

CLLA20-24NSR6/230NSR6, CLLA20-24SD6/230SD6

PRODUCT DATA



CLLA20-24NSR6/-230NSR6

CLLA20-24SD6/-230SD6

GENERAL

These actuators enable floating control, and are suitable for use in conjunction with ON/OFF or floating single-pole, double-throw (SPDT) control outputs. They can operate CentraLine's standard valves in heating, ventilation, and air conditioning (HVAC) applications.

FEATURES

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

SPECIFICATIONS

Temperature Limits

Ambient operating limits	-10...+50 °C at 5...95% r.h.
Ambient storage limits	-40...+70 °C at 5...95% r.h.
Medium valve temp.	Max. 150 °C (220° C with High-Temperature Kit)

Safety

Protection class	II as per EN60730-1
Protection standard	IP54 as per EN60529
Flame retardant housing	V0 as per UL94 (with metal cable gland)

Wiring

Wiring terminals	1.5 mm ²
Cable entry	M20. Two additional knock-outs M18 and M20 to access auxiliary switch and potentiometer

Weight

Spring-return models	1.3 kg
Non-spring return models	2.4 kg

Material

Cover	ABS-FR
Base	glass-fiber reinforced plastic
Yoke	aluminum die-cast

Noise level	≤45dB(A)
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Table 1. Specifications

model number	CLLA20-24NSR6	CLLA20-24SD6	CLLA20-230SD6	CLLA20-230NSR6
supply voltage	24 Vac ± 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: 2-way valve "closed," 3-way valve port A-AB "open"		Supply voltage between terminals N and Ph 1; actuator stem extended: 2-way valve "closed," 3-way valve port A-AB "open"	
signal input 2	Supply voltage between terminals 2 and 24 V~; actuator stem retracted: 2-way valve "open," 3-way valve port A-AB "closed"		Supply voltage between terminals N and Ph 2; actuator stem retracted: 2-way valve "open," 3-way valve port A-AB "closed"	
stroke	20 mm			
run-time at 50 Hz	1 min	1.8 min	1.8 min	1 min
close-off force	≥ 600 N			
spring return time	--	≈ 12 s		--
spring return direction (upon power failure)	--	actuator stem extends	actuator stem extends	--

OPERATION

General

The drive of a synchronous motor is converted into linear motion of the actuator stem via 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-set value in either direction.

The actuator switches off precisely when the specified stem force is reached.

Manual Operation (CLLA20-24NSR6, CLLA20-230NSR6)

The actuators without spring return are equipped with a manual operation knob used in case of power failure. Manual operation is permitted only after the power supply is switched off or disconnected.

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

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

Spring Return (CLLA20-24SD6/-230SD6)

The CLLA20-24SD6 and CLLA20-230SD6 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 manual operation knob) in order to allow connection of the stem button retainer to the valve stem without power supply.

Electrical Installation

Cable length/diameter for field mounting:

- Max. 200 m / 1.5 mm²

Force Limit Feedback

- When the actuator stem is extended to its end position, terminal 1 and 4 are connected.
- When the actuator stem is retracted to its end position, terminals 2 and 5 are connected.

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. A cable gland M20 is delivered with the unit.

Part number: 43191680-005

Auxiliary Potentiometers

The actuators can be equipped on-site with an auxiliary potentiometer. This can be used as feedback potentiometer and/or to provide remote indication of the valve position

Part number: 43191679-011 (10 kΩ)

Part number: 43191679-012 (220 Ω)

High-Temperature Kit

(for applications >150°C medium temperature)

order number High-Temperature Kit	valve	DN
43196000-001	CLVT2W...P16, CLVT3W...P16, CLVF2W...P16, CLVF3W...P16, CLVF3W...P6	15...50 15...32
43196000-002	CLVF2W...P16, CLVF3W...P16, CLVF3W...P6	40...80

CLOSE-OFF PRESSURE RATINGS

Table 2. Close-off pressure ratings

stem force	600 N							
stroke	20 mm							
valve size (mm)	15	20	25	32	40	50	65	80
VALVES	close-off pressure ratings (in kPa)							
CLVT2W/3W (P16)	1600	1600	1000	700	460	260	--	--
CLVF2W (P16)	1600 ¹⁾ , 1000 ²⁾	1000	1000	600	350	200	120	50
CLVF3W2.5-100 (P6)	600	600	600	600	480	260	160	100
CLVF3W160/250/360 (P16)	1000	1000	1000	790	480	260	160	100

¹⁾ kvs 0.25 – 1.0; ²⁾ kvs 2.5 – 4.0

For details on the valves, see following documents:

- CLVT2W/3W (PN16) EN0Z-0928GE51
- CLVF2W (PN16) EN0Z-0925GE51
- CLVF3W2.5-100 (PN6/16) EN0Z-0927GE51
- CLVF3W160/250/360 (PN16) EN0Z-0924GE51

