

MR series

Ø22, Ø25, Ø30 high-end switches with 3 aluminum guards and 2 plastic guards in various configurations



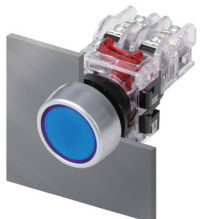

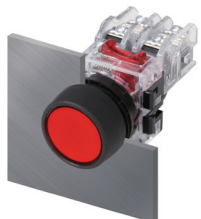


Via QR code more information via QR code.

| Model | Push button switch | | | | | |
|-------------------------|--------------------------------|-------------|----------------|---------------|----------------|----------|
| | Aluminum guard | | | Plastic guard | | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 | |
| Appearance ● ● ● ● ● | | | | | | |
| Actuator code | MRF-A(Ø30) | MRF-N(Ø25) | MRF-R(Ø22) | MRF-K(Ø25) | MRF-T(Ø22) | |
| Model | Illuminated push button switch | | | | | |
| | Aluminum guard | | | Plastic guard | | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 | ON / OFF |
| Appearance ● ● ● ● ● | | | | | | |
| Actuator code | MRX-A(Ø30) | MRX-N(Ø25) | MRX-R(Ø22) | MRX-K(Ø25) | MRX-T(Ø22) | MRX-WM2 |
| Model | Pilot lamp | | | | | |
| | Aluminum guard | | | Plastic guard | | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 | |
| Appearance ● ● ● ● ● | | | | | | |
| Actuator code | MRP-A(Ø30) | MRP-N(Ø25) | MRP-R(Ø22) | MRP-K(Ø25) | MRP-T(Ø22) | |
| Model | Selector switch | | | | | |
| | Aluminum guard | | | Plastic guard | | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 | |
| Appearance ● | | | | | | |
| Actuator code | MRS-A(Ø30) | MRS-N(Ø25) | MRS-R(Ø22) | MRS-K(Ø25) | MRS-T(Ø22) | |
| Model | Illuminated selector switch | | | | | |
| | Aluminum guard | | | Plastic guard | | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 | |
| Appearance ● ● ● ● ● | | | | | | |
| Actuator code | MRT-A(Ø30) | MRT-N(Ø25) | MRT-R(Ø22) | MRT-K(Ø25) | MRT-T(Ø22) | |
| Appearance ● ● ● ● ● | | | | | | |
| Actuator code | MRT-A3(Ø30) | MRT-N3(Ø25) | MRT-R3(Ø22) | MRT-K3(Ø25) | MRT-T3(Ø22) | |
| Model | KEY selector switch | | | | | |
| | Aluminum guard | | | | | |
| | Flat Ø30 | Flat Ø25 | Flat Ø22 | | | |
| Appearance ● | | | | | | |
| Actuator code | MRK-A(Ø30) | MRK-N(Ø25) | MRK-R(Ø22) | | | |

| Model | Stop switch | | | | |
|---|---|---|---|---|---|
| | Aluminum guard | | | Plastic guard | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 |
| Appearance  |  |  |  |  |  |
| Actuator code | MRE-AM(Ø30) | MRE-NM(Ø25) | MRE-RM(Ø22) | MRE-KM(Ø25) | MRE-TM(Ø22) |
| Appearance  |  |  |  |  |  |
| Actuator code | MRE-AR(Ø30) | MRE-NR(Ø25) | MRE-RR(Ø22) | MRE-KR(Ø25) | MRE-TR(Ø22) |
| Model | Illuminated stop switch | | | | |
| | Aluminum guard | | | Plastic guard | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 |
| Appearance  |  |  |  |  |  |
| Actuator code | MRA-AM(Ø30) | MRA-NM(Ø25) | MRA-RM(Ø25) | MRA-KM(Ø22) | MRA-TM(Ø22) |
| Appearance  |  |  |  |  |  |
| Actuator code | MRA-AR(Ø30) | MRA-NR(Ø25) | MRA-RR(Ø25) | MRA-KR(Ø22) | MRA-TR(Ø22) |
| Model | Buzzer | | | | |
| | Aluminum guard | | | Plastic guard | |
| | Flat Ø30 | Flat Ø25 | Protrusion Ø22 | Flat Ø25 | Protrusion Ø22 |
| Appearance  |  |  |  |  |  |
| Actuator code | MRB-A(Ø30) | MRB-N(Ø25) | MRB-R(Ø25) | MRB-K(Ø22) | MRB-T(Ø22) |

