

TSHK 681, 682: Fan-coil room-temperature controller, with digital display

How energy efficiency is improved

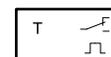
Enables controlling of HVAC components according to needs and enables automatic switching off in downtimes.

Features

- LCD of the room temperature or setpoint, with two buttons (\pm) for adjusting the setpoint
- Output for heating or cooling depending on connection type, or change in direction of travel with external switch
- With main switch for mains power supply and slide switches for three fan speeds
- Suitable for wall mounting or fitting on recessed junction boxes
- Electronics unit and switching relay
- Quasi-continuous temperature control
- Two-point pulsed activation
- Individual unitary temperature control in residential and business rooms for activating e.g. electric heating systems, thermal actuators, or fans or cooling units in air-conditioning systems.



TSHK68*F001



Technical data

Power supply		
	Power supply ¹⁾	230 V~, approx. ± 10 V, 50...60 Hz
Parameters		
	Setting range	5...30 °C; resolution 0.5 °C
	Proportional band	3 K
	Display of actual value	0...40 °C; resolution 0.1 °C
	Hysteresis ²⁾	Approx. $\pm 0.1...0.5$ K
	Shortest switching interval	Approx. 18 min (E = 0.5)
	Time constant in still air	20 min
	Dead time in still air	2 min
	Time constant in moving air (0.2 m/s)	15 min
	Dead time in moving air (0.2 m/s)	1 min
Ambient conditions		
	Admissible ambient temperature	0...55 °C
Outputs		
	Load	3(2) A, 230 V~
	Fan load	6(3) A, 230 V~
Construction		
	Weight	0.18 kg
	Housing	Pure white (RAL 9010)
	Housing material	Fire-retardant thermoplastic (fire classification UL94 HB)
	Baseplate	Black thermoplastic with NTC sensor
	Cable inlet	At rear
	Screw terminals	For wires of up to 2.5 mm ²
Standards and directives		
	Type of protection	IP 30 (EN 60529)
	Protection class	II (IEC 60730)
	Energy class	I = 1 % acc. EU 811/2013, 2010/30/EU, 2009/125/EG

¹⁾ 10% more voltage results in: P-band = approx. 4 K, switching period = 15 min, actual-value reduction = approx. 0.5 K

²⁾ The device is pulsed electronically. When the temperature increases, the control factor falls to zero at the "Heating" output and rises to E = 1 at the "Cooling" output. A small temperature variation of $\pm 0.1...0.5$ K occurs as a result of pulsing, depending on the time constant of the room



Overview of types

Type	Operating mode
TSHK681F001	Heating or cooling or heating/cooling; 2-pipe
TSHK682F001	Heating/cooling; 4-pipe

	TSHK681	TSHK682
Mains switch ON/OFF	•	(•)
Operating mode switch	—	☰ OFF ☱ ☲
Fan speeds	☰ ☱ ☲	☰ ☱ ☲
Indicators	°C digital	°C digital

Accessories

Type	Description
0362238001	Cable-type sensor, 4 m long, made of PVC, for external temperature measurement (max. 50 m)
0362239001	Pure white intermediate cover plate, suitable for various recessed junction boxes

Description of operation

The room temperature is measured by an internal NTC temperature sensor and compared with the setpoint applied. Depending on the temperature deviation, an electrical switching relay is pulsed. When the setpoint is reached, the control factor = 0.5. The controlling has a proportional behaviour with a P-band of 3 K.

If there is a power failure (longer than 1s), the setpoint entered is lost. If the setpoint is not input again, the value 22 °C is set automatically.

Intended use

This product is only suitable for the purpose intended by the manufacturer, as described in the "Description of operation" section.

All related product regulations must also be adhered to. Changing or converting the product is not admissible.

