

INVERTER PHASE CHECK with DATA FLOW MONITOR

Installation guide

Checks Inverter Output shows Non-Functioning-Output Devices or Damaged Output Stage.
Checks Serial-Link Communication between Indoor and Outdoor Units. Identifies Connection Problems or Non-Working Pc boards. Invaluable Aid for Analysis of Inverter Problems

ATTENTION!

Before commencing any tests, SWITCH OFF ALL POWER SOURCES and WAIT for a MINIMUM OF 3 MINUTES to allow all capacitor voltages to decay. Before disconnecting or connecting any terminals, check that all voltages are zero.

This Test Equipment

- MUST NOT BE USED in damp or wet conditions
- must only be used by a competent Engineer
- is not intended for permanent connection

Performing The Tests

A) Checking the Inverter Phase Outputs

This test is carried out using the three Phase Terminals marked R, Y, B.

With All Power Switched Off (see above) disconnect the connections from the inverter to the compressor and wire the three terminals on the Inverter Phase Check Module marked R, Y, B.

With the connections safely made to both the inverter and the Module, place the Module down on a dry surface where the lights can be seen through the windows in the fascia label and switch on the power to the inverter.

If the inverter outputs are "good", then all six lights will turn on, showing red, yellow, blue. If there is a problem with the output (power) board, or with the driver board which controls it, then one or more of these lights will not be lit.

Note: the inverter boards from some manufacturers incorporate safety cut-out which stop the inverter after a few seconds if the compressor is not connected. In these cases the lights on the Module will only light for a few seconds, but provided all six lights turn on then the inverter is probably ok. A second test, with the compressor and the Module both connected should then provide further confirmation.

B) Checking the Data Flow

When the inverter is operating, data flows between the communication board in the outdoor unit to each of the indoor units. To check these data flows, connect the red and black data probes to the pairs of terminals feeding each of the indoor units in turn. With the air conditioner switched on and operating the indoor units the two data flow lights should both be flashing in turn to indicate the data is flowing in both directions. This flashing is not symmetrical and varies in intensity and frequency depending upon the type and amount of data being transmitted. It is only important to check that the data is bi-directional, which is indicated by the flashing of these two lights separately. If one or both lights do not flash check firstly that the connections at both ends are made properly. If all is well then change the appropriate indoor board and re-test. If there is still no success then the data board in the outdoor unit should be changed.

Connecting the Inverter Phase Check

