

Gira KNX heating actuator,
6-gang with controller
For controlling and regulating
heating or cooling circuits

GIRA

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Heating and cooling conveniently and intelligently
controlled via KNX



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The Gira 6-gang heating actuator with integrated controller facilitates convenient integration of heating and cooling systems into intelligent building technology with KNX. The heating actuator controls up to 6 heating or cooling circuits in the building. 230 V or 24 V thermal servos can be used as drives. Six temperature controllers are integrated into the compact DRA design with 4 modular widths. They work completely independently of each other and can be flexibly assigned to the outputs. If desired, they can also be used to control further KNX heating actuators, such as the KNX heating actuator Basic, 6-gang. Existing Gira KNX 3 Komfort touch sensors, for example, are used for operation. In addition to the room temperature controllers, the heating actuator also offers integrated pump control, extensive service and maintenance functions, and the option of manual operation on the device.

Simple control

The integrated room temperature controllers in the heating actuator mean that separate room temperature controllers are not needed in the respective rooms. This means that where a Gira KNX touch sensor 3 Plus with room temperature controller was previously needed, the cheaper touch sensor 3 Komfort can now be used. The touch sensor measures the room temperature; the buttons are used to set the setpoint temperature warmer or cooler and to switch between the individual operating modes, such as comfort mode, stand-by mode and night mode.

Convenient automation

When controlled by a KNX presence detector, the heating actuator can also switch between comfort and stand-by mode. Using a KNX server, such as the Gira X1, enables further automation, for example with changes of mode based on the time of day or day of the week.



Scope for spontaneity

Residents staying longer or having a party? No problem! One touch of the button activates the comfort extension (party mode) so that the heating system remains in comfort mode for a set time despite night mode being activated.

No heat escape

Forgot to close the windows? The intelligently networked heating system reacts to save energy: should the air conditioning system detect an open window from the window contacts, the heating actuator automatically switches to frost/heat protection mode. Even without window contacts, this automatic switch-over can be triggered by the detection of rapid changes in temperature.

Comparison: KNX heating actuator, 6-gang with controller and heating actuator Basic, 6-gang

Function	KNX heating actuator, 6-gang with controller	KNX heating actuator basic, 6-gang
		
Manual operation	•	
Construction site operation (service mode)	•	
LED status display on the device	•	
Number of electrothermic servos per channel	2 × 24 V AC or 4 × 230 V AC	2 × 24 V AC or 4 × 230 V AC
Power supply	230 V AC and 24 V DC via KNX	KNX supply only
1-bit correcting variable, switching	•	•
1-byte correcting variable, PWM	•	• (New)
1-byte correcting variable, PWM with correcting variable limit	•	
Global setting of channel parameters	•	
Position protection (valve flushing)	Intelligent anti-jamming	Standard anti-jamming
Control of heating circuit pumps	•	•
Heating requirements control	•	
Transmission of the largest variable	•	
Elapsed operating time meter	•	
Cascading of several devices	•	
Emergency mode	•	•
Testing cycle after overload or short circuit	•	•
Group feedback	•	Passive only
Summer or winter operation	•	

Heat quicker, cool quicker

Floor heating reacts relatively slowly to changes in the temperature setpoint – for example if you want to heat rooms up again after some time away. If the building is equipped with additional heating or cooling devices, these can be switched on automatically by the heating actuator in the event of major deviations between the setpoint and actual temperature.

Pump control saves energy

Many modern heating systems have circulation pumps that run constantly. The heating actuator helps to save energy by using an additional KNX switching actuator to only activate the pump when a room needs to be heated or cooled. The automatic anti-jamming briefly activates the pump on a regular basis to ensure that it remains in functioning condition, even if it is rarely used.

For long-lasting valves

Even if heating valves are not used for an extended period, there is a risk of them failing due to jamming. The heating actuator's intelligent valve flushing prevents this by briefly opening and closing the valves automatically during extended periods of non-use.

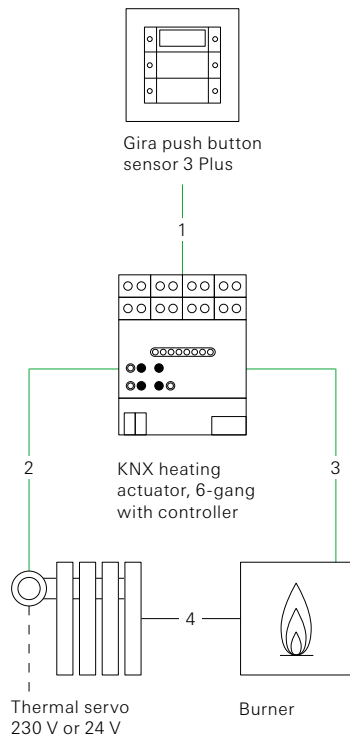
Sensor failure? You won't lose heat.

Should temperature measurement in the room ever fail, the heating actuator can automatically switch to emergency mode. Here, the connected valve is set to a programmable value so that the heating or cooling continues to run.

