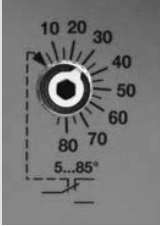



		AF120 US, AF120-S US AF230 US, AF230-S US	AFBUP, AFBUP-S, AFXUP, AFXUP-S	
OPERATION	Torque	133 in-lb [15 Nm] minimum	180 in-lb. [20 Nm] minimum	
	Running Time	Motor	< 75 seconds	<75 seconds
		Spring	< 60 seconds	20 seconds @ -4°F to 122°F [-20°C to 50°C]; <60 seconds @ -22°F [-30°C]
	Noise Level	Max. 45 dB (A)	<50dB(A) motor @ 75 seconds; ≤62dB(A) Spring Return	
	Motor Technology	DC Motor	DC Motor	
	Overload Protection	Electronic throughout 0° to 95° rotation	Electronic throughout 0° to 95° rotation	
	Operating Temperature	-22°F to 122°F [-30°C to 50°C]	-22°F to 122°F [-30°C to 50°C]	
Operating Humidity	5 to 95% RH non-condensing	5 to 95% RH, non-condensing		
CONTROL	Control Signal	On/Off	On/Off	
MOUNTING & COMMISSIONING	Dimensions (L x W x H)			
	With Conduit Fitting	10.47" [266] x 3.86" [98] x 3.25" [82.7]	9.69" [246] x 3.86" [98] x 3.42" [87]	
	Shaft Dimensions	Up to 1.05"	Up to 1.05"	
	Direction of Rotation	Reversible with CW/CCW mounting	Reversible with CW/CCW mounting	
	Manual Override	3 mm hex crank supplied	5 mm hex crank (3/16" Allen), supplied	
	Position Indication	Visual indicator, 0° to 95° (0° is Spring Return position)	Visual indicator, 0° to 95° (0° is Spring Return position)	
	Angle of Rotation	95°, adjustable 30 to 95° w/ ZDB-AF2 US accessory	95° (adjustable with mechanical end stop, 35° to 95°)	



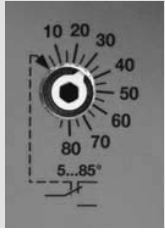



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		AF120 US, AF120-S US AF230 US, AF230-S US	AFBUP, AFBUP-S, AFXUP, AFXUP-S	
ELECTRICAL WIRING	Power Supply	AF120: 120 VAC ± 10% 50/60 Hz AF230: 230 VAC ± 15% 50/60 Hz	24...240 VAC -20 %/+10%, 50/60 Hz; 24...125 VDC +/- 10 %	
	Power Consumption	Running	AF120: 8 W AF230: 8.5 W	7 W
		Holding	AF120, AF230: 3 W	3.5 W
	Transformer Sizing / VA Rating		AF120, AF230: 11 VA	7 VA @ 24 VAC 8.5 VA @ 120 VAC 18 VA @ 240 VAC
	Auxiliary Switches	(-S Models): 2 x SPDT 7A (2.5A) @ 250 VAC, UL Approved, one set at +5°, one adjustable 5° to 85°		(-S Models): Two SPDT 3A (0.5A inductive) @ 250V UL Approved, one set at +10°, one adjustable 10° to 90°
Electrical Connection	3 ft, 18 GA appliance cable 1/2" conduit connector, (-S Models): Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors		3 ft, 18 GA, appliance cable, 1/2" conduit connector, (-S Models): Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors; Optional 10 or 16 ft cables with X types	
CONSTRUCTION	Housing Rating	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2	
	Housing Material	Zinc coated steel	Zinc coated metal and plastic casing	
	Agency Listings	cULus acc. to UL 873 and CAN/CSA C22.2 No. 24-93	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC & 2006/95/EC	
	Storage Temperature	-40°F to 176°F [-40°C to 80°C]	-40°F to 176°F [-40°C to 80°C]	
	Weight	7.3 lbs (3.3 kg)	4.6 lbs (2.1 kg), (-S Models): 4.9 lbs (2.25 kg)	

