ESBE CRK210 Unit Controller Instruction Manual

Contents

ESBE CRK210 Unit Controller

Product Specifications

- **Series:** CRK210
- **Voltage:** 230 VAC
- **Temperature Range:** C + 77 (C= see valve)
- **Torque:** 6 Nm
- **Weight:** 0.5 kg
- **Note:** Replaces 12725100
- **Certifications:** LVD 2014/35/EU, EMC 2014/30/EU, RoHS3 2015/863/EU

Product Usage Instructions

Installation

- Power supply by 230 V AC adapter (complete with transformer, cable and wall socket plug).
- Flow temperature sensor comes with 1.5m cable included (longer cable available as accessory). The sensor must be carefully insulated from ambient temperature.
- Adaptor kits for easy fitting onto ESBE rotary mixing valves series VRx are supplied with each controller. Adaptor kits can also be ordered separately.

Operation

The CRK210 is a constant temperature controller intended for applications where a constant flow temperature is desired. It is integrated with an actuator and designed to be used with rotating mixing valves series VRx.

Suitable Mixing Valves

- Series VRG130
- Series VRG230
- Series VRG330
- Series VRH130

- Series 3MG
- Series 3G
- Series 3F
- DN50

Frequently Asked Questions

- **Q:** What is the purpose of the CRK210 controller?
  - **A:** The CRK210 is designed to provide constant flow temperature control for devices with combined heating and cooling function.
- **Q:** How is the CRK210 powered?
  - **A:** The CRK210 is powered by a 230 V AC adapter.
- **Q:** Can the flow temperature sensor cable be extended?
  - **A:** Yes, a longer cable for the flow temperature sensor is available as an accessory.

INTRODUCTION

- ESBE Series CRK210 are combined actuators with controllers. The CRK210 range offers constant flow temperature control for devices with combined heating & cooling function. The Series CRK210 is intended to be used with valves Series VRx.

OPERATION

- The CRK210 is a constant temperature controller intended for applications where a constant flow temperature is desired. The controller is integrated with an actuator and foreseen to be used with rotating mixing valves series VRx.
- The Series CRK210 consists of two main components; an actuator and a flow temperature sensor. The primary function of the controller is to keep a constant set temperature at the sensor location. The series comes with a T/T2 (main temperature to alternative temperature) setting, which is also used to control the opening direction of actuator. This feature is intended for devices with combined heating and cooling function set by relay. But additional equipment is needed to release the relay, e.g. a clock in case the heating/cooling unit has no available control signal. The release of the relay will change the working direction of the actuator to correspond with the workning mode of the source unit (heating mode or cooling mode). The settings are done via joystick and presented on a display.

INTRODUCTION OF ESBE SELF-ADAPTIVE SYSTEM

The ESBE Self-Adaptive System is taking care of PI factors (Proportional gain and Integral response) by learning the system behaviours and solving the issues which in the past needed to be taken care of by an installer at the controller installation site. The self-adaptive system takes care of smooth operation of the controller, eliminates issues connected to delays or controller response times and deliver a high control standard and comfort. This turns the CRK210 Series into controllers which are suited to work in any system setup or environment.

INSTALLATION

- Power supply by 230 V AC adapter (complete with transformer, cable and wall socket plug).
- Flow temperature sensor comes with 1,5m cable included (longer cable available as accessory). The sensor must be carefully insulated from ambient temperature.
- Thanks to the special interface between the controller series CRK210 and the ESBE series VRG and VRH, the unit as a whole has a unique stability and precision when regulating.

