Datasheet

Electronic Solar Heat Regulator SH-E01

Application

The regulator is used for utility water management in solar heating systems. The solar heat circuit circulation pump is controlled on the basis of the differential temperature between the solar collector and the hot-water tank.

If the differential temperature is higher than the preset start-up temperature differential, the circulation pump will be in operation. The pump will run until the temperature differential is 2°C.

Functions

The regulator is simple to install and easy to operate for the end-user:

- Electrical connections on wall plate
- Installer settings on regulator back
- Pump exercise
- User settings on regulator front
- Design suitable for use in any room
- Fault indication in display
- Forced cooling in case of overtemperature
- 24-hour backup in case of power failure

Ordering

Product	Type	Code Number
Regulator including 2 temperature sensors	SH-E01	088H2001
Regulator excluding temperature sensors		088H2000
2 temperature sensor	-	088H2050

Accessories		
Sensor pocker, brass	length 111 mm	017-437000
Sensor pocker, brass	length 180 mm	017-436766
Heat-conductive paste, aluminium	-	041E011400

Data - Electronic Regulator

Supply voltage	230 V AC ±10%
Power consumption	25-42 mA
Switching action	Type 1B
Pump output	230 V AC, max. 2(1)A
Alarm output	230 V AC, max. 2(1)A
Connections	2 x NTC sensor, pump, external alarm
Enclosure	IP40
Ambient temperature	0 to 45 °C
Transport temperature	-20 to 60 °C
Min. operating value	0.5 °C/minute
Control pollution situation	Pollution degree 2
Ball pressure T	75 °C
Rated impulse voltage	2.5 KV
Software classification	Class A
Dimensions, H x W x D	90 x 135 x 26 mm
Weight	215 g
Temperature display	T1, solar collector: -9 to 150 °C. T2, tank bottom: 0 to 99 °C
Approvals	EN60730-2-9, LVD, 2006/95/EC, EN60730-1, DTI type approval obtained, EMC 2004/108/EC

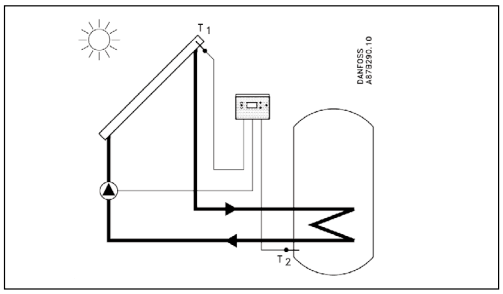
Datasheet Solar Heat Regulator - SH-E01

Data - Temperature Sensor

Type	NTC	
Temperature Range	-20 to 200 °C	
Sensor Accuracy	Max. 2% of full scale:	-40 til 90 °C: ±1.0 °C, 90 til 150 °C: ±2.5 °C 150 til 200 °C: ±3.5 °C
Sensor diameter x length	Ø 6 mm x 50 mm	
Cable	3 m. 0.5 m approved for 200 °C, the rest for 105 °C	

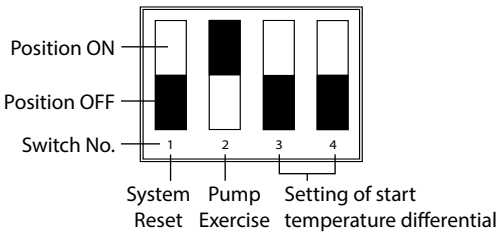
Sensor cables can be extended by double-insulated cable, min. 2 x 0.75 mm², max. length 50 m.

Operating Principle



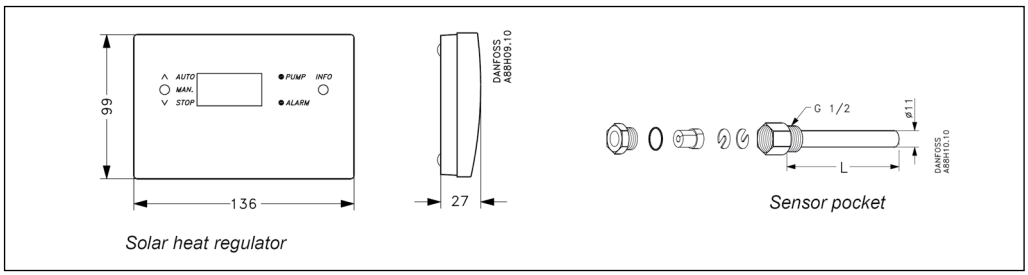
T1: Temperature sensor in solar collector
T2: Temperature sensor in hot water tank
Circulation pump
Solar heat controller

Installer Settings

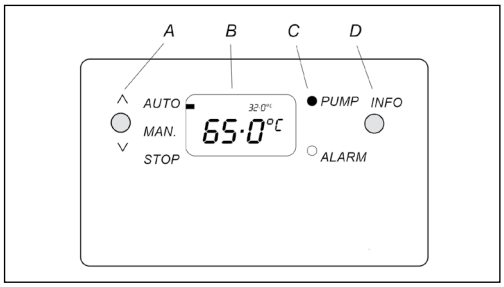


Switch No.		Start temp. differential
3	4	
OFF	OFF	5°C
OFF	ON	10°C
ON	OFF	15°C
ON	ON	20°C

Dimensions



User Settings



A) Setting of pump operation pattern:
AUTO, MAN or STOP.
B) Display mode:
Temperature, output or fault in alarm mode.
C) Indication of pump operating mode and alarm
- Green lamp is lit when pump is running
- Red lamp indicates alarm
D) Shift between display modes:
Temperature or solar heat output

Danfoss Ltd.
Ampthill Road
Bedford MK42 9ER
Tel: 01234 364621
Fax: 01234 219705
Email: ukheating@danfoss.com
Website: www.heating.danfoss.co.uk