

For Direct Operation of Electrical machinery

COB 270 series

Outline

The COB 270 series are pushbutton switches for hoist and crane operation for which built-in button packing is provided within the case.

Cable protection area (cable bushing) and waterproof area (cable packing) are separate, so cable can easily be inserted and better water resistance can be achieved.




The standard case is formed from shockproof ABS, rendering it lightweight and risk-free in terms of electrical shocks, so it can be used safely.

Features a mechanical interlock. Simultaneous use of, for example, the up/down or east/west buttons is impossible to ensure safety.

There are a number of inching types that support crane hoisting/lowering in small increments. (COB 271A, COB 272A, COB 273A)

With regard to the switch to turn the power for direct operation on/off, there are also types with switch units that perform self maintenance by turning on a 2a contact when the ON button (top) is pressed, and leaves it open when the OFF button (bottom) is pressed. (COB 272KB, COB 273KB)

Basic Type List

Type name	COB 271 COB 271A	COB 272 COB 272A COB 272KB	COB 273 COB 273A COB 273KB
Appearance			
No. of buttons	2 (1 pair)	4 (2 pairs)	6 (3 pairs)
Button packing	Built-in structure		
Prevention of erroneous operation	With mechanical interlock		

General specifications

Specifications

Item	Rating
Degree of protection	IP65 (JIS C 0920) Electrical Appliance and Material Safety Law \diamond PS : Rainproof type
Material/ Color	Case : Shockproof ABS Resin ^{Note} / Orange (Munsell 7.5YR7/13 equivalent) Case-tightening screws: Stainless (\pm screws) Cable bushing: Synthetic rubber / Black
Vibration proof	Operational Tolerance 10 to 55Hz Displacement 1.5mm
Shockproof	Durability 500m/s ²
	Operational Tolerance 100m/s ²
Ambient temperature	-15°C to +40°C (must be free of ice or condensation)
Relative humidity	45 to 85% RH
Connected terminal	M4 screws (Pressure terminal type)
Installation position	Must be installed with the cable slot uppermost using appropriate cable cabling.

Rating

Item	Specifications
Voltage used	3 ϕ 200/220V 3 ϕ 400/440V
Rated insulation voltage	500V AC
Rated thermal current	15A
Insulation resistance	100M Ω or more (500 V DC Megger)
Withstand voltage	2500 V AC / minute

Compliance standards

Name of standards
JIS C 8201-3
JIS C 0920
Electrical Appliance and Material Safety Law \diamond PS (compliant products)

Power Switches

Hoist Push-Button Switches

Operating Push Button Switches

Foot Switches

Liquid Level Relays

Product List

No. of buttons	Characteristics	Type	Maximum applicable electrical machinery capacity 3 φ 200/220V 400/440V	Included cable bushing (Applicable cable diameter range)	Included marking board	Contact arrangement	General mass (g)
2 (1 pair)	—	COB 271	2.2 kW	COB A2 (φ 10.3 to φ 13.5)	Up, Down	2NO-2NO	390
	For inching	COB 271A	1.5 kW				
4 (2 pairs)	—	COB 272	2.2 kW×2	COB B1 (φ 13.3 to φ 16.5)	Up, Down, East, West, South North	2NO-2NO-2NO-2NO	570
	For inching	COB 272A	1.5 kW×2				
	With On/Off switch unit <small>Note</small>	COB 272KB	2.2 kW×1				
6 (3 pairs)	—	COB 273	2.2 kW×3	COB B2 (φ 16.3 to φ 19.5)	Up, Down, East, West, South North	2NO-2NO-2NO-2NO-2NO-2NO	750
	For inching	COB 273A	1.5 kW×3				
	With On/Off switch unit <small>Note</small>	COB 273KB	2.2 kW×2				

Remarks :

1. Tightening up method is adopted to secure the cable within the case for standard products. Steel core attachment board is also available.
2. Please refer to “Cable bushing in Option” for installation of cable bushing.

Option

Cable bushing

It is dangerous to use the standard cable bushing included with this product with inappropriate cabling, as rainwater may easily enter the switch. Please purchase the appropriate cable bushing.

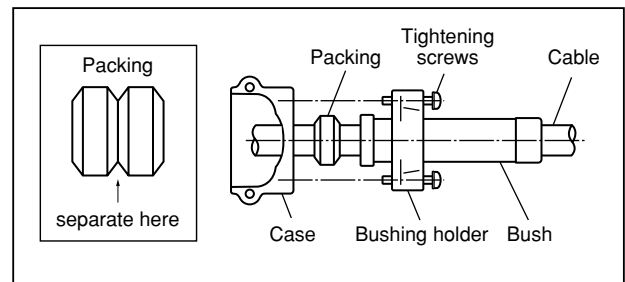
• How to install the cable bushing

The cable is fed through the bushing holder, bushing, and packing in that order, and the tightening screw used to secure the bushing holder firmly to the case. Two packings are prepared as a set. Check the cable range displayed on the packing, and separate off the applicable one.