Control Panel Installation Geometry

| Aluminum guard | | | Plastic guard | |
|---|---|---|--|---|
| Flat Ø30 MRO-A | Flat Ø25 MRO-N | Protrusion Ø22 MRO-R | Flat Ø25 MRO-K | Protrusion Ø22 MRO-T |
|  |  |  |  |  |

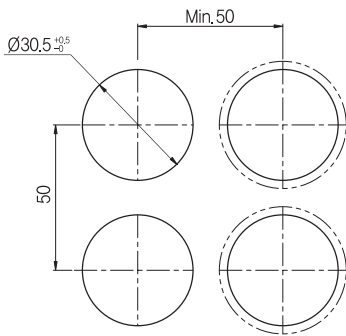
h Specification

| Category | | Content |
|-------------------------------------|--------------|---|
| Contact configuration | | M3.5 Screwing, 1a1b contact unit |
| Contact operation | | Snap-action |
| Installation panel thickness | | 1 ~ 6 mm (excluding accessories) |
| Tightening torque | | 0.8 N·m or less |
| Installation nut tightening torque | | 2.0 N·m or less |
| Rated current | | 250 V a.c. |
| Current rating | | 6 A 250 V a.c. |
| Conditional Short - Circuit Current | | 100 A |
| Operating frequency | | 30 cycles/min |
| Insulation Resistance | | 100 MΩ or more (500 V d.c.) |
| Withstand voltage | | 2,000 V a.c. 50/60 Hz 1 minute |
| Contact contact resistance | | 50 mΩ or less (at the time of shipment) |
| Vibration resistance | | 10 ~ 55 Hz amplitude 1.5 mm |
| Impact resistance | Durability | 300 m/s ² or more (30 G or more) |
| | misoperation | 100 m/s ² or more (10 G or more) |
| Life | Mechanical | More than 500,000 times |
| | Electrical | More than 200,000 times (at rated load) |
| Minimum load current | | 5 mA 24 V d.c., 10 mA 110 V d.c. |
| LAMP Input Power | | 100 ~ 240 V a.c. / 4.4W or less (LED Condenser voltage drop) |
| | | 380 V a.c. / 2.7 W or less (LED Condenser voltage drop) |
| | | 12 ~ 24 V d.c. / a.c. / 0.5 W or less (LED Resistance voltage drop) |
| | | 440 V a.c. / 0.5 W or less (LED Condenser voltage drop) |
| | | 100 ~ 125 V d.c. / 0.7 W or less (LED Resistance voltage drop) |
| Buzzer volume | | About 90 dB |
| Ambient temperature | | -20 ~ 55 °C (without ice or condensation) |
| Ambient humidity | | 45 ~ 85 % RH |
| Storage temperature | | -40 ~ 70 °C |

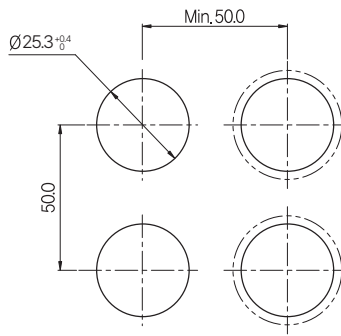
h Panel cutout

[Unit : mm]

