

Operational Description of receiving unit Type URX97 Model RC52.1

1 Identification of the unit

Type	URX97
Model	RC52.1
Equipment	remote control receiving unit
Receiving radio module	MRXUS06B
Used frequency band	902 - 928 MHz
FCC Identifier	OQA-RX97RC52
Manufacturer	AUTEC srl Via Pomaroli, 65 I-36030 CALDOGNO (VI)

where:

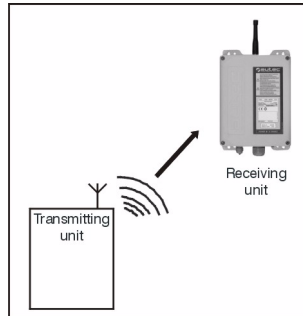
TYPE: identifies type of unit (transmitting, receiving or transceiving), type of casing and used electronic modules.

MODEL: differentiates power supply, type of actuators and radio frequency band

2 Operational description

Industrial radio remote controls are used to command machines from a distance.

Each industrial radio remote control is made up of a portable transmitting unit, from which the user can remotely control the machine, and a receiving unit installed on board the machine itself.

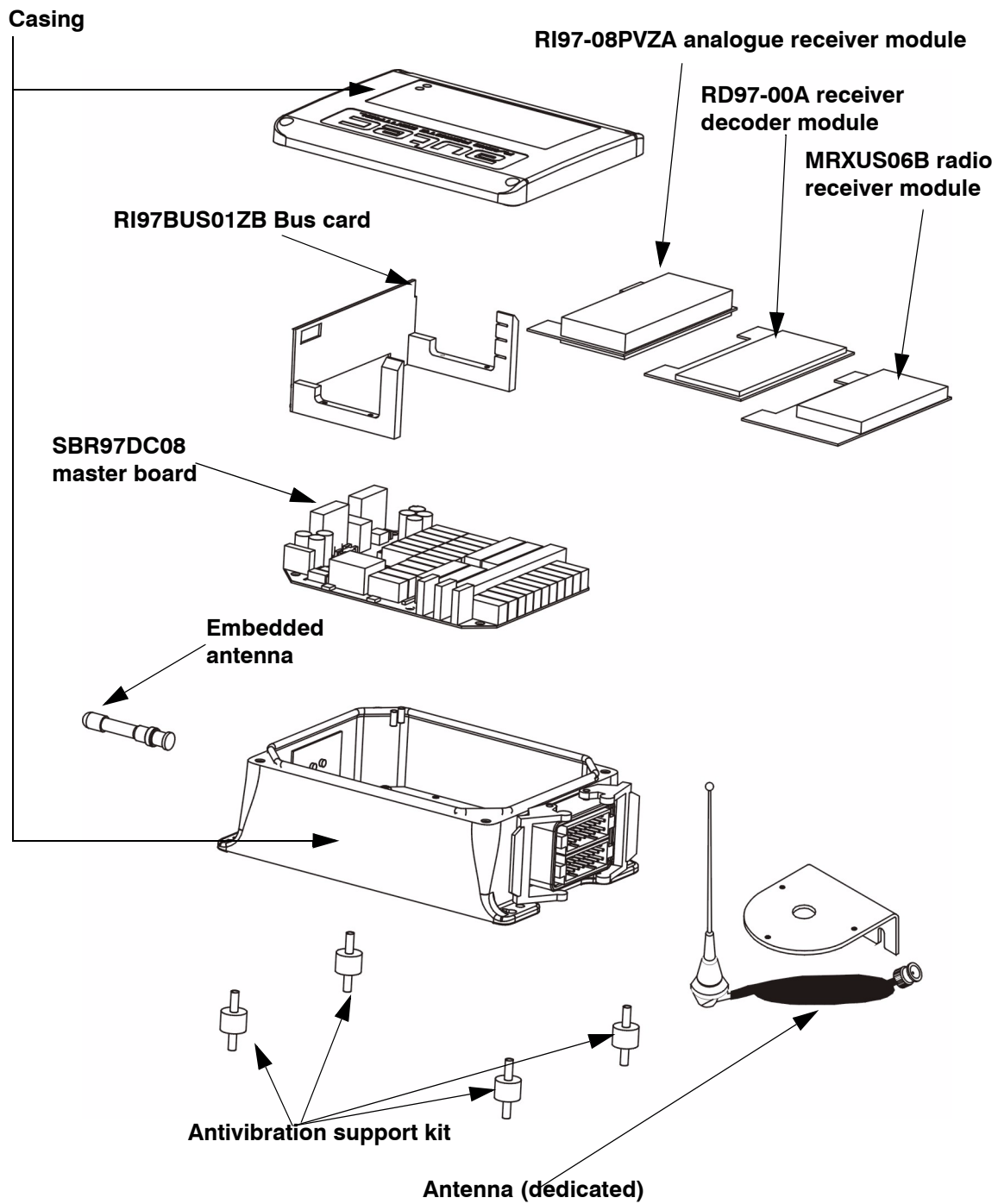


The receiving unit contains MRXUS06B. It is the radio receiving module.

A double conversion superheterodyne radio circuit demodulates the tuned carrier (256 different frequencies may be chosen in any 3.2 MHz subband of the 902-928 MHz ISM band) and so recovers the data telegram to be decoded by a following logic section. Decoding is performed with two-channel redundancy, so as to achieve protection against single faults; if both channels recognize a telegram containing the same address stored in the "address key" EEPROM, then commands encoded on the telegram are output to be used for relay driving. Relays are housed on SBR97DC08 master board, together with a suitable power supply section (*for details see related block diagrams*).

Telegrams coming from a transmitter with address different from that stored in the "address key", as well as any other radio noise, will be discarded; the receiver will automatically bring the system to safe state (no command output) if no valid signal is received for more than 0.5 or 1.5 sec.

3 Exploded view



4 Technical data MRXUS06B receiving radio module

Used frequency band	902 - 928 MHz
Type of modulation	4800 Baud GFSK
Channel spacing	25 kHz
Sensitivity	-116 dBm (SINAD > 12 dB)
Type	superheterodine (double conversion)
Duty cycle	up to 100 % (continuous duty), depends on user's need
Duplex direction	simplex
Antenna type	integrated $\lambda/4$ monopole *
Data telegram	232 bit
Hamming distance	> 8
Probability of non-recognition of error	<10 exp-11

* a dedicated $\lambda/4$ monopole antenna with cable 1-5 metres (see exploded view) may also be used.