

## CONTROLLERS

# CONTROLLER SERIES CRF100

ESBE series CRF100 is the premium solution of a combined weather compensating and indoor sensor based controller with the possibility to connect the unit to ESBE Comfort control cloud service, powered by Ngenic Tune\*. With the additional room display unit, it's easy for the user to monitor, schedule and control their indoor environment either directly in the room or from their pocket.

### FUNCTIONALITY

The ESBE series CRF100 is designed to provide a high level of comfort and at the same time save energy for the house owner accomplished by using the input from both the outdoor- as well as the indoor sensor. The controller include an advanced adaptation that will build the ideal characteristic heating curve for the specific building so that the user only need to decide one thing — the desired indoor temperature.

- ESBE Comfort control cloud service allows the user to monitor and manage the heating system from a cellphone, tablet or PC. Internet connection and a LAN port is required (Ethernet cable included).
- The user can easily schedule vacations and planned absence in the Comfort Control APP giving the user possibility to affect the savings in the system even more

### OPERATION

The indoor sensor checks your indoor temperature and the sunlight that affects your house on the inside. At the same time, the control box and the outdoor sensor checks the outdoor temperature. The information is sent to the gateway, forwarding the information to the cloud where the data is processed. The control box collects control parameters and sends them to the controller which together with actual data from the flow pipe sensor adapts the heating system in an optimal way.

The user can easily schedule vacations and planned absence in the Comfort control app. Further settings, such as day to day climatic adjustments as well as the internal day and weekly program, can be set in the Room display unit.

### CONTENT

The controller consists of four main parts; the actuator unit, the outdoor sensor, ESBE room display and the additional CRU100 kit (indoor sensor, gateway and control box).

- Power supply for actuator unit by 230 V AC adapter (complete with transformer, cable and wall socket plug).
- Flow pipe sensor, comes with 1,5m cable included (longer cable available as accessory).
- Outdoor sensor with 20 m cable.
- Room display unit which contains an indoor temperature sensor, wireless
- Indoor sensor, wireless
- Gateway

\* Ngenic Tune is a third party solution provider.



CRF111

Connect it to your router or modem using a regular Internet (Ethernet) cable (included with the product).

- Control box

### INSTALLATION

Install controller. Install the cellphone application, connect the gateway to your router, connect the control box to the ESBE controller and install the sensors.

- the outdoor sensor shall be mounted on the north side of the building under the eaves in order to protect the sensor from direct sunlight and rain and be connected to the control box.
- the flow pipe sensor must be carefully insulated from ambient temperature
- the Indoor sensor should be installed on a wall in, for example, a living room. The sensor should not be exposed with direct sunlight, but needs to be able to detect light. It communicates wireless with the control box.

Your system is now connected and accessible from where ever you are in the world. Continuous access to the internet is a requirement.

### OPTIONAL EQUIPMENT

Flow pipe sensor CRA911, 5m cable \_\_\_\_\_ Art. No. 17053100

### OTHER

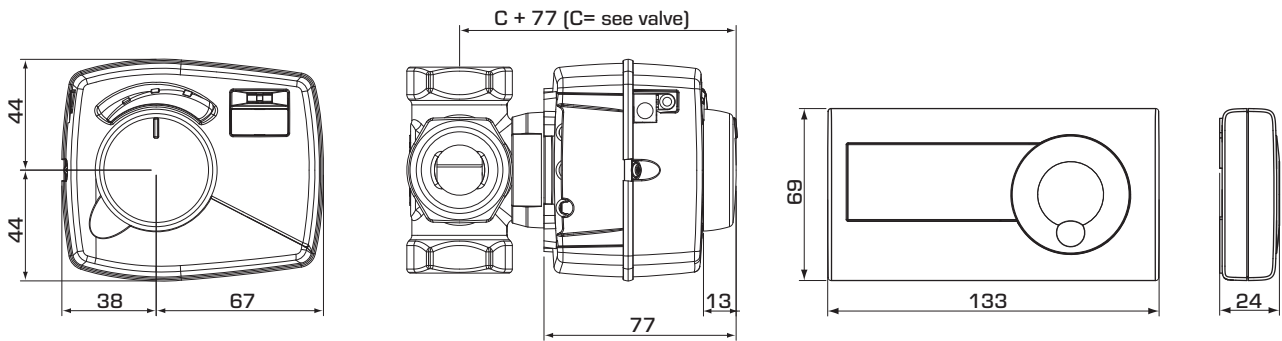
Thanks to the special interface between the controller series CRE100 and the ESBE valves series VRG, VRH and VRB, the unit as a whole has a unique stability and precision when regulating.

