The Modbus Display and Control with Auto Addressing

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The Modbus Display & Control (MDC) is a device with two RS485 Modbus ports, a keypad for setting parameters / navigating and a display to view the status of the connected fans. The RS485 Master port connects to up to 100 Modbus EC fans and the RS485 Slave port allows an interface to a higher-level Modbus Master device e.g. BMS or IoT dataloggers if required. The MDC has its own "fan auto-addressing" feature to ease installation and commissioning, and supports four different operating modes.

Part Number	Supply Voltage (nominal) VDC	Ambient Temperature °C	Max Humidity %RH	Width mm	Length mm	Height mm	Weight g
CN1116	10 - 48V	-20 to 60	90	123	132	27	204

Monitor mode
- Display Modbus data from fans such as Speed, Power, Motor temperature, Electronics temperature, Setpoint %, Hours run, Warnings.
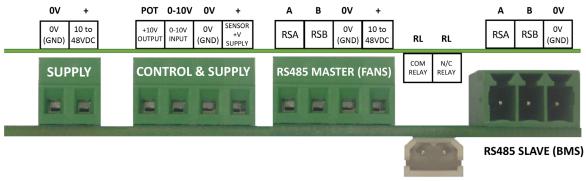
Monitor & Control mode
- The fan array speed is controlled by one, or a combination of:
  - 0-10V control signal input to the MDC
  - Modbus Master system connected to the RS485 Slave port e.g. BMS
  - MDC keypad

Constant Volume / Constant Pressure Control mode
- This operating mode requires one or multiple differential pressure sensors that are used by the MDC to maintain a constant volume/pressure according to a setpoint entered via the keypad or the RS485 Slave port. The MDC has an automatic sensor mapping procedure in case multiple pressure sensors are used.

Modbus Relay mode
- The MDC stops monitoring/controlling the fans and begins relaying Modbus messages between the two RS485 ports.