



Technical Information

MFC-1 Multi-function Controller

A11-03.1.2-PB-V3 - Jan 2013

Product Parts

The basic MFC-1[3S&SD] kit shown to right includes the following components:

- MFC-1 Controller
- 7 x Screws
- 2 x Wire clamps
- 1 x PT-1000 high temperature sensor
- 2 x PT1000 low temperature sensors
- 1 x Mounting bracket
- 3 x Plastic wall plugs
- 1 x 4GB SD card

Product code MFC-1[5S&SD] kit also available that includes the full 5 sensors.

Applications

The Apricus MFC-1 multi-function controller can manage a wide range of solar thermal and HVAC systems for both domestic and commercial applications. A variety of software packs allow the controller to be programmed to meet a wide range of applications. Custom software is available upon request.

Features

- Backlit LCD display with clear plain text
- Direct display of key system data (temperatures, energy etc)
- PT1000 temperature sensors
- Variable speed and standard relay outputs
- Up to 4 dry contact signal inputs
- Data-logging (SD card)
- Rear and bottom punch-outs for conduit or cable glands
- Quick hang wall mounting bracket
- Software packs to suit various applications
- Manual, Auto or Off mode for easy relay management
- End User mode limits access to only basic functions

Technical Data

Housing: ABS plastic

Dimensions: 199 x 100 x 54mm

Power Supply: AC 110-240V 50/60Hz (Max 8 Amp)

Standby Power Consumption: 4W

Inputs:

- 1 x PT1000 sensor (-40°C~220°C / -40°F~428°F)
- 4 x PT1000 sensors (-20°C~105°C / -4°F~221°F)
- 3 x dry contact signal inputs
- Grundfos VFS flow and temperature sensor input

Outputs:

- 1 x 4 Amp variable speed semiconductor relay
- 3 x 5 Amp standard relays

Expansion: RS232 plug (for future expansion hardware)

Data Logging: SD card (4GB provided as standard)

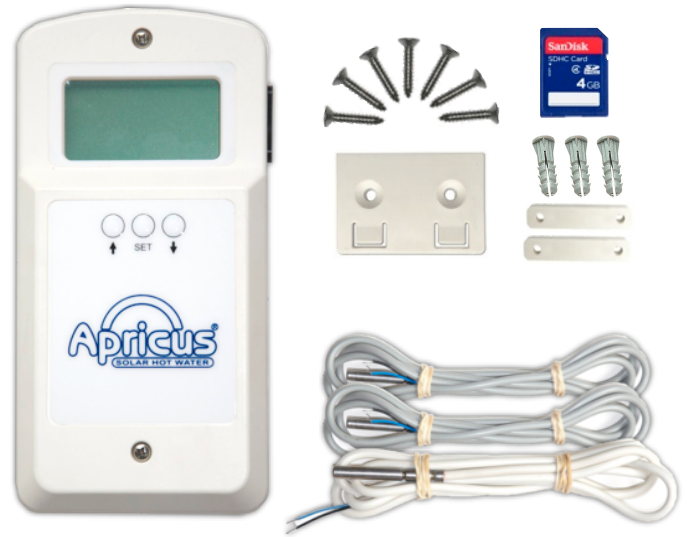
Ambient Temperature: 0°C~40°C / 32°F~104°F

Protection Type: IP 20

Protection Class: I

Certifications:

- ETL: UL 873, CSA C22.2 No. 23-93
- CE: EMC 2004/108/EC, LVD 2006/95/EC



Main Display Screens

| | | | | | | | | |
|-----------|------------|--------|---|---|---|---|---|---|
| 08:26 | ☀ | ☼ | ☽ | ☾ | ☿ | ♁ | ♂ | ♀ |
| T1 140°F | R1 | 50% | | | | | | |
| T2 120°F | R2 Boost | ☐ | | | | | | |
| T3 125°F | R3 Flow | ☐ | | | | | | |
| T4 138°F | R4 2nd | ☐ | | | | | | |
| T5 150°F | V-F | 1.8Gpm | | | | | | |
| V-T 138°F | MODE: AUTO | | | | | | | |

| | | |
|--------------|--------|--------|
| MODE: MANUAL | | |
| T1 140°F | R1 | 50% |
| T2 120°F | R2 On | ☐ |
| T3 125°F | R3 Off | ☐ |
| T4 138°F | R4 Off | ☐ |
| T5 150°F | V-F | 1.8Gpm |
| V-T 138°F | EXIT | |

| ENERGY OUTPUT | |
|---------------|---------|
| Today | 11kWh |
| 7 days | 65kWh |
| 30 days | 320kWh |
| 365 days | 2200kWh |
| Total | 5600kWh |
| Day Average | 7.2kWh |

| ERRORS | |
|--------------------------|--|
| E10: NONE | |
| E11: 05/03/2012 10:24 02 | |
| CLEAR ALL ERRORS | |

| AVERAGE TEMPS | | | |
|---------------|-------|--------|-------|
| | 1hour | 24hour | Total |
| T1 | 140°F | 110°F | 115°F |
| T2 | 120°F | 120°F | 120°F |
| T3 | 125°F | 125°F | 125°F |
| T4 | 138°F | 138°F | 138°F |
| T5 | 150°F | 150°F | 150°F |

| RELAY ACTIVITY | | | |
|----------------|-------|--------|-------|
| | 1hour | 24hour | Total |
| R1 | 25m | 4h | 290h |
| R2 | 15m | 2h | 45h |
| R3 | 5m | 8h | 90h |
| R4 | 0m | 0h | 0h |



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