Engineering and fitting notes

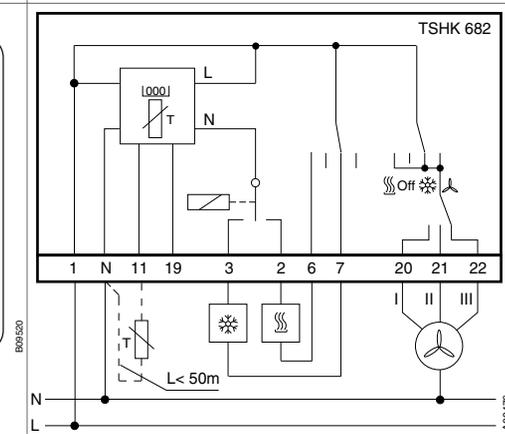
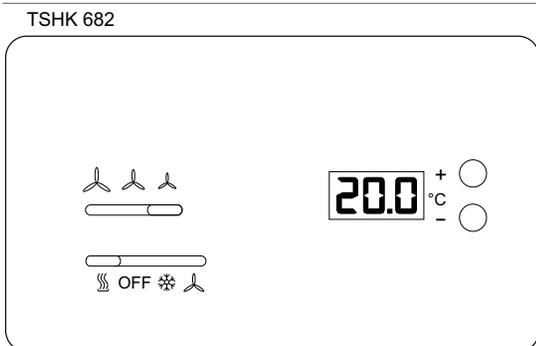
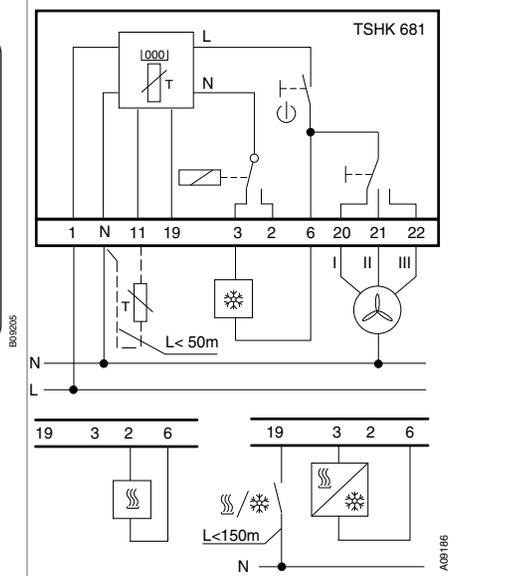
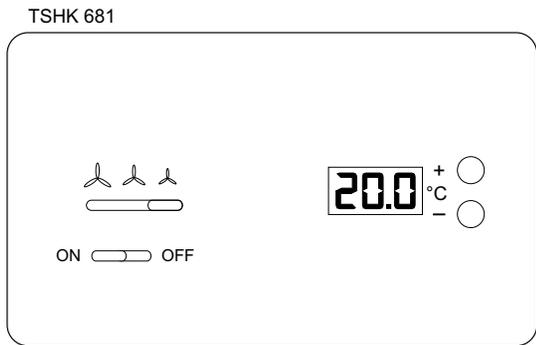
Fitting position: Horizontally on the wall. Avoid draughts and solar radiation. Fitting height approx. 1.5 m.

Disposal

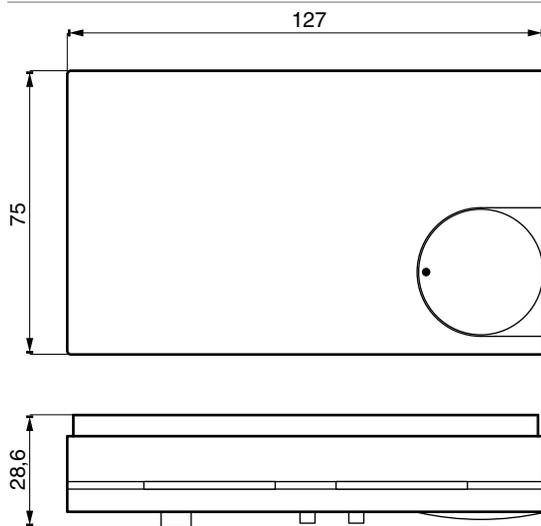
When disposing of the product, observe the currently applicable local laws.

More information on materials can be found in the Declaration on materials and the environment for this product.

Connection diagrams



Dimension drawing



Accessories

