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NEW ZEALAND MADE

RM-8WAY-MB-24VDC MODBUS RELAY MODULE

The relay module provides 8 individual relays controlled over an RS485 serial bus using the Modbus RTU protocol.

The relays can be either mechanical Finder 46.61-024-DC relays or Autonics SRS1 solid state relays. The relay module can be populated with a mixture of mechanical relays or solid state relays to suit the loads being switched.

The module is powered from an external 24V DC supply.

Order code:

RM-8WAY-MB-24VDC 8 way Modbus relay module
Fitted with Finder 8 x 46.61-024V-DC relays

Optional customer specified mixture of
Finder 46.61-024V-DC relays or
Autonics SRS1 solid state relays on request

Specifications

Comms		: Isolated RS485 port : Selectable 9600 (default) or 19200 Baud 8 bit no parity 1 stop bit
Protocol		: Modbus RTU slave, node addressing selectable 1 (default) to 247
Supported Functions		: 01 read discrete outputs : 03 read holding registers : 05 write discrete output : 06 write single register : 15 write multiple outputs : 16 write multiple registers
Outputs	8 individual relays with fuse holders * NOTE fuses not supplied with the unit Either Finder 46.61-024-DC mechanical relays with SPCO contacts or Autonics SRS1 solid state relays with NO outputs 46.61-024-DC relays SRS1-A1205 relays SRS1-A1D102 relays	: 250VAC 10A SPCO (fuse/fuse holder limited) : 24-240VAC 5A NO : 5-100VDC 2A NO
Supply Input		: nominal 24V dc, operating range 18V to 30V dc : approx. 20mA + 25mA/relay, 225mA with all 8 relays on
Isolation		: 2kV isolation between the supply and RS485 bus
Temperature	Operating Storage	: -10°C to +20°C to +50°C : -20°C to +70°C
EMC Compliance		: AS/NZS 61000.6.3:2012
Housing	DIN rail mounted polyamide, flame retardant UL 94 V0.	
Terminals	Spring steel clamp, tin plated copper alloy terminal	: up to 2.5mm^2 stranded conductor : wire stripping 9mm

CARREL ELECTRADE LTD
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7 July 2025

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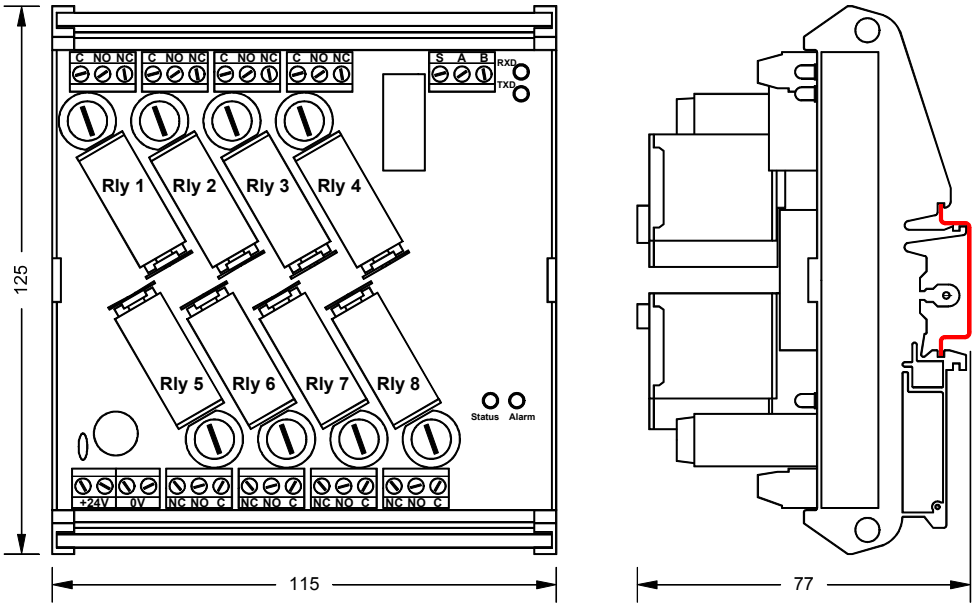
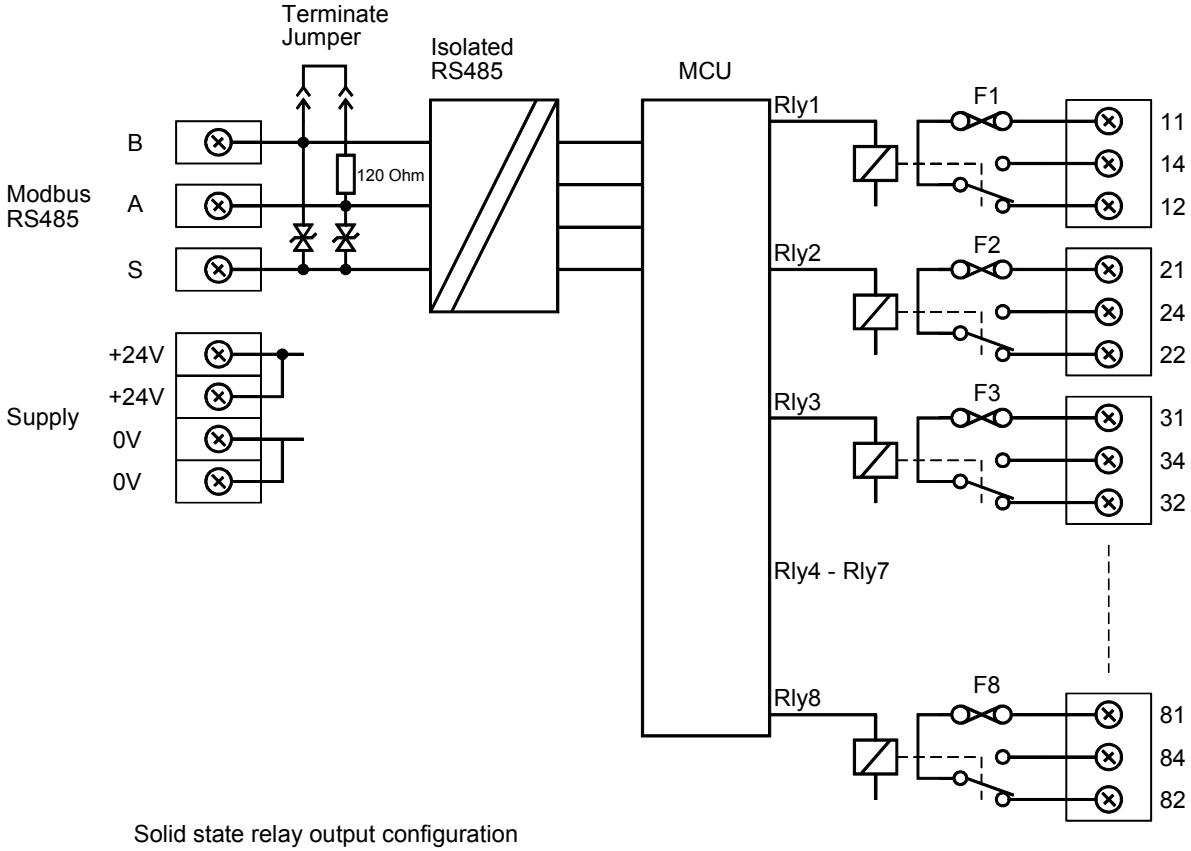
RM-8WAY-MB-24VDC MODBUS RELAY MODULE