OPTIONAL EQUIPMENT

- Art. No.
- 16200700 _____
- ARA801 Auxiliary switch kit 17053100 _____
- CRA911 Flow temperature sensor, 5m cable 17056200 _____
- CRA915 UK plug

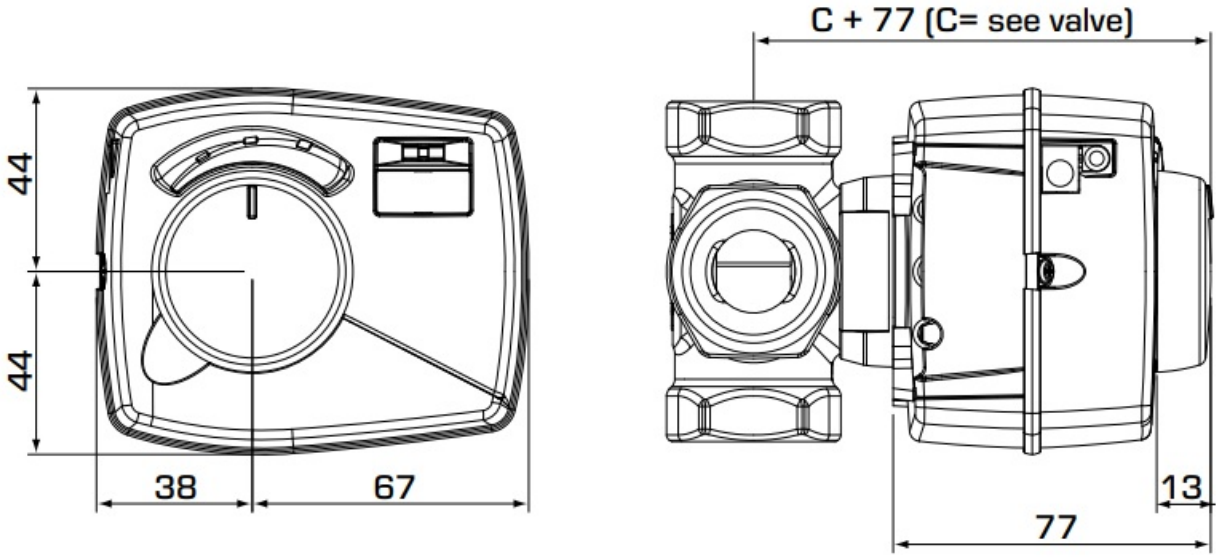
SUITABLE MIXING VALVES

- Series VRG130
- Series VRG230
- Series VRG330
- Series VRH130
- Series 3MG
- Series 3G
- Series 3F ≤ DN50

ADAPTOR KITS

Required adaptor kits for easy fitting onto an ESBE rotary mixing valve series VRx is supplied with each controller. Adaptor kits can also be ordered separately.
Art. No.
16000500 _____ ESBE valve series VRG, VRH, G, MG, F
Adaptor kits for other mixing valves are available as follows:
Art. No.

- 16000600 _____ Meibes
- 16000700 _____ Watts 1
- 6000800 _____ Honeywell Corona
- 16000900 _____ Lovato
- 16001000 _____PAW
- 16001100 _____Wita Minimix, Maximix



SERIES CRK210

Art. No.	Reference	Voltage [V AC]	Temp. range	Torque [Nm]	Weight [k g]	Note	Replaces
12729100	CRK211	230	5–95°C	6	0,5		12725100

