



# HM 80

## UNIVERSAL MIXING VALVE CONTROLLER

### PRODUCT DATA



### FEATURES

- Direct control of mixing valve actuators for individual room temperature control
- The HM 80 is communicating with the Chronotherm CM67RFMV, (CM67z) to keep the room temperature constant, time program, holiday function
- Manual or automatic control
- Simple binding operation to reduce installation time and costs
- Pump control, after running time adjustable 0..99 min.
- External Flow Sensor connectable NTC 20K $\Omega$ , 25°C not linear (type T7414C1012)
- Maintenance run for pump and mixing valve
- Boiler feedback heat on demand with CM67RFMV, CM67z
- Heating / Cooling operation
- RF communication check

### GENERAL

The wireless Universal Mixing valve Controller is used for heating/cooling zoning control. The HM 80 controls the mixing valve depending on the room temperature and room setpoint by using fuzzy control logic to keep the room temperature precisely constant. It can be done with and without the flow sensor T7414C1012 (optional)

The pump can be controlled directly with the HM 80 relay output 230V~.

### SPECIFICATIONS

#### ELECTRICAL

**Electrical voltage supply** : 230V ~ , 50Hz, max. 6A

**Pump relay** : 3A, cos  $\phi$  0,7, without potential free relay contact

**Mixing valve relay** : 3A, cos  $\phi$  0,7, without potential free relay contact

#### RF Communication

**Frequency** : 868,3 MHz Receiver

**Receiver class** : 2

**RF communication range** : 30m in a residential building environment

**RF communication Technology** : short, high rate transmission to minimize air time and avoid collisions

#### ENVIRONMENTAL and STANDARDS

**Storage temperature** : -20 ... +70 °C

**Operating temperature** : 0 ... +50 °C

**Dimensions (HxWxD)** : 161,5 x121x 46 mm

**Humidity** : max. 5 ... 90 %

**Material** : Socket: PA-GF 25-FR  
Cover : PC-FR VO certificated

**IP class** : IP54

**Options** : Flow sensor NTC 20K $\Omega$  connectable

**Compatible products Approv** : CM67RFMV, CM67z



# Application EXAMPLES

## Application A

### Mixing Valve Application for UFH without boiler feedback

**CM67RFMV with parameter settings**

- Pump after running time 0...99 min
- Actuator running time 0...240 s
- Min flow temperature setpoint 0...50°C
- Max flow temperature setpoint 0...99°C

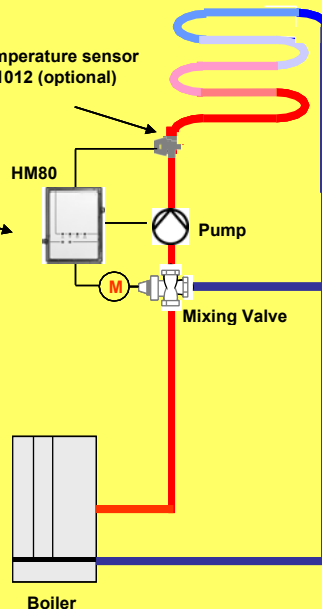


Flow temperature sensor T7414C1012 (optional)

The HM80 controls the mixing valve depending on the room temperature setpoint and communicates with the CM67RFMV. In addition the controller has a relay output for pump control and connection for the flow sensor.

**Without using the flow sensor** the mixing valve position is adjusted in accordance with the room setpoint temperature and the actual room temperature.

If the flow sensor is used the mixing valve position is adjusted in accordance with the calculated flow temperature setpoint and the measured flow temperature. The flow temperature setpoint is calculated from the room temperature setpoint and the actual room temperature deviation.



## Application B

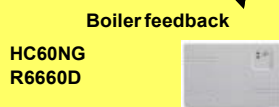
### Mixing Valve Application for UFH with boiler feedback

**CM67RFMV with parameter settings**

- Pump after running time 0...99 min
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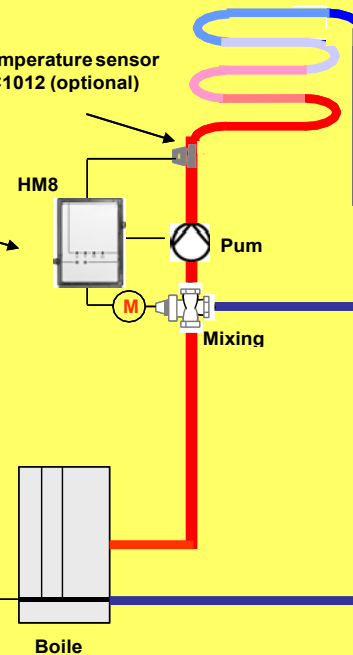


