

EU2B Series: 30mm Hazardous Location Switches EC2B Series: Hazardous Location Control Stations



STANDARDS COMPLIANCE

	Switches	Pilot Lights	Meters	Control Boxes
UL	Class I, Zone 1 AEx de IIC T6 Gb Class I Div 2, Groups A, B, C and D			
c-UL	Class I, Zone 1, Ex de IIC T6 Gb Class I, Div 2, Groups A, B, C and D	Class I, Zone 1, Ex de IIB T6 Gb Class I, Div 2, Groups C and D	Class I, Zone 1, Ex de IIC T6 Gb Class I, Div 2, Groups A, B, C and D	
ATEX	Ex II 2G Ex de IIC Gb Ex II 2D Ex tb IIIC Db IP65			Ex de IIC T6 Gb Ex tb IIIC T80°C Db (dust)
IECEx	Ex de IIC Gb Ex tb IIIC Db IP65			Ex de IIC T6 Gb Ex tb IIIC T80°C Db (dust)

CERTIFICATE NUMBERS

UL/c-UL E347230	ATEX PTB 08 ATEX 1053 U PTB 08 ATEX 1003 U PTB 08 ATEX 1048	IECEx IECEx PTB 15.0006U IECEx PTB 15.0007U IECEx PTB 15.0032
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APPLICABLE STANDARDS

Control Units	Standards	Mark
Pushbuttons Selector Switches Key Selector Switches Pilot Lights Meters	EN60947-5-1	CE
	UL60079-0 UL60079-1 UL60079-7	cULus LISTED
	CAN/CSA C22.2 No. 60079-0 CAN/CSA C22.2 No. 60079-1 CAN/CSA C22.2 No. 60079-7	Ex
	EN60079-0 EN60079-1 EN60079-7 EN60079-31	IECEx
	IEC60079-0 IEC60079-1 IEC60079-7 IEC60079-31	
Emergency Stop Switches	EN60947-5-5	TUV

PRODUCT DESCRIPTION

Complying with UL, IECEx, and ATEX Directives for hazardous environments, new 30mm EU2B Hazardous Location Switches and EC2B Hazardous Location Control Stations provide increased safety for your applications.

Control Unit Options:

- Pushbuttons
- Pilot Lights
- Selector Switches
- Key Selector Switches
- Emergency Stop Switches
- Meters

Control Station Options:

- Pre-configured stations
- Custom-configured stations
- Open control boxes
- Mounting holes for up to 18 control units

KEY FEATURES

- Class I, Zone 1/Division 2
- Applicable in explosive gas atmospheres (AEx de IIC T6 Gb)
- UL Type 4X rated
- Up to 3 contact blocks
- Selector switches available with lever or key
- Selector switches available with overlapping contacts
- Exposed and finger-safe (IP20) screw terminals available
- Corrosion resistant stainless steel enclosure (SUS304)
- Melamine coating
- NPT and Metric reducer options



SPECIFICATIONS

General Specifications

Degree of Protection	IP65 (IEC60529), Type 4X	
Insulation Resistance	100 MΩ minimum (500V DC megger)	
Operating Temperature	−20 to +50°C (no freezing)	
Operating Humidity	45 to 85% (no condensation)	
Altitude	2,000m Maximum	
Pollution Degree	3	
Shock Resistance	Operating Extremes	100-m/s ² Emergency Stop Switch: 150-m/s ² (without Meter)
	Damage Limits	1000-m/s ²
Vibration Resistance	Operating Extremes	5 to 55-Hz, amplitude 0.5 mm Emergency Stop Switch: 5 to 500-Hz, amplitude 0.35-mm, acceleration 50-m/s ² (without Meter)
	Damage Limits	30Hz, amplitude 1.5-mm Emergency Stop Switch: 5 to 500-Hz, amplitude 0.35-mm, acceleration 50-m/s ²