### SUITABLE MIXING VALVES

- Series VRG100
- Series VRG200
- Series VRG300
- Series VRH100
- Series VRB100
- Series MG\*
- Series G
- Series F ≤ DN50
- Series BIV
- Series T and TM
- Series H and HG

\* Not 5MG

# CONTROLLER SERIES CRF100



Installation dimensions for Controller Series CRF100 with ESBE VRG100, VRG200, VRG300, VRH100 and VRB100 mixing valves

Installation dimensions for Room display units

## SERIES CRF100

Art. No.	Reference	Voltage [V AC]	Torque [Nm]	Weight	Note
12870100	CRF111	230	6	2,3	

## ADAPTOR KITS

Required adaptor kits for easily fitting onto an ESBE rotary mixing valve is supplied with each actuator. Adaptor kits can also be ordered separately.

ESBE valve series VRG, VRH, VRB, G, MG, F, BIV, T, TM, H, HG \_\_\_\_\_ Art. No. 16000500

Adaptor kits for other mixing valves are available as follows:

Honeywell Corona \_\_\_\_\_ Art. No. 16000800  
 Lovato \_\_\_\_\_ 16000900  
 Meibes \_\_\_\_\_ 16000600  
 PAW \_\_\_\_\_ 16001000  
 Watts \_\_\_\_\_ 16000700  
 Wita \_\_\_\_\_ 16001100

## TECHNICAL DATA

Ambient temperature: \_\_\_\_\_ max. +55°C  
 \_\_\_\_\_ min. -5°C  
 Sensors: \_\_\_\_\_ Temperature sensor type NTC  
 Temperature range:  
 Flow pipe sensor \_\_\_\_\_ +5 to +95°C  
 Room sensor \_\_\_\_\_ +5 to +30°C  
 Outdoor sensor \_\_\_\_\_ -50 to +70°C  
 Enclosure rating - Actuator unit: \_\_\_\_\_ IP41  
 - Room display unit: \_\_\_\_\_ IP20  
 Protection class: \_\_\_\_\_ II  
 Power supply - Actuator unit: \_\_\_\_\_ 230 ± 10% VAC, 50 Hz  
 - Room display unit - wireless: \_\_\_\_\_ 2x 1,5 V LR6/AA  
 Power consumption - 230 V AC: \_\_\_\_\_ 10 VA  
 Battery endurance, wireless room display unit: \_\_\_\_\_ 1 year  
 Torque: \_\_\_\_\_ 6 Nm  
 Running time at max. speed: \_\_\_\_\_ 30s  
 ErP Temperature controls class: \_\_\_\_\_ VII  
 Energy efficiency contribution: \_\_\_\_\_ 3,5%

CE LVD 2014/35/EU  
 EMC 2014/30/EU  
 RoHS 2011/65/EU  
 RED 2014/53/EU

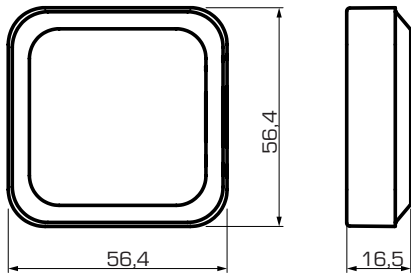
See separate CRU100 data sheet for more information about Control box, Gateway and Indoor sensor.

CONTROLLERS

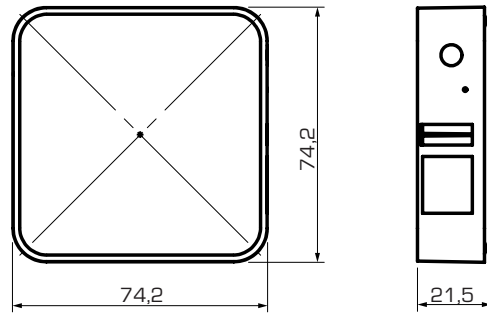
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## CRU100 PACKAGE

Indoor sensor



Gateway



Control box

