



K483

Description

The K483 series of digital electronic thermostats is constituted of appliances manufactured for use in heating and/or cooling radiant underfloor or ceiling systems, alongside the KM203 controller, the KD200 and KD300 display units, the KPM20 control unit and other communicating devices with compatible protocols.

Versions and product codes

The K483 series of thermostats is powered directly from the communication bus network and is designed for flush-mounting installation.

- The K483A version is equipped with a relay for the direct control of electrothermal or motorised actuator for circuit interceptor valves or zone valves.
- The K483B version is not equipped with integrated relay and can be used to control electric actuators indirectly, in combination with the KPM20 control module.
- The K483F version, paired with the KF200 control module to be installed on the device, is designed to control the two-pipe fan coil terminal units; in addition, it can indirectly control electric actuators in combination with the KPM20 control module.
- The K483D version is designed to be used for the control of dehumidification units, via the humidistat function additional to the basic thermostat function. This version has an integrated sensor for relative humidity measurement and controls the dehumidifier directly through the relay output; in addition, it can indirectly control electric actuators in combination with the KPM20 control module.
- The K483A/B versions can be selected (codes K483AY002 , K483BY002 and K483FY002) with an integrated capacitive-type sensor for accurate measurement of relative humidity of the ambient air mass.

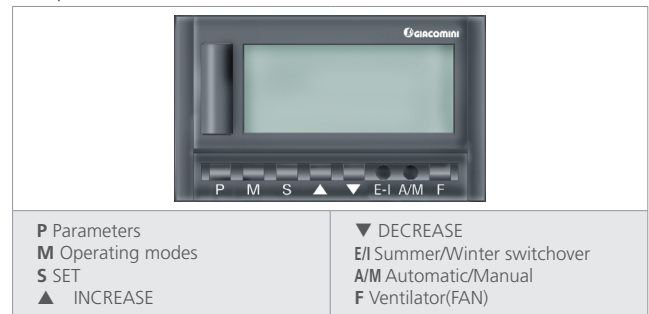
Product code	Signal bus connection	Direct control of zone actuators	Indirect control of zone actuators	Fan coil control	Dehumidifier control	R.H. sensors
K483AY001	X	X				
K483AY002	X	X				X
K483BY001	X		X			
K483BY002	X		X			X
K483FY001	X		X	X		
K483FY002	X		X	X		X
K483DY002	X		X		X	X

Technical data

FOR ALL VERSIONS	
Power supply voltage	from bus (when connected to primary or secondary bus) 8-12 V~, or 6-8 V, 50 ÷ 60 Hz
Current	I nominal 10 mA I max 50 mA
Bus	Bidirectional, RS485, 9600 baud (bd)
Measuring range	12÷28 °C ± 1% of base scale
Connections	RS485 serial bus: 4-conductor telephone cable (for distances <200 m), protected cable for greater distances
EC compliance	Residential/industrial directive CE89/336/EEC, EN50081/1, EN50082/2
Protection degree	IP 20
Environmental conditions for operation	0÷55 °C up to 90% R.H. (relative humidity).
Environmental conditions for storage	-34÷55 °C
FOR K483A AND K483D VERSIONS	
Thermal number	1 S.P.D.T. (with exchange contact)
Resistive load	8 A, 230 V~
Inductive load	4 A, 230 V~
FOR THE K483F VERSION (FAN COIL CONTROL)	
Digital outputs	4 digital-type outputs, opto-isolated open collectors, to be interfaced with KF200 control module inputs
FOR K483AY002, K483BY002 K483FY002 AND K483DY002 VERSIONS	
R.H. capacitive-type	sensor
Measuring range	10÷95 %
Accuracy at 20°C	± 3% of base scale

