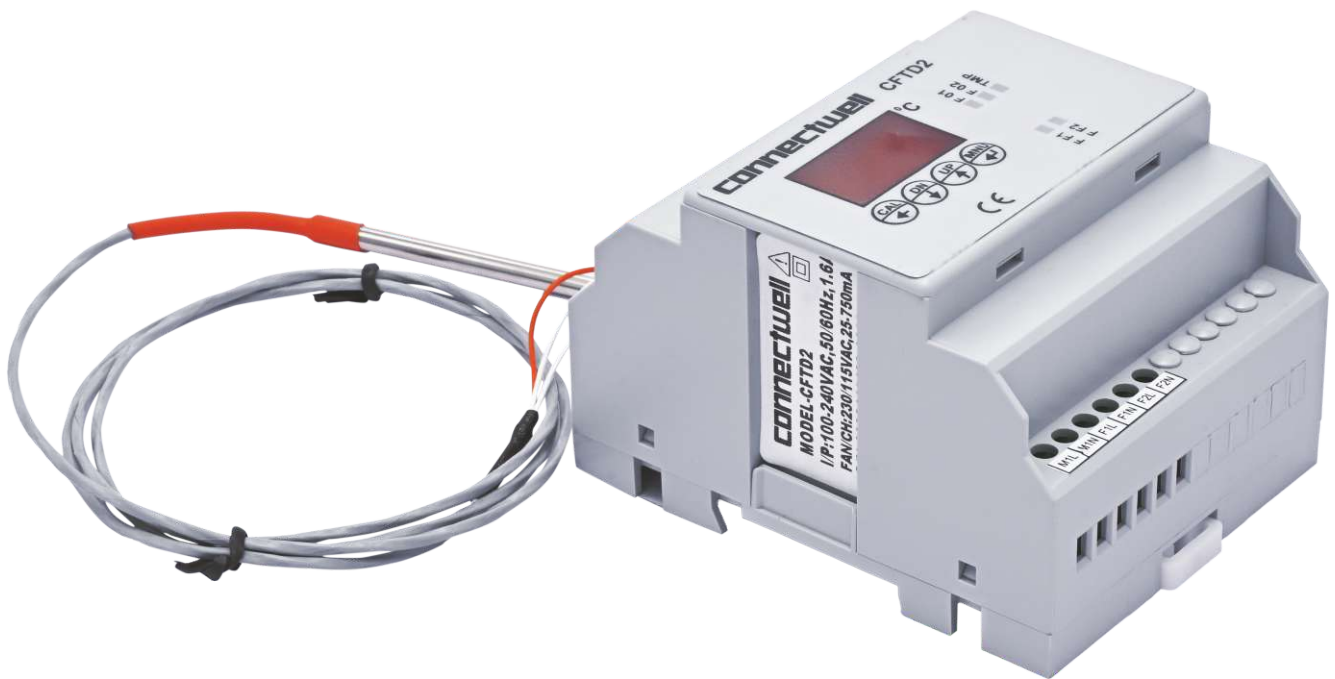


# FAN MONITORING & CONTROL DEVICE



## CONTINUITY & SAFETY

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GURANTEED

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Connectwell Fan Monitoring & Control Device (CFMCD) is the ultimate solution for ensuring that your control panels are equipped with a redundancy and alarm mechanism to respond to any adverse event resulting from malfunctioning of fans and the resultant loss of ventilation and cooling.

CFMCD - For Applications and Control Panels, where failure is not an option.

Easy to

## INSTALL, CALIBRATE & PROGRAM



- Din Rail Mounted
- Automatic Fan Calibration
- Manual Program option with Button selection and display

Continuous

## status SENSING & MULTIPLE ALARM mechanisms



- Simultaneous fan sensing
- Atmospheric Temperature based fan control
- Fan redundancy mode
- Separate Alarm for temperature and fan fault
- Analog output for live temperature indication

Protection

at all levels -



## SELF, FANS, APPLICATION

- Power redundancy mode
- Isolated supply for fans
- 20 mA to 750 mA fan current (suitable for all range of fans)
- Fan overload detection
- Fan Disconnect detection
- Mandatory Manual Reset of Failure Connection