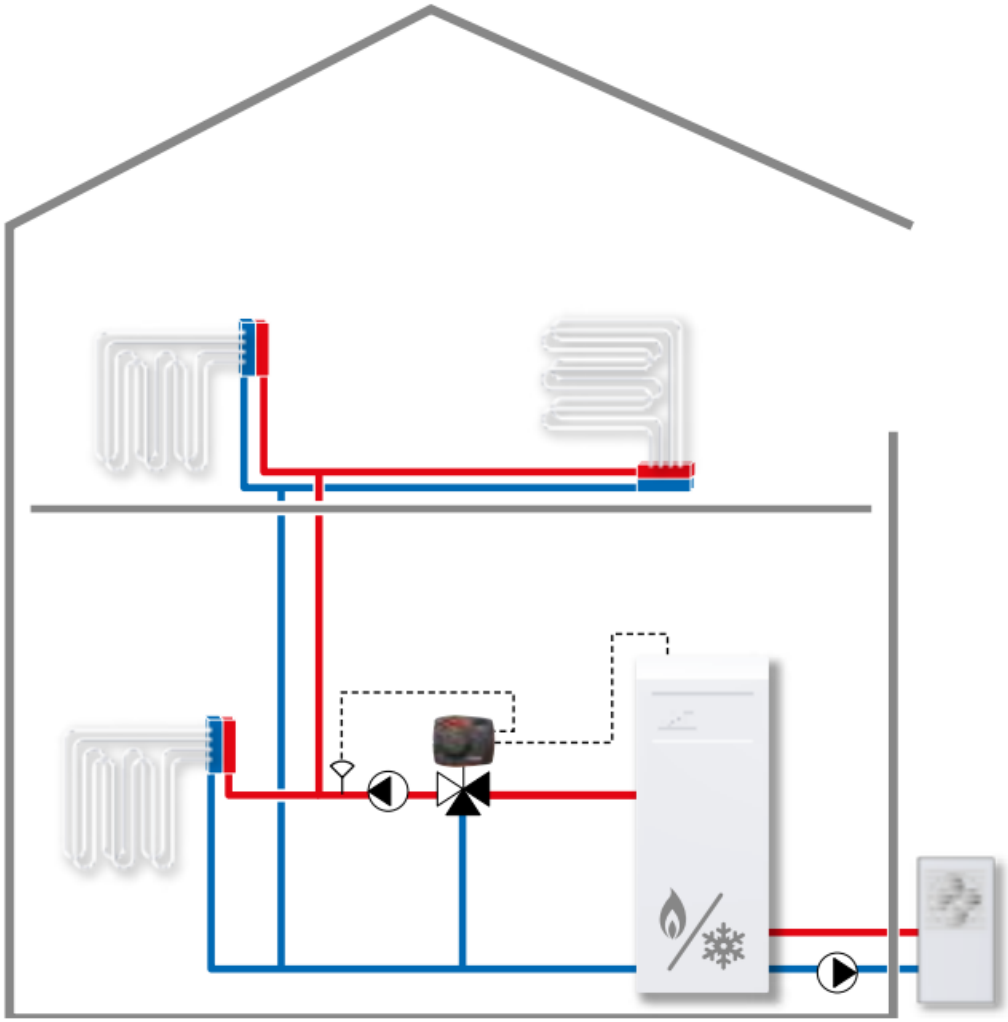
TECHNICAL DATA

- **Ambient temperature:**_____max. +55°C
  - _ _____ min. –5°C
- **Sensor type:**_____ NTC
- **Temperature range:**
  - Flow temperature sensor_____ +5 to +95°C
- **Enclosure rating, Actuator unit:**_____IP41
- **Protection class:**_____ II
- **Power supply, Actuator unit:**_____ 230 ± 10% V AC, 50 Hz
- **Power consumption (230 V AC):**_____ 10 VA
- **Torque (Actuator):**_ _____ 6 Nm
- **Running time at max. speed (Actuator**):_____ 30s
- **ErP Temperature control class:**_____N/A
- **Energy efficiency contribution**:_____N/A

LVD 2014/35/EU EMC 2014/30/EU RoHS3 2015/863/EU

- **WIRING** Please see the Installation Instruction

INSTALLATION EXAMPLE



Constant flow temperature going to the heating circuit

The CRK210 controls and secures the set flow temperature. The controller is connected to the device with combined heating and cooling function. The connection is done via relay, which when released will change the opening direction of the CRK210. This feature allows the CRK210 to adjust the work principle between heating or cooling working mode of the heating/cooling device.

MORE INFORMATION

- The shown applications are only examples of product use!
- Before using the product in any application, the regional and national regulations need to be checked.

ESBE SERIES CRK210 • en • E

Documents / Resources

	ESBE CRK210 Unit Controller [pdf] Instruction Manual CRK210, CRK210 Unit Controller, Unit Controller, Controller

References

- User Manual