Switches

Rated Insulation Voltage		600V
Contact Resistance		50mΩ maximum (initial value)
Impulse Withstand Voltage (Uimp)		6kV
Insulation Resistance		100MΩ minimum (500V DC megger)
Short-Circuit Protection		250V/10A fuse (Type aM IEC60269-1/IEC60269-2)
Conditional Short-Circuit Current		1,000A
Mechanical Life	Pushbutton	1,000,000 operations minimum
	Selector Switch	500,000 operations minimum
	Key Selector Switch	500,000 operations minimum
	Emergency Stop Switch	50,000 operations minimum
Electrical Life	Pushbutton	250,000 (switching frequency 1800 operations/hr)
	Selector Switch	250,000 (switching frequency 900 operations/hr)
	Key Selector Switch	250,000 (switching frequency 900 operations/hr)
	Emergency Stop Switch	50,000 (switching frequency 900 operations/hr)
Minimum Operator Stroke Required for Direct Opening Action	Emergency Stop Switch	7.0mm
Maximum Operator Stroke	Emergency Stop Switch	9.0mm

Note: Contacts will bounce during operation of pushbuttons and selector switches (reference value: 20- ms). Be sure to take contact bounce time into consideration when designing a control circuit.

Contact Rating (Switches)

Rated Insulation Voltage (Ui)		600V					
Rated Thermal Current (Ith)		10A*					
Rated Operating Voltage (Ue)		24V	120V	240V	500V		
Rated Operating Current (Ie)	AC 50/60Hz	Resistive Load (AC12)	10A*	10A*	6A	2.8A	
		Inductive Load (AC15)	10A*	6A	3A	1.4A	
	DC	Resistive Load (DC12)	8A	2.2A	1.1A	—	
		Inductive Load (DC13)	4A	1.1A	0.55A	—	

Note: Up to 2 contacts (per control unit): 10A
3 contacts (per control unit): 9A
Minimum applicable load: 3V AC/DC, 5mA
Applicable operating locations may vary according to operating conditions and load types.

Contact Rating Code Designation	Thermal Continuous Test Current Amperes	Maximum current, Amperes								Maximum Volt-Amperes	
		120 Volt		240 Volt		480 Volt		600 Volt		600 Volt	
		Make	Break	Make	Break	Make	Break	Make	Break	Make	Break
A600	10	60	6.00	30	3.00	15	1.5	12	1.2	7200	720

Pilot Lights

Rated Insulation Voltage (Ui)		500V
Rated Operating Voltage (Ue)	Voltage	6V, 12V, 24V AC/DC
	Transformer	120V, 230V, 240V, 380V, 480V AC
Impulse Withstand Voltage (Uimp)		4kV
Insulation Resistance		100 MΩ minimum (500V DC)
Frequency		50/60Hz
Power Consumption (approx.)	Full Voltage	0.3W
	Transformer	1.5W
Life (reference value)		Approx. 40,000 hours

Note: Because the built-in LED lamp is a high-brightness version, the lamp may light dimly due to induction even when power is off.

Meters

Accuracy Class		2.5
Insulation Resistance		100 MΩ minimum (500V DC megger)
AC ammeter	Rated Insulation Voltage (Ui)	300V
	Operation	Moving core
	Impulse Withstand Voltage (Uimp)	4kV
	Power Consumption	1VA
	Measurement	5A, 10A, 30A, 50A, etc
	Input (CT Ratio)	1A, 5A
DC input meter	Extended Memory	3 times, etc
	Rated Insulation Voltage (Ui)	150V
	Operation	Moving coil
	Impulse Withstand Voltage (Uimp)	2.5kV
	Input	0 to10V DC, 4 to 20mA, etc.
	Power Consumption (DC ammeter)	0.15W
	Consumption Current (DC voltmeter)	1mA

Note: Use a commercially available CT (current transformer) for all AC ammeters, and install the CT in a non-hazardous location.

Control Boxes

Degree of protection	IP65 (IEC60529), Type 4X
Housing Material	Stainless steel (SUS304)
Standard Coating	Melamine
	1-column: Outside coating 2-, 3-column: Inside and outside coating
Rated Insulation Voltage	600V
	(with pilot light or ET2A-8PE screw terminal block: 500V) Meter AC input: 300V Meter DC input: 150V
Insulation Resistance	100 MΩ minimum (500V DC megger)
Operating Temperature	−20 to +50°C (no freezing)
Operating Humidity	45 to 85% (no condensation)
Altitude	2000m maximum

Agency Approvals		UL/c-UL, IECEx/ATEX certified
Applicable Enclosure		All enclosures except for 6 Control Units x 3 Column
Mounting Style		Wall Mount
Control Unit	Pilot Light	Yes ¹
	Pushbutton	Yes
	Emergency Pushbutton	Yes
	Selector Switch	Yes
	Key Selector Switch	Yes
Reducer Screw	Meter	Yes
		NPT Thread (standard)
		Metric Thread
Degree of Protection		IP65, TYPE4X (UL)
Grounding Terminal Screw Material		Stainless Steel
Applicable Wire	Stranded Wire (mm2)	1.5 to 2.5
	Solid Wire (mm2)	1.2 to 1.6
	Solid/Stranded Wire (AWG)	16-14

1: c-UL explosion protection is different when pilot light is installed.

