

ACTUATORS & DAMPERS

FAST-ACTING FAIL SAFE ACTUATORS

NKQ SERIES

DESCRIPTION

The **Belimo NKQ Series actuators** are electronic, fail safe, fast acting actuators. They are designed to deliver a 4 to 10 second (4 second is standard) fail safe return. They are not spring return, but rather they are driven by a super capacitor which allows a very fast return to the normal or fail safe position desired. The basic models come in both ON/OFF and 2-10VDC options. Auxillary switches and feedback options are available on the **NKQB24-1** model. The **NKQB24-SR** comes with a feedback of 2-10 VDC standard and the auxillary switch is an optional add-on. For more customized control, the **NKQx-MFT** models can be custom ordered based on the options available.

FEATURES

- **Standard 4 second drive time**
- **Standard 1/2" to 1.05" clamp**
- **3' plenum rated cable with conduit connector**
- **24VAC/DC power supply**
- **Direct coupled**
- **5 year warranty**



NKQ Series

BELIMO



INDIVIDUAL SPECIFICATIONS

MODEL	TORQUE	SUPPLY VA	CONTROL SIGNAL	FEEDBACK	AUXILIARY	DRIVE TIME
NKQB24-1	54 in-lb (6 Nm)	22 VA	On/Off	None	S1A or S2A (optional)	4 seconds
NKQB24-SR	54 in-lb (6 Nm)	22 VA	Proportional 2 to 10 VDC (4-20 mA)	Proportional (2-10 VDC)	S1A or S2A (optional)	4 seconds
NKQX24-MFT*	54 in-lb (6 Nm)	22 VA	Proportional 2 to 10 VDC (4-20 mA)	Proportional (2-10 VDC)	S1A or S2A (optional)	4 seconds

*Custom multi-function technology option. Default is 2 to 10 VDC.

DIMENSIONS

TORQUE	DIMENSIONS	MAXIMUM SHAFT DIAMETER	MINIMUM SHAFT LENGTH	ENCLOSURE RATING	WEIGHT
54 in-lb (6 Nm)	10.1"H x 3.86"W x 3.15"D (25.1 x 9.8 x 8.0 cm)	1.05" (2.7 cm)	1.75" (4.5 cm)	NEMA2 / IP54 UL enclosure type 2	2.4 lb (1.0 Kg)

ORDERING INFORMATION

MODEL
NKQB24-1
NKQB24-SR
NKQX24-MFT

DESCRIPTION

Electronic failsafe actuator, 54 in-lb, 24 VAC/VDC, On/Off
 Electronic failsafe actuator, 54 in-lb, 24 VAC/VDC, 2-10 VDC proportional (4-20 mA)
 Electronic failsafe actuator, 54 in-lb, 24 VAC/VDC, 2-10 VDC proportional (4-20 mA) w/ MFT technology

K-AM25
P370
S1A
S2A
ZG-NMA
ZS-100
ZS-150
ZS-260

ACCESSORIES

0.75" (1.91 cm) shaft clamp
 Shaft mount auxilliary switch
 Optional SPDT auxiliary switch for LM, NM, AM, GM, GK, NK
 Optional 2X SPDT auxiliary switch for LM, NM, AM, GM, GK, NK
 Crank arm adapter kit for NQB, NKQX
 Galvanized weather shield for Belimo AFB/NFB/LF/TF/GMB/AMB/NMB/LMB
 Polycarbonate weather shield for Belimo AFB/NFB/LF/TF/GMB/AMB/NMB/LMB
 Explosion proof housing

