# DRED module

# for DX Air Conditioning Systems

# Installation Instructions

**GENERAL**
DRED stands for 'Demand Response Enabling Device'. It provides a method by which a controlling authority, most likely a power supply company, can limit the amount of power that an air conditioner can consume in comparison to its nominal full load power consumption. The aim is to reduce overall power consumption to the supply network at critical peak load times.

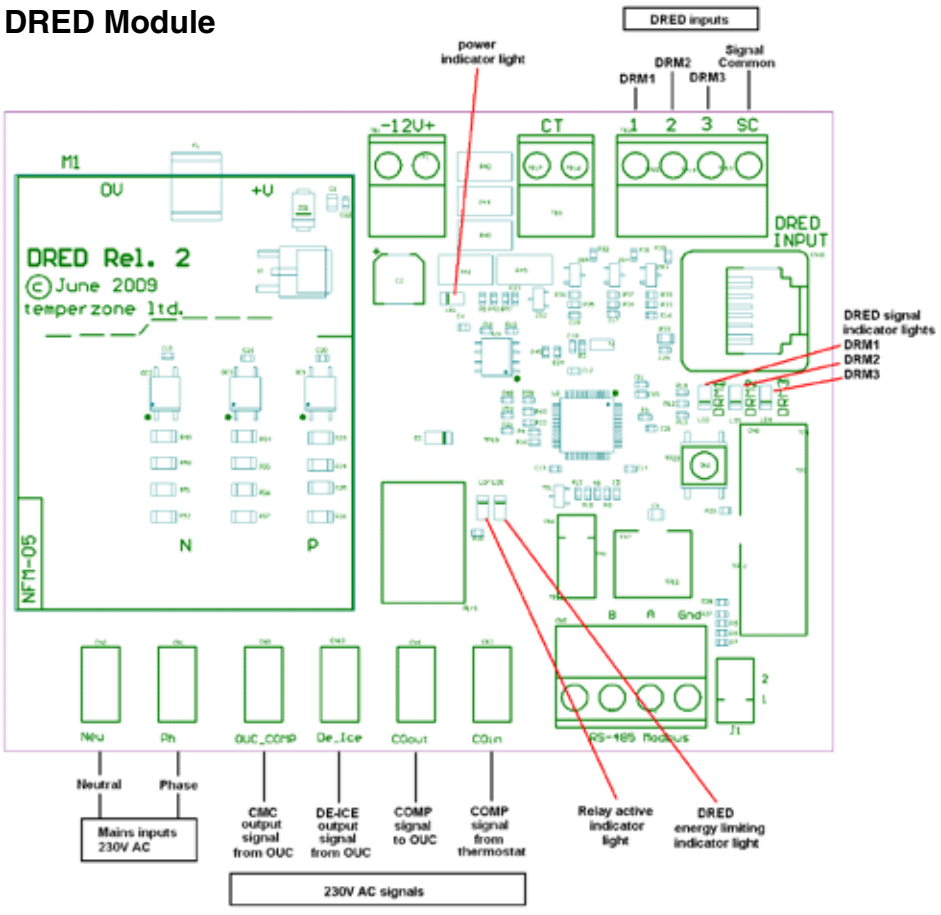
This DRED module is designed to fit any **temperzone** unit installed with an Outdoor Unit Controller (OUC) version 5, or older, and thereby make it compliant with the Australian standard AS4755.3.1. OUC versions 6 onwards do not require this module as they have a DRED facility built-in.
**Note**: It is not compatible with Digital units.

DRED is capable of demanding three different levls of response from the air conditioner, identified as DRM1, DRM2 and DRM3 – refer 'OPERATION' below.

**230V AC CONNECTIONS**

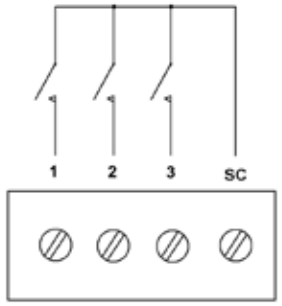
1. Connect mains power to the Neutral (“Neu”) and Phase (“Ph”) terminals. Important: Do not inadvertently swap the neutral and phase wires!
2. Connect COin on the DRED module to the COMP output from the thermostat.
3. Connect COout on the DRED module to the COMP input of the OUC.
4. Connect OUC_COMP on the DRED module to the CMC output of the OUC.
5. Connect De-Ice on the DRED module to the DE_ICE N/C output of the OUC. Note: If no De-Ice signal is used then connect the De-Ice terminal directly to mains neutral.

## DRED Module




**NOTE**
The manufacturer reserves the right to change specifications at any time without notice or obligation.

**DRED SIGNAL CONNECTIONS**
The DRED input switch contacts should be ‘voltage-free’.




**OPERATION**

- When no DRM inputs signals are active the DRED module passes the COMP signal from the thermostat directly to the OUC.
- If a DRM signal becomes active whilst the unit is in a De-Ice cycle the DRED module allows the De-Ice mode to finish before starting control of the unit’s energy consumption.
- If the compressor has started less than 100 seconds before a DRM signal has become active then a minimum compressor-run-time of 100 seconds will be allowed to complete before the DRED module starts control of the energy consumption.
- When the DRM1 input signal is active the DRM1 indicator light will be on. The DRED module will turn the compressor off. While the compressor is off the indoor fan is allowed to continue running.
- When the DRM2 input signal is active The DRM2 indicator light will be on. The DRED module will turn the compressor off after a certain time. Tthe indoor fan is allowed to continue running. On average the unit will consume less than 50% of the unit’s rated energy during a half hour period.
- When the DRM3 input signal is active the DRM3 indicator light will be on. The DRED module will turn the compressor off after a certain time. The indoor fan is allowed to continue running. On average the unit will consume less than 75% of the unit’s rated energy during a half hour period.
- When the DRED module limits the unit energy consumption by stopping the compressor then the relay indicator light will be on and the energy limiting indicator light will blink on and off.