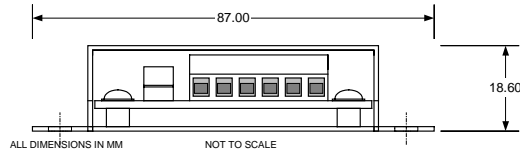
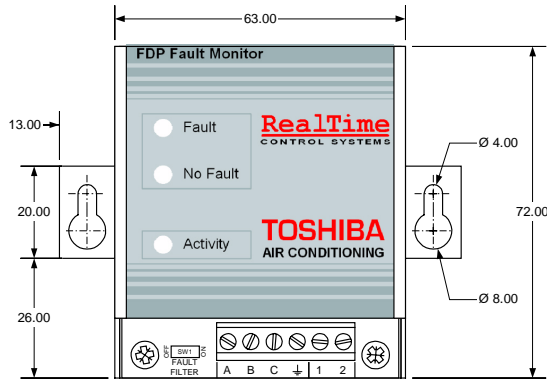


FDP Fault Monitor

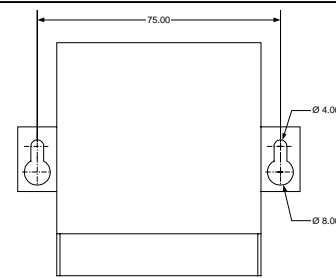
Installation and Operating Instructions



Installation

The FDP should be mounted using the keyhole mounting points as indicated in the adjacent diagram.

The FDP can be mounted horizontally or vertically.

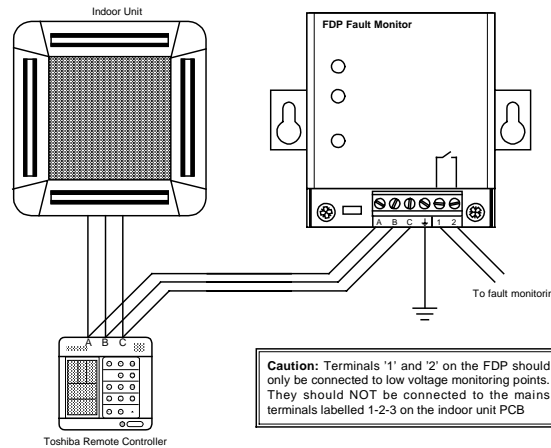


Wiring

Cabling should be a minimum 0.75mm² throughout.

Terminals ABC connect in parallel to a Toshiba remote controller. Terminals 1-2 connect to fault monitoring or indication equipment according to the specified rating of the relay

THIS PRODUCT MUST BE EARTHED



FDP Functional description

The FDP Fault Monitor detects all indoor and outdoor faults occurring in Toshiba RAV series air-conditioners including all R407C and older R22 units. The FDP is attached in parallel to the standard remote controller and detects any faults that can be displayed on the controller for up to 16 units.

- A volt-free contact allows external signaling of the fault. The relay is closed under fault free conditions, and is open under fault condition or no power
- LEDs on the FDP indicate fault/no fault condition and indicate communications activity from the A/C units
- 09 Faults can be optionally filtered to prevent reporting of 09 faults that occur for less than a 3 hour period

Warnings and Cautions

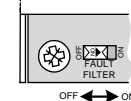
A standard Toshiba Remote controller must be attached for the FDP to operate correctly

THIS PRODUCT MUST BE EARTHED

Do not exceed the specified fault relay ratings

Configuring 09 Fault Filtering

The Fault Filter switch controls filtering of 09 Fault codes.



Fault Filter OFF

09 Faults are treated like any other fault code

Fault Filter ON

09 Faults are only reported after 3 hours. The FDP will clear immediately when 09 clears

FDP Functionality

The FDP monitors the fault codes for each A/C unit attached to the remote controller. Any Toshiba fault code will cause the FDP to indicate a fault condition. When the units are cleared from the remote controller the FDP will clear the fault only if all of the faults are removed from the system. **NOTE standard remote controllers retain previous fault codes for units even if they are not currently in fault. Under these conditions the FDP will not indicate a fault.**

Fault relay contact is CLOSED on normal, fault free operation

Fault relay contact is OPEN on fault, or on power down.

FDP LED modes are shown in the following table.

<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	No Power on A-B Terminals	<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	Unit Fault Activity LED retains normal flashing pattern
<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	Power-on Self Test Should last for less than 1 second after power-up, then the fault LED should switch off	<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	99 Fault on Unit 1 Comms lost with unit 1 Other units communicating Activity LED flash slower than normal
<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	Searching for Units After power up - searching for active units and identifying unit series	<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	No Unit Comms Failure to communicate with any units
<input type="radio"/> Fault <input type="radio"/> No Fault <input type="radio"/> Activity	Normal Activity Activity LED 1 second flash - Series 4 2 second flash - Series 3	Key: <input type="radio"/> OFF <input type="radio"/> FLASHING <input type="radio"/> ON	

Functional Specification

Electrical		Environmental	
Supply	12V AC from Indoor unit	Temperature Storage Operation	-10oC to 50oC 0oC to 50oC
Power	<1VA	Humidity	0-90% RH non-condensing
Relay	1A, 24VAC max 1A, 30VDC max	Protection	IP30
Mechanical Dimensions (mm)	H72 x W87 x D19	EMC Emissions EMC Immunity	EN50081-1 EN50082-1
Mounting	Two keyhole mounting flanges	Casing	Zinc coated mild steel
Weight	75g	Connectors	Rising clamp to 0.75mm ² cable