Control elements

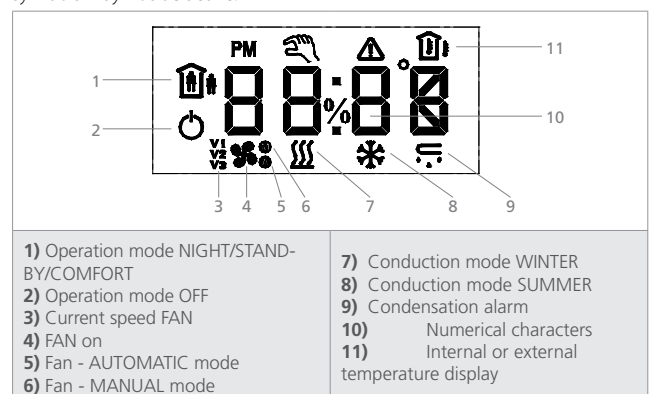
The K483 series thermostats are equipped with 8 command buttons on the front panel.



- P Parameters
- M Operating modes
- S SET
- ▲ INCREASE
- ▼ DECREASE
- E/I Summer/Winter switchover
- A/M Automatic/Manual
- F Ventilator(FAN)

Signalling elements

The K483 series of thermostats is equipped with a digital display which shows the ambient temperature and other information at all times, using appropriate symbols. Depending on which version of the thermostat is installed, some symbols may not be active.

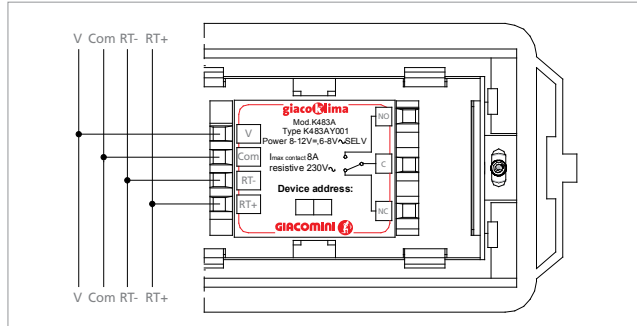


- 1) Operation mode NIGHT/STAND-BY/COMFORT
- 2) Operation mode OFF
- 3) Current speed FAN
- 4) FAN on
- 5) Fan - AUTOMATIC mode
- 6) Fan - MANUAL mode
- 7) Conduction mode WINTER
- 8) Conduction mode SUMMER
- 9) Condensation alarm
- 10) Numerical characters
- 11) Internal or external temperature display



Connection to the bus

Data is transferred between the K483 thermostat and the KPM20 control module via the system bus (connection to secondary bus) or between the K483 thermostat and the KM20x control and supervision unit (connection to primary bus) using the RT+, RT- and Com terminals. In addition, power is supplied to the thermostat through the system bus, using the V and Com terminals. The maximum number of K483 thermostats that can be connected to the control module via secondary bus is 8.



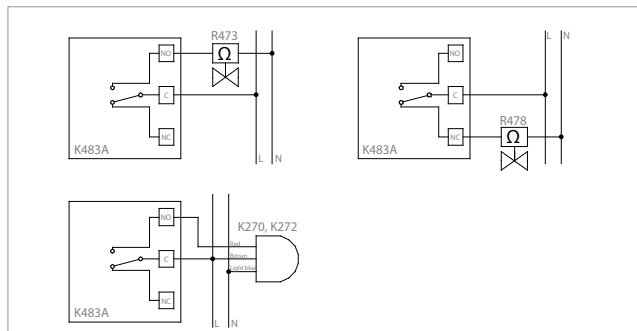
Terminal identifier	Function
RT+	Signal (standard RS485)
RT-	Signal (standard RS485)
Com	Common (signal + power supply)
V	SELV power supply



Warning.
Before proceeding with the connection to the system bus, ensure that the KPM20 control module or KM20x control and supervision unit is not connected to the power supply, in order to avoid damage to the K483 thermostat. When connecting more than 4 K483 thermostats to the KM20x controller (via primary bus), separate device power supplies must be provided. With the K483A thermostat, the bus cable (or the power cable) and the actuator connection cable cannot be placed in the same embedded channelling.