## CFMCD

### 2 Fan with Temperature Control

- Compact and standard DIN Mounting
- Auto Sensing / Manual Sensing saves calibration time.
- LED Indication for FAN OK, FAN FAIL, FUSE FAIL & FAN TRIP SET
- Potential free contact for Fan/Temp Failure
- Display for Temperature Display and program
- 3-Wire PT 100 RTD Interface along with device
- 2 Wire 4-20 mA current output
- Programmable Temperature range for 4-20 mA transmitter
- Programmable Auto Reset functionality
- Universal Input Voltage design (110/230 VAC)
- Fan Redundancy
- Shuffling of fans
- Input Fuse protection



CE RoHS

#### ORDERING INFORMATION

| Cat. No.        | CFTD2                    |
|-----------------|--------------------------|
| Description     | Fan Failure Module For   |
|                 | 2 Fans with Temp Monitor |
| No. of Channels | 2                        |
| Std. Pack       | 1                        |

#### TECHNICAL DETAILS (CONTROLLER)

|                                |                          |
|--------------------------------|--------------------------|
| Ambient Operating Temperature  | 0°C ... +50°C            |
| Rated Input voltage            | 100-240 VAC              |
| Rated Current/Channel          | 25 - 750mA               |
| Input Frequency                | 50/60Hz                  |
| Fuse Fail Indication           | Yes                      |
| Fan Monitor Units              | 2                        |
| Fan Failure Alarm contact      | Yes                      |
| Over Temperature Alarm contact | Yes                      |
| Live Temperature Display       | Yes                      |
| Nominal input power            | 9VA                      |
| Degree of protection           | IP20                     |
| Pollution Degree               | 2                        |
| Fan Protection                 | Fuse                     |
| <b>Indications</b>             |                          |
| Fan Calibration                | Green blinking (All LED) |
| Fan OK                         | Green (F01, F02 LED)     |
| Fan Fail                       | Red (F01, F02 LED)       |
| Over Temp                      | Red (TMP LED)            |
| Fuse Fail                      | Red (FF1, FF2 LED)       |

#### TEMPERATURE SENSOR

|                             |                              |
|-----------------------------|------------------------------|
| Sensor type                 | RTD Sensor                   |
| Sensor Category             | Pt100                        |
| Length of sensor            | 1mtr                         |
| Operating temperature range | 0 to 99 deg C (Customizable) |
| Sensor Output               | 4 to 20 mA                   |

#### CONNECTION DETAILS

|                       |                     |
|-----------------------|---------------------|
| Type of Connection    | Screw Connection    |
| Min. Wire Size        | 0.5 mm <sup>2</sup> |
| Max. Wire Size        | 2.5 mm <sup>2</sup> |
| Min. Wire Size(AWG)   | 20 AWG              |
| Max. Wire Size(AWG)   | 14 AWG              |
| Screw Size            | M3                  |
| Wire Stripping Length | 7 mm                |

#### FAN RATING

|       |                                         |
|-------|-----------------------------------------|
| Fan 1 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 2 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |

#### MODES

|                                                  |                                          |
|--------------------------------------------------|------------------------------------------|
| Single Fan Mode 1                                | Fan 1-ON, Fan 2-OFF                      |
| Single fan Mode 2                                | Fan 1-OFF, Fan 2-ON                      |
| <sup>(1)</sup> Redundant Fan Mode (1+1 Fan Mode) | Fan 1-ON, Fan 2-Redundant State          |
| <sup>(2)</sup> Redundant Shuffle Fan Mode        | Fan 1, Fan 2 Shuffles State Periodically |
| Dual Fan Mode                                    | Fan 1- ON, Fan 2 - ON                    |

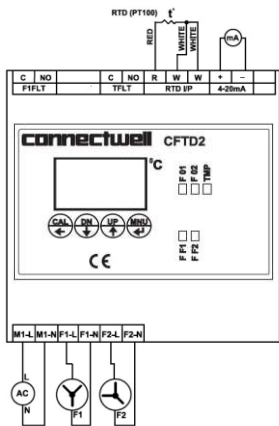
Note : (1) In Redundant Fan Mode, Fan 1 runs and Fan 2 is disabled under normal condition.  
At the instant of Fan 1 in Fault state the F01 LED glows red and Fan 2 is enabled and operates until fault is cleared.

Note : (2) In shuffle mode of operation FAN 1 is enabled and Fan 2 is disabled (redundant) after 8 hours Fan 1 is redundant and Fan 2 starts operating.  
This cycles continues alternatively every 8 hours.