Cable bushing type name	Applicable cable diameter range	Packing (waterproof area)	Bush (protection area)
COB A1	φ 7.5 to φ 10.5	CC-A1	CB-A
COB A2	φ 10.3 to φ 13.5	CC-A2	
COB B1	φ 13.3 to φ 16.5	CC-B1	CB-B
COB B2	φ 16.3 to φ 19.5	CC-B2	

Remark : C7 to CA20 for COB 70 series can also be used.

Reference : When inserting into the bushing, it is recommended to lubricate the cable and cable slot with wet soap to ease insertion. Do not use lubricating oil, as this may damage the bushing.



Button characters

An extensive range of markings boards is available in addition to the markings board included. Characters other than the following can also be produced. Please contact us for further details.

Standard markings (Black characters)



Special markings (Black characters)

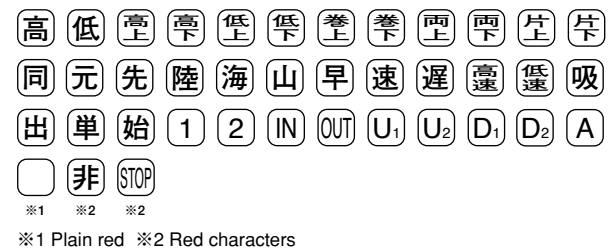
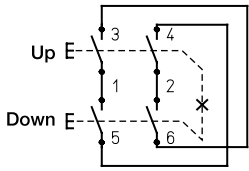
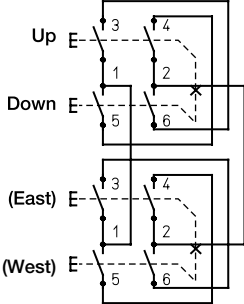
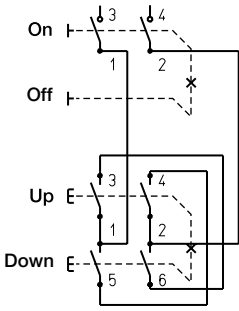
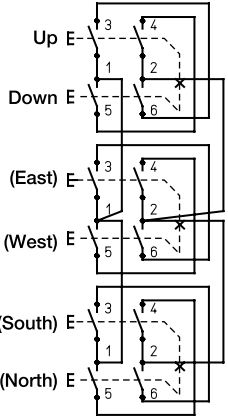
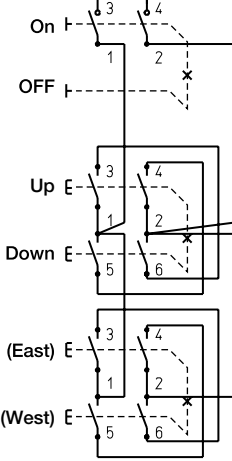
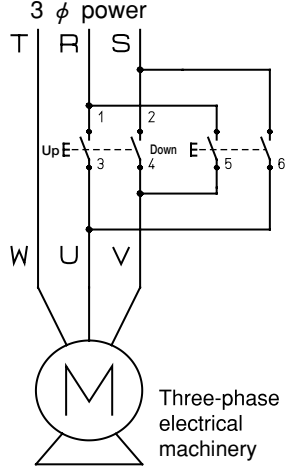


Diagram of internal connections

COB 271, COB 271A	COB 272, COB 272A	COB 272KB
 <p>1-2 (R-S) : Power 3-4 (U-V) : Electrical machinery Connection cable ^{Note} : 2 mm², 4-core</p>	 <p>1-2 (R-S) : Power 3-4 (U-V) : Electrical machinery Connection cable ^{Note} : 2 mm², 6-core</p>	 <p>1-2 (R-S) : Power 3-4 (U-V) : Electrical machinery Connection cable ^{Note} : 2 mm², 4-core</p>
COB 273, COB 273A	COB 273KB	Usage example (Elementary wiring diagram)
 <p>1-2 (R-S) : Power 3-4 (U-V) : Electrical machinery Connection cable ^{Note} : 2 mm², 8-core</p>	 <p>1-2 (R-S) : Power 3-4 (U-V) : Electrical machinery Connection cable ^{Note} : 2 mm², 6-core</p>	 <p>3 ϕ power T R S W U V M Three-phase electrical machinery</p>

Note : If a different cable diameter is used, please purchase an appropriate cable bushing.

Power Switches

Hoist Push-Button Switches

Operating Push Button Switches

Foot Switches

Liquid Level Relays

Dimensions (Unit: mm)