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		AF24-MFT US, AF24-MFT-S US	AFB24-MFT, AFB24-MFT-S, AFX24-MFT, AFX24-MFT-S	
OPERATION	Torque	133 in-lb. [15 Nm] minimum	180 in-lb. [20 Nm] minimum	
	Running Time	Motor	150 seconds (default), variable (75 to 300 seconds)	150 seconds (default), variable (70 to 220 seconds)
		Spring	<20 sec spring return fail safe position	<20 seconds @ -4°F to 122°F [-20°C to 50°C]; <60 seconds @ -22°F [-30°C]
	Noise Level	<45 dB (A)	≤40dB(A) motor @ 150 seconds, run time dependant; ≤62dB(A) spring return	
	Motor Technology	Brushless DC motor	Brushless DC motor	
	Overload Protection	Electronic throughout 0 to 95° rotation	Electronic throughout 0 to 95° rotation	
	Operating Temperature	-22 to 122° F (-30 to 50° C)	-22 to 122°F (-30 to 50°C)	
	Operating Humidity	5 to 95% RH, non-condensing	Max. 95% RH, non-condensing	
CONTROL	Operating Range 'Y'	2 to 10 VDC, 4 to 20 mA w/500 Ω resistor; Programmable Variable	2 to 10 VDC, 4 to 20 mA w/500 Ω resistor; Variable (VDC, PWM, Floating Point, On/Off)	
	Input Impedance	100 kΩ for 2 to 10 VDC (0.1 mA); 500 Ω for 4 to 20 mA; 1500 Ω for PWM, Floating Point and On/Off	100 kΩ for 2 to 10 VDC (0.1 mA); 500 Ω for 4 to 20 mA; 1500 Ω for PWM, Floating Point, On/Off	
	Feedback Output 'U'	2 to 10 VDC, 0.5 mA max, variable when configured with MFT options	2 to 10 VDC, 0.5mA max, variable when configured with MFT options	
MOUNTING & COMMISSIONING	Dimensions (L x W x H)			
	With Conduit Fitting	10.47" [266] x 3.86" [98] x 3.25" [82.7]	9.69" [246] x 3.86" [98] x 3.42" [87]	
	Shaft Dimensions	Up to 1.05"		
	Direction of Rotation	Motor	Reversible with built-in switch 	Reversible with built-in switch
		Spring	Reversible with CW/CCW mounting	Reversible with CW/CCW mounting
Manual Override	3 mm hex crank (supplied)	5 mm hex crank (3/16" Allen), supplied 		
Position Indication	Visual indicator, 0° to 95° (0° is Spring Return position) 	Visual indicator, 0° to 95° (0° is Spring Return position) 		

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		AF24-MFT US, AF24-MFT-S US	AFB24-MFT, AFB24-MFT-S, AFX24-MFT, AFX24-MFT-S	
MOUNTING & COMMISSIONING	Angle of Rotation	95°, adjustable 30 to 95° w/ ZDB-AF2 US accessory 	95° (adjustable with mechanical end stop, 35° to 95°) 	
	Power Supply	24 VAC, ± 20%, 50/60 Hz; 24 VDC, ±10%	24 VAC, ± 20%, 50/60 Hz; 24 VDC, +20/-10%	
ELECTRICAL WIRING	Power Consumption	Running	6 W	7.5 W
		Holding	2.5 W	3 W
	Transformer Sizing	10 VA (Class 2 power source)	10 VA (Class 2 power source)*	
	Auxiliary Switches	(-S Models): 2 x SPDT 7A (2.5A) @ 250 VAC, UL Approved, one set at +5°, one adjustable 25° to 85° 	(-S Models): Two SPDT 3A (0.5A inductive) @ 250V UL Approved, one set at + 10°, one adjustable 10° to 90° 	
Electrical Connection	3 ft, 18 GA appliance cable 1/2" conduit connector, (-S Models): Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors 	3 ft, 18 GA, appliance cable, 1/2" conduit connector, (-S Models): Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors; Optional 10 or 16 ft cables and plenum rated cables (non -S models only) with X types 		
CONSTRUCTION	Housing Rating	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2	
	Housing Material	Zinc coated metal	Zinc coated metal and plastic casing	
	Agency Listings	cULus acc. to UL 873 and CAN/CSA C22.2 No. 24-93	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC & 2006/95/EC	
	Storage Temperature	-40 to 176° F (-40 to 80° C)	-40 to 176°F (-40 to 80°C)	
	Weight	6.0 lbs. (2.7 kg)	4.6 lbs. (2.1 kg), (-S Models): 4.9 lbs.(2.25 kg)	