SWITCHES (CONTROL UNITS)



Pushbuttons



Emergency Stop Switches



Pilot Lights



Selector Switches

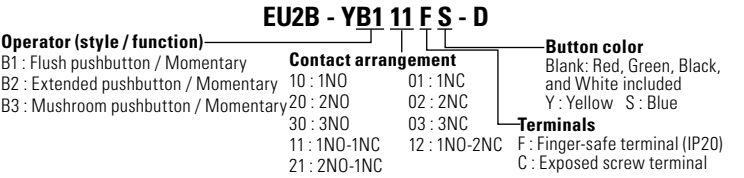


Key Selector Switches



Meters

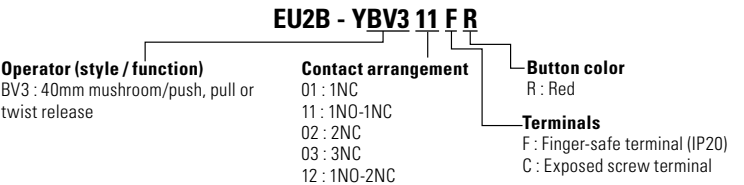
Pushbuttons



Part Number	Style and Function	Contact Arrangement	Weight (Approx.)	① Button Color
EU2B-YB110④①-D	Flush Momentary	1NO	68g	① Blank - supplied with red, green, black, and white buttons For yellow or blue buttons, specify Y (yellow) or S (blue).
EU2B-YB101④①-D		1NC		
EU2B-YB111④①-D		1NO-1NC	92g	
EU2B-YB120④①-D		2NO		
EU2B-YB102④①-D		2NC	116g	
EU2B-YB121④①-D		2NO-1NC		
EU2B-YB112④①-D		1NO-2NC		
EU2B-YB130④①-D		3NO		
EU2B-YB103④①-D		3NC		
EU2B-YB210④①-D		Extended Momentary	1NO	
EU2B-YB201④①-D	1NC			
EU2B-YB211④①-D	1NO-1NC		94g	
EU2B-YB220④①-D	2NO			
EU2B-YB202④①-D	2NC		118g	
EU2B-YB221④①-D	2NO-1NC			
EU2B-YB212④①-D	1NO-2NC			
EU2B-YB230④①-D	3NO			
EU2B-YB203④①-D	3NC		76g	
EU2B-YB310④①-D	1NO			
EU2B-YB301④①-D	1NC			
EU2B-YB311④①-D	1NO-1NC	101g		
EU2B-YB320④①-D	2NO			
EU2B-YB302④①-D	2NC	125g		
EU2B-YB321④①-D	2NO-1NC			
EU2B-YB312④①-D	1NO-2NC			
EU2B-YB330④①-D	3NO			
EU2B-YB303④①-D	3NC			

Note: ① Button Color. Specify a contact terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal)

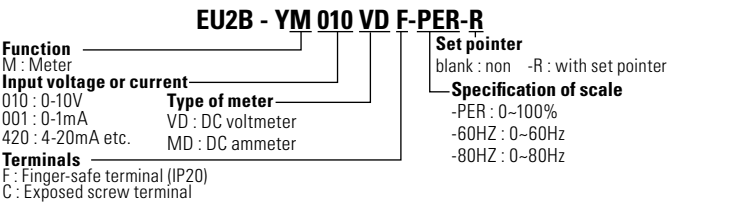
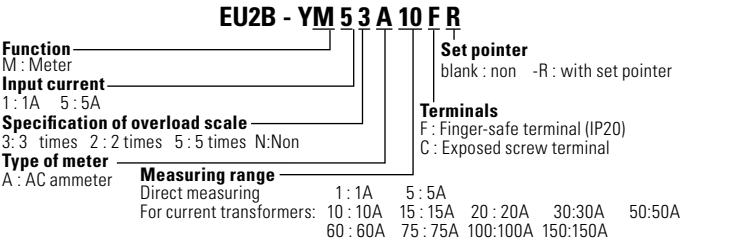
Emergency Stop Switches