Dimensions

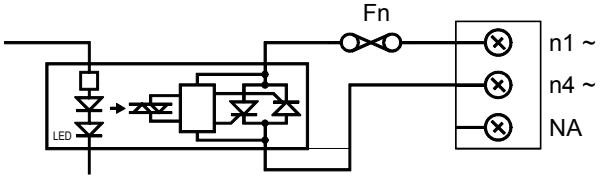


Circuit Diagram

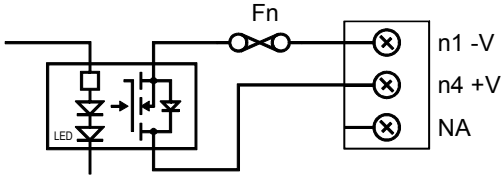


Solid state relay output configuration

Autonics SRS1-A1205 24-240Vac 5A



Autonics SRS1-A1D102 5-100Vdc 2A



Note. No NC connection with solid state relays.

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RM-8WAY-MB-24VDC MODBUS RELAY MODULE

Modbus Operation
Modbus RTU slave over RS485.
Baud rate 9600 (default) or 19200, no parity 8 bit 1 stop bit.
Node address range 1 (default) to 247.
The relay states can be read using function 01, read outputs (coils) or function 03, read holding registers. The relay states correspond to bits 0 to 7 in register 40001.
The relay states can be written using function 05, write single output (coils), function 06 write single register, function 15 write multiple outputs (coils) or function 16, write multiple registers.
Broadcast slave address 0 read supported for function 01 read outputs (coils) and function 03 read holding registers. Responds with actual node address plus data.

Supported Modbus functions:
Function 01, read outputs(coils)
Address range 10001 to 10008
Function 03, read holding registers
Address range 40001 to 40007
Function 05, write single output (coils)
Address range 10001 to 10008
Function 06, write single register
Address range 40001 to 40007
Function 15, write multiple outputs (coils)
Address range 10001 to 10008
Function 16, write multiple registers
Address range 40001 to 40007

Modbus Registers

Outputs (coils):
10001 Relay output 1
10002 Relay output 2
10003 Relay output 3
10004 Relay output 4
10005 Relay output 5
10006 Relay output 6
10007 Relay output 7
10008 Relay output 8

Holding Registers:
40001 MbReg1 Relay outputs
Relay output 1, bit 0
Relay output 2, bit 1
Relay output 3, bit 2
Relay output 4, bit 3
Relay output 5, bit 4
Relay output 6, bit 5
Relay output 7, bit 6
Relay output 8, bit 7
Bits 8 to 15 not used

40002 - 40005 not used

40006 MbBaud RS485 Baud rate, read/write either 9600 (default) or 19200

40007 MbNode Modbus node address, 1 (default) to 247