



TE1S

Digital electronic fan speed controller temperature / time

The TE1S controllers control the rotational speed of single-phase (230 VAC / 50 Hz) voltage controllable motors according to temperature. They provide a great number of user adjustable options such as: auto and manual operation modes, possibility for calibration and input / output adjustment, additional remote control input (heat / cool switching, remote on / off switching, max. ventilation), kick start with programmable duration, min. and max. speed limitations, off level with adjustable hysteresis, digital readout, TK protection, internal real-time clock (day / night, day / week programmable), outputs for a valve (230 VAC) and connecting a slave unit (0–10 V / 0–20 mA). The firmware can be changed via the USB interface (into TE2S, DP1S, DP2S, CO1S, CO2S, TC1S, TC2S, RH1S, RH2S) according the application requirements. A temperature sensor is not included.

Key features

- 1 temperature setpoint in the range: -25–65 °C
- Analog output: selectable between proportional and digital (for alarm function on TK input)
- Input for remote control: remote heat / cool switching, remote on / off switching, max. ventilation
- 1 unregulated output 230 VAC for a valve connection
- Auto mode - COOL: speed increases when temperature rises
- Auto mode - HEAT: speed decreases when temperature rises
- Manual mode: speed increases / decreases on user demand until the next switching point set by a real-time clock
- Min. and max. speed settings
- Min. safety speed setting
- Time to max. speed
- Off level and kick start with adjustable duration
- Adjustable hysteresis
- Motor overheating protection with an option for delayed detection
- User-friendly and intuitive multilingual menu
- User and installer priorities set by passwords
- Calibration and reset to factory settings

Technical specifications

Power supply	230 VAC ±10 % / 50 Hz	
Temperature measurement range (SR)	-30–70 °C	
Temperature setpoint (SP)	-25–65 °C	
Analog output	Proportional / Digital (H = 10 VDC; L = 0 VDC)	
Proportional range	2–30 °C	
Hysteresis	0,5–5 °C	
Operating modes	Cool / Heat	
Off level	-30–70 °C	
Min. safety speed	25–80 %	
Min. speed setting	min. safety speed–80 %	
Max. speed setting	(min. speed + 20 %)—100 %	
Kick start time	0–30 s	
Time to max. speed	2–100 s	
TK delay	0–60 s	
Protection standard	IP54	
Ambient conditions	Temperature	0–40 °C
	Rel. humidity	< 95 % rH (non-condensing)
Storage temperature	-10–50 °C	

Standards

- Low Voltage Directive 2014/35/EU
- EMC Directive 2014/30/EU
- WEEE Directive 2012/19/EU
- RoHS Directive 2011/65/EU



Article codes

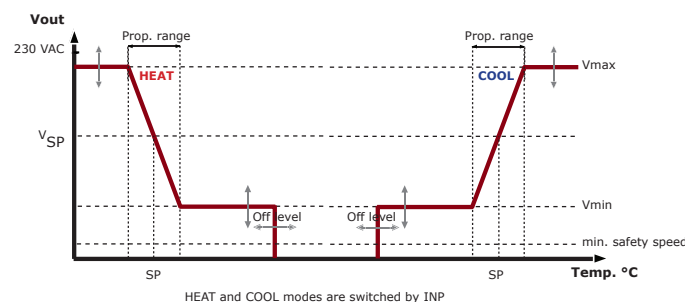
	Current rating, [A]	Fuse rating, [A] (5*20 mm)
TE1S0-30-DT	0,3–3,0 A	F1: F 5,0 A H 250V F2: F 1,0 A H 250V
TE1S0-60-DT	0,5–6,0 A	(6.3*32 mm) F1: F 10 A H 250V F2: F 1 A H 250V
TE1S0100-DT	1,0–10,0 A	(6.3*32 mm) F1: F 16 A H 250V F2: F 1 A H 250V

Note: When several motors have to be connected but the current range is exceeded, a few motors can be connected to a slave controller (see EVS series) which automatically follows the speed controller.