Part Number	Operator	Contact Arrangement	Weight (Approx.)	Button Color
EU2B-YBV301④R	ø40 Mushroom	1NC	96g	R : Red
EU2B-YBV311④R		1NO-1NC	120g	
EU2B-YBV302④R		2NC		
EU2B-YBV312④R		1NO-2NC	144g	
EU2B-YBV303④R		3NC		

Specify a terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal)

Meters



Input	Part Number	Description		Weight (approx.)
AC input meter (ammeter)	EU2B-YM53A5④	Capacity: 5A	Expansion scale: x3	270g
	EU2B-YM53A10④	Capacity:10/5A	Expansion scale: x3	
	EU2B-YM13A10④	Capacity:10/1A	Expansion scale: x3	
	EU2B-YM53A15④	Capacity:15/5A	Expansion scale: x3	
	EU2B-YM13A15④	Capacity:15/1A	Expansion scale: x3	
	EU2B-YM13A20④	Capacity:20/1A	Expansion scale: x3	
	EU2B-YM53A30④	Capacity:30/5A	Expansion scale: x3	
	EU2B-YM13A30④	Capacity:30/1A	Expansion scale: x3	
	EU2B-YM53A50④	Capacity:50/5A	Expansion scale: x3	
	EU2B-YM53A60④	Capacity:60/5A	Expansion scale: x3	
	EU2B-YM53A75④	Capacity:75/5A	Expansion scale: x3	
	EU2B-YM53A100④	Capacity:100/5A	Expansion scale: x3	
	EU2B-YM53A150④	Capacity:150/5A	Expansion scale: x3	
DC input meter	EU2B-YM010VD④-PER	0-10V DC Input	Scale: 0 to 100%	
	EU2B-YM010VD④-60HZ	0-10V DC Input	Scale: 0 to 60Hz	
	EU2B-YM001MD④-PER	0-1mA DC Input	Scale: 0 to 100%	
	EU2B-YM001MD④-60HZ	0-1mA DC Input	Scale: 0 to 60Hz	
	EU2B-YM001MD④-80HZ	0-1mA DC Input	Scale: 0 to 80Hz	
	EU2B-YM420MD④-PER	4-20mA DC Input	Scale: 0 to 100%	
	EU2B-YM420MD④-60HZ	4-20mA DC Input	Scale: 0 to 60Hz	

Specify a terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal)

Pilot Lights

Part Number	Type	Operating Voltage	Weight (Approx.)	① Illumination Color Code
EU2B-YL1126④D①	Transformer	120V AC	150g	R : red G : green A : amber Y : yellow PW : white S : blue
EU2B-YL1236④D①		230V AC		
EU2B-YL1246④D①		240V AC		
EU2B-YL1386④D①		380V AC		
EU2B-YL1486④D①		480V AC		
EU2B-YL166④D①	Full Voltage	6V AC/DC	108g	
EU2B-YL111④D①		12V AC/DC		
EU2B-YL122④D①		24V AC/DC		

Note: ① Illumination Color. Specify a contact terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal)

2 Position Selector Switches

EU2B - YSK 3 11 N1 F A

Operator (style / function)
S : Selector (Knob operator)
SK : Key selector (Key operator)

Number of Positions / Spring Return Action
2 : 2-position / Maintained
2R : 2-position / Maintained (Overlap)
2J : 2-position / Maintained (Special function)
21 : 2-position / Spring return from right
3 : 3-position / Maintained
31 : 3-position / Spring return from right
32 : 3-position / Spring return from left
33 : 3-position / Spring return two-way

Key Removable Position
See option codes below

Terminals
F : Finger-safe terminal (IP20)
C : Exposed screw terminal

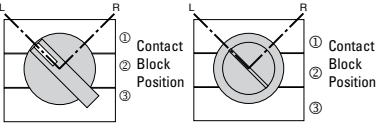
Circuit Number
Blank : No Designation
N* : See charts

Contact arrangement
10 : 1NO 03 : 3NC
11 : 1NO-1NC 02 : 2NC
01 : 1NC 21 : 2NO-1NC
30 : 3NO 12 : 1NO-2NC
20 : 2NO

