

AFB24-MFT-X1

Modulating, Spring Return, 24 V, Multi-Function Technology®



Technical Data	
Power Supply	24 VAC, ±20%, 50/60 Hz, 24 VDC, -10% / +20%
Power Consumption Running	7.5 W
Power Consumption Holding	3 W
Transformer Sizing	10 VA (class 2 power source)
Electrical Connection	18 GA appliance rated cable with 1/2" conduit connector protected NEMA 2 (IP54) 3ft [1m] 10ft [3m] and 16ft [5m]
Overload Protection	electronic throughout 0° to 95° rotation
Operating Range Y	2 to 10 VDC, 4 to 20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor), variable (VDC, PWM, floating point, on/off)
Feedback Output U	2 to 10 VDC, 0.5 mA max, VDC variable
Angle of Rotation	95°, adjustable with mechanical end stop, 35° to 95°
Nominal Torque	Min. 180 in-lbs [20 Nm]
Direction of Rotation (Motor)	reversible with built-in switch
Direction of Rotation (Fail-Safe)	reversible with CW/CCW mounting
Position Indication	visual indicator, 0° to 95° (0° is full spring return position)
Manual Override	5 mm hex crank (3/16" Allen), supplied
Running Time (Motor)	default 150 sec, variable 70...220 sec
Running Time (Fail-Safe)	<20 sec
Override Control	min. position = 0% , mid. Position = 50% , max. position = 100% (Default)
Ambient Humidity	max. 95% RH non-condensing
Ambient Temperature Range	-22°F to 122°F [-30°C to 50°C]
Storage Temperature Range	-40°F to 176°F [-40°C to 80°C]
Housing	NEMA 2, IP54, UL Enclosure Type 2
Housing Material	zinc coated metal and plastic casing
Agency Listings†	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC
Noise Level (Motor)	<40 dB (A)
Noise Level (Fail-Safe)	<62 dB (A)
Servicing	maintenance free
Quality Standard	ISO 9001
Weight	4.6 lb [2.1 kg]
Degree of Protection IEC/EN	IP54

*Variable when configured with MFT options.

†Rated Impulse Voltage 800V, Type of action 1.AA, Control Pollution Degree 3

Date created, 02/12/2018 - Subject to change. © Belimo Aircontrols (USA), Inc.

Wiring Diagrams

⚠ WARNING! LIVE ELECTRICAL COMPONENTS!
 During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

◆ Meets cULus requirements without the need of an electrical ground connection.

Ⓐ Actuators with appliance cables are numbered.

