The Sollatek **FreoGuard**
User Instructions

The FreoGuard disconnects the mains supply when the supply goes either below or above preset acceptable limits. These limits, referred to as the 'window', are 190-260 volts (90-135V for the 115V models), *unless a different window was specified*. The FreoGuard reconnects the mains supply automatically after the supply returns and remains within the window for the wait time which is nominally 3 minutes unless a different wait time was specified.

The FreoGuard is fully encapsulated, designed mainly for OEM (Original Equipment Manufacturer) applications and rated at either 16Amps (FreoGuard 16) or 30Amps (FreoGuard 30). Please check the rating on the serial label before connecting the unit to the mains. **Exceeding the rating of the FreoGuard will cause damage to the unit**. These devices are encapsulated to hermetically seal and ruggedise them. They have three spade terminals, suitable for push-on crimps, Live in, Live out and Neutral.

CONNECTIONS TO THE FREOGUARD

1. Connections are made by standard 0.25" crimp terminals, marked NEUTRAL, LIVE OUT (Compressor) and LIVE IN (Input). If the supply has been within the window for the duration of the wait time, the FreoGuard is energised connecting LIVE IN to LIVE OUT.

2. For refrigeration equipment, it is normally required to protect the compressor only. In that case, connect the FreoGuard between the Live In of the supply and the thermostat (see wiring diagram), i.e. NEUTRAL to Neutral, LIVE IN to the supply Live (after disconnecting it from the thermostat input) and the LIVE OUT to the thermostat input.

3. **On first switching on, there will be no output for the duration of the wait time** (see above) while the FreoGuard monitors the mains the LEDs will light as follows;

Red LED	Incoming Voltage is BAD. NO OUTPUT.
Yellow LED	Incoming Voltage is GOOD. Wait 3 minutes for connection.
Green LED	Incoming Voltage is GOOD, OUTPUT/LOAD is connected.
No LED	No Incoming Voltage to the FreoGuard.

TESTING PROCEDURE

1. Connect the FreoGuard to a variable power source and ensure the output of the Variac is at a good starting voltage (i.e. between 110-115V or 220-230V). The YELLOW LED is ON

2. Wait for about 3 minutes. The FreoGuard will energise and the Green LED is now ON. (TIP ** The FreoGuard has two special test pins. By shorting these pins with a metal object, the 3 minute delay is by-passed and the FreoGuard will energise immediately.)
   **All stated connect & disconnect voltages for below are +/-3 Volts for the 230V and +/2 Volts for the 110V**

3. Slowly decrease the voltage until the FreoGuard disconnects (at about 90V for the 115V model and 180V for the 230V model). RED LED is now ON. This is the low voltage disconnect.

4. Increase the voltage **slowly** (in 1 volt increments) until the YELLOW LED lights. **This is the LOW VOLTAGE reconnection voltage** (93V for the 115V and 186V for the 230V model). WAIT for 3 minutes. The GREEN LED will light.

5. Repeat the above process for the Over-Voltage. The Over Voltage disconnect should be 133V for the 115V model and 266V for the 230V models.

6. To check for the over-voltage reconnect, drop the voltage until the YELLOW LED lights (131V for the 115V models and 260V for the 230V models). **This is the OVER- VOLTAGE reconnect.** WAIT for 3 minutes. The GREEN LED will light.

CAUTION! **The FreoGuard is either 16Amps (FreoGuard 16) or 30Amps (FreoGuard 30). Please check the rating on the serial label before connecting the unit to the mains. Exceeding the rating of the FreoGuard will cause damage to the unit.**

SUGGESTED WIRING DIAGRAM

The neutral connection is for sensing and so can be taken from any point within the fridge
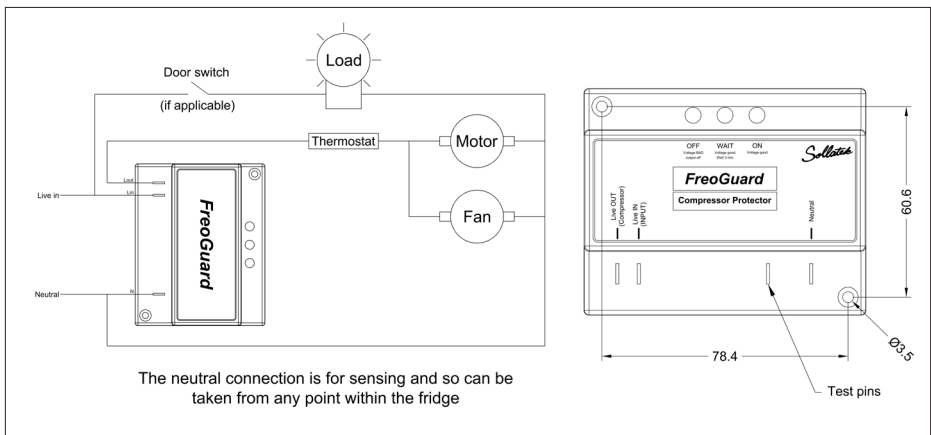
SOLLATEK UK LTD.

Tel: +44 (1753) 214 500
sales@sollatek.com
www.sollatek.com

Intelligent Controls

Sollatek (UK) Ltd. Sollatek House, Waterside Drive, Langley, Slough SL3 6EZ UK