EHS

EHSD

Electronic temperature control system EHS for electric heating elements

- Electronic temperature control system for controlling electric heating elements in rectangular ducts or round ducts in ventilation systems. The heat output of the heating element is controlled depending on the difference between the setpoint and actual value for supply air temperature, which serves as a reference variable.
- The controllers are continuously variable through time-proportional pulse width control. The ratio between activation time and deactivation time is adjusted to the existing power requirement. The max. switching cycles per time unit stipulated by the electricity suppliers are thus maintained even for high switching capacities.
- Contactless power switching via electronic power switch.
- Control using setpoint adjuster (internal or external, room sensor TFR) or using external control signal 0 – 10 V DC (only for EHSD types).

- **Application**
- The controllers are suitable for constant supply air control and constant room control. In case of rapid temperature changes in the supply air, a PI control behaviour is achieved; in case of slow changes in room air, the control behaviour corresponds to a P-controller. Automatic night-time reduction can be achieved using an external, on-site timer.
- An air flow monitoring system is also stipulated for safety reasons.

Flow monitor, electronic

SWE Ref. no. 00065

– mechanical, from NW 315

SWT Ref. no. 00080

see product page.

Electronic temperature controller for electric heating elements up to 3.6 kW (230 V) / 6.4 kW (400 V)

EHS Ref. no. 05002

Temperature-controlled, semiconductor-controlled controller. Elegant, white plastic casing for wall installation. Constant supply air or room control via built-in temperature sensor for temperature detection at the installation location. Can be switched to external duct sensors or room sensors (TFK or TFR, Accessories). Has a minimum and maximum limit for the supply air temperature.

Measurement range	0 – 30 °C
Voltage	230 V, 1~ / 400 V, 2~ (automatic detection)
Load capacity	16 A
Protection category	IP20
Dim. in mm	H 150 x W 94 x D 43
Weight	approx. 0.3 kg
Wiring diagram no.	531.1

Electronic temperature controller for electric heating elements up to 17 kW

EHSD 16 Ref. no. 05003

Temp.-controlled, semi-conductor-controlled controller. Robust aluminium casing for wall or switch cabinet installation. Constant supply air or room control via external duct or room sensor (TFK/TFKB or TFR, Accessories). Remote control possible via external setpoint adjuster TFR or external control voltage 0 – 10 V DC.

Voltage	400 V, 3~
Load capacity	25 A
Protection category	IP40
Dim. in mm	H 207 x W 160 x D 95
Weight	approx. 1.7 kg
Wiring diagram no.	550.2

Electronic temperature controller for electric heating elements up to 34 kW

EHSD 30 Ref. no. 05004

Design like EHSD 16; but max. power 34 kW. The total heat output is divided into a controlled portion (max. 17 kW) and a basic output portion (17 kW). If the heat output requirement of approx. 17 kW is exceeded, the basic output of 17 kW will be permanently activated using the provided switch contactor. The remaining heat output will be temperature-controlled.

Voltage	400 V, 3~
Load capacity	25 A
Protection category	IP40
Dim. in mm	H 207 x W 160 x D 95
Weight	approx. 1.7 kg
Switching relay	Voltage 230 V~
Current	max. 5 A
Switch contactor	Volt. 400 V, 3~
Current	max. 25 A
Wiring diagram no.	550.2

Other access. for EHSD

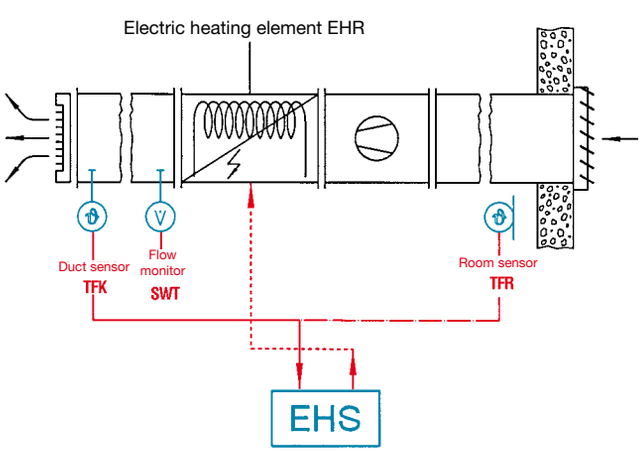
Duct temperature sensor for limiting function.

TFKB Ref. no. 05009

Reference

Integration in the system control required on site must be carried out according to the specified wiring diagrams.

Installation diagram EHR



TFK

Duct sensor (Accessory for EHS)

TFK Ref. no. 05005

Temperature sensor for detecting the air temperature in air ducts with installation kit for installation in duct wall.

Temperature range	0 – 30 °C
Protection category	IP20
Length intern./extern.	130 / 50 mm Ø 10 mm
Weight	approx. 0.1 kg

TFR

Room sensor (Access. for EHS)

TFR Ref. no. 05006

Temperature sensor with integrated setpoint adjuster for surface mounting. Also suitable simply as a temperature sensor or simply as a setpoint adjuster. Elegant plastic casing.

Temperature range	0 – 30 °C
Protection category	IP20
Dim. in mm	H 85 x W 85 x D 30
Weight	approx. 0.1 kg