DIMENSIONS (mm)

|           |                                                                                                                                        |
|-----------|----------------------------------------------------------------------------------------------------------------------------------------|
| Width     | 72                                                                                                                                     |
| Height    | 90                                                                                                                                     |
| Depth     | 58                                                                                                                                     |
| Standards |                                                                                                                                        |
| Safety    | IEC-61010-1                                                                                                                            |
| EMC       | IEC-61326-1, IEC-61000-4-2,<br>IEC-61000-4-3, IEC-61000-4-4<br>IEC-61000-4-5, IEC-61000-4-6<br>IEC-61000-4-8, IEC-61000-4-11, CISPR 11 |

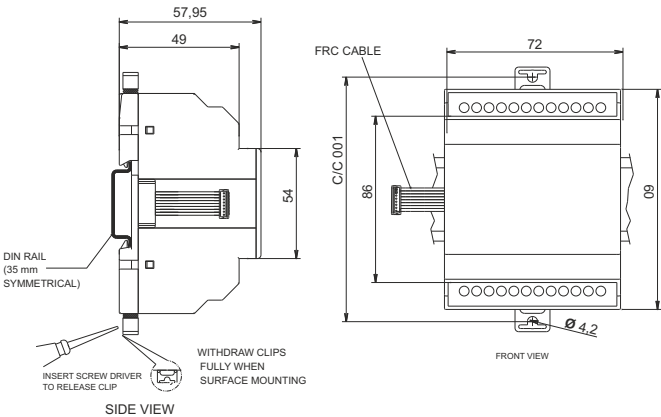
ELECTRICAL CONNECTION DIAGRAM



ACCESSORIES

|                                    |                    |
|------------------------------------|--------------------|
| Mounting Rail (1 M Length)         |                    |
| 35mm x 7.5mm DIN Rail - Un slotted | CA701-1M           |
| 35mm x 7.5mm DIN Rail - Slotted    | CA701-1M-S         |
| 35mm x 15mm DIN Rail - Un slotted  | CA701-15-1M        |
| 35mm x 15mm DIN Rail - Slotted     | CA701-15-1M-S      |
| End Clamp                          | CA702 (6 mm Pitch) |

MECHANICAL DIMENSIONS (mm)



## CFMCD

### 4 Fan with Temperature Control

- Automatic Fan calibration
- Manual programming of Individual Fans
- Fan Overload, Fault Identification
- Fan Redundancy
- Various fan modes
- 3-Wire PT 100 RTD Interface along with device
- Live temperature display
- 4 - 20 mA analog temperature feedback
- Fan fault relay & Temp fault relay for remote monitoring
- Input Fuse protection
- Universal Input Voltage design (110 - 230 VAC)
- Compact & Standard DIN Rail Mounting



CE RoHS

#### ORDERING INFORMATION

|                 |                          |
|-----------------|--------------------------|
| <b>Cat. No.</b> | <b>CFTD4</b>             |
| Description     | Fan Failure Module For   |
|                 | 4 Fans with Temp Monitor |
| No. of Channels | 4                        |
| Std. Pack       | 1                        |

#### TECHNICAL DETAILS (CONTROLLER)

|                                |                  |
|--------------------------------|------------------|
| Ambient Operating Temperature  | 0°C ... +50°C    |
| Rated Input voltage            | 100-240 VAC      |
| Rated Current/Channel          | 25 - 750mA       |
| Input Frequency                | 50/60Hz          |
| Power Input                    | 9 VA*            |
| Fuse Fail Indication           | Yes              |
| Fan Monitor Units              | 4                |
| Fan Failure Alarm contact      | Yes              |
| Over Temperature Alarm contact | Yes              |
| Live Temperature Display       | Yes              |
| Nominal input power            | 9VA              |
| Degree of protection           | IP20             |
| Pollution Degree               | 2                |
| Fan Protection                 | Fuse             |
| <b>Indications</b>             |                  |
| Fan Calibration                | Green (blinking) |
| Fan OK                         | Green            |
| Fan Fail                       | Red              |
| Over Temp                      | Red              |
| Fuse Fail                      | Red              |

#### TEMPERATURE SENSOR

|                             |               |
|-----------------------------|---------------|
| Sensor type                 | RTD Sensor    |
| Sensor Category             | PT100         |
| Length of sensor            | 1mtr          |
| Operating temperature range | 0 to 99 deg C |
| Sensor Output               | 4 to 20 mA    |

