

Thanks for purchasing IDEC products! Please confirm that the delivered product is what you have ordered. Read this instruction sheet to make sure of correct operation.

▲ Safety precautions

- Turn off the power to the control unit before starting installation, removal, wiring, and maintenance. Failure to turn power off may cause electric shocks or fire hazard.
- Use wires of a proper size to meet voltage and current requirements. Tighten the terminal screws with recommended tightening torque. Improper wires and loose terminals during operation will cause overheating and fire hazard. Provide a proper protection against electric shocks. Failure to turn power off may cause electric shock or fire hazard.

1 Type

<Without control unit>

Box cover color **YB1W - 111**
 Y: Yellow
 Z: Grey

<With control unit>

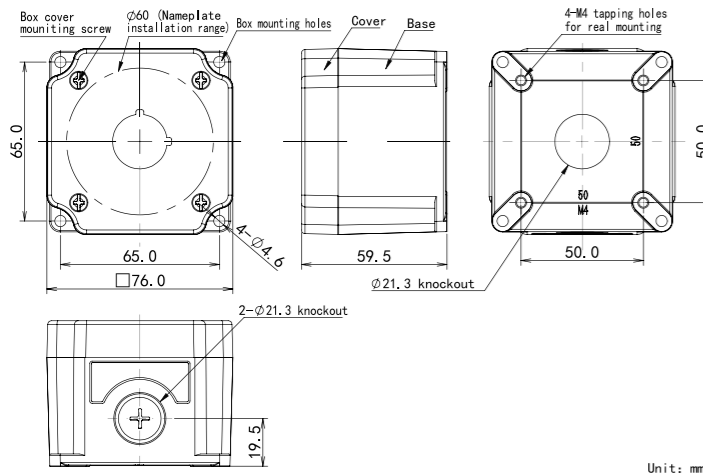
Type No. with control unit
 Example: YW1B-V4E01R **YB1W -**
 Please refer to the model selection catalog of each switch for details

Box cover color
 Y: Yellow
 Z: Grey

Types of accessories
 (Selected signboards, etc)
 0: None
 1-: Separate designation (Refer to the catalog)

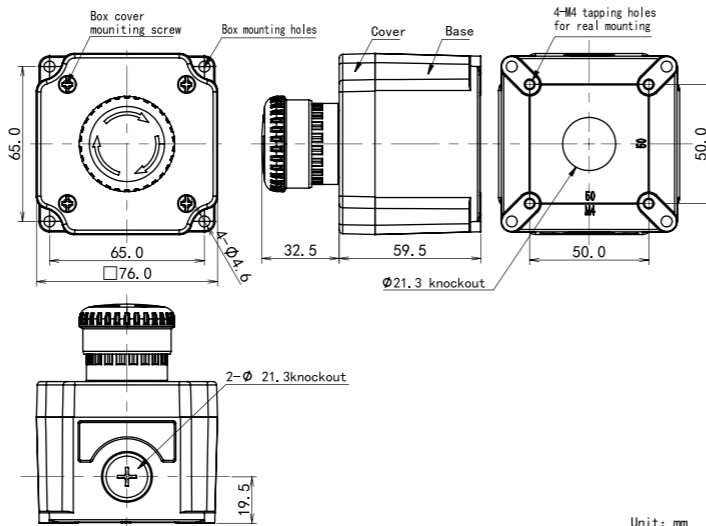
2 Dimensions

<Without control unit>



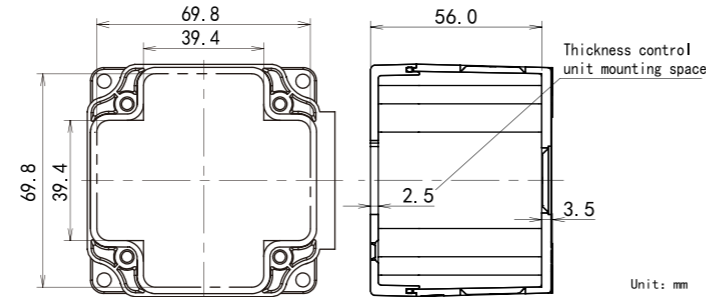
Unit: mm

<With control unit>



- The overall height depends on the switch installed. The figure above shows the overall dimensions when installing YW series emergency stop switch.

<Internal effective dimensions>



- The inside dimensions show the available space for mounting control units, excluding the protrusions inside the YB series control box.

<Switch mounting hole>



3 Specifications

| | | |
|-------------------------------|------------------------------------------------------------|---------------------------|
| Applicable Standards | IEC/EN60529 GB/T14048.5(With control unit only) | |
| Standard Operating Conditions | Operating Temperature | -25~+60°C (no freezing) |
| | Relative Humidity | 45~85%RH(no condensation) |
| | Storage Temperature | -40~+80°C (no freezing) |
| | Pollution Degree | 3 |
| Degree of Protection | IP65(Only when matched with the corresponding switch) | |
| Electric Shock Protection | Class II (Only when matched with the corresponding switch) | |
| Material | Box Cover, Box Base: | Polycarbonate |
| | Box cover mounting screw: | Iron, surface galvanized |
| Applicable Control unit | YW/HW/XW/TW Series switches (IDEC products) | |
| Weight | Without control unit | 100g |
| | With YW switch (single contact block) | 144g |

- The above specifications are for the switch box only. For details on control units, refer to the specifications of each control unit.
- Please purchase switches and accessories that meet the mounting hole, effective depth and mounting panel thickness (2.5mm) of the switch box.
- When using products other than the corresponding model, they do not belong to the warranty object.

