

Zellweger Tone Filter Unit Model: ZF180 1050 Hz Specification Sheet



Description:

The ZF180-1050 Tone Filter Unit is a device to attenuate the Zellweger ripple control frequency used by electricity supply companies to control power shedding to consumers.

This is performed by superimposing another voltage at a higher frequency on the mains supply.

This is commonly referred to as the “off-peak” supply.

The unfortunate consequence of this control system is that electrical equipment connected to the mains supply is also subjected to this higher frequency signal and can have an adverse effect.

Such effects can present themselves as electrical noise or equipment malfunction, flickering or dimming of lighting circuits, and more commonly, audio noise induced in electric motors (e.g. ceiling fans) and audio/radio equipment.

In most situations this superimposed voltage level is low enough not to noticeably cause any problems.

In other areas where this voltage level is high (but still within the electricity supply parameters), the effects can be intolerable.

This device, along with others in our product range, is a tuned, passive inline filter that can reduce the incoming voltage ripple to a level where the problem becomes unnoticeable.

This model is specifically tuned to the control signal of 1050Hz.

The attenuation at the mains supply frequency of 50Hz is negligible.

Specifications:

Input: 240Vac nominal \pm 10%
 Frequency: 50Hz
 Output: 240Vac
 Power: 0.75A (180W) continuous
 Consumption: approx 10W when idle

Tone Frequency: 1050Hz \pm 10Hz
 Attenuation: -30dB – (Nominal)
 Example: 10V in = 0.3V out @ 1050Hz (no load)
 Attenuation levels typically improve under most loads.

Dimensions: Main enclosure 105mm x 54mm x 30mm (LxWxH)
 Mounting ring add 15mm to length if used
 Wiring length approx 300mm
 Weight 500g

Enclosure: Enclosure molded from Clear PETG plastic.
 Unit is Epoxy encapsulated for increased safety and protection.
 No contact with conductive parts is possible unless fuse holder is opened.

Mounting: Unit is designed to fit into 3 locations.
 1) In the “Bell” housing at the top of the ceiling fan, when space is available.
 Unit specifically designed for the “hang-sure” style of fan bracket.
 It will fit into the space typically allocated for a remote control module.
 2) Above the fan in the ceiling space.
 3) Behind the switch wall plate.

Unit incorporates a wall mounting ring (6mm) to allow unit to be quickly screwed to a wall or ceiling frame.
 This metal ring can be easily folded back if not required, e.g. When fitted into the fan housing.

IP Rating – IP56 Main housing
 IP Rating – IP20 Inline fuse-holder (when fitted correctly with fuse)

Environment: Ambient temperature -10° to +50° C
 Relative humidity 5-95%

Connections: Input and output cables connected via insulated joiners (not supplied).
 Active and Neutral connections only – No EARTH required

RED - AC Live (active) from switch
 GREY - AC Live (active) to fan (fan/light)
 BLACK - Neutral

Installation: This unit is to be fitted and installed by licensed electrician only.
 This unit is designed to be installed in the power wiring anywhere between the fan switch and fan motor.
 In some circumstances it may be difficult to segregate the fan motor and the fan light.
 This unit can supply both the fan motor and the light if the total loading does not exceed 180W.
 This also allows for the fan remote module to work correctly if fitted.

Fuse rating: Input fuse 1Amp - M205 250Vac



NOTE

**All of these pictures are of the 750Hz unit.
 The 750Hz and 1050Hz models are identical in size.**