WIRING

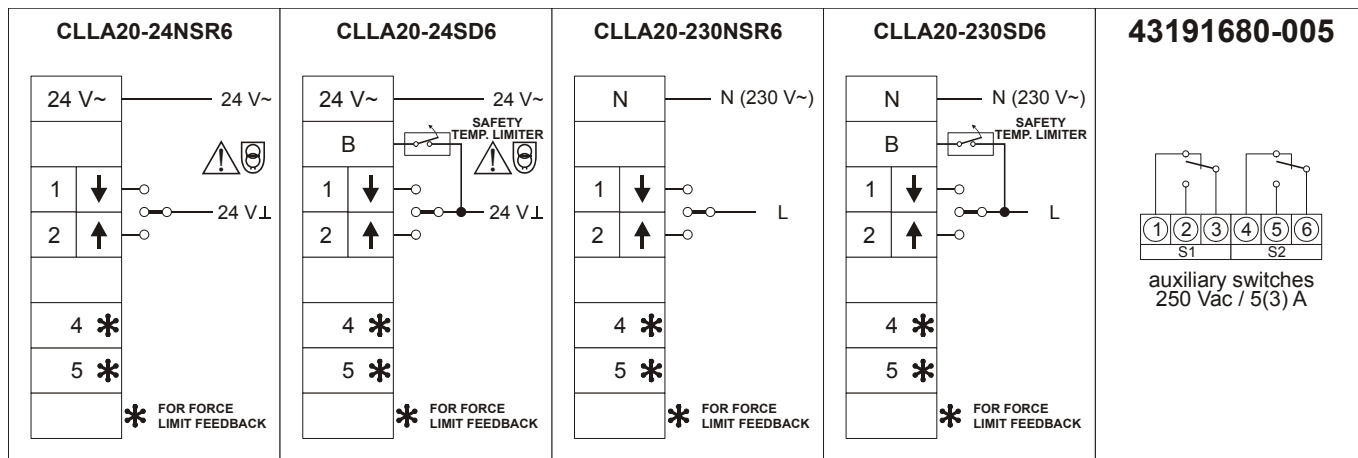


Fig. 1. Wiring

DIMENSIONS

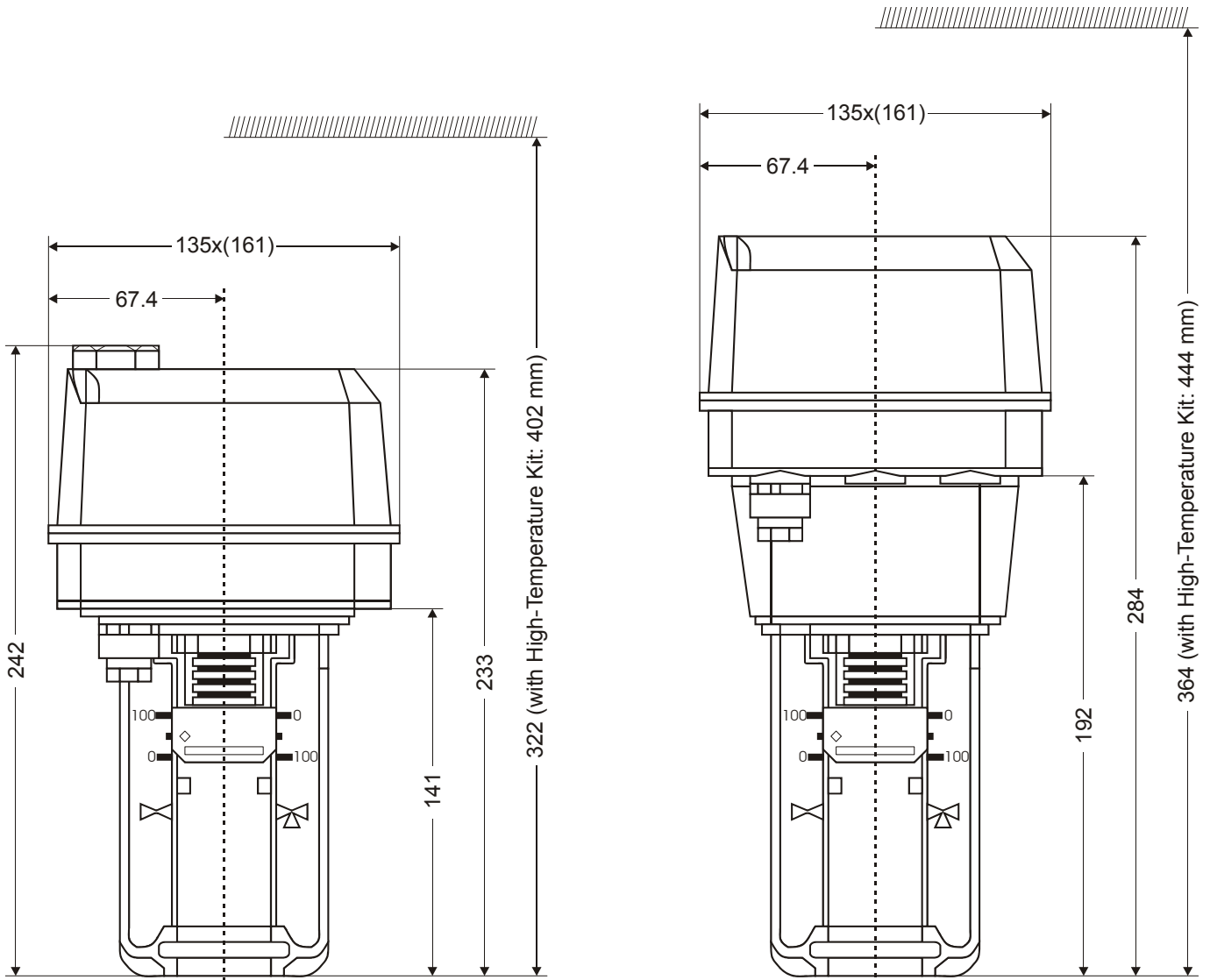


Fig. 2. CLLA20-24NSR6 / CLLA20-230NSR6 (left) and CLLA20-24SD6 / CLLA20-230SD6 (right), dimensions (in mm)

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:

Centraline
Honeywell GmbH
Böblinger Straße 17
D-71101 Schönaich
Tel +49 7031 637 845
Fax +49 7031 637 846
info@centraline.com
www.centraline.com

Centraline
Honeywell Control Systems Ltd.
Arlington Business Park
UK-Bracknell, Berkshire RG12 1EB
Tel +44 13 44 656 565
Fax +44 13 44 656 563
info-uk@centraline.com
www.centraline.com

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