

## Features

### 4100ES Modbus Interface:

- The 4100MB provides a Modbus interface to the 4100ES panel for multiple Modbus Masters.
- The 4100ES panel can send up to 24,000 network points, or conditions (alarm, fault, etc.) to the Modbus Masters.
- The 4100MB can poll the 4100ES panel for up to 32 analogue values which can be mapped to Modbus registers for sending to the Modbus Masters.
- The 4100MB can be configured to turn a point in the 4100ES panel on or off (e.g. relay or pseudo point) when a Modbus Master changes the state of a coil in the 4100MB.
- The 4100MB supports 2x serial Modbus Masters and the Ethernet version additionally supports 4 Modbus TCP Masters.
- The 4100MB also supports operation as a Modbus Master (referred to as LHD mode) for talking to a single Modbus Slave device over Ethernet, allowing the state of up to 2993 coils in the Slave to be mapped to points in the 4100ES panel.
- The 4100MB supports:-
  - Using SNTP server for keeping time and date accurate, for itself, the 4100ES panel and the Modbus Master. This does not support Daylight Saving.
  - Import/Export of the Modbus mapping table as a CSV file when operating as a Modbus Slave.
  - Import of the LHD mapping table when operating in LHD mode.
  - Import of a CSV file generated from a 4100ES panel database, allowing the 4100MB programmer to see the list of all the 4100ES devices/ points.

## Description

The 4100MB provides a Modbus interface to a standalone 4100ES panel or a number of panels on a 4100ES network. The 4100MB can connect to 2 Modbus Masters via RS232, RS485, or RS422 connections. The Ethernet version additionally supports up to 4 Modbus Masters and 1 Modbus Slave via Modbus over TCP.

The 4100MB can function in two ways:

- Modbus Slave, passing device status information received from the 4100 panels to one or more Modbus Masters.
- Modbus Master, designed to poll 3rd party interfaces such as a Linear Heat Detector (LHD) using Modbus/TCP and using the LHD information to update points in the 4100 panel.

Both functions can be active at the same time, but typically only one or the other would be used.



4100MB Base Unit

## 4100MB Options

The base 4100MB (557.202.508) unit provides 2x Modbus serial interfaces and serial connections for the 4100ES panel and the 4100MB programmer (Windows PC).

The Ethernet version E/4100MB (557.202.509) includes an Ethernet interface module with the base unit, adding a LAN connection for 4x Modbus Masters and a TCP/Modbus connection to one Modbus Slave device (e.g., linear heat detector). The serial Modbus and TCP connections can be operated at the same time.

## 4100MB Programming

The 4100MB is configured using a Windows-based program, computer and a RS232 serial connection to the 4100MB. Windows 7 is supported. A database report can be exported from the 4100ES panel programmer and imported into the 4100MB programmer, providing a pick list of all the 4100ES devices and points. These can be simply mapped to Modbus I/O points, along with a range of pre-defined states from the 4100MB – including panel connection states, time and date, watchdog, etc. Alternatively, CSV format files can be used to prepare the 4100MB configuration – listing the 4100 device addresses and the Modbus addresses they map to.

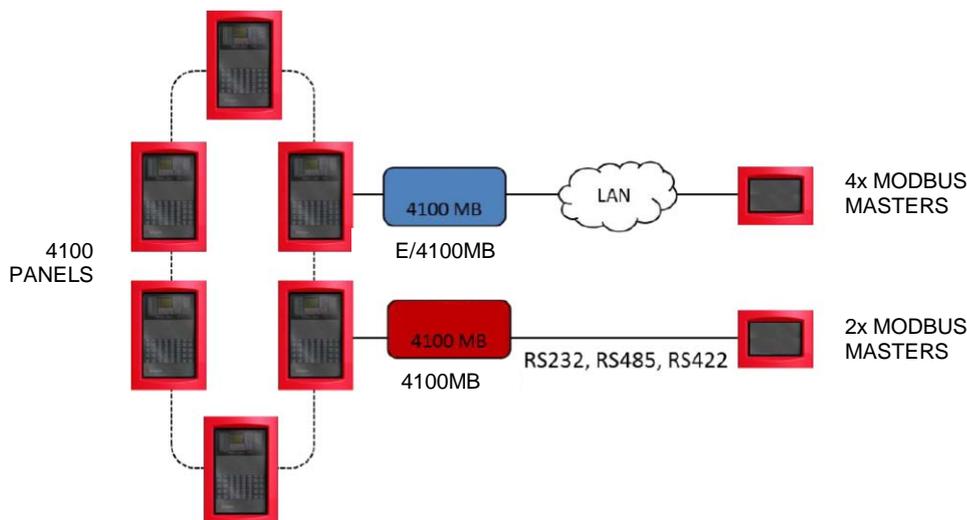
A CSV file can be used to define the LHD mode mapping from the Modbus Slave address to 4100ES panel address.

The 4100MB Programmer also provides diagnostic facilities and a Modbus Test program. The communications messages and other events are logged in a Messages window on the PC and the test program displays the status of all the Modbus addresses as exported by the 4100MB.

## 4100 Panel Requirements

The 4100MB is supported on 4100+, 4100U and 4100ES panels. However, the LHD mode is available with 4100ES only – it is not supported on 4100+ and 4100U.

The 4100MB is fitted on a legacy-style bracket (included with the 4100MB) which needs to be mounted in a spare slot of a mounting bay. It requires 24V power from the panel.



## 4100MB Specifications

Specification	Description
Environmental	Operating Temperature Range = -40° C to +85° C, RH <80% non-condensing
Module Package	Aluminium enclosure 108 mm x 144 mm, fitted to a 4100 Legacy-style bracket
Input Voltage	18 to 30 VDC (nominal 24 VDC) supplied from fire alarm control panel
Power	5 W maximum; 278 mA maximum @ 18 VDC; 208 mA maximum @ 24 VDC nominal
Serial Communications	Four Isolated Communication Ports, RS232, RS485, RS422 – 2x Modbus Master, 1x Programmer, 1x 4100ES panel
Local Relay	Form C contacts with LED indicators; green LED operates when relay is active and can be used to indicate processor or communication failure, alarm annunciation. Maximum ratings = 1 A resistive at 24 VDC
Status Indications	Transmission status green LED, one per Communication Port Supervision Fault status yellow LED, one per Communication Port Relay Output status per above

## 4100MB Ordering Codes

Part Number	Model	Description
557.202.508	4100MB	Modbus Slave Interface for Simplex 4100ES and NDU Fire Alarm Control Panels and Fire Alarm Network. Package includes: Installation and Configuration Manual, Software CD and RS232 Interface Cable. Supports Modbus RS232, RS422 and RS485
557.202.509	E/4100MB	Modbus Master and Slave Interface complete with Ethernet Media Card for Simplex 4100ES and NDU Fire Alarm Control Panels and Fire Alarm Network. Package includes: Installation and Configuration Manual, Software CD and RS232 Interface Cable. Supports Modbus RS232, RS422, RS485 and Modbus over Ethernet.
4100-0113K	4100/RS232	RS232 Interface card required in 4100ES panel for connection of 4100MB

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