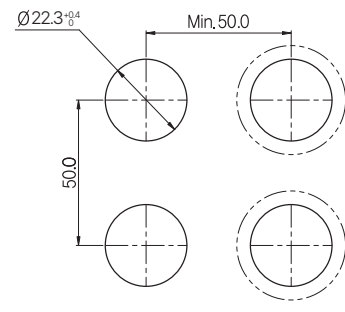
■ Ø30



■ Ø25



■ Ø22



h MR Accessory

| Model | Aluminum guard | | | Plastic guard | |
|-------------------|-------------------------------|-------------------------------|-------------------------------|-------------------------------|--------------|
| | EN-36 (Ø30) | EN-26 (Ø22) | HEG-22 | HEG-25F | HEG-30F |
| Application Model | MRE-A MRA-A | MRE-R, MRE-T MRA-R, MRA-T | MRE-R, MRE-R, MRA-R, MRA-T | MRE-N, MRE-K, MRA-N, MRA-K | MRE-A, MRA-A |
| Appearance | | | | | |
| Model | Front protection cover | | | Tightening tool | |
| | HSC-22P (Protrusion) | HSC-25F (Flat) | HSC-30F (Flat) | FIX HEAD-MR | FIX HANDLE |
| Application Model | MRF-R, MRF-T, MRX-R, MRX-T | MRF-N, MRF-K, MRX-N, MRX-K | MRF-A, MRX-A | Ø22, Ø25, Ø30 | Handle |
| Appearance | | | | | |

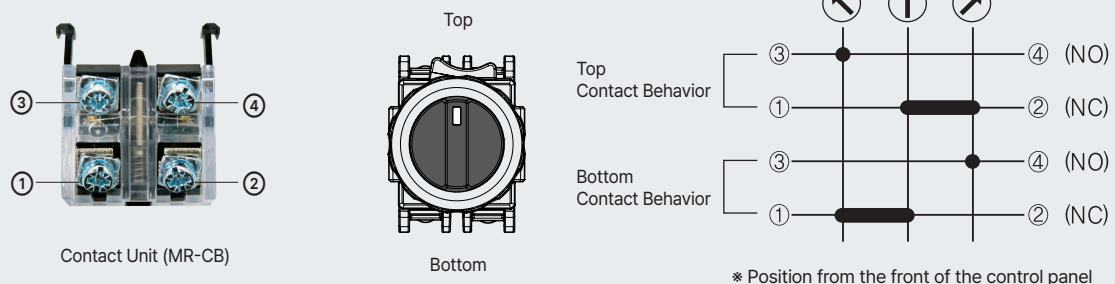
Component Configuration

| Model | Appearance | Model | Reference |
|--------------------------|---|---------------------|--|
| Contact unit |  | MR-CB | Hook fixing contact unit which is composed of 1a1b, is assembled to fixing plate. |
| Fixing plate |  | MR-FP | Connect to actuator, contact unit and lamp unit. |
| LED Illuminated unit |  | MR-LBA0 | 100 - 200 V a.c. |
| | | MR-LBA3 | 380 V a.c. |
| | | MR-LBD0 | 12 - 24 V d.c. / a.c. |
| | | MR-3SLA0 | 100 - 240 V a.c. |
| | | MR-3SLD0 | 12 - 24 V a.c. / d.c. |
| Protective cover |  | MR-AC | Protective cover is installed in opposite side when using only 1 LED illuminated unit or contact unit. |
| Nut clamping tool |  | QR-82 | Used to tighten the fixing nut on the back of the panel. |
| Clamping tool |  | FIX TOOL-MR | Used to tighten the fixing nut on the back of the panel. |
| Contact protection cover |  | MR protection cover | Contact protection cover |

Selector Contact Behavior

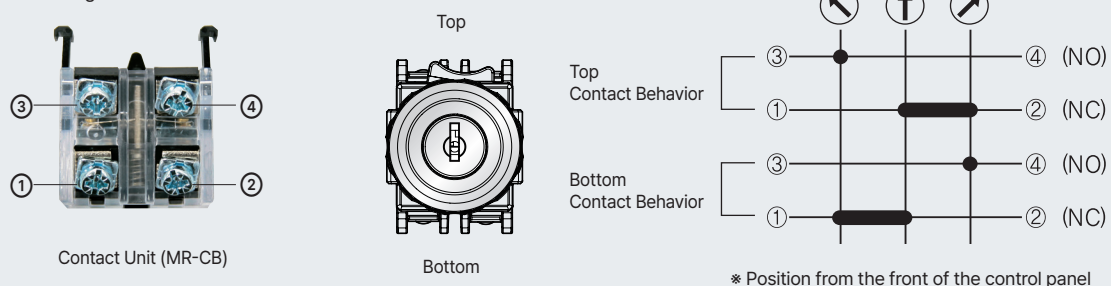
■ For 3-speed selectors, refer to the contact behavior diagram.

