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## RS-232 Relay Controller

### RELC-RM1

#### Hardware Features

- 1U Rack-Mount form factor
- AC powered
- RS-232 input
- RS-232 output for additional units
- 40 controllable relays
- Common, NO and NC contacts available per relay
- Pluggable Phoenix style connectors for relay contacts
- Switch to set unit ID for daisy chaining
- Relay-state memory for unforeseen power cycles

### RELC-RM1

#### Hardware Connections

- 100-240 VAC IEC Power Socket
- 10 x 12 pin sockets for 4 relays each
- RS-232 connections for master and slave units
- ID switch on back panel

#### Hardware Indicator LED's

- Power LED
- Data received LED
- 40 LED's to indicate relay state

### RELC-RM1 Electrical Specifications

#### Electrical Characteristics

(Over the Operating Range)

PARAMETER	TEST CONDITIONS	MIN	TYP	MAX	UNIT	NOTES
Power Consumption	230VAC, all relays off			2	W	
Power Consumption	230VAC, all relays on			17	W	
Relay Current	DC			1	A	
Relay Voltage	DC			60	V	
Relay Current	AC			0.5	A	
Relay Voltage	AC			60	V	

### HARDWARE ORDERING OPTIONS

**Part Number**

**RELC-RM1**

**Description**

Rack Mount form factor, including all features as described above

RELC-RM1 DATASHEET February 2015

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## Internal Mode Switch (DIP switch 1)

When the switch is ON, the relay states will be stored in memory. When the power was cycled the relay states will be restored.

When the switch is OFF, the relays will be off when the power was cycled.

## RS-232 Communications

The unit can be daisy chained to more units. Every unit must have an unique ID. Only the unit with the correct ID will respond to a valid command. All invalid commands will be ignored. The firmware has a 100 command storage buffer. Up to a 100 commands can be received without a delay between the commands. After a command was processed that buffer position will be cleared.

### Communication Specification

Baud rate:	19200
Data bits:	8 bits
Parity:	None
Stop bits:	1
Flow control:	None

### RS-232 Command Formats

Byte 1	Header	226
Byte 2	Unit ID	0 – 9
Byte 3	Relay number	1 – 40
Byte 4	Relay state	0(off) or 1(on)
Byte 5	Footer	209

Example (switch on relay 18 of unit 5):  
<226><5><18><1><209>

### RS-232 Response Formats

Example Response:  
<226><79><75><209>

The unit has responded with the following.

Byte 1	Header	226
Byte 2	"O"	79
Byte 3	"K"	75
Byte 4	Footer	209

### Slave Units

Connect the first units' RS-232 output to the second units' RS-232 input. Use 3 wires, GND, TX and RX, making sure to cross the TX and RX lines. The unit ID's can be in any order.



# Physical Layout and Dimensions

## RELC-RM1

(All Dimensions in mm)