4 Mounting

<Installing of switch box>

- Installing the YB series box from the front.
 - use 4 M4 screws to install from 4 front mounting holes on the outside of the switch box. (recommended tightening torque: 1.4-2.0N·m)
 - Determine the screw length in consideration of the box base and panel thickness.
 - Mounting screws are not supplied with the YB series control box.
- Installing the YB series box from the back
 - install four M4 tapping screws to the M4 tapping screw hole on the back of the base(tightening depth: 9-11mm, bottom hole diameter: φ3.6) (recommended tightening torque 1.3N·m (m4p screw))
 - Mounting screws are not supplied with the YB series control box.

<Installing and removing the switch>

Please refer to the installation method of each switch.

<Installing a cable gland>

- Break the wire hole with a hammer and screwdriver aligning the screwdriver with the center of the cross mark on the wire hole. (please open the bottom wire hole from the inside to the outside of the bottom, and the connector cannot be installed at the bottom wire hole)
- Note: the base may be damaged if the the center of the cross mark is not used as the knock off point. If there is resin residue at the orifice after opening, please use appropriate tools to remove it, so as not to affect the protection level.
- Be careful not to damage the internal contact block unit when opening the wire hole.

< Installing of switch accessories>

Please refer to the installing method of each switch accessory.

YW emergency stop switch can be equipped with QH22L indicator accessories (purchased and installed by the customer). Please use an obtuse angle (150° recommended) drill bit to process based on the guide hole on the box cover φ5-5.2 holes before installing.

<Installing the box cover and box base>

- Attach the box cover to the box base.
- Use box cover mounting screws to attach the box cover to the box base. (the recommended tightening torque is 1.3N·m).

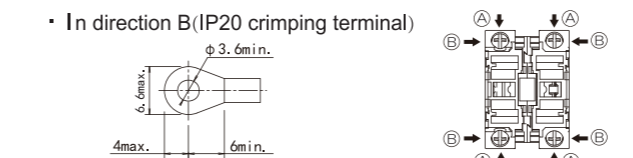
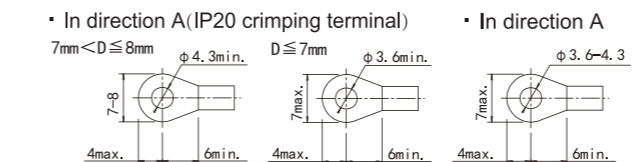
5 Wiring

<Applicable wire>

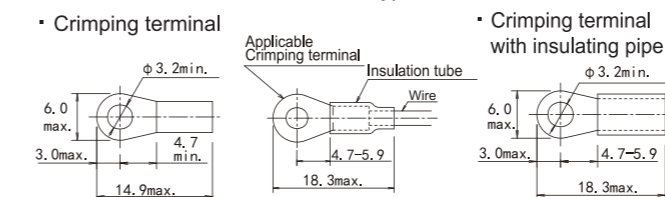
- Determine the wire size in consideration of the control unit and cable thickness of the cable gland.

<Applicable crimping terminal>

- YW series
Y-shaped, bar shaped and needle shaped crimping terminals
- HW/TW series
Non-insulated terminal



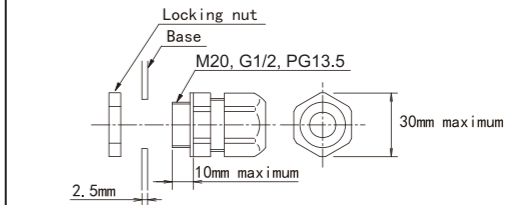
- XW series (Screw terminal type)



- When using crimping terminals, be sure to install insulating tubes.
- When using crimping terminals for XW series, the installation number of one terminal is 1.
- During wiring, do not allow wires to interfere with the operation of the switch box.

<Applicable cable gland>

- Use cable glands with waterproof characteristics (IP65, NEMA TYPE 4X) which can be mounted on a panel thickness of 2.5mm or more.



- When using plastic cable gland and multi-core cable (representative example)

| Gland port size | Plastic cable gland |
|-----------------|-------------------------------------------------------------------------------------------------|
| M20 | 5311 1220 [SKINTOP ST-M20] Applicable gasket: 5380 1050 [SKINDICHT JTM20] (LAPP, Germany) |
| G1/2 | 5380 6031 [SKINTOP ST-PF1/2] Applicable gasket: 5380 1065 [SKINDICHT JT13.5] (LAPP, Germany) |
| PG13.5 | 5301 5230 [SKINTOP ST13.5] Applicable gasket: 5380 1065 [SKINDICHT JT13.5] (LAPP, Germany) |

- Locking nut for installation cable gland (Order separately)

| Gland port size | Locking Nut Type(Made of plastic) |
|-----------------|-----------------------------------|
| M20 | HW9Z-NM20PN05 (IDEC products) |
| G1/2 | HW9Z-GPN05 (IDEC products) |
| PG13.5 | HW9Z-PG135PN05 (IDEC products) |

- Tighten cable glands to a torque of : 3.0 ± 0.3N·m.
- Insufficient tightening of the cable gland may degrade the waterproof characteristics.
- Electric shock protection Class II is maintained only when a plastic cable gland is used.
- Determine the cable gland for a multi-core cable according to the outside diameter of the cable sheath.
- When wiring from the back of YB series control box, use the φ21.3 knockout on the back of the control box. A cable gland cannot be installed to the φ21.3 knockout.

6 Notes for Operation

<Wiring>

- Avoid foreign objects such as dust, liquid, and oil from entering the switch while wiring.
- Do not twist or pull the cable or cable gland with excessive force. Otherwise, the wire and YB series control box may be damaged.
- This product is not provided with PE terminal, so it is not allowed to connect or interconnect the bonding circuit.

<Operation>

- Avoid any contact with oil or coolants. Otherwise, the control box may be damaged.
- Use YB series control box indoors.

7 Precautions for Disposal

- Dispose of the YB series control box as an industrial waste.