

# Control Switch

## MR series (Aluminum guard type)







Model	PUSH-BUTTON SWITCH					
	Aluminum guard type			Plastic guard type		
	Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22	
Appearance						
Suffix code	MRF-A(Ø30)	MRF-N(Ø25)	MRF-R(Ø22)	MRF-K(Ø25)	MRF-T(Ø22)	
Model	ILLUMINATED PUSH BUTTON SWITCH					
	Aluminum guard type			Plastic guard type		
	Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22	ON / OFF
Appearance						
Suffix code	MRX-A(Ø30)	MRX-N(Ø25)	MRX-R(Ø22)	MRX-K(Ø25)	MRX-T(Ø22)	MRX-WM2
Model	PILOT LAMP					
	Aluminum guard type			Plastic guard type		
	Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22	
Appearance						
Suffix code	MRP-A(Ø30)	MRP-N(Ø25)	MRP-R(Ø22)	MRP-K(Ø25)	MRP-T(Ø22)	
Model	SELECTOR SWITCH					
	Aluminum guard type			Plastic guard type		
	Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22	
Appearance						
Suffix code	MRS-A(Ø30)	MRS-N(Ø25)	MRS-R(Ø22)	MRS-K(Ø25)	MRS-T(Ø22)	
Model	ILLUMINATED SELECTOR SWITCH					
	Aluminum guard type			Plastic guard type		
	Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22	
Appearance						
Suffix code	MRT-A(Ø30)	MRT-N(Ø25)	MRT-R(Ø22)	MRT-K(Ø25)	MRT-T(Ø22)	
Model	KEY SELECTOR SWITCH					
	Aluminum guard type					
	Flush Ø30	Flush Ø25	Extended Ø22			
Appearance						
Suffix code	MRK-A(Ø30)	MRK-N(Ø25)	MRK-R(Ø22)			






# Control Switch

Model		EMERGENCY STOP BUTTON SWITCH				
		Aluminum guard type			Plastic guard type	
		Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22
Appearance						Temperature Controller
Suffix code	MRE-AM(Ø30)	MRE-NM(Ø25)	MRE-RM(Ø22)	MRE-KM(Ø25)	MRE-TM(Ø22)	Recorder
Appearance						Digital Counter Timer
Suffix code	MRE-AR(Ø30)	MRE-NR(Ø25)	MRE-RR(Ø22)	MRE-KR(Ø25)	MRE-TR(Ø22)	Analog Timer
Model		ILLUMINATED EMERGENCY STOP BUTTON SWITCH				
		Aluminum guard type			Plastic guard type	
		Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22
Appearance						Panel Meter
Suffix code	MRA-AM(Ø30)	MRA-NM(Ø25)	MRA-RM(Ø22)	MRA-KM(Ø25)	MRA-TM(Ø22)	Multi Pulse Meter
Appearance						Proximity Sensor
Suffix code	MRA-AR(Ø30)	MRA-NR(Ø25)	MRA-RR(Ø22)	MRA-KR(Ø25)	MRA-TR(Ø22)	Photo Sensor
Model		BUZZER				
		Aluminum guard type			Plastic guard type	
		Flush Ø30	Flush Ø25	Extended Ø22	Flush Ø25	Extended Ø22
Appearance						Rotary Encoder
Suffix code	MRB-A(Ø30)	MRB-N(Ø25)	MRB-R(Ø22)	MRB-K(Ø25)	MRB-T(Ø22)	Thyristor Power Regulator
Appearance						Solid State Relay
Suffix code	MRB-A(Ø30)	MRB-N(Ø25)	MRB-R(Ø22)	MRB-K(Ø25)	MRB-T(Ø22)	Power Supply
Contact unit	MR-CB					Push Button / Main Switch
Contact configuration	1a1b					
Operation of contact	Snap-action					
Installing panel thickness	7.0 mm (When excluded the additional accessories) Plastic guard extended type : 7 mm (when excluded the additional accessories)					Cam Switch / Limit Switch
Material	Contact material	AgSnO2				
	Contact cover material	Polycarbonate (PC)				
	Contact body material	Polycarbonate (PC)				
Mechanical characteristic	Fixed torque	Installing screw : 1.96 N·m max, Terminal screw : 0.78 N·m max				Micro / Hoist Switch
	Operating distance	5 mm ±0.2				
	Reflection time	max 3 ms				
Electrical characteristic	Durability of actuator	Button : min 1 million times, Selector switch : min 50 thousand times				Foot / Mono Lever Switch
	Dielectric strength	2,000 V a.c. for 1 min				
	Contact resistance	Max 50 mΩ (Default)				
	Insulation resistance	Min 100 MΩ 500 V d.c.				
Light source	Power supply voltage	AC : 6 A 250 V a.c., DC : 10 A 24 V d.c.				Signal Light
		5 mA 24 V d.c., 10 mA 110 V d.c.				
		500 thousand times (resistive load)				
Environment condition	Ambient temperature	100 - 240 V a.c. (LED condenser voltage dropping type)				Terminal Block / Power Buzzer / Fuse Holder / Control Box
		380 V a.c. (LED condenser voltage dropping type)				
		12 - 24 V d.c./a.c. (LED Resistance voltage dropping type)				
Environment condition	Ambient humidity	-20 ~ 55 °C				
		35 ~ 85 % RH				
		-40 ~ 85 °C				
Environment condition	Shock resistance	300 % pulse cycle 11 ms				
		100 %, 10 Hz - 55 Hz, amplitude 0.75 mm (within 1 ms)				

