



MB 2 + R8

TECHNICAL DATA

Processor:	Neuron 3150
Memory:	Flash 64kB
Transceiver:	FTT-1 OA
Interface to PC:	via LonWorks Network
Operating Temp:	-20...+ 60°C
Supply voltage:	24 Vdc
Housing:	Plastic injection moulding with DIN rail mount
Certification:	CE

CONTROLLERS

MB2	Input: 8 analog/digital, Output: 8 digital
MB2-B	Input: 8 analog/digital, Output: 2 analog/digital + 6 digital
MB2-C	Input: 8 analog/digital Output: 4 analog/digital + 4 digital

Analog 1 digital inputs and analog 1 digital outputs are individual selectable by jumpers.

RELAY BOXES

R4-230VAC1 OA-NO 4 output 230 Vac relays
(Normally Open)
R8-230VACIOA-NO 8 output 230 Vac relays
(Normally Open)
R8-230VACIOA-NC 8 output 230 Vac relays
(Normally Closed)

FEATURES

- Flexible, low-cost control module for Lonworks networks.
- Individually configurable digital and analog inputs
- 'Plug and play' relay box allows control of power switching applications
- Uses flash memory to facilitate application download via network.

GENERAL

The MB2 range of control modules provide a convenient, low cost solution to control applications.

Originally designed for building control applications, the MB2 features 8 inputs individually configurable to accept either digital or analog signals, plus a choice of analog and digital output options.

A 64kb programmable flash memory provides storage for application programs and configuration data and facilitates remote update.

MB2 can be used alone or in conjunction with a matching relay box, which clips to the side of the controller unit to provide 4 or 8 relay outputs each rated at 10A 230 Vac.

Connections between the controller and the relay box are made automatically when the relay box is clipped into place.

DIGITAL OUTPUTS

These act as MOSFET current source outputs.

In the active state, an output is pulled high to +24V and is capable of sourcing up to 0.5A.

In the inactive state, an output is switched to a high-impedance state.

The outputs incorporate overcurrent, overvoltage and overtemperature protection to prevent damage occurring in the event of a short circuit.

DIGITAL INPUTS

These are individually configurable by jumpers inside the enclosure to be either Active High or Active Low.

ORDERING CODE

MB 2	LON Controller
MB 2-B	LON Controller
MB 2-C	LON Controller



ACTIVE HIGH

The Input presents a high impedance load to the source. The Input changes to an active state when pulled high to the +24V rail.

In the absence of a +24V source, input is pulled low (inactive) by internal pull-down resistors.

Threshold voltage for the inactive to active transition is Input > 6 Volts.

Threshold voltage for the active to inactive transition is Input < 1 Volts.

The input may therefore be activated either by another device providing a +24V output signal, or by volt-free contacts connected between the input and the +24V supply.

ACTIVE LOW

The input changes to an active state when pulled low to the Ground (0V) rail.

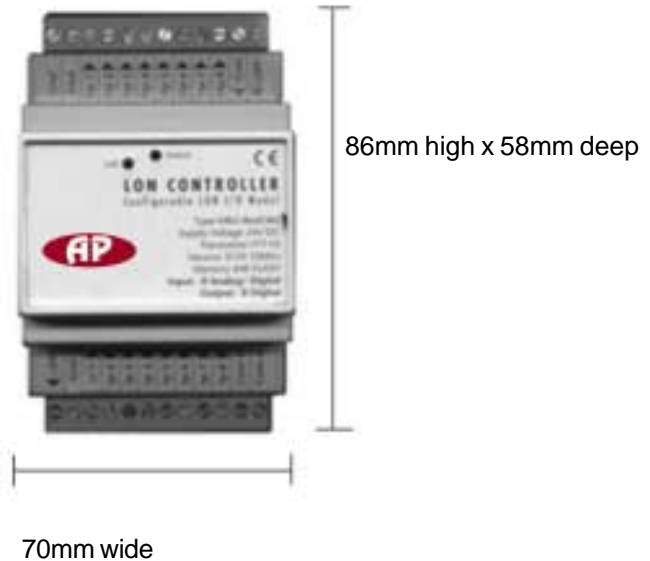
In the absence of a connection to Ground, the input is pulled high (inactive) by internal pull-up resistors to an internal +5V supply; therefore, when nothing is connected to the input, +5V is measurable between the input and Ground (0V).

The input may therefore be activated by volt-free contacts connected between the input and the Ground (0V) rail.

MB2 CONTROL MODULE FOR LONWORKS NETWORKS

Dimensions and Construction

Constructed from self extinguishing material (UL94-VO)



ANALOG INPUT / OUTPUTS

Analog inputs 0 - 10V input

Input impedance: 2 K Ω
 V_{IN} max: V supply max.
 Accuracy better than: 2 %
 Resolution: 12 bit
 Conv. time: <100 mS
 Linearity better than: 0,5 %

Analog outputs

Output impedance: <1 Ω
 I_{out} : 5 mA
 V_{out} : 0-10V
 Accuracy: < 2% (Full scale)
 Resolution: 12 bit
 t_{settle} : <150 μ S
 t_{rise} : <150 μ S

Resistance measurement input

1K Ω
 V supply max.
 2 %
 12 bit
 <100 mS
 0,5 %

Max. current consumption

Sensors 250 mA
 MB2 controller 100 mA
 8 digital outputs ea. 0.5A 4000 mA
 Relaybox 8 relays 200 mA