				Selector Switches		Key Selector Switches	
Con-tact	Mount-ing	Operator Position		Maintained	Spring Return from Right	Maintained	Spring Return from Right
							
NO	1		●	EU2B-YS210④	EU2B-YS2110④	EU2B-YSK210④③	EU2B-YSK2110④③
				EU2B-YS201④	EU2B-YS2101④	EU2B-YSK201④③	EU2B-YSK2101④③
NC	3	●					
NO	1		●	EU2B-YS220④	EU2B-YS2120④	EU2B-YSK220④③	EU2B-YSK2120④③
NO	3		●				
NC	1	●		EU2B-YS202④	EU2B-YS2102④	EU2B-YSK202④③	EU2B-YSK2102④③
NC	3	●					
NO	1		●	EU2B-YS211④	EU2B-YS2111④	EU2B-YSK211④③	EU2B-YSK2111④③
NC	3	●					
NO	1		●				
NO	2		●	EU2B-YS230④	EU2B-YS2130④	EU2B-YSK230④③	EU2B-YSK2130④③
NO	3		●				
NC	1	●					
NC	2	●		EU2B-YS203④	EU2B-YS2103④	EU2B-YSK203④③	EU2B-YSK2103④③
NC	3	●					
NO	1		●				
NO	2		●	EU2B-YS221④	EU2B-YS2121④	EU2B-YSK221④③	EU2B-YSK2121④③
NC	3	●					
NO	1		●				
NC	2	●		EU2B-YS212④	EU2B-YS2112④	EU2B-YSK212④③	EU2B-YSK2112④③
NC	3	●					
NO	1		■				
				EU2B-YS2R11④	N/A	EU2B-YSK2R11④③	N/A
NC	2	■					

Key is removable in all maintained positions. Specify key removal position in place of ③ in the part number. See table. Specify a terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal).

2-position, 2-position/inverse cam
Selector Switch Key Selector Switch



EU2B - YL1 22 F D R

Operator (style / function)
L1 : Pilot Light / dome

Operating voltage
126 : AC 120V (Transformer type)
246 : AC 240V (Transformer type)
386 : AC 380V (Transformer type)
486 : AC 480V (Transformer type)

Lens/LED Colors
R : Red G : Green A : Amber
Y : Yellow PW : White S : Blue

Terminals
F : Finger-safe terminal (IP20)
C : Exposed screw terminal

		Selector Switches		Key Selector Switches	
Con-tact	Mount-ing	Operator Position		Maintained	Maintained
		L	R	L R	L R
NO	1	●		EU2B-YS2J10④	EU2B-YSK2J10④③
				EU2B-YS2J01④	EU2B-YSK2J01④③
NC	3		●	EU2B-YS2J20④	EU2B-YSK2J20④③
NO	1	●		EU2B-YS2J02④	EU2B-YSK2J02④③
NC	3		●	EU2B-YS2J11④	EU2B-YSK2J11④③
NO	1	●		EU2B-YS2J30④	EU2B-YSK2J30④③
NC	2	●		EU2B-YS2J03④	EU2B-YSK2J03④③
NC	3		●	EU2B-YS2J21④	EU2B-YSK2J21④③
NO	1	●		EU2B-YS2J12④	EU2B-YSK2J12④③
NC	2	●			
NC	3		●		

③ Key Removable Option Codes (2-position)

Code	Description
A	Key removable in any position
B	Key removable in left position
C	Key removable in right position

