

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 |
| Pack of 2 temperature sensors | - | 088H2050 |

| Accessories | | |
|----------------------------------|---------------|------------|
| Sensor pocker, brass | length 111 mm | 017-437000 |
| Sensor pocker, brass | length 180 mm | 017-436766 |
| Heat-conductive paste, aluminium | - | 041E0114 |

Data - Electronic Regulator

| | |
|-----------------------------|--|
| Supply voltage | 230 V AC \pm 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 |

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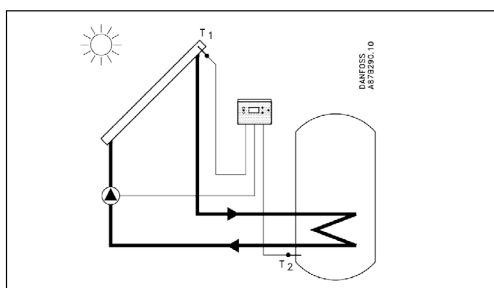
Solar Heat Regulator - SH-E01

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 | |

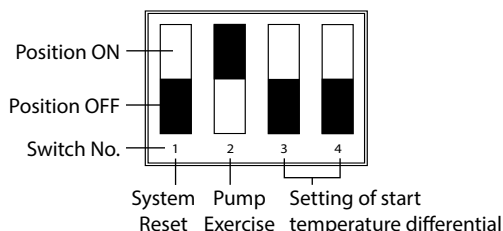
Sensor cables can be extended by double-insulated cable, min. 2 x 0.75 mm², max. length 50 m.

Operating Principle



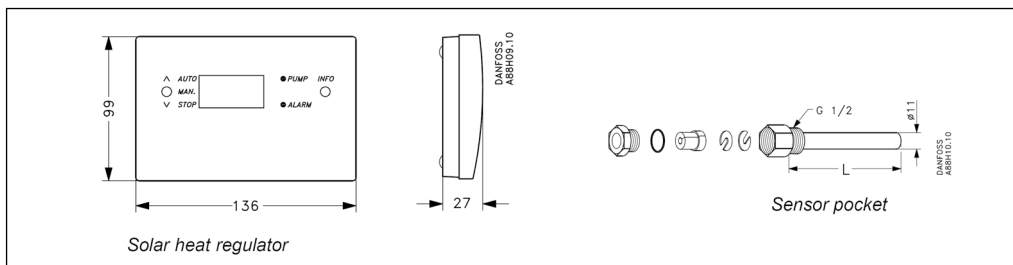
- T1: Temperature sensor in solar collector
- T2: Temperature sensor in hot water tank
- Circulation pump
- Solar heat controller

Installer Settings

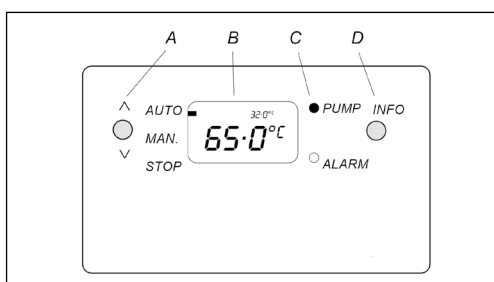


| Switch No. | | Start temp. differential |
|------------|-----|--------------------------|
| 3 | 4 | |
| OFF | OFF | 5°C |
| OFF | ON | 10°C |
| ON | OFF | 15°C |
| ON | ON | 20°C |

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

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