

The 12-38-0000 transceiver is capable of accurate control and telemetry over long distances. Designed to be used in industrial environments it can withstand temperature extremes as well as being resilient to electrical noise often found in industrial plants. The transceiver, along with its integrated input/output interface is designed for the control and telemetry of industrial machines with high accuracy and speed.



## 12-38-0000 VHF/UHF Transceiver

- The 12-38 Series transceivers are available as VHF or UHF units with user-programmable power outputs ranging from 50mW to 5W.
- Built-in POCSAG encoder.
- On-board SD card to store configuration, capturing log files and storage of audio wave files.
- Broadcast audio wave file to radio transceiver.
- Store & Forward capability, can be used as range extender.
- Two variants: VHF (136—174 MHz) or UHF (440—470 MHz)
- All parameters such as frequency, power output, deviation, data transmission are user- configurable.



### Key Features:

- POCSAG and NRZ standard transmissions.
- Analogue FM transmission & reception
- Over The Air Baud Rate 512, 1200.
- POCSAG built-in encoder (programmable on/off)
- 240 Character messaging, buffered.
- RS232 buffered serial port / USB port.
- RF output through standard BNC termination.
- 3 Ground activated inputs.
- 2 Open Collector outputs.
- Other I/O:  
PTT, Busy, Mic/AV in, Mic/AV Out, +5V.
- Connectors:  
Serial Port (RS232) = RJ12 (6P6C)  
Serial Port / Flash Drive = mini USB  
Input/Outputs = RJ45 (8C)

### Applications:

- **Messaging:** The 12-38 supports pager messaging and can transmit 3 types of POCSAG message: alphanumeric, numeric & tone only transmissions.
- **Store & Forward:** Used when a transmitter is designated as a source, and a receiver listens to the source relaying the message to another transmitter for retransmission. Configurable as an optional feature.
- **Telemetry Control:** Systems that need external messaging and data to operate, switch on/off.



### Technical Specification

#### 12-38-0000 – VHF / UHF Transceiver

Frequency Range	136 - 174MHz - VHF (Model No. 12-38-0150)
Frequency Selection	User configurable
Power Supply	+13.8V typical (11 to 15 VDC range)
Power Consumption	Standby: 140mA Transmit: 1.2A @ 5W
Transmit Power	5W, 4W, 2W, 1W, 500mW, 250mW
Channel Spacing	6.25kHz, 12.5kHz, 25kHz
Modulation	FSK with NRZ Data True FM for Audio
Deviation	±2.25kHz or ±4.5kHz
Transmit Duty Cycle	Up to 100%
Receiver Sensitivity	-119dBm for 12 dB SINAD
Audio Modes	Analogue FM transmission and reception
Audio Conditioning	300Hz to 3kHz passband software defined pre-emphasis DTMF and CTCSS (<300Hz)
Muting	Software defined muting level
Baud Rates	512, 1200 Will not operate with 1200 baud rate pagers
Message Format	POCSAG
Configuration Application	Salcom Configuration Tool
Programming Cable	12-45-0000 (RJ12 to DB9)
Serial Port	9600 , N, 8, 1; RS232
Serial Protocols	Salcom
Discrete Inputs	3 (Ground activated)
Discrete Outputs	2 (Open collector)
Other I/O	PTT; Busy; Mic/AV In; Mic/AV Out; +5V
Connectors	Serial Port (RS232) = RJ12 (6P6C) Serial Port / Flash Drive = mini USB
Power Connector	2-way plug & socket, screw connections (supplied)
RF Connector	50Ω BNC
Environmental Protection	Not suitable for outdoor use and should be protected from adverse environmental conditions
Operating Temperature	-10°C to +60°C (+14°F to +140°F)
Indicators	Power LED (Green) - Slow Flashing = Normal Operation - Rapid Flashing = USB Connected Status LED (Red) - On = Transmitting - Flashing = Error Condition
Weight	318g
Enclosure Dimensions	100mm x 130mm x 30mm (WxDxH)
Enclosure Material	Extruded aluminium
Colour	Matt black
Type Approvals	AS/NZS 4295: 2004 (RF) AS/NZS 4769.1:2000 + Amendment 1:2002 (RF)