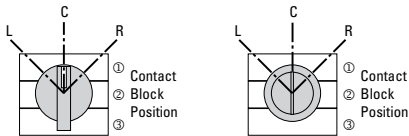
3 Position Selector Switches

					Selector Switches				Key Selector Switches			
Contact	Mounting	Operator Position			Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two Way	Maintained	Spring Return from Right	Spring Return from Left	Spring Return Two Way
		L	C	R								
NO	1	●			EU2B-YS320④	EU2B-YS3120④	EU2B-YS3220④	EU2B-YS3320④	EU2B-YSK320④③	EU2B-YSK3120④③	EU2B-YSK3220④③	EU2B-YSK3320④③
NO	3			●								
NO	2	●		●	EU2B-YS320N1④	EU2B-YS3120N1④	EU2B-YS3220N1④	EU2B-YS3320N1④	EU2B-YSK320N1④③	EU2B-YSK3120N1④③	EU2B-YSK3220N1④③	EU2B-YSK3320N1④③
NO	3			●								
NC	1			■	EU2B-YS302④	EU2B-YS302④	EU2B-YS3202④	EU2B-YS3302④	EU2B-YSK302④③	EU2B-YSK302④③	EU2B-YSK3202④③	EU2B-YSK3302④③
NC	3	■										
NC	2			●	EU2B-YS302N1④	EU2B-YS3102N1④③	EU2B-YS3202N1④③	EU2B-YS3302N1④	EU2B-YSK302N1④③	EU2B-YSK3102N1④③	EU2B-YSK3202N1④③	EU2B-YSK3302N1④③
NC	3	■										
NO	1	●			EU2B-YS311④	EU2B-YS311④	EU2B-YS3211④	EU2B-YS3311④	EU2B-YSK311④③	EU2B-YSK311④③	EU2B-YSK3211④③	EU2B-YSK3311④③
NC	3	■										
NC	1			■	EU2B-YS311N1④	EU2B-YS3111N1④	EU2B-YS3211N1④	EU2B-YS3311N1④	EU2B-YSK311N1④③	EU2B-YSK3111N1④③	EU2B-YSK3211N1④③	EU2B-YSK3311N1④③
NO	3			●								
NO	1	●										
NC	2		●		EU2B-YS311N2④	EU2B-YS3111N2④	EU2B-YS3211N2④	EU2B-YS3311N2④	EU2B-YSK311N2④③	EU2B-YSK3111N2④③	EU2B-YSK3211N2④③	EU2B-YSK3311N2④③
NC	2		●		EU2B-YS311N3④	EU2B-YS3111N3①	EU2B-YS3211N3①	EU2B-YS3311N3①	EU2B-YSK311N3④③	EU2B-YSK3111N3④③	EU2B-YSK3211N3④③	EU2B-YSK3311N3④③
NO	3			●								
NO	2	●		●	EU2B-YS311N4④	EU2B-YS3111N4④	EU2B-YS3211N4④	EU2B-YS3311N4④	EU2B-YSK311N4④③	EU2B-YSK3111N4④③	EU2B-YSK3211N4④③	EU2B-YSK3311N4④③
NC	3	■										
NO	1	●										
NO	2	●		●	EU2B-YS330④	EU2B-YS3130④	EU2B-YS3230④	EU2B-YS3330④	EU2B-YSK330④③	EU2B-YSK3130④③	EU2B-YSK3230④③	EU2B-YSK3330④③
NO	3			●								
NC	1			■	EU2B-YS303④	EU2B-YS3103④	EU2B-YS3203④	EU2B-YS3303④	EU2B-YSK303④③	EU2B-YSK3103④③	EU2B-YSK3203④③	EU2B-YSK3303④③
NC	2		●									
NC	3	■										
NO	1	●										
NC	2		●		EU2B-YS321N1④	EU2B-YS3121N1④	EU2B-YS3221N1④	EU2B-YS3321N1④	EU2B-YSK321N1④③	EU2B-YSK3121N1④③	EU2B-YSK3221N1④③	EU2B-YSK3321N1④③
NO	3			●								
NC	1			■								
NO	2	●		●	EU2B-YS312N1④	EU2B-YS3112N1④	EU2B-YS3212N1④	EU2B-YS3312N1④	EU2B-YSK312N1④③	EU2B-YSK3112N1④③	EU2B-YSK3212N1④③	EU2B-YSK3312N1④③
NC	3	■										

Specify a terminal style in place of ④ in the part number: F (Finger-safe terminal), C (Exposed screw terminal).

Key is removable in all maintained positions. Specify key removal position in place of ③ in the part number. See table.

