

Moralle Electronics Limited

MEAC-DA001 – Daikin Air Conditioner BACnet / Modbus Interface Module



DATA SHEET

1. Technical Specifications

Dimensions	110mm x 58mm x 27mm
Weight	40g
Colour	Black
Power Supply	Internally Supplied from Air Conditioner unit (5v nominal)
Led Indicators	1 x RX, 1 x TX, 1 x Status, 1 x A/C Unit Com Status
Configuration	Configurations with proprietary software provided
Baud Rate	Up to 115200 baud
Operating Temperature	From -25oC to 85oC
Storage Temperature	From -40oC to 85oC
Isolation Voltage	4000v
Compliance	
Certification	

2. Overview

The MEAC-DA001 is designed for use with Daikin indoor air conditioning units which feature an electronic control board with an S21 interface socket (A list of compatible products can be found at www.moralle.co.uk/products/DA001). Its purpose is to provide a cost effective and simple method of enabling full integration of these units via the BACnet or Modbus MSTP protocol within most modern Building Management Systems (BMS), when integrated within an existing or new RS485 network. The unit is designed to be both discrete and robust and allows for up to 248 (Modbus) or 32 (BACnet*) devices to be connected on one single network.

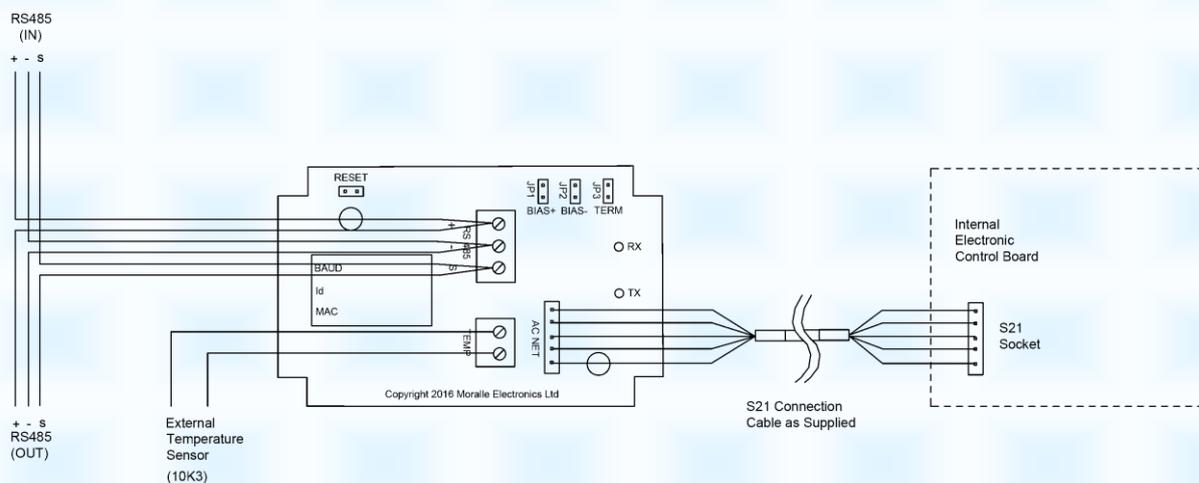
The MEAC-DA001 Interface is bi-directional allowing both read and write capability making integration and control seamless within new or existing Building Management Systems.

The device also incorporates a temperature sensor input to allow for localised temperature measurement which often is not available from the air conditioning unit itself. This can be used within the BMS strategy to monitor and control the localised supply air temperature, internal space temperature or external air temperature for the air conditioning unit or multiple units when used in an array configuration.

(* BACnet Protocol allows for the connection of up to 127 master devices or 255 slave devices on one RS485 network, however, it is unlikely with loading that a single network would be capable of handling such a number.)

3. Physical Connection of the MEAC-DA001 to Air Conditioning Unit and RS485 Network.

Disconnect the power to the Air Conditioning Unit, locate the internal electronic control board and attach the supplied cable to the S21 socket.



4. MEAC-DA001 – Air Conditioner Interface Unit – Internal & External Schematic

Internal

Reset

1 Second Reset will Power Cycle the device.

5 Second reset will restore to factory default.

RS485 Network Terminals

Allows for simple installation of the RS485 daisy chain network connection

External Temperature Sensor

Terminals allow for installation of a 10K3 type temperature sensor to be installed.

RS485 Network Bias Settings

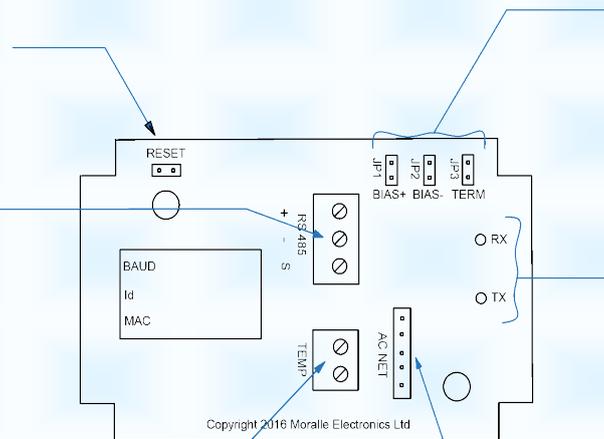
JP1 - Resistive Bias (High)
JP2 - Resistive Bias (Low)
JP3 - Resistive Bias (Term)

RS485 Communication Status LED

RX - Receiving
TX - Transmitting

S21 Air Conditioner Connection

Attach supplied cable from your Air Conditioning unit



External

Status LED (Green)

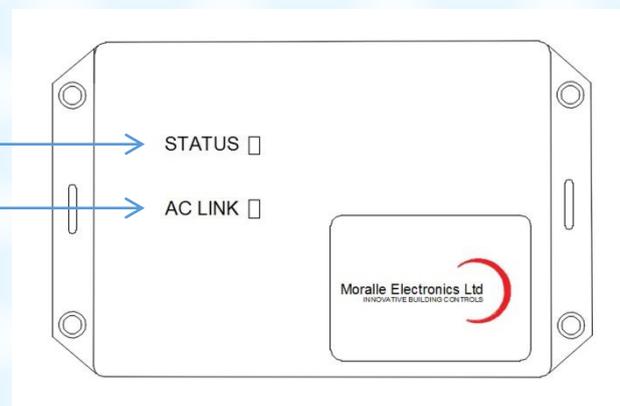
Indicates

- **Static** - AC Unit & Temperature Sensor functioning correctly
- **One Flash** - Internal fault AC communications
- **Two Flashes** - Internal error buffer overflow
- **Three Flashes** - Auxiliary sensor failed
- **Unit** - Unit failure

AC LINK LED (Amber)

Indicates

- **Flashing** - Communication is being established with Air Conditioning Unit
- **Static** - Communication has been established with Air Conditioning Unit



5. Notes

6. Contact Us

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