Connection to the actuator (only for K483A)

The K483A version of the thermostat is equipped with terminals for the direct control of electric actuators or motorised actuators.



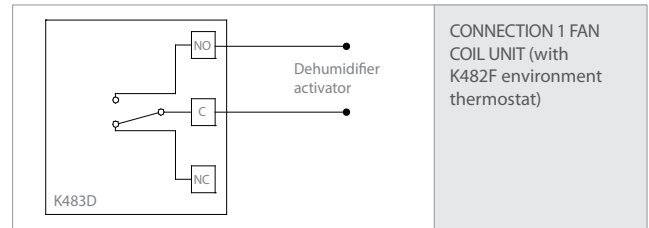
Terminal identifier	Function
NO	Contact terminal normally open
C	Common terminal
NC	Contact terminal normally closed



Warning.
When connecting several actuators to the thermostat contact, check that the maximum capacity of the output relay is not exceeded. It is not advised to connect more than 5 electric actuators of R473, R478 type in parallel, or not more than 2 motorised actuators of K270, K272 type in parallel on the same thermostat.

Dehumidifier activator output (only for K483D)

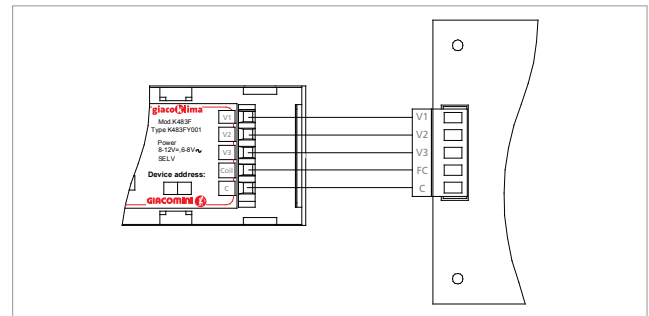
The K483D version of the thermostat is equipped with terminals for the control of the dehumidification unit. The activator is powered only when the thermostat is in SUMMER conduction mode.



Terminal identifier	Function
NO	Contact terminal normally open – the contact closes when it becomes necessary to dehumidify (R.H. measured > R.H set)
C	Common terminal
NC	Contact terminal normally closed – the contact opens when it becomes necessary to dehumidify (R.H. measured > R.H set)

Connection to KF200 module (only for K483F)

The K483F version of the thermostat is equipped to control a two-pipe fan coil terminal unit. The KF200 control module must be installed on the terminal: for connection to the motor and if necessary, to the zone valve of the fan coil unit, see the KF200 control module installation manual.



Use a 4x0,25 mm² type cable to carry out the connections between the K483 and KF200 thermostats.

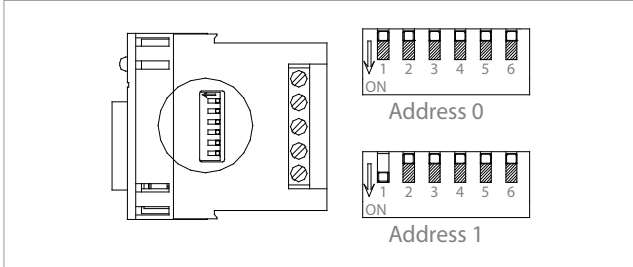


Warning.
No more than 1 KF200 unit should be connected to the K483F thermostat: to control several fan coil units in parallel, consult the electrical installation manual on the KF200 card. The KF200 control module outputs are contacts with 230 V~ power: do not power the contacts with external voltage. Use an individual embedded channel for the connection between the K483F thermostat and the KF200 control module.



Addressing

If the K483 thermostat is used in combination with the KPM20 control module and/or the KM20x controller, a physical address must be assigned through the six-way microswitch located on the left side of the device, in order to allow proper communication on the bus.



On delivery, all microswitch sliders are set to "OFF" (the side displaying numbers 1-6). On the K483 thermostat, it is possible to set the address to a value between 0 and 31: check the design documentation for the address to be assigned.

