

## AL0620-24-x, AL0620-230-x Electric Linear Valve Actuators

### SPECIFICATION DATA



### APPLICATION

The AL0620-24-x, AL0620-230-x actuators provide floating control, and are suitable for use in conjunction with ON/OFF or floating single-pole, double-throw (SPDT) control outputs. They can operate Trend's standard valves in heating, ventilation, and air conditioning (HVAC) applications.

### FEATURES

- Quick and easy installation
- No separate linkage required
- No adjustments
- Low power consumption
- Force-limiting end switches
- Spring-return models
- Manual operator
- Models for low and line voltage
- Synchronous motor
- Corrosion-resistant design
- Maintenance-free

### SPECIFICATIONS

#### Temperature Limits

Ambient operating limits	-10...+50 °C at 5...95% RH
Ambient storage limits	-40...+70 °C at 5...95% RH
Medium valve temperature	Max. 150 °C

#### Protection

Protection standard	IP54 as per DIN 40050
Insulation	Class II as per DIN EN60730
Flame retardant as per	UL 94-V0 (with metal cable gland)

#### Wiring

Wiring terminals	1.5 mm <sup>2</sup>
Cable entry	M20 x 1.5 cable gland (with strain relief) and two additional knock-outs PG11 and PG13.5

#### Weight

non-spring return type	1.3 kg
spring return type	2.4 kg

#### Material

Cover	ABS-FR
Base	glass fiber reinforced plastic
Yoke	aluminum diecast

#### Dimensions

See Fig. 1 on page 3

model	AL0620 -24-K	AL0620 -24-SD	AL0620 -24-SU	AL0620 -230-SD	AL0620- -230-SU	AL0620 -230-K
supply voltage	24 Vac $\pm$ 15%, 50/60 Hz			230 Vac +10/-15%, 50/60 Hz		
power consumption	4 VA	11 VA		12 VA		6.5 VA
signal input 1	Supply voltage between terminals 1 and 24 V~; actuator stem extended. Two-way valve: "closed", three-way valve port A-AB: "open"			Supply voltage between terminals N and Ph 1; actuator stem extended: two-way valve closed; three-way valve port A - AB open.		
signal input 2	Supply voltage between terminals 2 and 24 V~; actuator stem retracted. Two-way valve: "open", three-way valve port A-AB: "closed".			Supply voltage between terminals N and Ph 2; actuator stem retracted: two-way valve open; three-way valve port A - AB closed.		
stroke	20 mm					
run time at 50 Hz	1 min	1.8 min				1 min
close-off force	$\geq$ 600 N					
spring return time	--	$\approx$ 12 s				--
spring return direction (upon power failure)	--	actuator stem extends	actuator stem retracts	actuator stem extends	actuator stem retracts	--

## OPERATION

### General

The drive of a synchronous motor is converted into linear motion of the actuator stem by using a spur gear transmission. The actuator stem is connected with the valve stem by a button keyed retainer connection.

An integrated spring package limits the stem force to a factory-adjusted value in either direction.

Installed microswitches switch off the actuator precisely when the specified stem force is reached.

### Manual Operation

Actuators without spring return are equipped with a manual operator used in case of power failure. Manual operation is possible only after the power supply has been switched off or disconnected.

To operate, push the manual operator knob down and turn clockwise to move the stem downward and counter-clockwise to move the stem upward. If the actuator returns to automatic control, the manual operator knob unlocks automatically.

In the case of actuators with spring return, the manual operator is located under the cover.

### Spring Return

The AL0620-24-x, AL0620-230-x spring return actuators provide a defined safety position of the valve in case of power failure.

The spring return actuators are shipped from the factory with a shipment stop (to lock the knob) in order to allow connection of the stem button retainer to the valve stem without power supply.

### Electrical Installation

The actuators are delivered with a pre-installed cable gland M20 x 1.5 (with strain relief) and two additional knock-outs for PG11 and PG13.5.

### Accessories

#### Auxiliary Switches

The actuators can be equipped on site with an auxiliary switch unit with two switches. Their switching points are adjustable over the full length of the actuator stroke.

The switches can be used to switch pumps or provide remote indication of any stroke position.

