

XA/XW/FB E-Stops

Features

- Emergency stop switches with safety slave functions can be connected to the AS-Interface 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 master devices.



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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	IDC†	1-IN	Non-illuminated	XA1E-BV3Z10C1*	R: red RH: bright red N: grey* (29mm only)
			1-IN 1-OUT	Illuminated	XA1E-LV3Z114C1R	
	40mm		1-IN	Non-illuminated	XA1E-BV4Z10C1*	
			1-IN 1-OUT	Illuminated	XA1E-LV4Z114C1R	

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

ø22mm XW Series

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

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

Operating Force	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)
Minimum Force Required for Direct Opening Action	60N (XA series), 80N (XW, FB series)
Minimum Operator Stroke Required for Direct Opening Action	4.0mm
Maximum Operating Stroke	4.5mm
Operation Frequency	900 operations/hour
Mechanical Life	250,000 operations minimum
Electrical Life	250,000 operations minimum
Connectors	IDC connector (XA series) IDC connector, crimping connector (XW series) M12 connector/AS-Interface piercing connector (FB series)
Recommended Tightening Torque for Locking Ring	0.88 N·m (XA series), 2.0 N·m (XW series)

Communication Specifications

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

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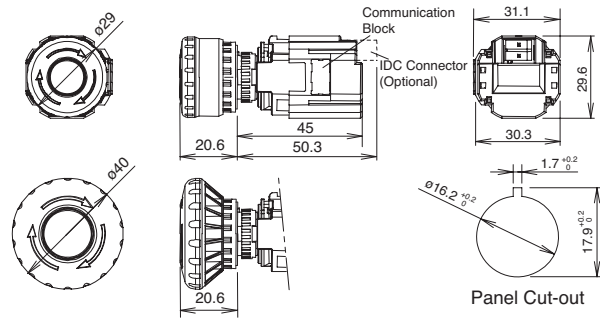
Communication & Networking

Accessories

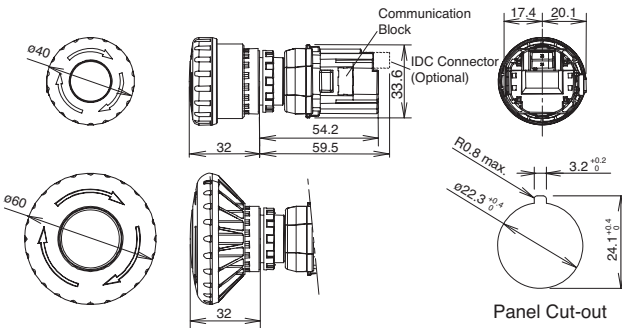
Name	Specification	Part Numbers
XA/XW Series IDC Connector Kit*	End connector (with cover)	XW9Z-C100-1
	Through connector (with cover)	XW9Z-C100-2
IDC Connector Termination Tool	Manufactured by ITW Pancon	MMIT-156F
XW Series Connector Cable	Length 500mm, without connector	XW9Z-C205
	Length 1m, without 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

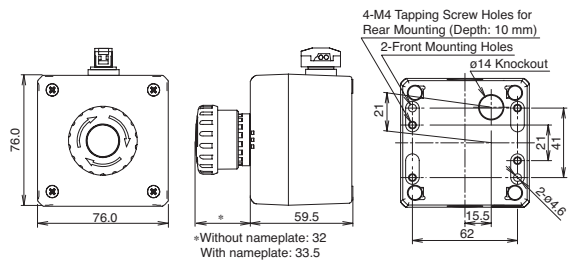


XW Series

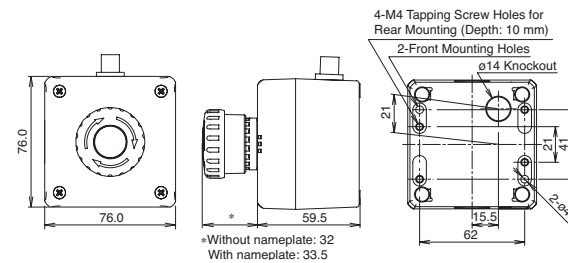


FB Series

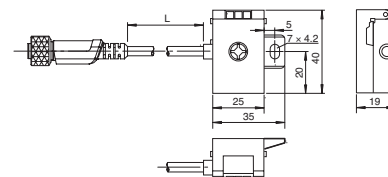
AS-Interface Piercing Type



M12 Connector Type



M12 Connector Cable for FB Series Box



All dimensions in mm.

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