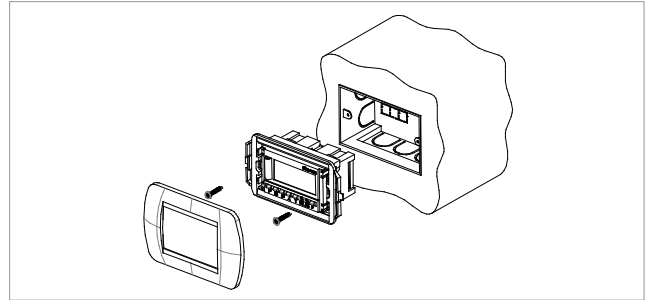
Addr.	Microswitch way position					
	1	2	3	4	5	6
0	OFF	OFF	OFF	OFF	OFF	OFF
1	ON	OFF	OFF	OFF	OFF	OFF
2	OFF	ON	OFF	OFF	OFF	OFF
3	ON	ON	OFF	OFF	OFF	OFF
4	OFF	OFF	ON	OFF	OFF	OFF
5	ON	OFF	ON	OFF	OFF	OFF
6	OFF	ON	ON	OFF	OFF	OFF
7	ON	ON	ON	OFF	OFF	OFF
8	OFF	OFF	OFF	ON	OFF	OFF
9	ON	OFF	OFF	ON	OFF	OFF
10	OFF	ON	OFF	ON	OFF	OFF
11	ON	ON	OFF	ON	OFF	OFF
12	OFF	OFF	ON	ON	OFF	OFF
13	ON	OFF	ON	ON	OFF	OFF
14	OFF	ON	ON	ON	OFF	OFF
15	ON	ON	ON	ON	OFF	OFF
16	OFF	OFF	OFF	OFF	ON	OFF
17	ON	OFF	OFF	OFF	ON	OFF
18	OFF	ON	OFF	OFF	ON	OFF
19	ON	ON	OFF	OFF	ON	OFF
20	OFF	OFF	ON	OFF	ON	OFF
21	ON	OFF	ON	OFF	ON	OFF
22	OFF	ON	ON	OFF	ON	OFF
23	ON	ON	ON	OFF	ON	OFF
24	OFF	OFF	OFF	ON	ON	OFF
25	ON	OFF	OFF	ON	ON	OFF
26	OFF	ON	OFF	ON	ON	OFF
27	ON	ON	OFF	ON	ON	OFF
28	OFF	OFF	ON	ON	ON	OFF
29	ON	OFF	ON	ON	ON	OFF
30	OFF	ON	ON	ON	ON	OFF
31	ON	ON	ON	ON	ON	OFF



Warning.
Ensure that the right address has been assigned: two devices with the same address can't be present in the same system.

Installation

Users are advised to mount the K483 thermostat on an internal wall, about 1,5 metres from the floor, in a position which is representative of the average temperature of the environment to be controlled. Do not mount the thermostat on external walls, close to doors or windows or positions which see significant exposure to solar radiation. Install the thermostat away from steam, water conduits, areas with no air circulation or sources of electrical interference. If the K483 thermostat is equipped with a Relative Humidity measurement sensor, it must be installed in clean surroundings, and must not be exposed to polluted air: the detector element is affected by the presence of active chemical substances.



Warning.
Ensure that the 230 V~ power supply is suspended while the connections are being carried out. The installation of the device must only be carried out by qualified personnel.

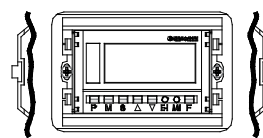
The K483 thermostat is located pre-assembled and already attached to the dedicated HOLDER supplied as standard inside the package. Therefore, in order to complete the assembly, proceed as follows:

- 1) carry out the connections and addressing as described in the previous paragraphs;
- 2) place the K483 (and HOLDER) in the 3 module box already recessed into the wall and secure the HOLDER using the screws provided;
- 3) Press on the desired covering plate.