1 Provide overload protection and disconnect as required.

3 Actuators may also be powered by 24 VDC.

5 Only connect common to negative (-) leg of control circuits.

7 A 500 Ω resistor (ZG-R01) converts the 4 to 20 mA control signal to 10 VDC.

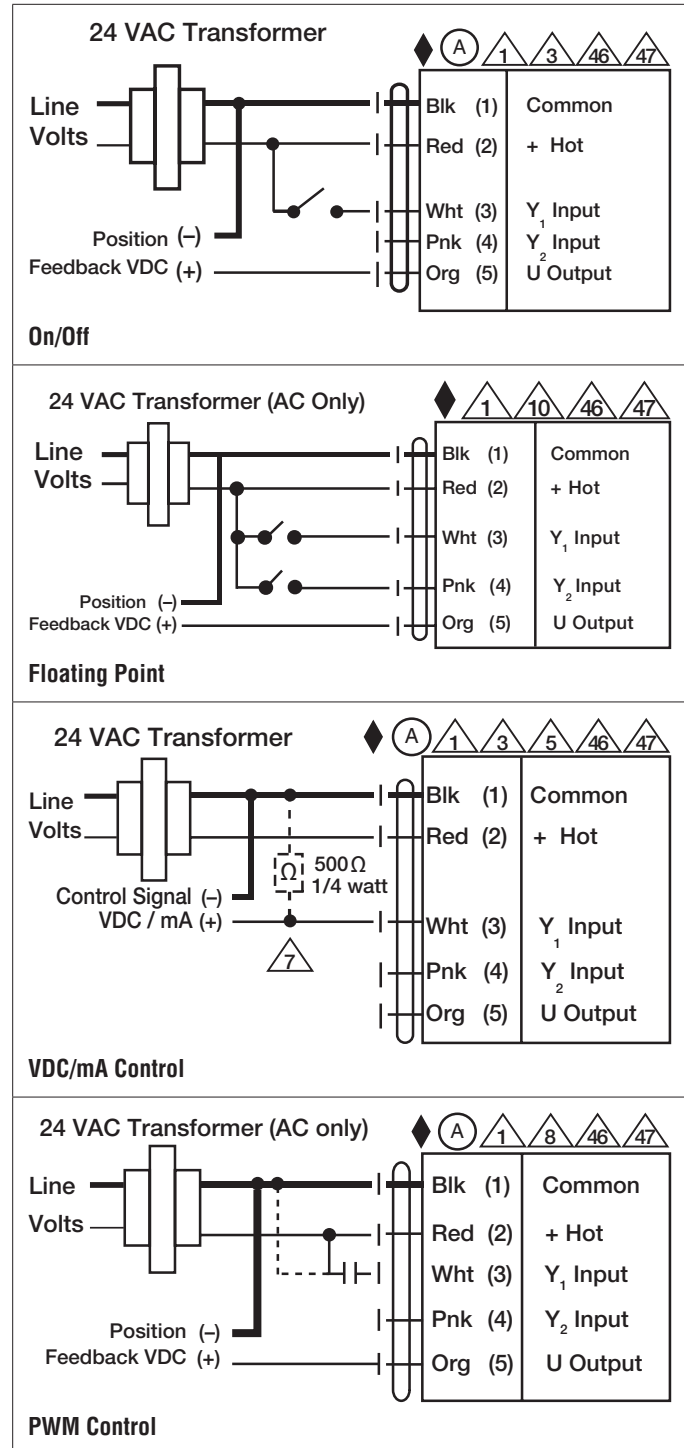
8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 VAC line.

10 For triac sink the Common connection from the actuator must be connected to the Hot connection of the controller. Position feedback cannot be used with a triac sink controller; the actuator internal common reference is not compatible.

12 IN4004 or IN4007 diode. (IN4007 supplied, Belimo part number 40155).

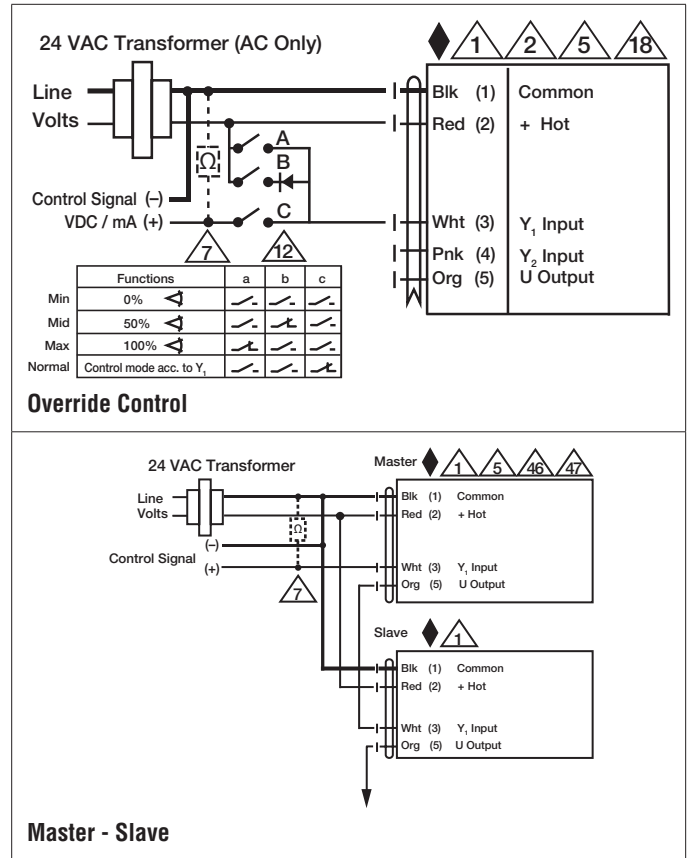
46 Actuators may be controlled in parallel. Current draw and input impedance must be observed.

47 Master-Slave wiring required for piggy-back applications. Feedback from Master to control input(s) of Slave(s).



AFB24-MFT-X1

Modulating, Spring Return, 24 V, Multi-Function Technology®



Date created, 02/12/2018 - Subject to change. © Belimo Aircontrols (USA), Inc.