

Data Sheet

ESBE CRA112 Setpoint Control

For Use with ESBE VRG Valve Bodies *See Datasheet

Features:



The ESBE CRA112 is a combined actuator and constant flow temperature control with an adjustable setting operation range. This constant regulation of flow temperature is an ideal controller for applications that require constant monitoring or regulation of temperature. Several application examples could involve domestic hot water, slab radiant heating, or return water temperature protection. Depending on the placement of the sensor and the piping of the CRA112 assembly, it will either be regulating the

temperature by either mixing or diverting. The compact CRA112 control mounts directly to an ESBE VRG valve body (½" to 2" only) - both 3-way and 4-way configurations. The CRA112 can also be mounted to ESBE's discontinued MG and G series valves up to 2" size.

Benefits:

- **Complete control package; actuator controller and remote sensor* included**
*Included sensor lead is 4.9 ft/1.5m, but available 16 ft/5m lead can be purchased (17053100)
- **Simple 'push in rocker' for navigating menu**
- **Easy to use LCD backlit digital display**
- **Quickly mounts to ESBE valve bodies**
- **Adjustable setpoint temperature range of 41° to 203°F (5° to 95°C)**
- **Able to maintain two unique setpoint temperatures with use of an external relay (ex: 120°F (49°C) and 140°F (60°C))**

Ordering Information:

Code No.	Series	Required Power Supply	Run Time (90° @ 60Hz)	Designed for Use with
12720212	CRA112	24V	25 seconds	ESBE Valves up to 2" only

Accessories/ Replacement Parts:

Code No.	Description
16000500	Replacement Assembly kit: drive sleeve, mounting stud scale, and mounting screw
17053100	Optional CRA911 Temperature sensor, 16ft (5m)
17053500	Replacement CRA913 24V power lead

Applications:

3-Way Mixing/Diverting Application	
The CRA112 can be utilized to maintain a set water temperature for a mixing or diverting application. Via the remote sensor the controller maintains the temperature by regulating the appropriate supply water temperature to the system.	

4-Way Mixing Application	
	The installation of the CRA112 on a 4-way valve will adjust the valve to provide the appropriate temperature of supply water to the system.

Indirect Hot Water Heater	
	The utilization of the CRA112 on an indirect hot water will help in maintaining appropriate tank temperature at both a minimum and maximum setting thus providing a consistent temperature within the indirect.

Radiant Heating Application	
	In radiant heating applications, the CRA112 is ideal in maintaining a consistent temperature requirement. The sensor can either maintain the required supply water temperature to the system or potentially maintain a surface temperature based upon the sensor's location.

Air Sensing Fan Coil Application	
	If there is a necessity to maintain a particular consistent air temperature across a fan coil, the CRA112 can assist in maintaining the necessary temperature.

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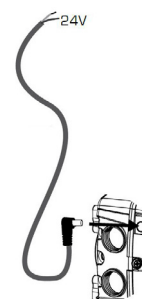
ESBE CRA112 Setpoint Control

Technical Specifications:

Supply Voltage	24 ± 10% VAC, 50/60 Hz
Power Consumption	3VA
Rotation	90°
Torque	4.42 ft. lbs (6Nm)
Mountable ESBE Valve Styles Sizes	VRG and discontinued MG & G series (up to 2")
Enclosure rating (Actuator & Control)	NEMA 12K, IP41
Ambient Temperature Range	23° to 131°F (-5° to 55°C)
Adjustable setpoint temperature range	41° to 203°F (5° to 95°C)
Weight	0.88lb (0.4kg)
Run Time	25 sec @60 Hz, 30 sec @50 Hz

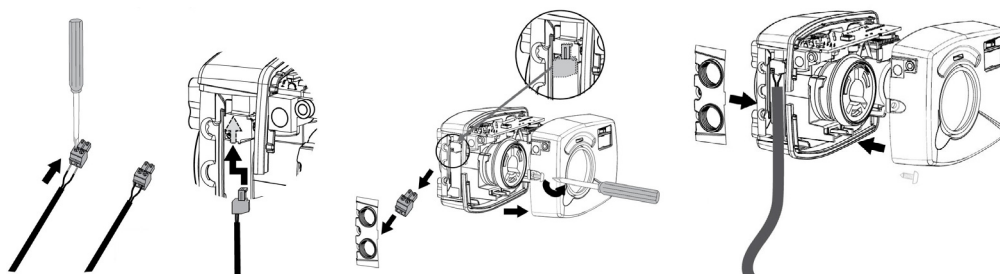
Electrical Wiring:

Included with the CRA 112 is a wire lead with a plug. The plug side is inserted directly into the control actuator while the other end of the lead is connected to a 24VAC power source.



External Relay, T2:

An external relay connected to the T2 terminals on the CRA signals the control to maintain a different setpoint temperature. When the relay is closed the control gives priority to the T2 temperature setting and overrides the primary setting. This external relay can be utilized as a setback or boosting of the setpoint temperature based upon the application requirements.

