

GKX24-MFT-X1 Technical Data Sheet

Modulating, Electronic Fail-Safe, 24 V, for 2 to 10 VDC or 4...20 mA Control Signal



5
5-year warranty



Technical Data

Power Supply	24 VAC, $\pm 20\%$, 50/60 Hz, 24 VDC, $\pm 10\%$
Power consumption in operation	12 W
Power consumption in rest position	3 W
Transformer sizing	21 VA (class 2 power source)
Electrical Connection	18 GA plenum cable with 1/2" conduit connector, degree of protection NEMA 2 / IP54, 3 ft [1 m] 10 ft [3 m] and 16ft [5 m]
Overload Protection	electronic throughout 0° to 95° rotation
Operating Range	DC 2...10 V (default), 4...20 mA w/ ZG-R01 (500 Ω , 1/4 W resistor), variable (VDC, on/off, floating point)
Operating range Y variable	Start point DC 0.5...30 V End point DC 2.5...32 V
Input Impedance	100 k Ω for DC 2...10 V (0.1 mA), 500 Ω for 4...20 mA, 1500 Ω for PWM, On/Off and Floating point
Position Feedback	DC 2...10 V, Max. 0.5 mA, VDC variable
Angle of rotation	Max. 95°, adjustable with mechanical stop
Direction of rotation motor	reversible with built-in switch
Direction of motion fail-safe	reversible with switch
Position indication	Mechanically, 30...65 mm stroke
Manual override	external push button
Running Time (Motor)	default 150 s, variable 95...150 s
Running time fail-safe	<35 s
Bridging time	programmable 0...10 s (2 s default) delay before fail-safe activates
Pre-charging time	5...20 s
Ambient humidity	max. 95% r.H., non-condensing
Ambient temperature	-22...122°F [-30...50°C]
Storage temperature	-40...176°F [-40...80°C]
Degree of Protection	IP54, NEMA 2, UL Enclosure Type 2
Housing material	UL94-5VA
Agency Listing	cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2004/108/EC and 2006/95/EC
Noise level, motor	52 dB(A)
Noise level, fail-safe	61 dB(A)
Maintenance	maintenance-free
Quality Standard	ISO 9001
Weight	4.0 lb [1.8 kg]

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

Safety Notes

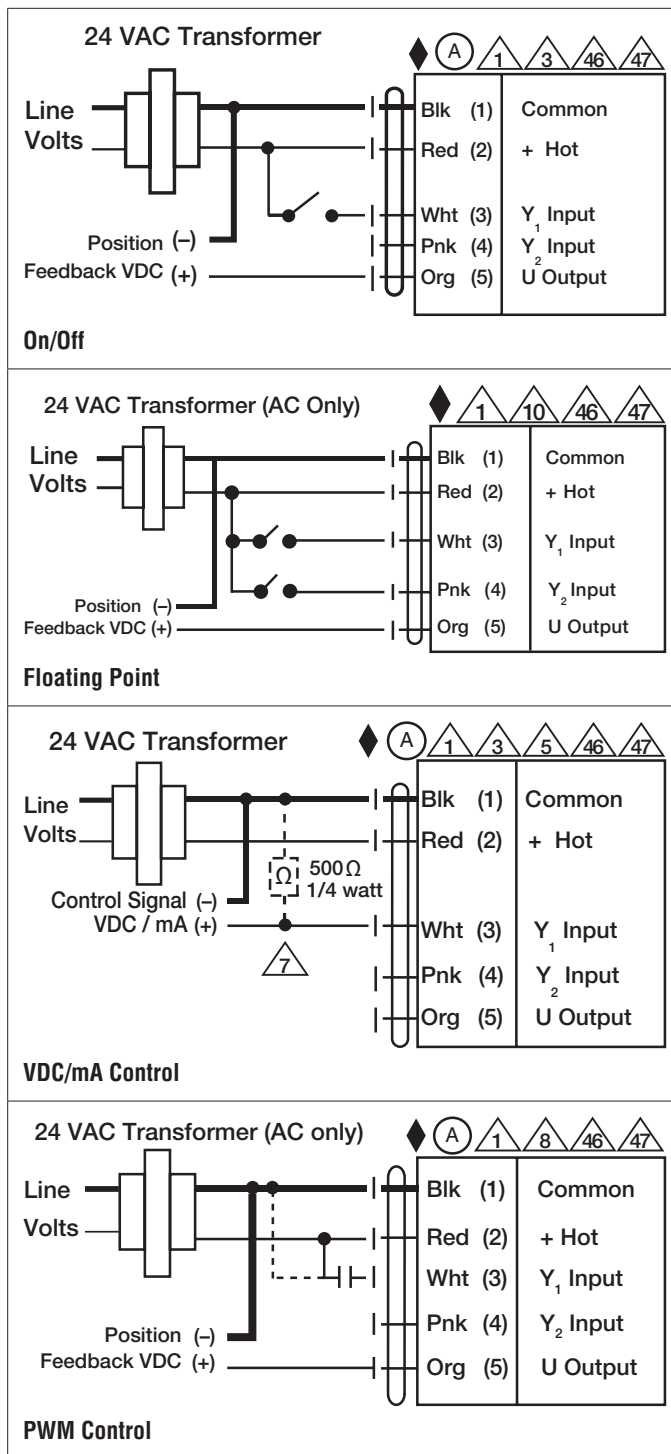
WARNING: For Belimo products sold in California: these products do or may contain chemicals which are known to the State of California to cause cancer and or birth defects or other reproductive harms. For more information see www.p65warnings.ca.gov.

Wiring Diagrams

INSTALLATION NOTES

-  **A** 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 2 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).
-  **◆** Meets cULus requirements without the need of an electrical ground connection.

 **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.



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