Maintenance to suit

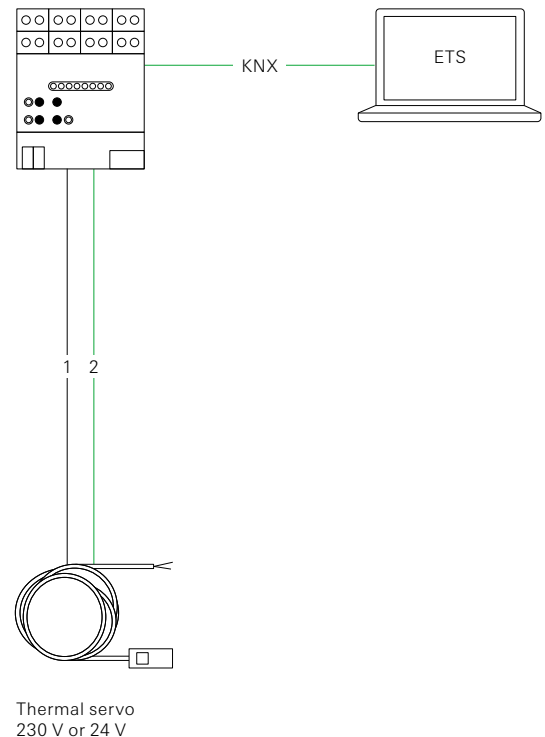
To ensure usage-appropriate maintenance cycles in the heating system, the heating actuator has an elapsed operating time meter to count how long the individual heating/cooling circuits have been active for. The data can be displayed with the Gira G1, for example. is also possible to set a limit, which triggers a maintenance signal via KNX.

Controlling a heating system via KNX



- 1 Transmission of the correcting variable telegrams via KNX
- 2 Control of the thermic servos
- 3 Transmission of heating demand information, pump control and maximum correcting variable via KNX
- 4 heating circuit

Start-up of electrothermic servos with "first-open function"



Start-up of the KNX heating actuator via ETS

- 1 Direct start-up via manual operation/construction site operation
- 2 Start-up via service mode with active KNX bus

GIRA

Gira
Giersiepen GmbH & Co. KG
Electrical installation
systems

Industriegebiet Mermbach
Dahlienstraße
42477 Radevormwald

P.O. Box 12 20
42461 Radevormwald

Germany

Phone +49 2195 602-0
Fax +49 2195 602-119

www.gira.com
info@gira.com

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Planning information

This device is a product of the KNX system and complies with the KNX guidelines. Detailed specialist knowledge gained in KNX training courses is required for understanding. The functionality of the device is dependent upon software. Detailed information regarding software versions and their range of functions as well as the software itself can be found in the manufacturer's product database. KNX-certified software is used for the planning, installation and start-up of the device.

Installation

Installation on top-hat rail pursuant to DIN EN 60715.

Technical data

General

- Ambient temperature
-5 ... +45 °C
- Storage/transport temperature
-25 ... +70 °C
- Installation width 72 mm/4 TE
- Test mark KNX/EIB/VDE
- Stand-by output max. 0.4 W
- Power loss max. 1 W

KNX supply

- KNX medium TP
- Start-up mode S mode
- Rated voltage
KNX DC 21 ... 32 V SELV
- Power consumption KNX
max. 250 mW

Device supply AC 230 V (L, N)

- Rated voltage AC 110 ... 230 V ~
- Mains frequency 50/60 Hz

Valve output supply AC 230 V

- Rated voltage AC 230 V ~

Valve output supply AC 24 V

- Rated voltage AC 24 V ~

Valve outputs

- Semiconductor contact type (Triac), ε
- Switching voltage AC 24/230 V ~
- Switching current 5 ... 160 mA
- Switch-on current max. 1.5 A (2 s)
- Switch-on current max. 0.3 A (2 min)
- Number of drives per output
- 230 V drives max. 4
- 24 V drives max. 2

Connections

- Screw terminal connection type
- Bus connection terminal connection type
- Single-wire 0.5 ... 4 mm²
- Fine-wire without core jacket
0.5 ... 4 mm²
- Fine-wire with core jacket
0.5 ... 2.5 mm²

Ordering information

- KNX heating actuator, 6-gang with controller
Order No. 2129 00

Scope of delivery

KNX connection and junction terminal included in delivery.

Optional accessories

- 230 V thermal servo
Order No. 2169 00
- 24 V thermal servo
Order No. 2179 00

Note

Update for the KNX heating actuator Basic Order No.: 211400

New KNX ETS database with additional functions:

- **Control using 1-bit or 1-byte corrected variable telegrams.**
- **For 1-byte correcting variables, the outputs are controlled by pulse width modulation (PWM).**

Subject to technical modifications.

Current prices and additional information are available in the Gira catalogue, in the Gira online catalogue at catalogue.gira.com, and at www.gira.com