* When attaching a contact unit



■ If you have a 3-speed key selector, please refer to the contact behavior diagram.

* When attaching a contact unit



h Suffix code

■ MRF series

| Model | Code | | | | Content |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| MRF- | <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) |
| | K | | | | Flush (Installing hole : Ø25) |
| | T | | | | 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) |

■ MRE series

| Model | Code | | | | Content |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|
| MRE- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Stop switch |
| Actuator | A | | | | Flush (Installing hole : Ø30) |
| | N | | | | Flush (Installing hole : Ø25) |
| | R | | | | Extended (Installing hole : Ø22) |
| | K | | | | Flush (Installing hole : Ø25) |
| | T | | | | Extended (Installing hole : Ø22) |
| Operation function | M | | | | Momentary |
| | R | | | | Push lock turn reset |
| Contact composition | | 1 | | | 1a1b |
| | | 2 | | | 2a2b |
| Cap (LED color) | | | R | | R (Red) |
| | | | G | | G (Green) * Push lock turn reset : only R (Red) |

■ MRP series

| Model | Code | | | | Content |
|---------------------|--------------------------|--------------------------|--------------------------|--|---|
| MRP- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Pilot lamp |
| Actuator | A | | | | Flush (Installing hole : Ø30) |
| | N | | | | Flush (Installing hole : Ø25) |
| | R | | | | Extended (Installing hole : Ø22) |
| | K | | | | Flush (Installing hole : Ø25) |
| | T | | | | Extended (Installing hole : Ø22) |
| Rated input voltage | A0 | | | | 100 - 240 V a.c. |
| | A3 | | | | 380 V a.c. |
| | A4 | | | | 440 V a.c. |
| | D0 | | | | 12 - 24 V d.c. / a.c. |
| Cap (LED color) | | | R | | R (Red), G (Green), Y (Yellow), A (Blue), W (White) |
| | | | | | |

■ MRS series

| Model | Code | | | | Content |
|---------------------|--------------------------|--------------------------|--------------------------|--|---|
| MRS - | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | | Selector switch |
| Actuator | A | | | | Flush (Installing hole : Ø30) |
| | N | | | | Flush (Installing hole : Ø25) |
| | R | | | | Extended (Installing hole : Ø22) |
| | K | | | | Flush (Installing hole : Ø25) |
| | T | | | | Extended (Installing hole : Ø22) |
| Operation function | 2A | | | | 2 positions alternate operation |
| | 2R | | | | 2 positions momentary operation |
| | 3A | | | | 3 positions alternate operation |
| | 3R | | | | 3 positions left and right side momentary operation |
| Contact composition | | 1 | | | 1a1b |
| | | 2 | | | 2a2b |
| Cap (LED color) | | | | | Black (solid) |

■ MRB series

| Model | Code | | | | Content |
|---------------------|--------------------------|--------------------------|--|--|----------------------------------|
| MRB- | <input type="checkbox"/> | <input type="checkbox"/> | | | Electronic buzzer |
| Actuator | A | | | | Flush (Installing hole : Ø30) |
| | N | | | | Flush (Installing hole : Ø25) |
| | R | | | | Extended (Installing hole : Ø22) |
| | K | | | | Flush (Installing hole : Ø25) |
| | T | | | | Extended (Installing hole : Ø22) |
| Rated input voltage | A0 | | | | 100 - 240 V a.c. |
| | D0 | | | | 12 - 24 V d.c. / a.c. |