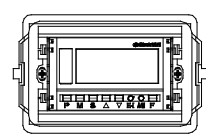
Assembly of the covering plate

Using the specially designed HOLDER, the covering PLATES of the individual domestic series can be fitted on the product:

- Bticino LIVING INTERNATIONAL
- Gewiss PLAYBUS and PLAYBUS YOUNG
- Vimar IDEA and IDEA RONDO'



To fit a LIVING INTERNATIONAL, PLAYBUS or PLAYBUS YOUNG series cover PLATE, it is necessary to break off and discard the two "wings" on each side of the holder itself.



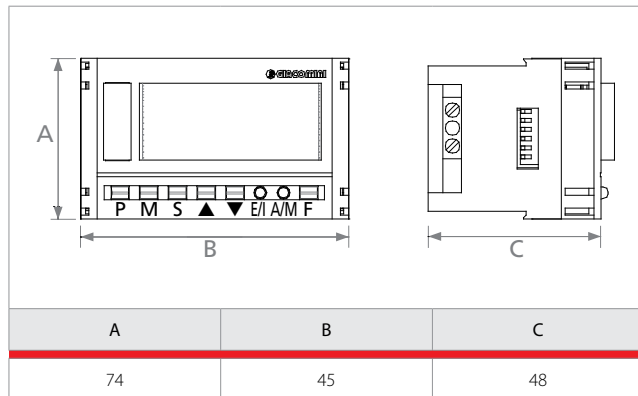
To fit an IDEA or IDEA RONDO' series cover PLATE, the "wings" must be left on the sides of the HOLDER.



Note.
Two plastic strips are provided with the product, to be used as "aesthetic covers" for the holes, which would otherwise be visible on the front of K483 units where Gewiss or Vimar PLATES are fitted.



Dimensions



Product specifications

K483A

Electronic digital thermostat for controlling ambient temperature. Flush-mounting installation in domestic box in 3 positions. SELV (Separated Extra-Low Voltage) power supply, for use with system bus. Measuring range 12÷28 °C. Environmental operating conditions 0÷55 °C. With control relay with exchange contact, for direct control of electric actuators or servo-motors for zone valve. Also available with integrated relative humidity probe. CE marked.

K483B

Electronic digital thermostat for controlling ambient temperature. Flush-mounting installation in domestic box in 3 positions. SELV (Separated Extra-Low Voltage) power supply, for use with system bus. Measuring range 12÷28 °C. Environmental operating conditions 0÷55 °C. Without control relay, for the indirect control of electric actuators in combination with the KPM20 control unit. Also available with integrated relative humidity probe. CE marked.

K483D

Electronic digital thermostat for controlling ambient temperature. Flush-mounting installation in domestic box in 3 positions. SELV (Separated Extra-Low Voltage) power supply, for use with system bus. Measuring range 12÷28 °C. Environmental operating conditions 0÷55 °C. For use with dehumidification unit with humidistat function. Supplied with integrated relative humidity probe. The control relay activates the dehumidification unit. In addition, the thermostat can indirectly control electrothermal zone actuators in combination with the KPM20 control unit. CE marked.

K483F

Electronic digital thermostat for controlling ambient temperature. Flush-mounting installation in domestic box in 3 positions. SELV (Separated Extra-Low Voltage) power supply, for use with system bus. Measuring range 12÷28 °C. Environmental operating conditions 0÷55 °C. For the use of terminal units for three-speed fan coil, the thermostat is supplied with the KF200 control module to be installed on the box. In addition, the thermostat can indirectly control electrothermal zone actuators in combination with the KPM20 control unit. Also available with integrated relative humidity probe. CE marked.

Additional information

For further information, visit the website www.giacomini.com or contact the technical service: ☎ +39 0322 923372 📠 +39 0322 923255 ✉ consulenza.prodotti@giacomini.com
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