

Zellweger Tone Filter Unit

Model: ZF16-1050

Specification Sheet



Description:

The ZF16-1050 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: 16A (3800W) 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 280mm x 190mm x 180mm (LxWxH)
 Cable Glands protrude 25mm on one end (two glands)
 Weight 3.5kg

Enclosure: Enclosure made from Grey ABS plastic.
 Unit has a screw lock cover and can be wire locked for added protection.
 No contact with conductive parts is possible unless lid is removed.

Mounting: Enclosure can be free standing or screw mounted through the base.
 This is accessed with the lid removed.
 This ZF16 unit is designed for mounting inside or under cover due to the need for added ventilation.

IP Rating - IP21 (When lid is oriented with vents angled facing downwards).
 The vents can be rotated to facilitate wall mounting, vertical or horizontally.

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

Connections: Input and output cables connected to internal labelled terminal strips through cable glands.
 Active, Neutral and Earth connections are included.
 The main EARTH for the lighting circuit, by wiring regulations, may need to be connected directly to switchboard EARTH bar and not rely on this unit for continuity.

Installation: This unit is to be fitted and installed by licensed electrician only.
 This unit is designed to be installed in the power wiring after the switchboard lighting circuit breaker.
 In some circumstances where this may not be possible or if used in a different application, an internal connection is included for an inline circuit breaker.
 This is typically fitted if a portable version of the filter is ordered.
 This unit can be used in many applications where the load does not exceed 3800W (16A).

Fuse rating: No internal fusing or protection is included as standard.
 This unit relies on a fused or breaker protected supply (16A)
 If a protected supply is unavailable a breaker can be fitted to the enclosure using the internal connections provided. These connections are bridged from the factory as standard.