3-position, 3-position/inverse cam Selector Switch Key Selector Switch



③ Key Removable Option Codes (3-Position)

Code	Description
A	Key removable in any position
B	Key removable in left and center positions
C	Key removable in center and right positions
D	Key removable in center position
E	Key removable in left and right positions
G	Key removable in left position
H	Key removable in right position)

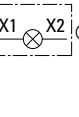
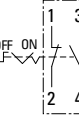
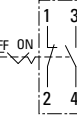
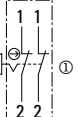
CONTROL BOXES

1 control unit	2 control units	3 control units	4 control units	5 control units	4 control units	6 control units	8 control units	10 control units
EC2B-B21B011N2①-U	EC2B-B21B021N2①-U	EC2B-B31B031N2①-U	EC2B-B51B041N3①-U	EC2B-B51B051N3①-U	EC2B-B32B042N2①-U	EC2B-B32B062N2①-U	EC2B-B52B082N3①-U	EC2B-B52B102N3①-U
1 column					2 columns			
6 control units	9 control units	12 control units	15 control units	18 control units	Thread Size		① Terminal Block Style	
EC2B-B33B063N2①-U	EC2B-B33B093N2①-U	EC2B-B53B123N3①-U	EC2B-B53B153N3①-U	EC2B-B63B183N3①-U	Code	Description	Code	Description
3 columns					M1	M16	blank	no terminal block
					M2	M20	C	Exposed screw terminals
					M3	M25	F	Finger-safe terminals
					M4	M32		
					M5	M40		
					N1	NPT1/2		
					N2	NPT3/4		
					N3	NPT1		
					N4	NPT1 1/4		

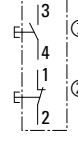
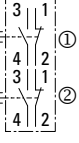
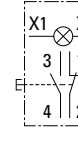
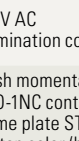
Other thread size options available. To specify different thread sizes, use table at left to select a code to use in place of N2 or N3 in the part number.
Specify terminal block style in place of ① in part number (standard versions do not contain a terminal block).

STANDARD CONTROL STATIONS

1 Control Unit × 1 Column

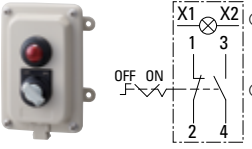
1 pushbutton		EC2B-1102BN2N□1-U		EC2B-1102BN2N□2-U		EC2B-1102BN2N□3-U		EC2B-1102BN2N□4-U					
		①	Flush momentary 1NO contact Nameplate ON Button color: black, green, red, and white 1NO-1NC contact	①	Flush momentary 1NC contact Nameplate OFF Button color: black, green, red, and white	①	Flush momentary 1NO-1NC contact Nameplate ON Button color: black, green, red, and white	①	Flush momentary 1NO-1NC contact Nameplate OFF Button color: black, green, red, and white				
1 pilot light		EC2B-1101BN2□11-U		EC2B-1101BN2□12-U		EC2B-1101BN2□13-U		EC2B-1101BN2□14-U		EC2B-1101BN2□16-U			
		①	120V AC Illumination color: red	①	240V AC Illumination color: red	①	24V AC/DC Illumination color: red	①	120V AC Illumination color: green	①	240V AC Illumination color: green	①	24V AC/DC Illumination color: green
1 selector switch		EC2B-1106BN2N□1-U		1 key selector switch		EC2B-1106BN2N□4-U		1 e-stop switch		EC2B-1102BN2N□7-U			
		①	Knob selector 2-position main- tained 1NO-1NC contact Name plate OFF-ON			①	Key selector 2-position maintained (removable at all positions) 1NO-1NC contact Nameplate OFF-ON			①	Emergency stop switch 2NC contact Nameplate EMER- GENCY STOP Button color (red)		

2 Control Units × 1 Column

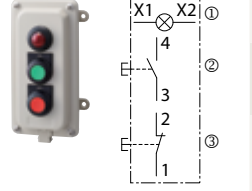
2 flush pushbuttons	EC2B-2102BN2N□1-U	2 Mushroom Pushbuttons	EC2B-2102BN2N□4-U
			
	Flush momentary 1NO contact, Nameplate ON Button color (black, green, red, and white buttons)	Mushroom momentary 1NO-1NC contact, Nameplate ON Button color (black)	
	Flush momentary 1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Mushroom momentary 1NO-1NC contact, Nameplate OFF Button color (red)	
1 pilot light/1 pushbutton	EC2B-2110BN2N□5-U	EC2B-2110BN2N□6-U	EC2B-2110BN2N□3-U
			
	120V AC Illumination color: red	240V AC Illumination color: red	24V AC/DC Illumination color: red
	Flush momentary 1NO-1NC contact Name plate STOP Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact Name plate STOP Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact Name plate STOP Button color (black, green, red, and white buttons)