MRK series

| Model | Code | | | | Content | |
|---|--------------------------|--------------------------|--------------------------|--------------------------|---|---|
| MRK- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Key selector switch | |
| Actuator | A | | | | Flush (Installing hole : Ø30) | Aluminum guard |
| | N | | | | Flush (Installing hole : Ø25) | |
| | R | | | | Extended (Installing hole : Ø22) | |
| Operation function | 2A | | | | 2 positions alternate operation | Refer to contact operation (3 positions : Only 2a2b contact available) |
| | 2R | | | | 2 positions momentary operation | |
| | 3A | | | | 3 positions alternate operation | |
| | 3R | | | | 3 positions left and right side momentary operation | |
| Contact composition | 1 | | | | 1a1b | |
| | 2 | | | | 2a2b | |
| Key removing position (Key selecting switch) | L | | | | Left | |
| | R | | | | Right | |
| | C | | | | Middle | |
| | D | | | | Left and right | |
| | E | | | | Front | |
| Actuator color (cap color) | | | | | Aluminum (Plating a matt chrome) | |

MRT series

| Model | Code | | | | Content | |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|---|---|
| MRT- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Illuminated selector switch | |
| Actuator | A | | | | Flush (Installing hole : Ø30) | Aluminum guard |
| | N | | | | Flush (Installing hole : Ø25) | |
| | R | | | | Extended (Installing hole : Ø22) | |
| | K | | | | Flush (Installing hole : Ø25) | Plastic guard |
| | T | | | | Extended (Installing hole : Ø22) | |
| Operation function | 2A | | | | 2 positions alternate operation | |
| | 2R | | | | 2 positions momentary operation | |
| | 3A | | | | 3 positions alternate operation | |
| | 3R | | | | 3 positions left and right side momentary operation | |
| Contact composition | 1 | | | | 1a1b | |
| | 2 | | | | 2a2b | |
| Power supply voltage | A0 | | | | 100 - 240 V a.c. | |
| | A3 | | | | 380 V a.c. | |
| | D0 | | | | 12 - 24 V d.c. / a.c. | |
| Cap (LED color) | | | | | R | R (Red), G (Green), Y (Yellow), A (Blue), W (White) |

MRX series

| Model | Code | | | | Content | |
|---------------------|--------------------------|--------------------------|--------------------------|--------------------------|------------------------------------|---|
| MRX- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Illuminated push button switch | |
| Actuator | A | | | | Flat (Installing hole : Ø30) | Aluminum guard |
| | N | | | | Flat (Installing hole : Ø25) | |
| | R | | | | Protrusion (Installing hole : Ø22) | |
| | K | | | | Flat (Installing hole : Ø25) | Plastic guard |
| | T | | | | Protrusion (Installing hole : Ø22) | |
| | W | | | | ON / OFF Visible | |
| Operation function | M | | | | Momentary | |
| | A | | | | Alternate | |
| Contact composition | 1 | | | | 1a1b | |
| | 2 | | | | 2a2b | |
| Rated input voltage | A0 | | | | 100 - 240 V a.c. | |
| | A3 | | | | 380 V a.c. | |
| | D0 | | | | 12 - 24 V d.c. / a.c. | |
| Cap (LED color) | | | | | R | R (Red), G (Green), Y (Yellow), A (Blue), W (White) BLANK(Yellow) |

MRA series

| Model | Code | | | | Content | |
|----------------------|--------------------------|--------------------------|--------------------------|--------------------------|----------------------------------|---|
| MRA- | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | Illuminated stop switch | |
| Actuator | A | | | | Flush (Installing hole : Ø30) | Aluminum guard |
| | N | | | | Flush (Installing hole : Ø25) | |
| | R | | | | Extended (Installing hole : Ø22) | |
| | K | | | | Flush (Installing hole : Ø25) | Plastic guard |
| | T | | | | Extended (Installing hole : Ø22) | |
| Operation function | M | | | | Momentary | |
| | R | | | | Push lock turn reset | |
| Contact composition | 1 | | | | 1a1b | |
| | 2 | | | | 2a2b | |
| Power supply voltage | A0 | | | | 100 - 240 V a.c. | |
| | A3 | | | | 380 V a.c. | |
| | D0 | | | | 12 - 24 V d.c. / a.c. | |
| Cap (LED color) | | | | | R | R (Red) |
| | | | | | G | G (Green) * Push lock turn reset : only R (Red) |