ACTUATORS & DAMPERS

FAST-ACTING FAIL SAFE ACTUATORS

NKQ SERIES

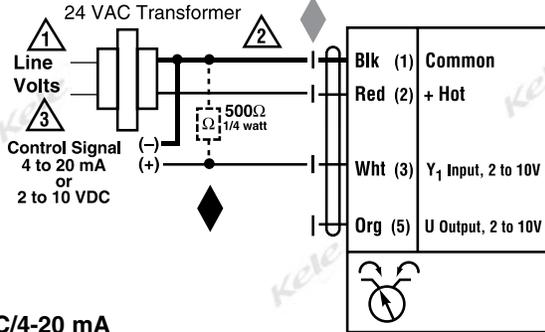


1

ACTUATORS & DAMPERS

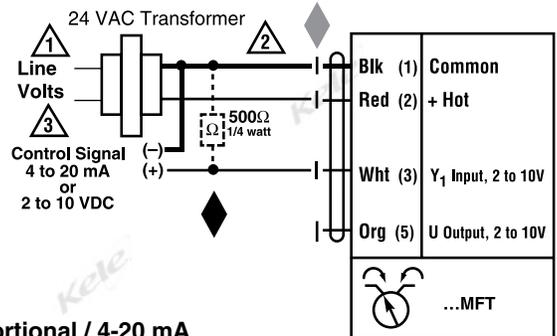
WIRING

NKQ SERIES



VDC/4-20 mA

NKQX24-MFT SERIES



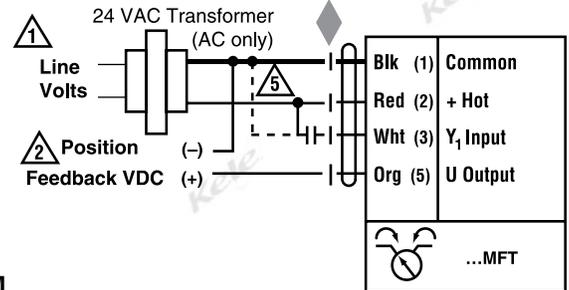
Proportional / 4-20 mA

INSTALLATION NOTES

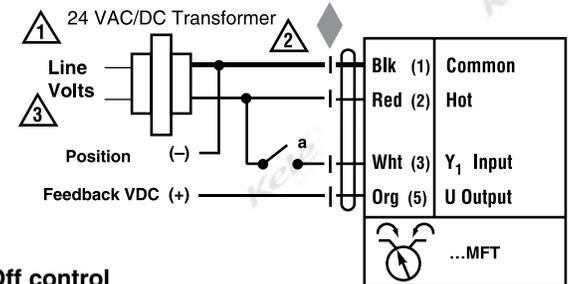
- 1 Provide overload protection and disconnect as required.
- 2 **CAUTION EQUIPMENT DAMAGE!** Actuators may be connected in parallel if not mechanically mounted to the same shaft. Power consumption and input impedance must be observed.
- 3 Actuators may also be powered by 24 VDC.
- 4 Position feedback cannot be used with Triac sink controller. The actuator internal common reference is not compatible.
- 5 Control signal may be pulsed from either the Hot (source) or the Common (sink) 24 VAC line.
- 8 Contact closures A & B also can be triacs. A & B should both be closed for triac source and open for triac sink.
- 9 For triac sink the common connection from the actuator must be connected to the hot connection of the controller.

APPLICATION NOTES

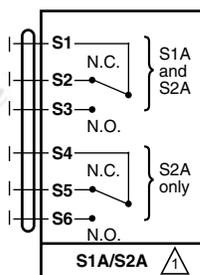
- ◆ Meets UL requirements without the need for an electrical ground connection.
- ◆ The ZG-R01 500Ω resistor may be used.
- ⚠ **WARNING: LIVE ELECTRICAL COMPONENTS**
During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. 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.



PWM

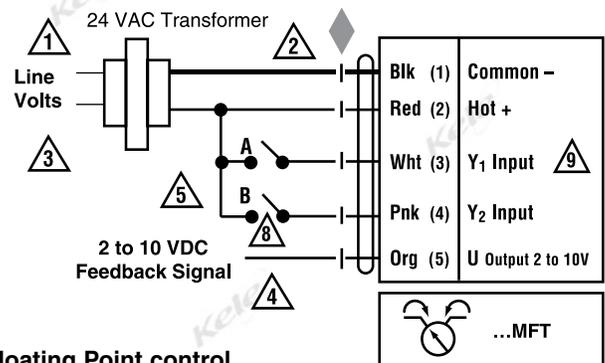


On/Off control



S1A/S2A
for GK and NK Motors (add-on auxiliary functions)
SPDT 3A (0.5A inductive) @ 250 VAC

⚠ Meets cULus and CSA requirements without the need of an electrical ground connection.



Floating Point control