CE

ERP

Regulator for variable control of electric heaters

Application

The ERP is a modern, variable regulator that precisely adapts energy use to current needs. The results are comfortable soft heat and better economy.

Comfort

Traditional thermostats of the on/off type cause alternately hot and cold heaters. The ERP gives the heater an equalized surface temperature so that the heater is best utilised for maximum comfort.This makes it suitable for radiant heating which is the fastest and most energy efficient form of heating.

With the ERP regulator, all types of electric radiators can be used as comfort heaters in a modern, energy-conservative regulation system. The temperature of the radiators becomes even and comfortable with no disturbing clicking.

Operation and economy

The output power is variable regulated through time-proportional control, i.e. the ratio between on-time and off-time, is varied to fit the prevailing heating requirement.This type of control is much more precise than an on/off regulator. This means more comfortable indoor climate and energy savings.

The current is electronically switched by a so-called triac without any moving parts that can wear out. Therefore, the ERP is silent and maintenance free. The current is switched at zero phase angle, to eliminate network disturbance and any interference to for example radio and television signals.

Design

ERP has a clean and simple design that blends well in most environment. ERP has an intergrated temperture sensor. External sensor is available as an accessory.

Functions

Control

For rapid temperature changes, ERP will work as a PI-controller with a fixed proportional band of 20 K and a fixed reset time of 6 minutes. For slow temperature changes, ERP will work as a P-controller with a fixed proportional band of 2 K.

Save reduction

ERP can, via an external time switch, provide an adjustable save reduction. On closure of the time-switch contact the ERP set-point is lowered by the set value, 0 – 10 K.

Controlling larger outputs

For larger power outputs a slave unit (ERPS) can be connected. Each ERPS handle the same power as ERP. NB! ERP cannot control 3 phase loads.

Design and specifications are subject to change without notice.

2008-11-20

Technical specifications | Electric heating control ERP

Type	Voltage [V]	Load [W]	Ambient temperature [°C]	Range internal sensor [°C]	Save reduction [K]	Pulse periode [s]	HxWxD [mm]	Weight [kg]
ERP	230V~/400V2~	3600/6400	0 - +30	0 - +30	0 - 10	60	153x93x40	0,3
ERPS	230V~/400V2~	3600/6400	0 - +30	0 - +30	0 - 10	60	153x93x40	0,3

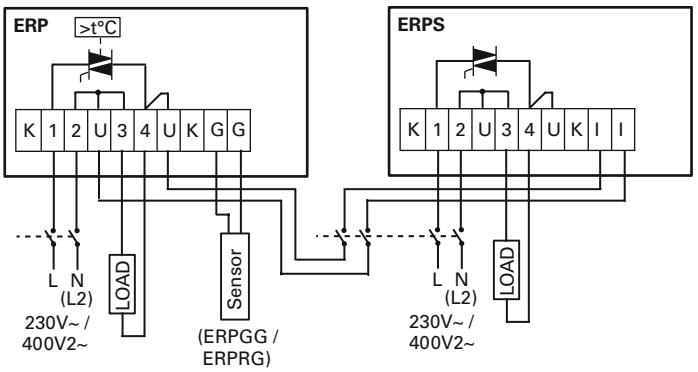
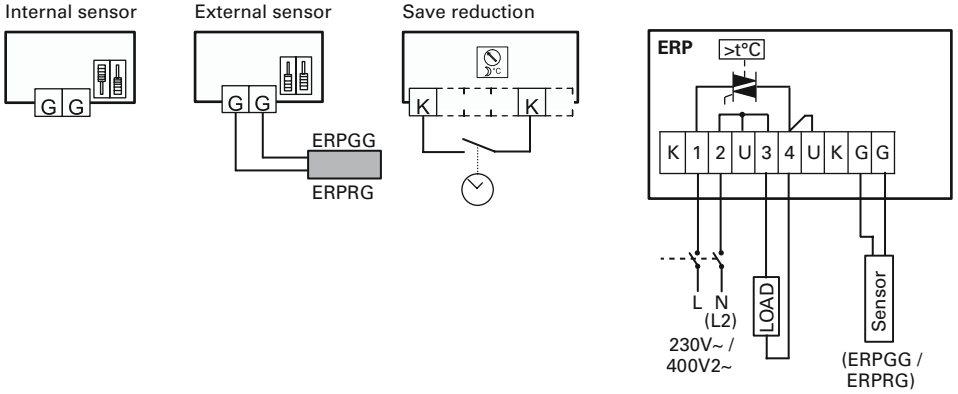
Protection class ERP: IP20
CE compliant.

Supply voltage	210-415V AC. Single phase or two-phase. Automatic adaption. Max 16 A. At 230V~ the maximum output is 3,6 kW and the minimum output is 230 W. At 400V~ the maximum output is 6,4 kW and the minimum output is 400 W.
Heat emission	20 W at full load
Regulation parameters	Room regulation: P-function with P-band 2K Incoming air regulation: PI-function with P-band 20K and I-time 6 min.
Operation indicator	LED that is lit when power is pulsed to the heater.
Connection external sensor/setpoint	For NTC-sensor and potentiometer as setpoint. The temperature range is dependent upon the measurement range of the sensor. Due to high potential difference between neutral and earth at the sensor connection, the installation should be carried out in conformity with prevailing regulations for mains voltage installations.

Accessories ERP

Type	Description
ERPRG	Room sensor ERP
ERPGG	Floor/duct sensor ERP
ERPS	Slave unit ERP
CBT	Electronic timer IP44
KUR	Digital time switch IP55

Internal wiring drawings electric heating control

ERP

ERPS