

Trusted 24 Vdc Fan Assembly Rack Mounted

Product Overview

This document provides general information for the Trusted® Fan Tray 24 Vdc Rack Mounted.

The Fan Tray is designed to provide forced cooling within a module rack of a Trusted System.

The distribution of Fan Trays within a module rack is on a basis of one per module chassis.

Features:

- Simple installation and connection.
- Capable of moving 69 m³/h (40.6 ft³/min).
- 24 Vdc operation.
- Low noise (32 dB per fan).

1. Description



Figure 1 T8270 Photo

The Trusted Fan Tray 24 Vdc Rack Mounted comprises four fans mounted vertically at the rear of a 2U high chassis. The chassis containing the fans incorporates a baffle to prevent air drawn by the fans flowing through the module chassis immediately above the Fan Tray. Air exhausted by the fans into the rear of the system cabinet is drawn upwards and out of the cabinet by roof-mounted fans – see PD-T8271.

Figure 2 below shows the configuration of the fans within the Fan Tray.

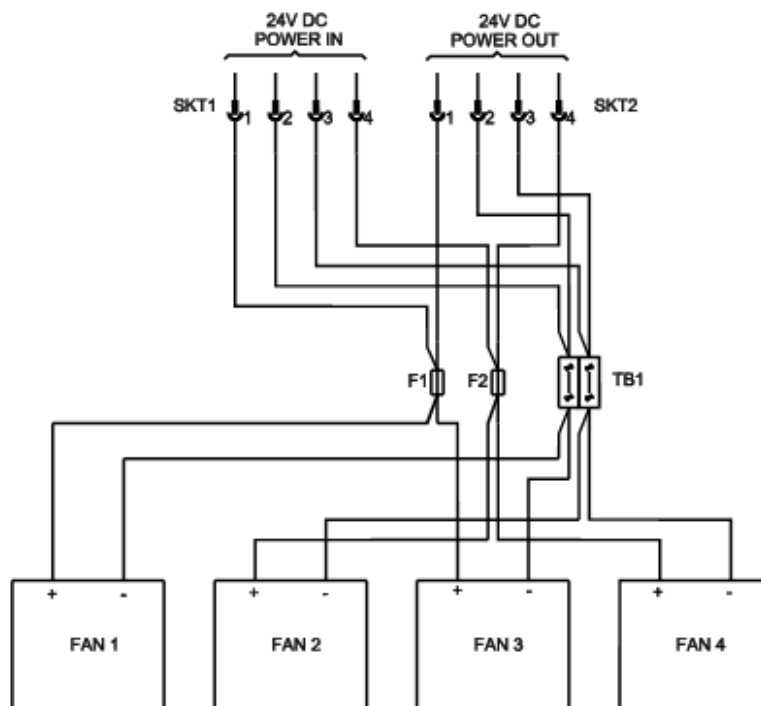


Figure 2 Fan Tray Wiring Diagram

The Fan Tray is powered from dual 24 Vdc supplies arranged such that the fans are supplied in pairs via 250 mA anti-surge fuses. The 0 V supply is connected via terminal block TB1.

Each fan is capable of moving 69 m³/h when operating with a nominal rotor speed of 3100 rpm. Protection against overloading and reverse polarity is provided electronically for each fan.

Figure 3 shows the method used to connect power to the Fan Trays in a Trusted System.

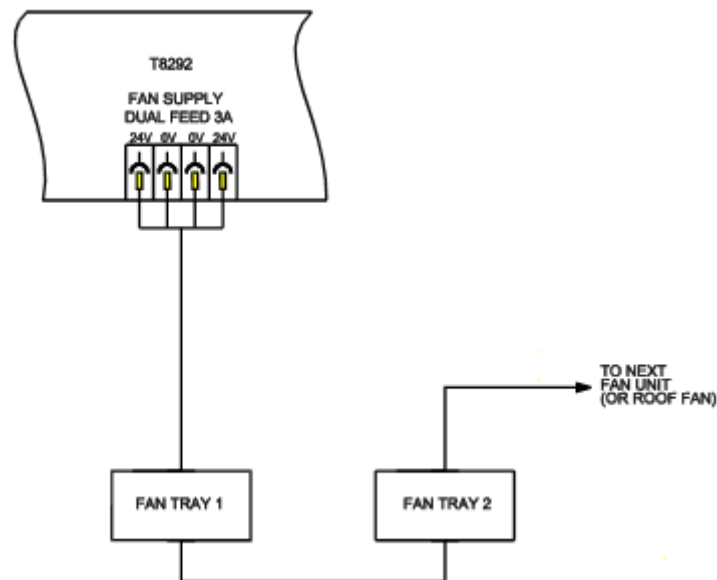


Figure 3 Fan Tray Power Connection Detail

The main supply for the Fan Tray is derived from a Trusted Power Distribution Unit MCB 24 Vdc - T8292 via a Trusted Fan Power Cable – TC-011-01. The same type of cable is used to interconnect the Fan Trays/Roof Fans in a Trusted System module rack. A fully populated module rack will include five Fan Trays, and may also include a Roof Fan Unit. This is the maximum number of Fan Trays/Roof Fan Units that may be powered from a single Trusted Power Distribution Unit miniature circuit breaker (MCB).

The pin connections of SKT 1 and SKT 2 are identical and are detailed below:

Pin	Service
1	24 V-1
2	0 V
3	0 V
4	24 V-2

Table 1 Fan Tray Pin Connections

2. Specifications

Voltage Range	18 Vdc to 28 Vdc
Fans	4-off Papst Type 8414NG
Individual Fan MTBF at 40°C at 70°C	 70,000 hours 35,000 hours
Fusing	Internal 250 mA anti-surge
Power Consumption	2 x 4 W
Air Flow (at 3100 rpm)	69 m ³ /h (40.6 ft ³ /min)
Operating Temperature	0 °C to +60 °C (+32 °F to +140 °F)
Non-operating Temperature	-20 °C to +70 °C (-4 °F to +158 °F)
Relative Humidity range (operating, storage & transport)	10 % – 95 %, non-condensing
Environmental Specifications	Refer to document 552517
Dimensions Height Width Depth	 88 mm (3.46 in) 483 mm (19 in) 267 mm (10.5 in)
Weight	1.8 kg (3.97 lb)