations or more
Electrical life	100,000 operations or more
Insulation resistance	100MΩ or more (500V DC insulation testing set)
Withstand voltage	1,000V AC / 1 min. (Between discontinuous terminals)
	2,000V AC / 1 min. (Between terminal and ground)
Wiring terminal	

## PRODUCT CODING

### M22KT4AC11R11-B

**Basic type**

**Black ring**

**No. of releases**

Code	No. of releases
	No release *
1	1
2	2

\* M22KQ and M22KC have no release.

**No. of contacts**

Code	No. of contacts
0	No switch *
1	1C
2	2C

\* Here is blank for M22KQ.

**Mechanism**

Code	Mechanism
KQ4	Indicator
KC4	Illuminated type pushbutton SW
KT4	Illuminated type pushbutton SW with release
P	Pushbutton SW

**Supplied voltage**

Code	Power source (V)
	No illumination *
AC02	24V AC
AC11	100 / 110V AC
AC12	125V AC
AC22	200 / 220V AC
DC02	24V DC
DC11	100 / 110V DC
DC12	125V DC
DC22	200 / 220V DC

\* M22P has no illumination.

**Color**


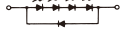
Code	Lens	Button
R	Red	Red
G	Green	Green
O	Orange	Orange
W	Milky white	White
Y	Yellow	Yellow
C	Clear	—
B	—	Black

SWITCH

## ACCESSORIES

### LED unit

#### TS-LED4-R

Code	Display color	Shape	Circuit diagram
R	Red		
G	Green		
	Yellow		
	Orange		
O	Clear		
Y	Milky white		

Applicable types:  
M22KQ4, M22KC4, M22KT4

### Lens

#### M22 lens R

Code	Display color
R	Red
G	Green
Y	Yellow
O	Orange
W	Milky white
C	Clear



Applicable types: M22KQ4, M22KC4, M22KT4

### Button

#### M22 button R

Code	Display color
R	Red
G	Green
Y	Yellow
O	Orange
W	White
B	Black



Applicable types: M22P

### Lens remover

#### ●XL-NQ



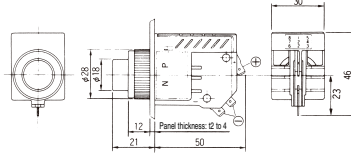


# M22 TYPE

## STANDARD PRODUCTS

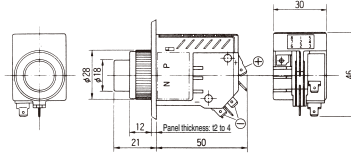
### Indicator

**M22KQ4** Supplied voltage Color -B



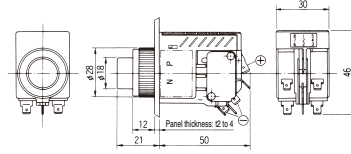
### Illuminated type pushbutton with 1C contact

**M22KC4** Supplied voltage Color 1-B



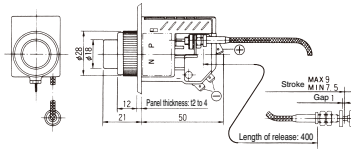
### Illuminated type pushbutton with 2C contact

**M22KC4** Supplied voltage Color 2-B



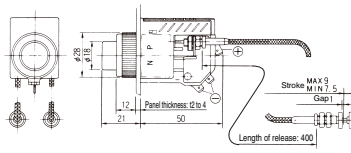
### Illuminated type pushbutton with 1 release

**M22KT4** Supplied voltage Color 01-B



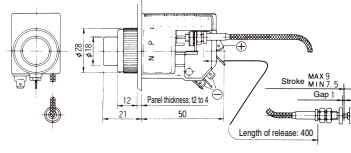
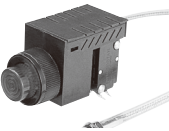
### Illuminated type pushbutton with 2 releases

**M22KT4** Supplied voltage Color 02-B



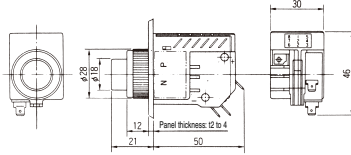
### Illuminated type pushbutton with 1C contact and 1 release

**M22KT4** Supplied voltage Color 11-B



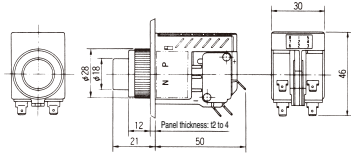
## Pushbutton with 1C contact

**M22P** Color **10-B**



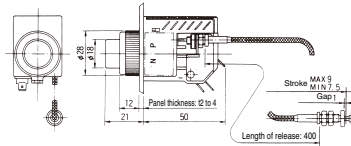
## Pushbutton with 2C contact

**M22P** Color **20-B**



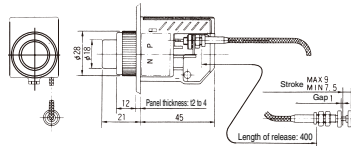
## Pushbutton with 1C contact and 1 release

**M22P** Color **11-B**



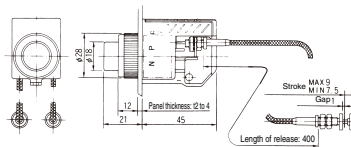
## Pushbutton with 1 release

**M22P** Color **01-B**

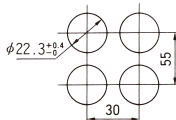


## Pushbutton with 2 releases

**M22P** Color **02-B**



### ■ Mounting hole size



### ■ Handling the release

The release is bendable, but its stroke varies. It must be used over a circle with diameter of 50 mm.



### ■ Applicable receptacle (manufactured by AMP) #187 series

Type of receptacle	Applicable wire size		Wire insulation cover size (mm)	Material and finish	Type of crimp tool	Instruction manual for crimp tool
	AWG	mm <sup>2</sup>				
60711-1	24-20	0.2 to 0.56	1.02 to 1.78	Brass + Tin plated		
170038-2	20-16	0.5 to 1.42	2.29 to 3.30	Brass + Tin plated	720590-1	013J
170467-1	18-14	0.75 to 2.27	2.20 to 3.40	Phosphorous bronze + Nickel plated		