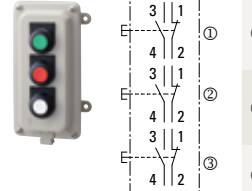
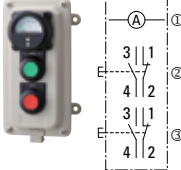
Specify terminal style code in place of □ in part no. C (standard screw terminal), F (finger-safe screw terminal)

2 Control Units × 1 Column

1 pilot light / 1 selector switch	EC2B-2117BN2N□3-U	EC2B-2117BN2N□4-U
	① 120V AC Illumination color: red	240V AC Illumination color: red
	② Knob, 2-position, 1NO-1NC contact Maintained, Name plate OFF-ON 	Knob, 2-position, 1NO-1NC contact Maintained, Name plate OFF-ON 

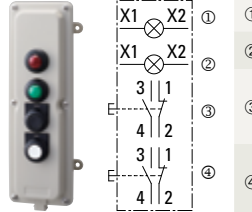
3 Control Units × 1 Column

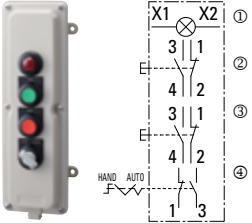
1 pilot light / 2 pushbuttons	EC2B-3110BN2N□5-U	EC2B-3110BN2N□6-U	EC2B-3110BN2N□3-U
	① 120V AC Illumination color: red	240V AC Illumination color: red	24V AC/DC Illumination color: red
	② Flush momentary 1NO contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO contact, Nameplate ON Button color (black, green, red, and white buttons)
	③ Flush momentary 1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)

3 pushbuttons	EC2B-3102BN2N□1-U	1 meter / 2 pushbuttons	EC2B-3152BN2N□1△-U
	① Flush momentary 1NO-1NC contact, Blank nameplate Button color (black, green, red, and white buttons)		① Specify input, capacity, and scale
			② Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)
			③ Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)

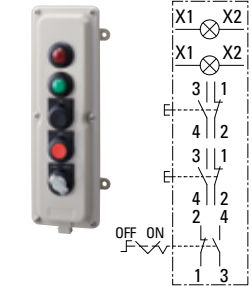
Specify the meter's capacity and scale in place of △ in the part number

4 Control Units × 1 Column

2 pilot lights / 2 pushbuttons	EC2B-4110BN3N□5-U	EC2B-4110BN3N□6-U	EC2B-4110BN3N□3-U
	① 120V AC, Illumination color: red	240V AC, Illumination color: red	24V AC/DC, Illumination color: red
	② 120V AC, Illumination color: green	240V AC, Illumination color: green	24V AC/DC, Illumination color: green
	③ Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)
	④ Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)

1 pilot light / 2 pushbuttons / 1 selector switch	EC2B-4113BN3N□5-U	EC2B-4113BN3N□6-U	EC2B-4113BN3N□3-U
	① 120V AC, Illumination color: red	240V AC, Illumination color: red	24V AC/DC, Illumination color: red
	② Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)
	③ Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)
	④ Knob, 2-position, maintained 1NO-1NC contact Nameplate HAND-AUTO 	Knob, 2-position, maintained 1NO-1NC contact Nameplate HAND-AUTO 	Knob, 2-position, maintained 1NO-1NC contact Nameplate HAND-AUTO 

5 Control Units × 1 Column

2 pilot lights / 2 pushbuttons / 1 selector switch	EC2B-5113BN3N□5-U	EC2B-5113BN3N□6-U	EC2B-5113BN3N□3-U
	① 120V AC, Illumination color: red	240V AC, Illumination color: red	24V AC/DC, Illumination color: red
	② 120V AC, Illumination color: green	240V AC, Illumination color: green	24V AC/DC, Illumination color: green
	③ Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate ON Button color (black, green, red, and white buttons)
	④ Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)	Flush momentary 1NO-1NC contact, Nameplate OFF Button color (black, green, red, and white buttons)
	⑤ Knob, 2-position, Maintained, 1NO-1NC contact, Name plate HAND-AUTO 	Knob, 2-position, Maintained, 1NO-1NC contact Name plate HAND-AUTO 	Knob, 2-position, Maintained, 1NO-1NC contact Name plate HAND-AUTO 

Specify terminal style code in place of □ in part no. C (standard screw terminal), F (finger-safe screw terminal)