

XA/XW/FB E-Stops

Features

- Emergency stop switches with safety slave functions can be connected to the AS-face Safety at Work network.
- Complies with IEC61508 SIL3 (Functional safety of electrical/electronic/programmable electronic safety-related systems) and EN954-1 safety category 4 (Safety of machinery safety related parts of control systems).
- Space, wire and labor-saving solutions for safety equipment
- Equipped with AS-Interface standard slave functions. Monitored with AS-Interface devices.



PLCs

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Part Numbers

ø16mm XA Series


Button/Lens Size	Connector Terminal	I/O Points	Illumination	Part Numbers	Button/Lens (*) Color Code
 29mm  40mm	IDC	1-IN	Non-illuminated	XA1E-BV3Z10C1*	R: red RH: bright red grey* (29mm only)
		1-IN 1-OUT	Illuminated	XA1E-LV3Z114C1R	
		1-IN	Non-illuminated	XA1E-BV4Z10C1*	
		1-IN 1-OUT	Illuminated	XA1E-LV4Z114C1R	

1. \*Grey is used for teaching pendants and not to be used as an E-Stop.  
 2. †IDC - insulation displacement connector.

ø22mm XW Series

Button/Lens Size	Connector Terminal	I/O Points	Illumination	Part Numbers	Button/Lens (*) Color Code
 40mm  60mm	IDC	1-IN	Non-illuminated	XW1E-BV4Z10C1*	R: red RH: bright red
	Crimp			XW1E-BV4Z10C2*	
	IDC	1-IN 1-OUT	Illuminated	XW1E-LV4Z114C1R	
	Crimp			XW1E-LV4Z114C2R	
60mm	IDC	1-IN	Non-illuminated	XW1E-BV5Z10C1*	
	Crimp			XW1E-BV5Z10C2*	

FB Series (Plastic Box + XW Series)

Button/Lens Size	Connector Terminal	I/O Points	Illumination	Nameplate	Part Numbers	Button/Lens (*) Color Code
 40mm  60mm	M12	1-IN	Non-illuminated	Without	FB1W-XW1EBV4Z10C2*-Y0-1	R: red RH: bright red
				With	FB1W-XW1EBV4Z10C2*-Y1-1	
		1-IN 1-OUT	Illuminated	Without	FB1W-XW1ELV4Z114C2R-Y0-1	
				With	FB1W-XW1ELV4Z114C2R-Y1-1	
40mm	AS-interface Piercing	1-IN	Non-illuminated	Without	FB1W-XW1EBV4Z10C2*-Y0-2	
				With	FB1W-XW1EBV4Z10C2*-Y1-2	
		1-IN 1-OUT	Illuminated	Without	FB1W-XW1ELV4Z114C2R-Y0-2	
				With	FB1W-XW1ELV4Z114C2R-Y1-2	
60mm		1-IN	Non-illuminated	Without	FB1W-XW1EBV5Z10C2*-Y0-2	

- “EMERGENCY STOP” is engraved on the nameplate.

**General Specifications**

<b>Operating Voltage</b>	26.5 to 31.6V DC (supplied from AS-Interface)
<b>Input Current</b>	Illuminated: 35mA (XA series), 40mA (XW, FB series) Non-illuminated: 25mA
<b>Dielectric Strength</b>	500V AC, 1 minute
<b>Insulation Resistance</b>	100 MΩ (500V DC megger)
<b>Operating Temperature</b>	XA, XW series: -25 to +55°C (no freezing) FB series: Illuminated -25 to +50°C (no freezing) Non-illuminated -25 to +55°C (no freezing)
<b>Storage Temperature</b>	-40 to +70°C (no freezing)
<b>Operating Humidity</b>	45 to 85% RH (no condensation)
<b>Pollution Degree (IEC60664)</b>	XA, XW series Operator unit: 3, Communication unit: 2 FB series: 3 (UL rating: 2)
<b>Degree of Protection (IEC60529)</b>	Operator unit: IP65 Terminal unit: IP20 (FB series: IP65)
<b>Corrosion Immunity</b>	Free from corrosive gases
<b>Vibration Resistance</b>	Damage limits/Operating extremes: 10 to 500 Hz, amplitude 0.35mm, acceleration 50 m/s <sup>2</sup> (5G)
<b>Shock Resistance</b>	Damage limits: 150 m/s <sup>2</sup> (15G) Operating extremes: 1000 m/s <sup>2</sup> (100G)
<b>Weight (approx.)</b>	XA series ø29: 35g, ø40: 40g XW series ø40: 60g, ø60: 70g FB series M12 connector: 195g (ø40), 205g (ø60) Piercing: 235g (ø40), 245g (ø60)

**Mechanical/Electrical Specifications**

<b>Operating Force</b>	Pushlock: 10.5N (XA series), 32N (XW, FB series) Pull reset: 10N (XA series), 21N (XW, FB series) Turn reset: 0.16N·m (XA series), 0.27 N·m (XW, FB series)
<b>Minimum Force Required for Direct Opening Action</b>	60N (XA series), 80N (XW, FB series)
<b>Minimum Operator Stroke Required for Direct Opening Action</b>	4.0mm
<b>Maximum Operating Stroke</b>	4.5mm
<b>Operation Frequency</b>	900 operations/hour
<b>Mechanical Life</b>	250,000 operations minimum
<b>Electrical Life</b>	250,000 operations minimum
<b>Connectors</b>	IDC connector (XA series) IDC connector, crimping connector (XW series) M12 connector/AS-Interface piercing connector (FB series)
<b>Recommended Tightening Torque for Locking Ring</b>	0.88 N·m (XA series), 2.0 N·m (XW series)

