

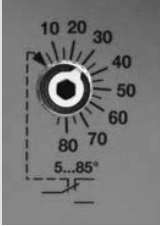

# Product Cross Reference

Current to New Generation



		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°)	



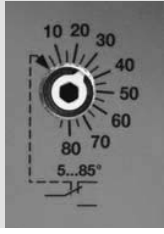



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		AF120 US, AF120-S US AF230 US, AF230-S US	AFBUP, AFBUP-S, AFXUP, AFXUP-S	
<b>ELECTRICAL WIRING</b>	<b>Power Supply</b>	AF120: 120 VAC ± 10% 50/60 Hz AF230: 230 VAC ± 15% 50/60 Hz	24...240 VAC -20 %/+10%, 50/60 Hz; 24...125 VDC +/- 10 %	
	<b>Power Consumption</b>	<b>Running</b>	AF120: 8 W AF230: 8.5 W	7 W
		<b>Holding</b>	AF120, AF230: 3 W	3.5 W
	<b>Transformer Sizing / VA Rating</b>		AF120, AF230: 11 VA	7 VA @ 24 VAC 8.5 VA @ 120 VAC 18 VA @ 240 VAC
	<b>Auxiliary Switches</b>	<b>(-S Models):</b> 2 x SPDT 7A (2.5A) @ 250 VAC, UL Approved, one set at +5°, one adjustable 5° to 85°		<b>(-S Models):</b> Two SPDT 3A (0.5A inductive) @ 250V UL Approved, one set at +10°, one adjustable 10° to 90°
<b>Electrical Connection</b>	3 ft, 18 GA appliance cable 1/2" conduit connector, <b>(-S Models):</b> Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors		3 ft, 18 GA, appliance cable, 1/2" conduit connector, <b>(-S Models):</b> Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors; Optional 10 or 16 ft cables with X types	
<b>CONSTRUCTION</b>	<b>Housing Rating</b>	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2	
	<b>Housing Material</b>	Zinc coated steel	Zinc coated metal and plastic casing	
	<b>Agency Listings</b>	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	
	<b>Storage Temperature</b>	-40°F to 176°F [-40°C to 80°C]	-40°F to 176°F [-40°C to 80°C]	
	<b>Weight</b>	7.3 lbs (3.3 kg)	4.6 lbs (2.1 kg), <b>(-S Models):</b> 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	
	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	
<b>MOUNTING &amp; COMMISSIONING</b>	<b>Angle of Rotation</b>	95°, adjustable 30 to 95° w/ ZDB-AF2 US accessory 	95° (adjustable with mechanical end stop, 35° to 95°) 	
	<b>Power Supply</b>	24 VAC, ± 20%, 50/60 Hz; 24 VDC, ±10%	24 VAC, ± 20%, 50/60 Hz; 24 VDC, +20/-10%	
<b>ELECTRICAL WIRING</b>	<b>Power Consumption</b>	<b>Running</b>	6 W	7.5 W
		<b>Holding</b>	2.5 W	3 W
	<b>Transformer Sizing</b>	10 VA (Class 2 power source)	10 VA (Class 2 power source)*	
	<b>Auxiliary Switches</b>	<b>(-S Models):</b> 2 x SPDT 7A (2.5A) @ 250 VAC, UL Approved, one set at +5°, one adjustable 25° to 85° 	<b>(-S Models):</b> Two SPDT 3A (0.5A inductive) @ 250V UL Approved, one set at + 10°, one adjustable 10° to 90° 	
<b>Electrical Connection</b>	3 ft, 18 GA appliance cable 1/2" conduit connector, <b>(-S Models):</b> Two 3 ft, 18 GA, appliance cables, 1/2" conduit connectors 	3 ft, 18 GA, appliance cable, 1/2" conduit connector, <b>(-S Models):</b> 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 		
<b>CONSTRUCTION</b>	<b>Housing Rating</b>	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2	
	<b>Housing Material</b>	Zinc coated metal	Zinc coated metal and plastic casing	
	<b>Agency Listings</b>	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	
	<b>Storage Temperature</b>	-40 to 176° F (-40 to 80° C)	-40 to 176°F (-40 to 80°C)	
	<b>Weight</b>	6.0 lbs. (2.7 kg)	4.6 lbs. (2.1 kg), <b>(-S Models):</b> 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
<b>MOUNTING &amp; COMMISSIONING</b>	<b>Angle of Rotation</b>	95°, adjustable 30 to 95° w/ ZDB-AF2 US accessory 	95° (adjustable with mechanical end stop, 35° to 95°) 
	<b>Power Supply</b>	24 VAC, ± 20%, 50/60 Hz; 24 VDC, ±10%	24 VAC, ± 20%, 50/60 Hz; 24 VDC, +20/-10%
<b>ELECTRICAL WIRING</b>	<b>Power Consumption</b>	<b>Running</b>	6 W
		<b>Holding</b>	2 W
	<b>Transformer Sizing</b>	10 VA (Class 2 power source)	10 VA (Class 2 power source)*
	<b>Auxiliary Switches</b>	N/A	N/A
	<b>Electrical Connection</b>	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 
<b>CONSTRUCTION</b>	<b>Housing Rating</b>	NEMA 2, IP54	NEMA 2, IP54, Enclosure Type2
	<b>Housing Material</b>	Zinc coated metal	Zinc coated metal and plastic casing
	<b>Agency Listings</b>	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
	<b>Storage Temperature</b>	-40 to 176° F (-40 to 80° C)	-40 to 176°F (-40 to 80°C)
	<b>Weight</b>	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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