Part number: ACCA-AL06-SW

### CLOSE-OFF PRESSURE RATINGS in kPa

Stem Force	600 N								
Stroke	20 mm								
Valve Size	mm	15	20	25	32	40	50	65	80
	inch	½	¾	1	1 ¼	1 ½	2	2 ½	3
Valves	Close-Off Pressure Ratings								
V162N, V162X	1600	1600	1000	700	460	260			
V162F (20 mm)	1600/1000	1000	1000	600	350	200	120	50	
V252FP	2500	2500	2500	2500	2500	2500	2500	2500	
V163N, V163X	1600	1600	1000	700	460	260			
V163F (20 mm)	1000	1000	1000	790	480	260	160	100	

For details on the valves, see following Data Sheets:

V162N	TA200890	V163F (20 mm)	TA200893
V163N	TA200891	V162X, V163X	TA200897
V162F (20 mm)	TA200892	V252FP	TA200899

### DIMENSIONS

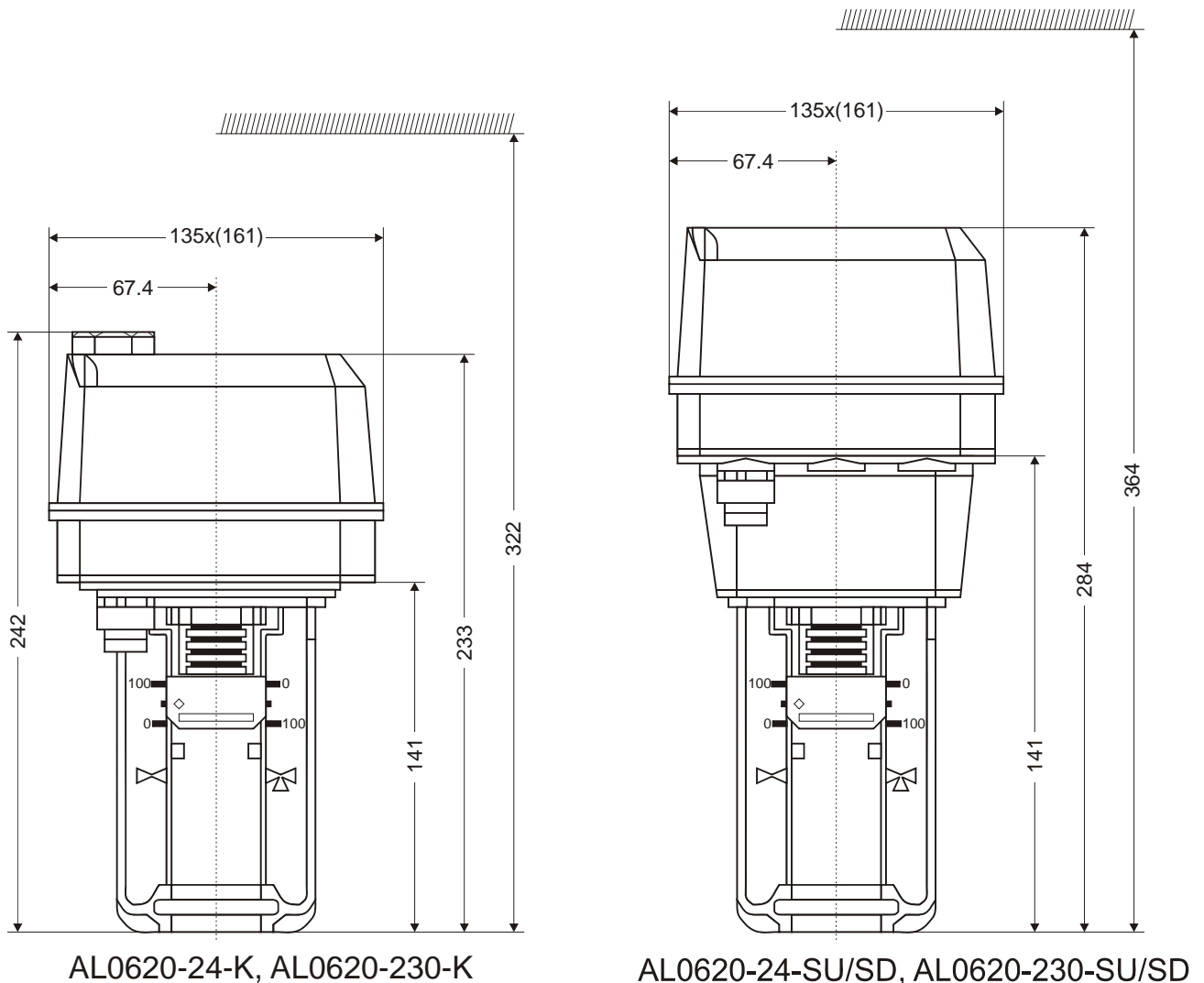


Fig. 1. Dimensions in mm

WIRING

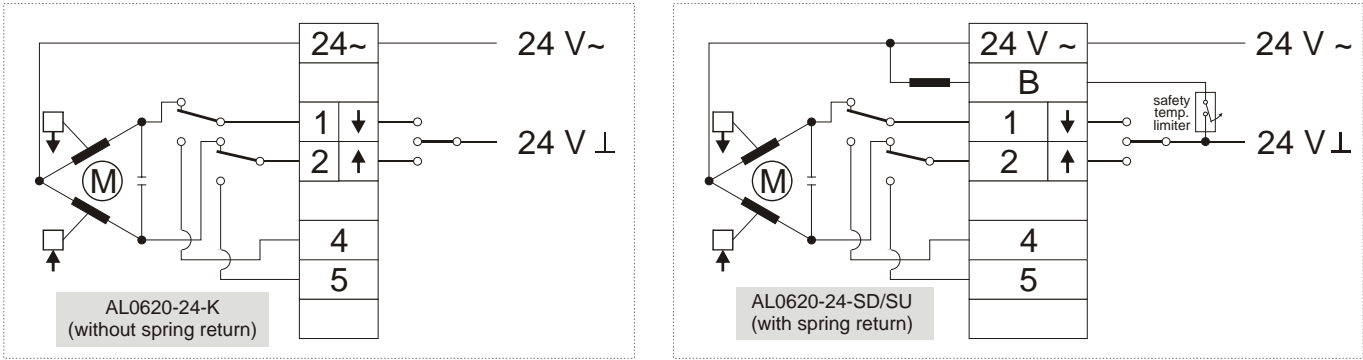


Fig. 2. Wiring 24 V~ models

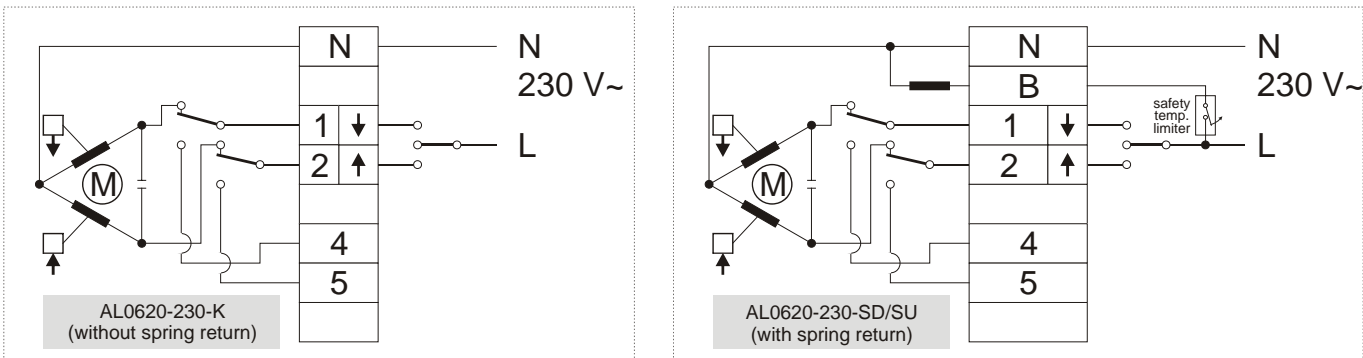


Fig. 3. Wiring 230 V~ models

AUXILIARY SWITCHES (OPTION)

Part number: ACCA-AL06-SW

auxiliary switches:  
 maximum rating  
 230 Vac  
 5 A (resistive load)  
 3 A (inductive load)

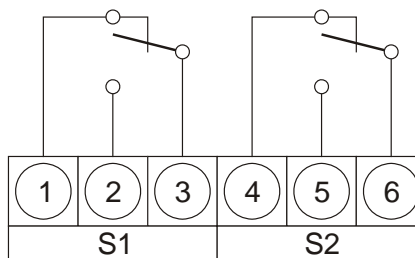



Fig. 4. Wiring auxiliary switch

DISPOSAL



**WEEE Directive:**

At the end of their useful life the packaging and product should be disposed of via a suitable recycling centre.

Do not dispose of with normal household waste.  
 Do not burn.

Manufactured for and on behalf of the Environmental and Combustion Controls Division of Honeywell Technologies Sàrl, Ecublens, Route du Bois 37, Switzerland by its Authorized Representative.

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Trend Control Systems Limited

P.O. Box 34 Horsham, West Sussex, RH12 2YF, UK. Tel: +44 (0)1403 211888, Fax: +44 (0)1403 241608, www.trend-controls.com