Flow temperature sensor T7414C1012 (optional)



Boiler feedback

HC60NG  
R6660D



## Application C

### Mixing Valve Application for UFH and Radiator Control HR80 without boiler feedback

**Default parameters are:**  
 Pump after running time 15 min  
 Actuator running time 150 s  
 Min flow temperature setpoint 15°C  
 Max flow temperature setpoint 55°C

Flow temperature sensor T7414C1012 (optional)

HM80

Pump

Mixing Valve

Pump

Boiler

Only Zone 1

CM67z

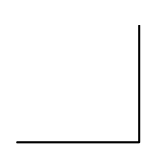
CM67z without programmed Parameters, only default parameters are used

Zone 2

HR80

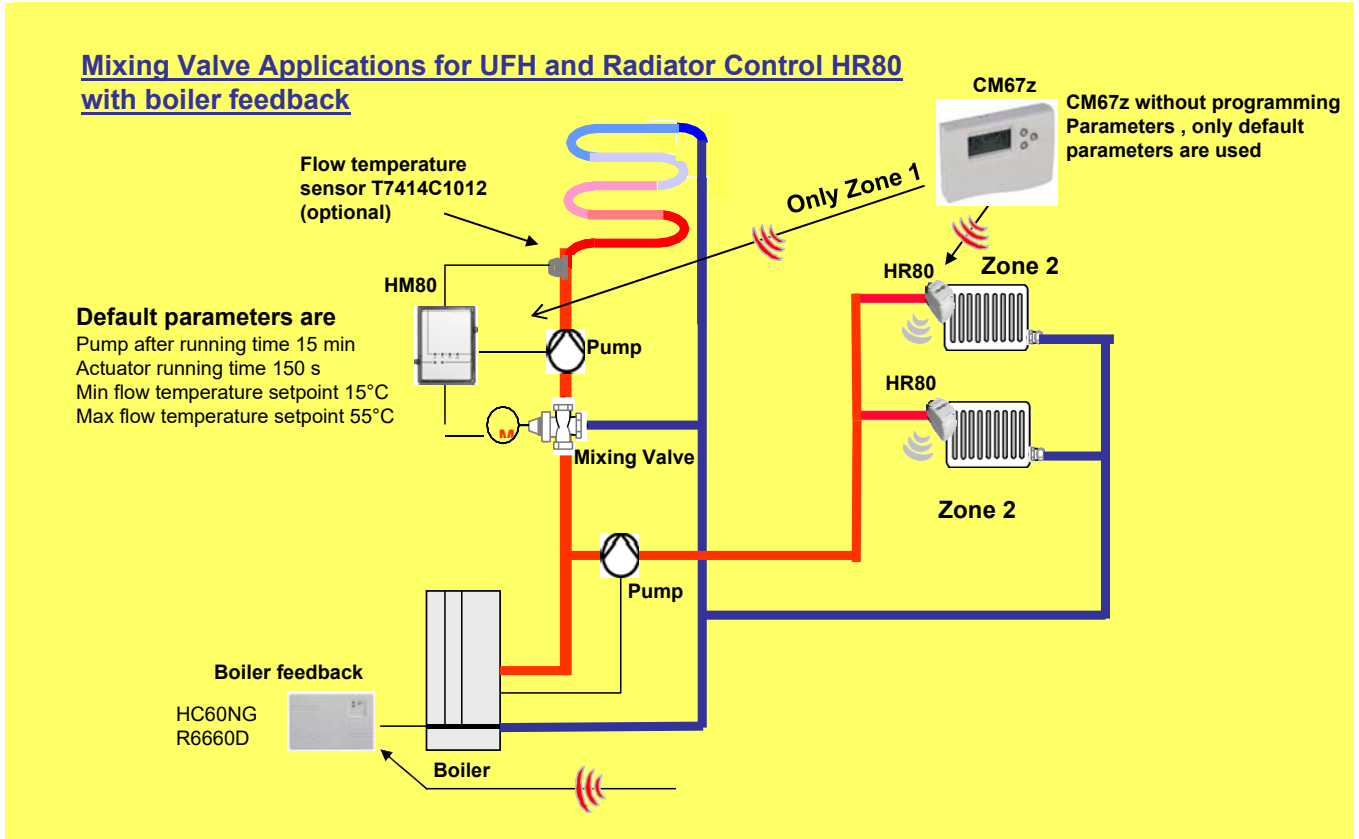
HR80

Zone 2



## Application D

### Mixing Valve Applications for UFH and Radiator Control HR80 with boiler feedback



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