#### TECHNICAL DETAILS (SENSOR)

|                       |                     |
|-----------------------|---------------------|
| Type of Connection    | Screw Connection    |
| Min. Wire Size        | 0.5 mm <sup>2</sup> |
| Max. Wire Size        | 2.5 mm <sup>2</sup> |
| Min. Wire Size(AWG)   | 20 AWG              |
| Max. Wire Size(AWG)   | 14 AWG              |
| Screw Size            | M3                  |
| Wire Stripping Length | 7 mm                |

#### FAN RATING

|       |                                         |
|-------|-----------------------------------------|
| Fan 1 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 2 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 3 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 4 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |

#### MODES

|                                                   |                                |
|---------------------------------------------------|--------------------------------|
| 4 Fan                                             | 4 Fan Standard Mode            |
| 4 Fan Redundancy*                                 | 2 Standard + 2 Redundancy Mode |
| 2 Fan                                             | 2 Fans Standard Mode           |
| 2 Fan Redundancy*                                 | 1 Standard + 1 Redundancy Mode |
| * Redundancy - Fan runs @ Temp fault or Fan fault |                                |

## DIMENSIONS (mm)

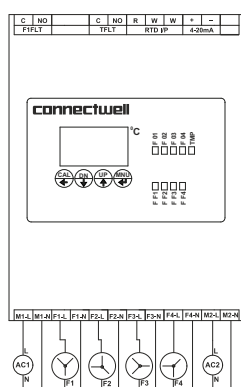
|                  |                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Width            | 72                                                                                                                                     |
| Height           | 90                                                                                                                                     |
| Depth            | 58                                                                                                                                     |
| <b>Standards</b> |                                                                                                                                        |
| Safety           | IEC-61010-1                                                                                                                            |
| EMC              | IEC-61326-1, IEC-61000-4-2,<br>IEC-61000-4-3, IEC-61000-4-4<br>IEC-61000-4-5, IEC-61000-4-6<br>IEC-61000-4-8, IEC-61000-4-11, CISPR 11 |

## ACCESSORIES

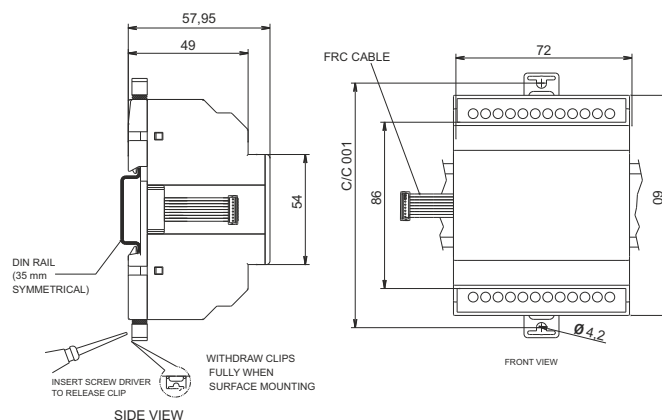
## Mounting Rail (1 M Length)

|                                    |                    |
|------------------------------------|--------------------|
| 35mm x 7.5mm DIN Rail - Un slotted | CA701-1M           |
| 35mm x 7.5mm DIN Rail - Slotted    | CA701-1M-S         |
| 35mm x 15mm DIN Rail - Un slotted  | CA701-15-1M        |
| 35mm x 15mm DIN Rail - Slotted     | CA701-15-1M-S      |
| End Clamp                          | CA702 (6 mm Pitch) |

## ELECTRICAL CONNECTION DIAGRAM



## MECHANICAL DIMENSIONS (mm)



## CFMCD

## 4 Fan with Temperature Control &amp; Power Redundancy

- Automatic Fan calibration
- Manual programming of Individual Fans
- Fan Overload, Fault Identification
- Fan Redundancy
- Various fan modes
- 3-Wire PT 100 RTD Interface along with device
- Live temperature display
- 4 - 20 mA analog temperature feedback
- Fan fault relay & Temp fault relay for remote monitoring
- Input Fuse protection
- Universal Input Voltage design (110 - 230VAC)
- Compact & Standard DIN Rail Mounting
- Power Redundancy



