



5-year warranty



Technical data

| | | |
|------------------------|------------------------------------|---|
| Electrical data | Nominal voltage | AC/DC 24 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Power consumption in operation | 7.5 W |
| | Power consumption in rest position | 3 W |
| | Transformer sizing | 10 VA (class 2 power source) |
| | Electrical Connection | 18 GA appliance cable, 3ft [1m] 10ft [3m] and 16ft [5m], with 1/2" conduit connector, degree of protection NEMA 2 / IP54 |
| | Overload Protection | electronic throughout 0...95° rotation |
| Functional data | Operating range Y | 2...10 V |
| | Operating range Y note | 4...20 mA w/ ZG-R01 (500 Ω, 1/4 W resistor) |
| | Operating range Y variable | Start point 0.5...30 V End point 2.5...32 V |
| | Options positioning signal | variable (VDC, PWM, on/off, floating point) |
| | Position feedback U | 2...10 V |
| | Position feedback U note | Max. 0.5 mA |
| | Position feedback U variable | VDC variable |
| | Direction of motion motor | selectable with switch 0/1 |
| | Direction of motion fail-safe | reversible with cw/ccw mounting |
| | Manual override | 5 mm hex crank (3/16" Allen), supplied |
| | Angle of rotation | 95° |
| | Angle of rotation note | adjustable with mechanical end stop, 35...95° |
| | Running Time (Motor) | 150 s / 90° |
| | Running time motor variable | 70...220 s |
| | Running time fail-safe | <20 s |
| | Override control | MIN (minimum position) = 0% MID (intermediate position) = 50% MAX (maximum position) = 100% |
| | Noise level, motor | 40 dB(A) |
| | Noise level, fail-safe | 62 dB(A) |
| | Position indication | Mechanical |
| Safety data | Degree of protection IEC/EN | IP54 |
| | Degree of protection NEMA/UL | NEMA 2 |
| | Enclosure | UL Enclosure Type 2 |
| | Agency Listing | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02, CE acc. to 2014/30/EU Listed to UL 2043 - suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC |
| | Quality Standard | ISO 9001 |

| | | |
|--------------------|---------------------|--------------------------------------|
| Safety data | Ambient temperature | -22...122°F [-30...50°C] |
| | Storage temperature | -40...176°F [-40...80°C] |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Servicing | maintenance-free |
| Materials | Housing material | Galvanized steel and plastic housing |

Footnotes *Variable when configured with MFT options.

Accessories

| Electrical accessories | Description | Type |
|------------------------|---|--------|
| | Service Tool, with ZIP-USB function, for programmable and communicative Belimo actuators, VAV controller and HVAC performance devices | ZTH US |

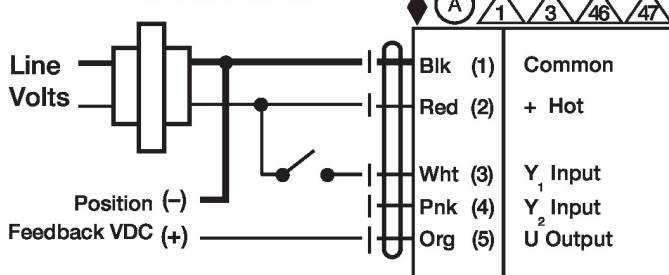
Electrical installation

- ⚠ 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 DC 24 V.
- 5 Only connect common to negative (-) leg of control circuits.
- 7 A 500 Ω resistor (ZG-R01) converts the 4...20 mA control signal to 2...10 V.
- 8 Control signal may be pulsed from either the Hot (Source) or Common (Sink) 24 V 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).

Wiring diagrams

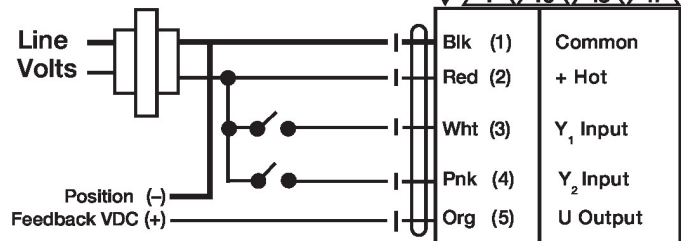
On/Off

24 VAC Transformer

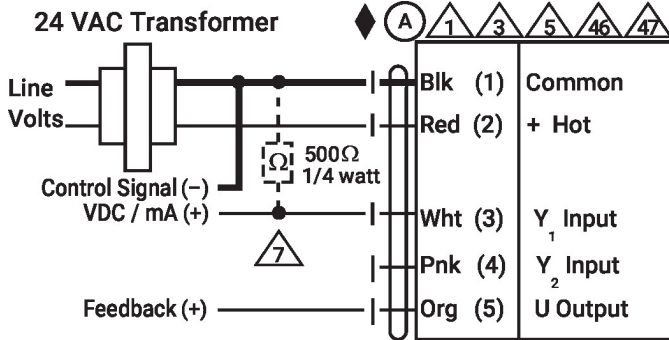


Floating Point

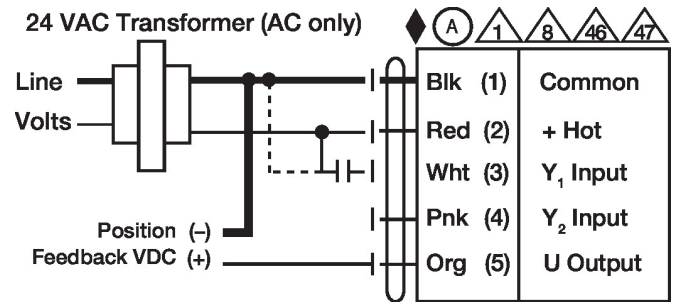
24 VAC Transformer (AC Only)



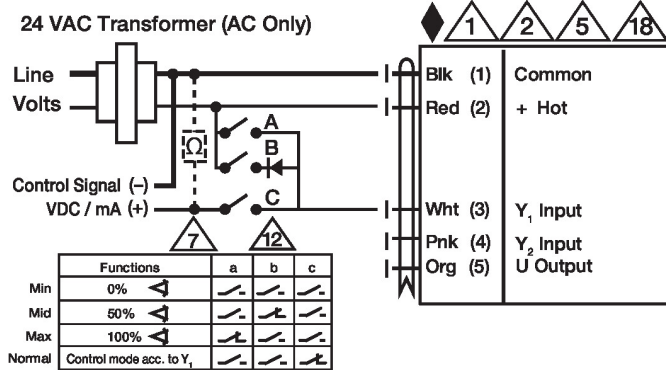
VDC/mA Control



PWM Control



Override Control



Master - Slave

