

# Datasheet

## 3 Fan Rack Mount Fan Tray, 1U

RS Stock number 529-009



### Intelligent Fan Trays

The fan trays are designed to form part of a rack management system which will provide cooling in response to the thermal requirement of the rack whilst monitoring its component parts and providing a response to failure of either a fan or thermal sensor and providing a local and remote alarm. Designed as a 1U high (IEC 297-1) component for insertion adjacent to the equipment requiring cooling, positioning is normally below the item(s) to be cooled

**Features:**

- 1U integral height (to IEC 297-1).
- Forms part of a complete rack management system.
- Fan speed responsive to temperature.
- Monitoring of fans, thermal control, & power supply
- Status indication locally by LED and audible alarm
- Remote alarm indication by volt free changeover contact
- Available in 3 fan & 6 fan versions
- Available in auto ranging AC input
- Available in -48v DC input versions (to ETS 300 132-2)

The Intelligent Fan Tray features a design which uses proven control solution for each group of 3 fans within a tray. On 6 fan versions this allows for separate monitoring for each group for both control and alarm functions allowing for redundancy if required with a further option of Dual Power Input on some styles.

Function of each group of 3 fans is regulated by programmed controller that operates the fans at half speed up to 35°C and increases the speed linearly to full speed at 55°C.

Thermal control is via a pluggable thermistor sensor for each group of 3 fans that is available in various lengths to suit its positioning within the rack. These must be ordered separately

**Monitoring of the various functions of each group of 3 fans is also carried out by the programmed controller as follows:**

- In the event of a fan failure the speed of the remaining fans in the group increases to full speed and an alarm condition is created.
- In the event of a failure of the thermistor sensor, either short circuit or open circuit, the speed of the fans in the group will increase to full speed and an alarm condition is created.
- When the themistor sensor for the group reaches a temperature of 65°C an alarm condition is created, this will reset at 62°C.



INTELLIGENT 19" FANTRAY

The Intelligent fan tray will not operate without the Thermal Sensor(s) which are available in different lengths to suit the required position(s) within the rack.

Description	Power Input	Order Code	Thermal Sensors Required
3 Fan Intelligent Fan Tray	Single Auto-ranging AC	28-4000193	1
3 Fan Intelligent Fan Tray	Single -48V DC	28-4000390	1
3 Fan Intelligent Fan Tray	Dual -48V DC	28-4000391	1
6 Fan Intelligent Fan Tray	Single Auto-ranging AC	28-4000392	2
6 Fan Intelligent Fan Tray	Dual Auto-ranging AC	28-4000393	2
6 Fan Intelligent Fan Tray	Single -48V DC	28-4000394	2
6 Fan Intelligent Fan Tray	Dual -48V DC	28-4000395	2

**THERMAL SENSORS FOR INTELLIGENT FAN TRAYS**

Description & Length	Order Code
Thermistor Assembly -0.5Metre	919-4000232
Thermistor Assembly -1.0Metre	919-4000233
Thermistor Assembly -1.5Metre	919-4000234
Thermistor Assembly -2.0Metre	919-4000235
Thermistor Assembly -2.5Metre	919-4000236
Thermistor Assembly -3.0Metre	919-4000237

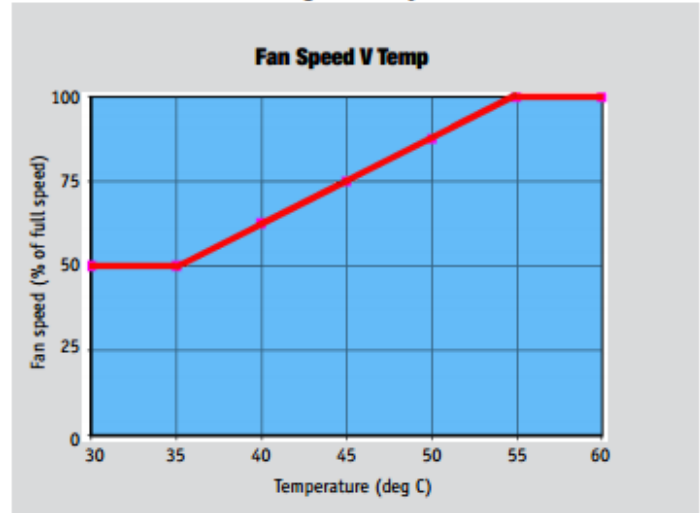
**The fan tray presents the following:**

- A Power On LED illuminated yellow when power is being supplied to the fan controller. On dual input units two Power On LEDs are present)
- And for each group of 3 fans:
- A Status LED illuminated green under normal operating conditions and red under alarm conditions.
- An Audible alarm will sound under alarm conditions until the fault is cleared.
- A Remote alarm via a set of volt free changeover contacts which will change over under any of the above alarm conditions. This remote alarm is designed to "fail safe" and is energised under normal conditions and will therefore also assume an alarm status on power failure.

**Fan Tray Specification:**

- Input voltage (AC) 100-240V +/- 10% 47-63Hz
- Input Voltage (DC) -48V Nom (-40.5 to -57.0V to ETS 300 132-2)
- Airflow is 170m3/h (100cfm) each fan (in free air)
- Operating temperature – fan tray 60oC maximum
- AC input units - Input connector(s) IEC 60320 C14
- DC input units - Input connector(s) Molex Min Fit Jr 4 way (mating part supplied)
- On 3 fan units -Alarm connector Molex Min Fit Jr 3 way (mating part supplied)
- On 6 fan units- Alarm connectors Phoenix contact 2 part with screw terminated receptacle to allow various combinations of alarm interconnection to be achieved.

**Thermal Profile of standard Intelligent Fan Tray**



Different thermal profiles are available to special order.