**Communication Specifications**

<b>Communication</b>	AS-Interface Ver. 3.0	
<b>Slave Type</b>	Safety slave	
<b>Maximum Network Length</b>	100m total	
<b>Maximum No. of Slaves</b>	31 (when only safety slaves are connected)	
<b>Profile (I/O, ID, ID2)</b>	S-7, B, E (illuminated type) S-0, B, E (non-illuminated type)	
<b>Data Bit</b>	<b>Input</b>	Emergency stop switch DI0 DI1 DI2 DI3
		When pressed 0 0 0 0
	<b>Output</b>	Emergency stop switch DI0 DI1 DI2 DI3
		When not pressed X X X X X: 0.1 (Unspecified)
<b>Parameter Bit</b>	D00 = 1 Pilot light: on D01 to 3: not used D00 = 0 Pilot light: off	
<b>Parameter Bit</b>	Not used	

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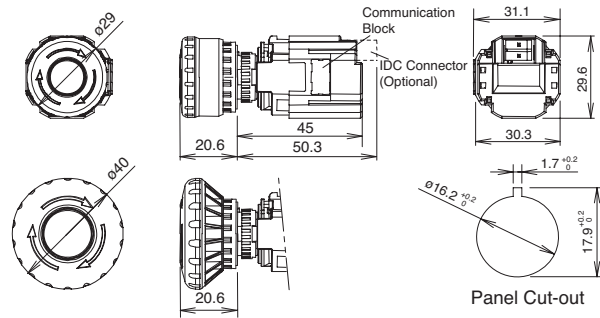
Communication &amp; Networking

Accessories

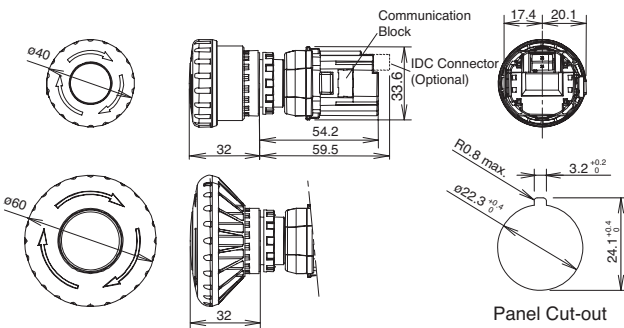
Name	Specification	Part Numbers
XA/XW Series IDC Connector Kit*	End connector (with cover)	XW9Z-C100-1
	Through connector (with cover)	XW9Z-C100-2
IDC Connector Termination Tool	Manufactured by ITW Pancon	MMIT-156F
XW Series Connector Cable	Length 500mm, without connector	XW9Z-C205
	Length 1m, without connector	XW9Z-C210
FB Series Control Box	Length 300mm, straight	FB9Z-CS03
	Length 1m, straight	FB9Z-CS10
M12 Connector Cable	Length 2m, straight	FB9Z-CS20
	Length 1m, right-angle	FB9Z-CL10
	Length 2m, right-angle	FB9Z-CL20

\*The package quantity is 5 pieces. IDC connector termination tool MMIT-156F (ITW Pancon) is needed to connect the cable to the connector.

Dimensions/Panel Cut-out  
XA Series

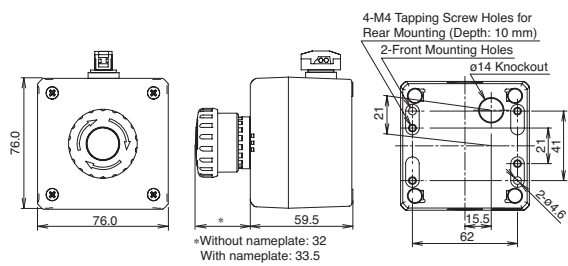


XW Series

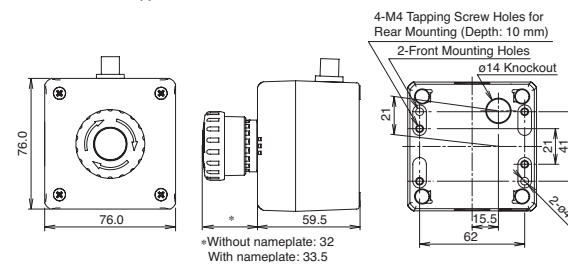


FB Series

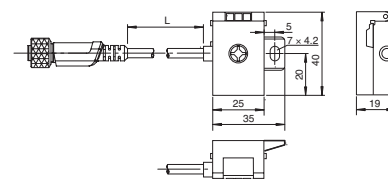
AS-Interface Piercing Type



M12 Connector Type



M12 Connector Cable for FB Series Box



All dimensions in mm.

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