# Control Switch

■ AR series  

Model	PUSH-BUTTON SWITCH		ILLUMINATED PUSH-BUTTON SWITCH		PILOT LAMP	
	Round	Round	Round	ON / OFF	AC	DC
Appearance						
Suffix code	ARF-F,B,P,G,H	ARF-S	ARX-P,G,H	ARX-S	ARP-A1,A2	ARP-B12,B24

Model	SELECTOR SWITCH	ILLUMINATED SELECTOR SWITCH	PILOT WHOLLY TYPE	EMERGENCY PUSH-BUTTON SWITCH	
	Lever	Lever			
Appearance					
Suffix code	ARS-S	ART	ARK	ARE-B,P,R,K	ARE-4XR

Operation	Mechanical	Max. 30 Operations /minute
	Electrical	Max. 30 Operations /minute
Insulation resistance		Min.100 M $\Omega$ (AT 500 V d.c.)
Dielectric strength		1,500 V a.c. 50/60 Hz for minute
Vibration	Malfunction Resistance	10 – 55 Hz double amplitude width 3 mm
Shock	Mechanical Durability	Min.500 %
	Malfunction Resistance	Min.100 %
Life	Mechanical	Min. 0.5 millions operations, 1,000 hour (PILOT LAMP)
	Electrical	Min. 0.1 millions operations, 1,000 hour (PILOT LAMP)
Ambient temperature		-25 ~ 40 °C
Ambient humidity		45 ~ 85 % RH
Storage temperature		-40 ~ 70°C

## ● LAMP RATINGS

Rated voltage		Rated current		Consumption power	
Incandescent light lamp	LED LAMP	Incandescent light lamp	LED LAMP	Incandescent light lamp	LED LAMP
6.3 V	6 V	150 mA	72 mA	1 W	0.4 W
12 V	12 V	80 mA	36 mA	1 W	0.4 W
24 V	24 V	40 mA	18 mA	1 W	0.4 W

## ● TRANSFORMER RATINGS

Rated voltage	Voltage use	Lamp
110 V a.c.	110 V a.c.	150 mA, 6.3 V a.c. LAMP
220 V a.c.	220 V a.c.	

※ LED lamp switch using transformer is on order made product. Contact block rated is 6 A 250 V a.c.

# Control Switch







## ■ CR series (Control switch)

Suffix code		Power voltage	Current consumption	Diameter	Remarks
 Push Button Lamp Switch	CR-254	100 – 240 V a.c.	4,4 VA max	Ø25	Red, Green, Blue, Yellow, White
	CR-304	380 V a.c.	2,7 VA max	Ø30	
 Push Button Switch	CR-251	5 A, 250 V a.c.	–		Ø25
	CR-301			Ø30	
 Pilot Lamp	CR-252	100 – 240 V a.c.	4,4 VA max	Ø25	Red, Green, Blue, Yellow, White
	CR-302	380 V a.c.	2,7 VA max	Ø30	
 Selector Switch	CR-253	5 A, 250 V a.c.	–		Ø25
	CR-303			Ø30	
 Emergency Stop Button Switch	CR-257	5 A, 250 V a.c.	–	Ø25	Red, Green, Yellow
	CR-307			Ø30	
 Emergency Stop Button Switch (Push lock turn reset)	CR-257R	5 A, 250 V a.c.	–	Ø25	Red, Green
	CR-307R			Ø30	
 Selector Push Button Switch	CR-308	5 A, 250 V a.c.	–	Ø30	Contact 1a1b
 Key Switch	CR-2511	5 A, 250 V a.c.	–	Ø25	–
	CR-3011			Ø30	

Temperature Controller
Recorder
Digital Counter Timer
Analog Timer
Panel Meter
Multi Pulse Meter
Proximity Sensor
Photo Sensor
Rotary Encoder
Thyristor Power Regulator
Solid State Relay
Power Supply
Control Switch
Push Button / Main Switch
Cam Switch / Limit Switch
Micro / Hoist Switch
Foot / Mono Lever Switch
Signal Light
Terminal Block / Power Buzzer / Fuse Holder / Control Box