Area of use

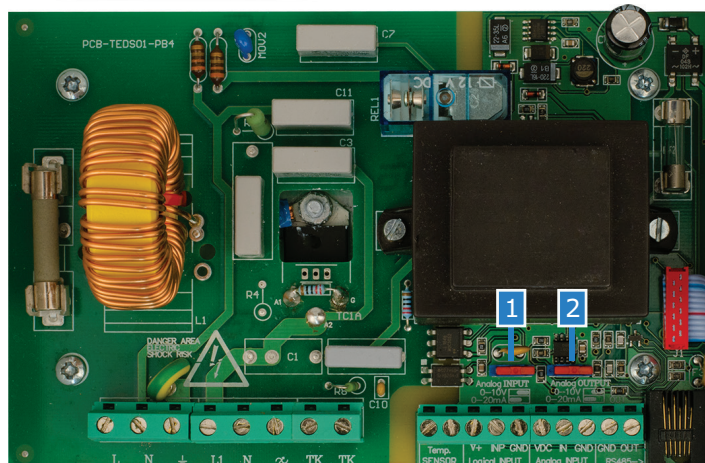
- Temperature control and maintenance in HVAC applications
- For indoor use only

Operational diagram(s)



TE1S

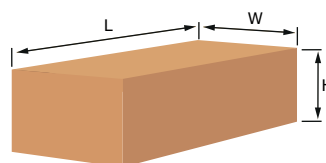
Digital electronic fan speed controller temperature / time



Settings		
1 - Analog input selection switch		not used
		not used
2 - Analog output selection switch		0—10 VDC
		0—20 mA

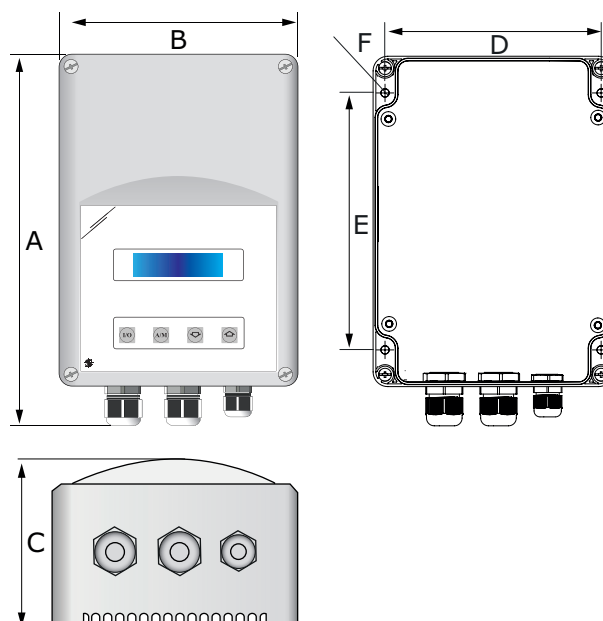
Wiring and connections		
L, N	Power supply (230 VAC $\pm$ 10 % / 50 Hz)	
Pe	Earth terminal	
L1, N	Unregulated output 230 VAC / 2 A	
N,	Regulated output to the motor	
TK	Thermal contact	
Temp. sensor	Terminals for temp. sensor connection	
V+	Supply output 12 VDC / 300 mA	
INP	Logical input	12—24 VDC = true (on) 0 VDC = false (off)
Gnd	Ground	
VDC	not used	
IN	not used	
OUT	Analog output (0—10 VDC / 0—20 mA)	
Connections	Cable cross section: 2,5 mm ² Cable gland clamping range: 3—6 mm / 8—13 mm	

Packaging



Article	Packaging	Length [mm]	Width [mm]	Height [mm]	Net weight	Gross weight
TE1S0 -30-DT	Unit (1 pc.)	265	175	145	1,58 kg	1,72 kg
TE1S0 -60-DT	Unit (1 pc.)	265	175	145	1,63 kg	1,85 kg
TE1S0 100-DT	Unit (1 pc.)	265	175	145	1,64 kg	1,86 kg

Fixing and dimensions



Article code	A	B	C	D	E	F
TE1S	255 mm	170 mm	140 mm	155 mm	194 mm	Ø 4,2