



**12-03-0000 UHF POCSAG  
Eight Channel  
Relay Output  
Receiver**

**PRODUCT INFORMATION**

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## POCSAG Relay Output Receiver

**GENERAL** The 12-03-0000 POCSAG Relay Output Receiver provides the ability to remote control up to 8 relay outputs using SALCOM paging systems or telephone wide area paging networks.

**OPERATION** The unit receives and decodes a numeric or alphanumeric pager call. If the received *unit number* matches the 12-03-0000 *unit number* the relay outputs are switched according to the ON/OFF commands of the message.

**INSTALLATION** Situate the 12-03-0000 away from direct sunlight, vibration and strong heat sources and avoid close proximity to radio transmission equipment. The unit is not certified as intrinsically safe.

In good coverage areas fit the aerial to the aerial socket as shown on the cover. An external aerial may be needed where reception is poor.

Connect a 12 volt DC power supply to the power terminals (see figure 1). The 12-03 is protected against reversed supply connection. The power source must be reasonably noise free.

The connections to the relay contacts are made using the eight pairs of terminals, labelled 1 to 8. These are normally open contacts, but can be configured to be normally closed by special order.

One end of each contact can be connected to ground by linking the pads adjacent to each terminal block (See figure 1).

Note: High current relays can be fitted on special order at the factory. Because of the high current capability of the relay outputs appropriate fuses should be fitted when the system is installed as protection against accidental short circuits.

### CORRECT OPERATION

The operation of the unit is shown by the LED in the corner of the PCB. See figure 1. Correct operation is shown by this LED flashing. If the LED does not light, check the voltage on the supply terminal block. Out of Lock condition of the VCO will also extinguish this LED, caused by the selection of a frequency out of range. During the reception of a valid command with the correct RIC code, this LED will stay on for

approximately one second. When a relay is commanded on, the corresponding LED will light next to the relay.

**UNIT NUMBER** Each unit will respond only to messages which contain a matching *Unit Number*. Up to 99 unique unit numbers are available. Any number of units can be programmed with the same unit number.

The *Unit Number* comprising of 2 digits is selected using the configuration software.

**MONOSHOT** Output monoshot (momentary) operation can be enabled by using the configuration software. Each relay output can have its own monoshot time, ranging from 0 to 10 seconds in 40mS steps. Setting the value to 0 disables the monoshot timer altogether, and the relay output is latched until commanded off.

#### **RELAY RESTORATION**

The 12-03-0000 has the ability to remember the state of the relays during a power down period. If this feature is turned on in the configuration software, the relays will be returned to their previous state at restoration of power.

#### **RADIO CHANNEL FREQUENCY**

The frequency of the radio channel can be set using the configuration software. The nominal tuning range is approximately 455 to 465MHz, but can be extended by factory tuning across the range 450 to 470MHz.

#### **SPECIFICATION**

Enclosure.	170mm x 120mm x 55mm. ABS plastic case. Weather proof. IP56
Supply Voltage	10v to 17v, Nominal 12V.
Current drain	Standby 35mA plus 18mA per relay.
Relay contacts	1Amp @24VDC. 10A @250VAC can be fitted on special order.
Temperature limits	-10 to +50degC
Frequency range	450-470MHz, factory set to order in one of four 5MHz bands
Frequency selection method	Synthesised. High vibration crystal conversion available as special order.
RX sensitivity	Approx -120dBm >-115dBm
Aerial connection	BNC 50ohm
Paging protocol	POCSAG 512 or 1200baud.

**COMMANDS**

The OUTPUT Relays of the 12-03-0000 are controlled by a series of numeric commands sent in the form of a numeric or alphanumeric pager message.

Note: For best sensitivity and range, it is better to send the command as a *numeric* paging message, as this uses the least number of characters.

**Command Format: UUx..x0y..y9****UU      Unit number**

This must be entered as 2 digits 00 - 99

N.B. 00 is a group call and all 12-03-0000 units with the same RIC will receive the command.

**x      Relay to go ON.**

Each digit corresponds to the matching relay number. Any combination of Digits 1-8 can be entered in any order. If none are entered then the function has no effect.

**0      End entry of Output ON values**

This terminates the list of outputs to turn on. This character is mandatory.

**y      Relay to go OFF.**

Each digit entered corresponds to the matching relay number. Any combination of Digits 1-8 can be entered in any order. If none are entered then the function has no effect.

**9      End entry of Outputs OFF values & Ignore rest of entry.**

This terminates the list of outputs to turn OFF and informs the 12-03-0000 to ignore the rest of the message. This allows a text message to follow the command.

**Examples****To control relays using the TELECOM Paging Network**

Message: 026PPPPPPPP UUx..x0x..x9

			12-03-0000 Command
			the pager number[TELECOM PAGER No]
			the network access number

**To control relays using a SALCOM 1131**

Message: NN[MESSAGE]UUx..x0x..x9

			12-03-0000 Command
			the message button
			The quick dial number

**12-03 CONFIGURATION**

The programmable parameters of the 12-03 can be configured using the Salcom 11-46-0000 Programming Adaptor and the Product Support Software S1171WE1. The software can be downloaded from the SUPPORT area of the Salcom web page ([www.salcom.co.nz](http://www.salcom.co.nz)). Programming of the 12-03 should be performed only by suitably qualified personnel.

**MEMORY PROTECTION**

The configuration memory can be protected from accidental corruption by inserting the WP (write protect) link. This must be removed when re-configuration is required.

**WARRANTY**

Our Products are warranted for a period of 12 months from date of purchase against faulty materials and workmanship. Should any fault occur the unit should be returned to the vendor, freight pre-paid. Please include a description of the fault to assist with prompt return. Any unauthorized alterations or repairs will invalidate the warranty.

**DISCLAIMER**

All information provided in this document is carefully prepared and offered in good faith as a guide in the installation, use and servicing of our products. Installers must ensure that the final installation operates satisfactorily within the relevant regulatory requirements. We accept no responsibility for incorrect installation. We reserve the right to change products, specifications, and installation data at any time, without notice.



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