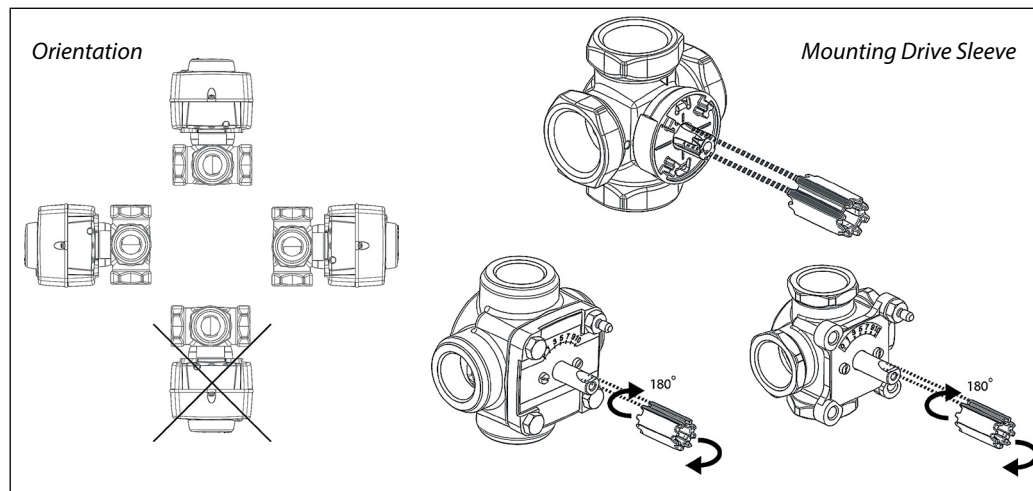


Mounting & Installation:

The actuator should be mounted with the ESBE rotary valve stem in either a horizontal position or pointing upwards. The actuator should not be installed in a downward orientation to reduce the possible contact with water. Included with the actuator is the mounting hardware necessary to mount the actuator to an ESBE rotary valve, i.e. VRG or the discontinued MG & G series.

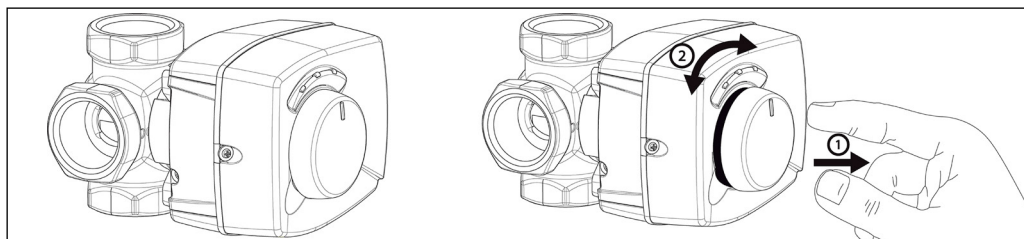
Mounting & Installation Contd.:

The orientation of the drive sleeve determines the version of valve the actuator will mount to.



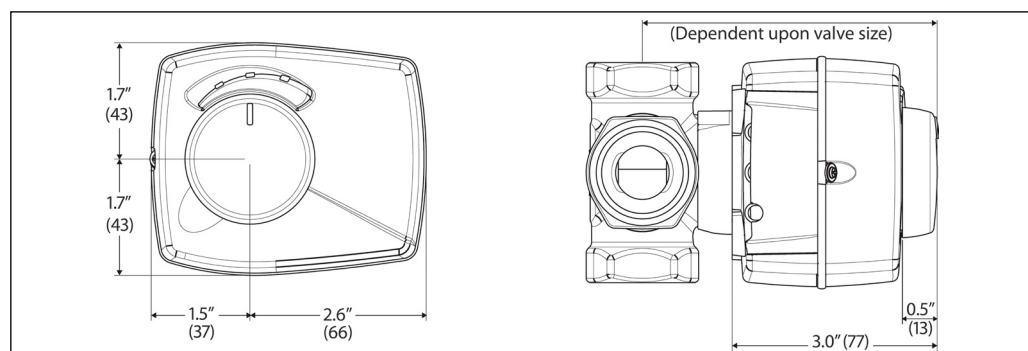
Manual Operation:

When placing the actuator in manual operation, power should be turned off to the actuator. In the event the actuator is powered and is left in a manual position, the result could lead to the internal damage to the actuator.



To manually operate the CRA actuator, partially pull out the large indicator knob (1). With it partially out, rotate the knob to the left or right to manually operate the valve (2). To return the actuator to automatic operation, rotate the knob to the position prior to manual operation and push the knob back into the original position.

Dimensions: (mm)



Additional Info:

*Please See **ESBE VRG Data sheet** for additional information.

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Danfoss
Toronto, ON
Tel.: 866-375-4822, Fax: 416-352-5981
www.na.heating.danfoss.com

Danfoss
Baltimore, MD
Tel.: 866-375-4822 Fax: 416-352-5981
www.na.heating.danfoss.com