CE RoHS

## ORDERING INFORMATION

|                 |                                                                          |
|-----------------|--------------------------------------------------------------------------|
| <b>Cat. No.</b> | <b>CFTDPR4</b>                                                           |
| Description     | Fan Failure Module For 4 Fans with<br>Temp Monitor with power redundancy |
| No. of Channels | 4                                                                        |
| Std. Pack       | 1                                                                        |

## TECHNICAL DETAILS (CONTROLLER)

|                                |                  |
|--------------------------------|------------------|
| Ambient Operating Temperature  | 0°C ... +50°C    |
| Rated Input voltage            | 100-240 VAC      |
| Rated Current/Channel          | 25 - 750mA       |
| Input Frequency                | 50/60Hz          |
| Power Input                    | 9 VA*            |
| Fuse Fail Indication           | Yes              |
| Fan Monitor Units              | 4                |
| Fan Failure Alarm contact      | Yes              |
| Over Temperature Alarm contact | Yes              |
| Live Temperature Display       | Yes              |
| Nominal input power            | 9VA              |
| Degree of protection           | IP20             |
| Pollution Degree               | 2                |
| Fan Protection                 | Fuse             |
| <b>Indications</b>             |                  |
| Fan Calibration                | Green (blinking) |
| Fan OK                         | Green            |
| Fan Fail                       | Red              |
| Over Temp                      | Red              |
| Fuse Fail                      | Red              |

## TEMPERATURE SENSOR

|                             |               |
|-----------------------------|---------------|
| Sensor type                 | RTD Sensor    |
| Sensor Category             | PT100         |
| Length of sensor            | 1mtr          |
| Operating temperature range | 0 to 99 deg C |
| Sensor Output               | 4 to 20 mA    |

## TECHNICAL DETAILS (SENSOR)

|                       |                     |
|-----------------------|---------------------|
| Type of Connection    | Screw Connection    |
| Min. Wire Size        | 0.5 mm <sup>2</sup> |
| Max. Wire Size        | 2.5 mm <sup>2</sup> |
| Min. Wire Size(AWG)   | 20 AWG              |
| Max. Wire Size(AWG)   | 14 AWG              |
| Screw Size            | M3                  |
| Wire Stripping Length | 7 mm                |

## FAN RATING

|       |                                         |
|-------|-----------------------------------------|
| Fan 1 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 2 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 3 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |
| Fan 4 | 230VAC / 25-750mA,<br>110VAC / 25-750mA |

## MODES

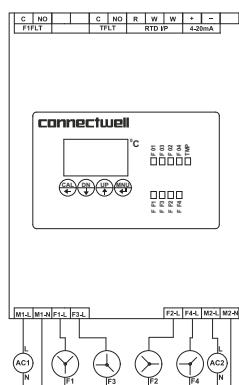
|                   |                                |
|-------------------|--------------------------------|
| 4 Fan             | 4 Fan Standard Mode            |
| 4 Fan Redundancy* | 2 Standard + 2 Redundancy Mode |
| 2 Fan             | 2 Fans Standard Mode           |
| 2 Fan Redundancy* | 1 Standard + 1 Redundancy Mode |

\* Redundancy - Fan runs @ Temp fault or Fan fault

## DIMENSIONS (mm)

|                  |                                                                                                                                        |
|------------------|----------------------------------------------------------------------------------------------------------------------------------------|
| Width            | 72                                                                                                                                     |
| Height           | 90                                                                                                                                     |
| Depth            | 58                                                                                                                                     |
| <b>Standards</b> |                                                                                                                                        |
| Safety           | IEC-61010-1                                                                                                                            |
| EMC              | IEC-61326-1, IEC-61000-4-2,<br>IEC-61000-4-3, IEC-61000-4-4<br>IEC-61000-4-5, IEC-61000-4-6<br>IEC-61000-4-8, IEC-61000-4-11, CISPR 11 |

## ELECTRICAL CONNECTION DIAGRAM



## ACCESSORIES

## Mounting Rail (1 M Length)

|                                    |                    |
|------------------------------------|--------------------|
| 35mm x 7.5mm DIN Rail - Un slotted | CA701-1M           |
| 35mm x 7.5mm DIN Rail - Slotted    | CA701-1M-S         |
| 35mm x 15mm DIN Rail - Un slotted  | CA701-15-1M        |
| 35mm x 15mm DIN Rail - Slotted     | CA701-15-1M-S      |
| End Clamp                          | CA702 (6 mm Pitch) |

## MECHANICAL DIMENSIONS (mm)

