

# PUSH BUTTON SWITCH

## Aluminum guard



Model	Code	Description
MRF--	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Push button switch
Actuator	A	Flush (Installing hole: Ø30)
	N	Flush (Installing hole: Ø25)
	R	Extended (Installing hole: Ø22)
Operation function	M	Momentary
	A	Alternate
Contact composition	1	1a1b
	2	2a2b
Cap (LED color)	R	R(Red), G(Green), Y(Yellow), A(Blue), W(White)

MRF-A Flush (Ø30)



MRF-N Flush (Ø25)



MRF-R Extended (Ø22)



# ILLUMINATED PUSH BUTTON SWITCH

## Aluminum guard



Model	Code	Description
MRX--	<input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/> <input type="checkbox"/>	Illuminated push button switch
Actuator	A	Flush (Installing hole: Ø30)
	N	Flush (Installing hole: Ø25)
	R	Extended (Installing hole: Ø22)
Operation function	M	Momentary
	A	Alternate
Contact composition	1	1a1b
	2	2a2b
Rated input voltage	A0	100 – 240 V AC
	A3	380 V AC
	D0	12 – 24 V DC/AC
Cap (LED color)	R	R(Red), G(Green), Y(Yellow), A(Blue), W(White)

MRX-A Flush (Ø30)



MRX-N Flush (Ø25)



MRX-R Extended (Ø22)



## ■ Suffix code

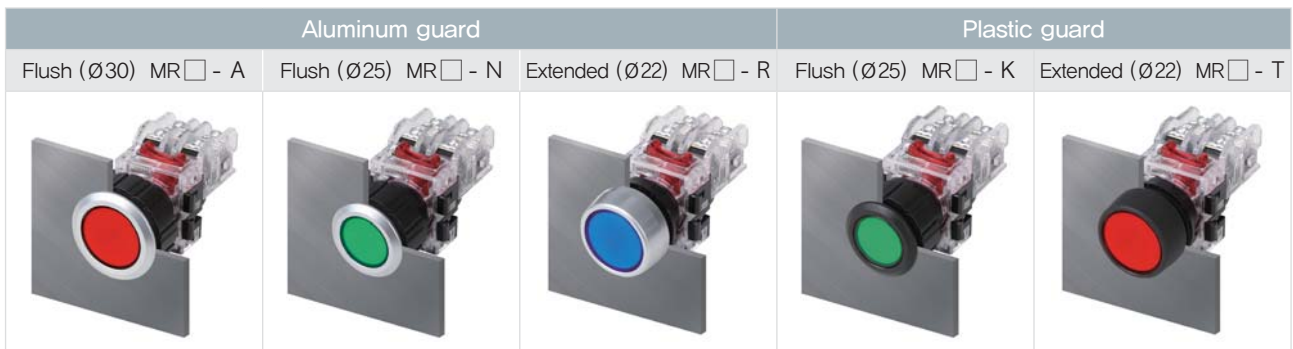
Model	Code	Description
MRF -	□	Push button switch
MRX -		Illuminated push button switch
MRP -		Pilot light
MRS -		Selector switch
MRT -		Illuminated selector switch
MRK -		Key selector switch
MRE -		Emergency stop switch
MRA -		Illuminated emergency stop switch
MRB -		Electronic buzzer
Actuator	A	Ø30 Flush
	N	Ø25 Flush
	R	Ø22 Extended
	K	Ø25 Flush
	T	Ø22 Extended

※ Please refer to the above suffix code and check out an operation function, contact composition, color actuator, rated input voltage, etc.