# Control Switch

## SR series (Ø16 Small control switch)

Model	SRF	SRX	SRP	SRS	SRK	SRE
	PUSH-BUTTON	ILLUMINATED PUSH-BUTTON	PILOT-LAMP	SELECTOR	KEY-SELECTOR	EMERGENCY RESET
Appearance						
Ratings	5 A, 250 V a.c.					
Display color	Red, Yellow, Green, Blue, White					
Contact	AgNi					
Insulation resistance	Min.100 MΩ					
Dielectric strength	1500 V a.c. (50/60 Hz for 1min.)					
Vibration	10 – 55 Hz, Double amplitude 0.75 mm					
Operation	Mechanical	Min. 500,000 times		Min. 100,000 times		
	Electrical	Min. 70,000 times				
Ambient temperature	-20 ~ 50 °C					
Ambient humidity	45 ~ 88 % RH					
Storage temperature	-40 ~ 70 °C					

### INCANDESCENT LAMP RATINGS


Power voltage	Power consumption
6.3 V a.c. / d.c.	60 mA
6.3 V a.c. / d.c.	40 mA
6.3 V a.c. / d.c.	20 mA

### LED RATINGS

Power voltage	Power consumption
12 V a.c. / d.c.	20 mA
24 V a.c. / d.c.	15 mA

## CR40 series LED Rectangular lamp

### Specification

Model	CR40		
Appearance			
Voltage	100 – 240 V a.c.	380 V a.c.	12 – 24 V d.c.
Current consumption	4.4 VA max	2.7 VA max	18 mA max
Cap color	Red, Yellow, Green, Blue, White		
Insulation resistance	Min. 100 MΩ (Within current carrying part & non current carrying part)		
Dielectric strength	1,500 V a.c. for 1 minute		
LED life	above 100,000 Hours		
Ambient temperature	-20 ~ 40 °C		
Ambient humidity	45 ~ 85 % RH		
Storage temperature	-25 ~ 55 °C		


### Suffix code

Model	Code	Information	
CR40	<input type="checkbox"/> <input type="checkbox"/>	CR40 series, LED indicator	
Power supply voltage	A0	110 – 240 V a.c.	LED (Condenser voltage dropping type)
	A3	380 V a.c.	
	D0	12 – 24 V d.c.	LED (Resistance voltage dropping type)
Color of indicator	R	Red, Yellow, Green, Blue, White	

# Combination Display Lights

## CD series LED Combination display lights

### Specification





Model	CD		
Appearance			
Voltage	24 V d.c.	110 / 220 V a.c.	110 / 125 V d.c.
Cap color	Red, Yellow, Green, White, Orange		
Insulation resistance	Min. 100 MΩ (At 500 V d.c.)		
Dielectric strength	1,500 V a.c. for 1minute		
Consumption power	0.68 W(24 V d.c., 28 mA)		
LED	24 V d.c.		
Life	50,000 hours (24 V d.c., 25 °C)		
Ambient temperature	-20 °C ~ 40 °C		
Ambient humidity	45 ~ 85 % RH		
Storage temperature	-25 ~ 55 °C		

※Note : CD-S□ (30 X 30 mm) and CD-R□ (30 X 40 mm)

### Suffix code

Model	Code	Information	
CD	□ □ □ □	CD series Combination display lights	
Standard type	S	Square type (30 mm ×30 mm)	
	R	Rectangular type (30 mm ×40 mm)	
Power supply voltage	A	24 V a.c. / d.c.	Without voltage dropping
	B	100 ~ 125 V d.c.	Resistance voltage dropping type
	C	110 V a.c.	Condenser voltage dropping type
	D	220 V a.c.	
LED indicating color	R	Red	
	G	Green	
	Y	Yellow	
	W	White	
	O	Orange	
	A	Blue	
Surface composition	2	1 column ~ 10 column (height)	
	6	1 row ~ 20 rows (Width)	

## HY-500 series Power button switch

Model	RATINGS	USE
 EXPOSURE	HY-510 3P 250 V a.c. 15A	Electromotor 3 phase power supply ON, OFF
 BUILT-IN	HY-512 2P 250 V a.c. 15A	1 phase Electromotor ON, OFF
	HY-513 3P 250 V a.c. 15A	Electromotor for 3 phase power supply ON, OFF
	HY-514 3P 250 V a.c. 15A	Electromotor for 3 phase power supply ON, OFF
 EXPOSURE	HY-516 3P 250 V a.c. 15A	Electromotor for 3 phase power supply Direct/reverse revolution for stop 1 phase, 3 phase, right/left for revolution
 EXPOSURE	HY-517 3P 250 V a.c. 15A	Electromotor 1 phase, 3 phase ON, OFF