*10 VA @ 70 second run time
 8.5 VA @ 150 second run time
 8 VA @ 220 second run time

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		AF24-MFT95 US	AFB24-MFT95, AFX24-MFT95	
OPERATION	Torque	133 in.-lb. [15 Nm] minimum	180 in.-lb. [20 Nm] minimum	
	Running Time	Motor	150 seconds (default), variable (75 to 300 seconds)	150 seconds (default), variable (70 to 220 seconds)
		Spring	<20 sec spring return fail safe position	<20 sec @ -4°F to 122°F [-20°C to 50°C]; <60 sec @ -22°F [-30°C]
	Noise Level	<45 dB (A)	≤40dB(A) motor @ 150 seconds, run time dependant; ≤62dB(A) spring return	
	Motor Technology	Brushless DC motor	Brushless DC motor	
	Overload Protection	electronic throughout 0 to 95° rotation	Electronic throughout 0 to 95° rotation	
	Operating Temperature	-22 to 122° F (-30 to 50° C)	-22 to 122°F (-30 to 50°C)	
	Operating Humidity	5 to 95% RH, non-condensing	Max. 95% RH, non-condensing	
CONTROL	Operating Range 'WRB'	0 to 135 Ω Honeywell electronic series 90, or a 0 to 135 Ω input	0 to 135 Ω Honeywell electronic series 90, or a 0 to 135 Ω input	
	Feedback Output 'U'	2 to 10 VDC, 0.5mA max, Variable when configured with MFT options	2 to 10 VDC, 0.5mA max, Variable when configured with MFT options	
MOUNTING & COMMISSIONING	Dimensions (L x W x H) [mm]			
	With Conduit Fitting	10.47" [266] x 3.86" [98] x 3.25" [82.7]	9.69" [246] x 3.86" [98] x 3.42" [87]	
	Shaft Dimensions	up to 1.05"	up to 1.05"	
	Direction of Rotation	Motor	Reversible with built-in switch 	Reversible with built-in switch
		Spring	Reversible with CW/CCW mounting	Reversible with CW/CCW mounting
	Manual Override	3 mm hex crank (supplied)	5 mm hex crank (3/16" Allen), supplied 	
Position Indication	Visual indicator, 0° to 95° 	Visual indicator, 0° to 95° (0° is Spring Return position) 		

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		AF24-MFT95 US	AFB24-MFT95, AFX24-MFT95
MOUNTING & COMMISSIONING	Angle of Rotation	95°, adjustable 30 to 95° w/ ZDB-AF2 US accessory 	95° (adjustable with mechanical end stop, 35° to 95°) 
	Power Supply	24 VAC, ± 20%, 50/60 Hz; 24 VDC, ±10%	24 VAC, ± 20%, 50/60 Hz; 24 VDC, +20/-10%
ELECTRICAL WIRING	Power Consumption		
	Running	6 W	7.5 W
	Holding	2 W	3 W
	Transformer Sizing	10 VA (Class 2 power source)	10 VA (Class 2 power source)*
	Auxiliary Switches	N/A	N/A
	Electrical Connection	3 ft, 18 GA appliance cable, 1/2" conduit connector 	3 ft, 18 GA, plenum cable, 1/2" conduit connector; AFX Model: 3 ft, 18 GA, plenum rated cable with or without 1/2" conduit connector 
CONSTRUCTION	Housing Rating	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2
	Housing Material	Zinc coated metal	Zinc coated metal and plastic casing
	Agency Listings	cULus acc. to UL 873 and CAN/CSA C22.2 No. 24-93	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC & 2006/95/EC
	Storage Temperature	-40 to 176° F (-40 to 80° C)	-40 to 176°F (-40 to 80°C)
	Weight	6.0 lbs. (2.7 kg)	4.6 lbs. (2.1 kg)

* 10 VA @ 70 second run time
8.5 VA @ 150 second run time
8 VA @ 220 second run time

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