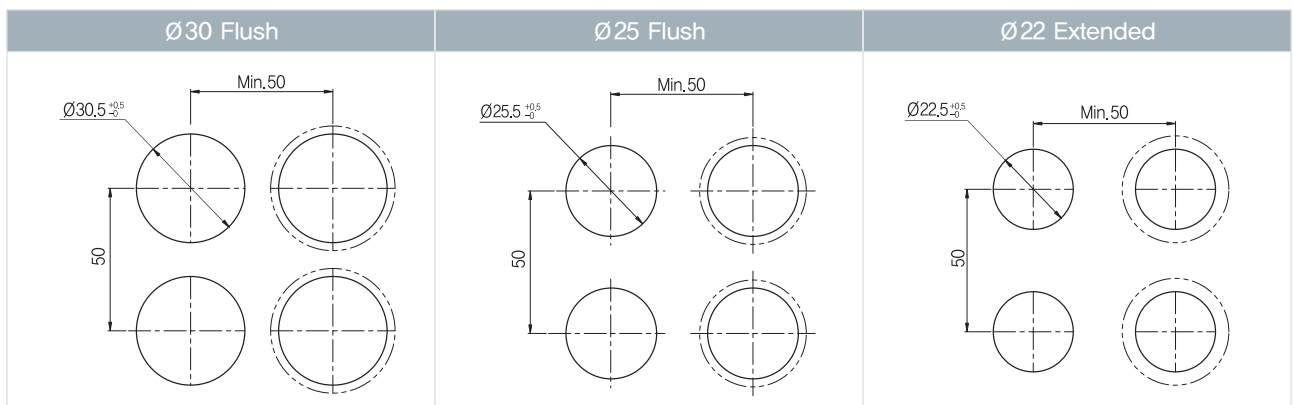
## ■ Specification

Contact composition		1a1b
Contact action		Snap-action
Installing panel thickness		7.0 mm (when excluded the additional accessories)
Material	Contact material	AgSnO <sub>2</sub>
	Contact body material	Polycarbonate (P.C)
Mechanical characteristic	Fixed torque	Installing nut : 1.96 N · m max, Installing nut : 0.78 N · m max
	Operating power	6.47 N (operation part + 1a1b contact)
	Operating distance	5 mm ±0.2
	Reflection time	max 3 ms
	Durability of actuator	Button: min 500 thousand times, Selector switch: min 200 thousand times
Electrical characteristic	Dielectric strength	2,000 V AC 1 min
	Contact resistance	max 50 MΩ (Initial setting)
	Insulation resistance	min 100 MΩ 500 V DC
	Rated current	6 A 250 V AC
	Min load current	5 mA 24 V DC, 10 mA 110 V DC
	Min load current	200 thousand times
Power supply voltage	Power supply voltage	100 – 240 V AC (ED condenser voltage dropping type)
		380 V AC (LED condenser voltage dropping type) 12 – 24 V DC/AC (LED resistance voltage dropping type)
Buzzer volume		Approx. 90 dB
Environment condition	Ambient temperature	-20 ~ 55 °C
	Ambient humidity	35 ~ 85 % RH
	Storage temperature	-40 ~ 85 °C
	Shock resistance	300 % pulse cycle 11 ms
	Vibration resistance	100 % 10 – 55 Hz, amplitude 0.75 mm (within 1 ms)

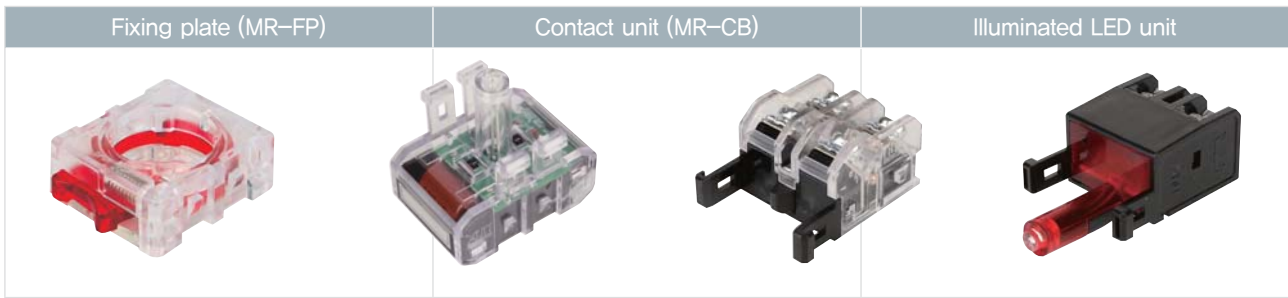
## ■ Actuator panel installation example



## ■ Panel cutout (Unit : mm)



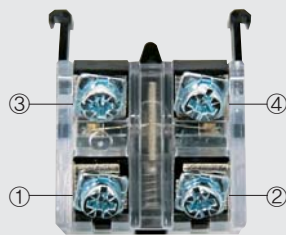
## Contact part composition



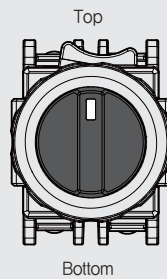
## Selector / Key selector contact operation

In case of 3 positions selector, please refer to the contact operation diagram.

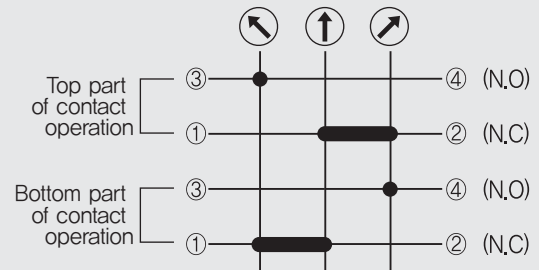
※ When installing to the contact unit



Contact unit (MR-CB)



Selector switch



※ The position from the front of actuator part

## Accessories

Kinds	Appearance	Model	Reference
Contact unit		MR-CB	Hook fixing contact unit which is composed of 1a1b, is assembled to fixing plate.
		MR-CBC	When air-conditioning and refrigerating by slow-action contact (1a1b) and driving an industrial machine's motor, it can be used as START signal and STOP signal in relay's self-hold circuit.
Flush aluminum guard		MR-AGA	Aluminum guard A type panel cutout $\varnothing 30$
		MR-AGN	Aluminum guard N type panel cutout $\varnothing 25$
Extended aluminum guard		MR-AGR	Aluminum guard R type panel cutout $\varnothing 22$
Fixing plate		MR-FP	Connect to actuator, contact unit and lamp unit.
3 positions of illuminated selector unit		MR-3SLA0□	100 – 240 V AC
		MR-3SLA3□	380 V AC
		MR-3SLD0□	12 – 24 V DC/AC
LED Illuminated unit		MR-LBA0□	100 – 240 V AC
		MR-LBA3□	380 V AC
		MR-LBD0□	12 – 24 V DC/AC
Protective cover		MR-AC	Protective cover is installed in opposite side when using only 1 LED illuminated unit or contact unit.