RRM02
Remote Radio Microphone Receiver

The RRM02 Remote Radio Microphone Receiver provides a method of implementation of RPA (Roving Public Address) functions to defined loudspeaker zones. This unit is a convenient and compact method of providing a radio microphone receiver when a SAP02 Station Announcement Point is not required. This would be particularly desirable for zones where there is no additional requirement for a fixed fist microphone such as the SAP02.

The RRM02 is designed to work with the whole range of ASL Voice Alarm and Public Address systems, while the provision of the closing contact select output from the RRM02 also enables it to be connected to PA (Public Address) systems other than those provided by ASL.

Where localised radio microphone coverage is required the RRM02 can be installed without any antenna cabling, using antenna mounting points on its upper face. If a larger area is to be covered then remote antennae can be used, and antenna combiners can be used to add further antennae, or multiple RRM02 units can be used in one zone. This functionality may be particularly useful in installations where several radio microphone antennae are required due to the topology of the zone, e.g. for a long and winding passenger walkway.

The RRM02 is physically implemented as an IP65 sealed enclosure, and is designed to be mounted against a vertical wall or other surface in the PA zone. The lower face of the unit provides ‘Power’, ‘Active’, and ‘Busy’ status indicators.

Internally the RRM02 comprises a Radio Microphone Receiver and a microphone PCB (Printed Circuit Board). A processor on the microphone PCB interfaces all LED indicators and the PTT (Press To Talk) signal to the ASL PA system by means of a serial interface, while microphone audio is provided as a balanced 0 dBu (nominal) analogue signal. The microphone’s processor is also responsible for generating an outgoing low-frequency surveillance tone which is used to monitor the audio connection to the Router. The processor also interfaces the PTT (Press to Talk) signal to non-ASL PA systems by means of a relay closing contact.

The Radio Microphone Receiver is a high quality, fully synthesised diversity receiver, capable of working on ten frequencies that are selectable via a rotary switch. Additional circuitry for pilot tone detection prevents announcements from unauthorised transmitters. The pilot tone frequency is unique to this receiver. Thus only announcements from transmitters able to provide the same pilot tone, such as the ASL RPA01 Transmitter, are broadcast to the system, while announcements from unauthorised transmitters are blocked. This security feature can however be disabled for compatibility with transmitters that do not provide the pilot tone.

The Radio Microphone Receiver provides phantom power for mast-head antenna amplifiers, which is ideal for demanding RF environments. The phantom power is current limited so that a short circuit on one antenna does not disable the other. The RRM02 is designed to mount two ASL ANT03 Whip Antenna on the upper face, or remotely connected to the RRM02. The ASL ANT04 Low Profile Antenna can also be used as a remote antenna, if required, as can other suitable antennae. Note that no antennae are supplied with the RRM02, and the appropriate type needs to be ordered separately.

Field connections are provided by DIN rail terminals mounted on the inside rear panel of the backbox.

For further details, and for information on other products, please visit www.asl-control.co.uk.

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SPECIFICATION

General

Supply Voltage Range ..... 18 – 40 V DC
Current Consumption
Min., no announcement ... 260 mA @ 24 V DC supply
Max., all LEDs on ..... 295 mA @ 24 V DC supply
Audio Output ..... 0 dBu balanced (nominal)
Output Impedance ..... 66 Ω
Microphone Control Data ..... EIA RS485 / 19200 baud
Antenna Connections ..... 50 Ω
2 x TNC (jack) on unit's upper face
2 x BNC (jack) on Radio Microphone Receiver
Other Connections .... internal DIN rail mounted terminals
Interface to non-ASL Systems ..... 2 x relay contact pairs[1]
(NO – Normally Open)
8 A / 250 V AC relay
PTT active indication
Format ..... cast aluminium box
Colour ..... agate grey RAL7038
Low Smoke and Fume, Zero Halogen

Radio Microphone Receiver

Phantom Power ..... 9.3 V nominal
Phantom Power Current Limit ..... 44 mA
Total Harmonic Distortion (THD) ..... < 1.3%
Audio Frequency Response ..... 70 Hz – 18 kHz, –3 dB
Sensitivity ..... Better than –107 dBm for 12 dB SINAD
Signal/Noise Ratio ..... >100 dBA
Squelch Level ..... 4 levels (selectable)
Operating Frequencies ..... 10 frequencies in the Channel 70 license free band selectable by internal rotary switch
Frequencies available from ASL on request

Environmental

Temperature Range ..... –5 °C to +50 °C (storage and operating)
Humidity Range ..... 0% to 93% non-condensing
Ingress Protection IP65

Dimensions and Weight

Dimensions (H x W x D) ..... 160 mm x 360 mm x 90 mm (excluding antennae and connectors)
Weight ..... 3.6 kg
Gland/Conduit Hole ..... 25 mm

RRM02 LOWER FACE
STATUS INDICATORS, FIELD WIRING HOLE, CABLE GLANDS FOR OPTIONAL REMOTE ANTENNA CONNECTION

[1] PTT relay contacts can also be used for connection of multiple RRM02 units for single audio zone group.

CE This equipment is designed and manufactured to conform to the following EC standards:
EMC: EN 55103-1:1997, EN 55103-2:1997, EN 50121-4:2006, ENV 50204:1996
Safety: EN 60065:2002

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