Operational Description for Type R202 Model 152D receiving unit

1 Identification of the unit

Type	**R202**
Model	**152D**
Configuration	**B27**
Equipment	**remote control receiving unit**
Receiving radio module	**E16SRXUS1**
Used frequency band	**902 - 928 MHz**
FCC Identifier	**OQA-R202152D**
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
CONFIGURATION: refersto the specific set of components and accessories of the unit

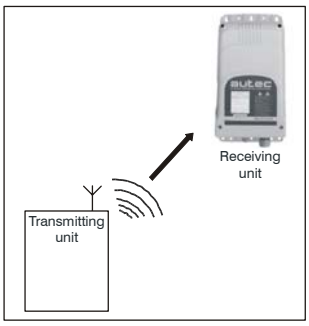
2 Difference between the units

There are two Configurations which differ each other for the used antenna:

- Configuration B27: embedded antenna
- Configuration B28: dedicated antenna with a cable 1 - 5 metres

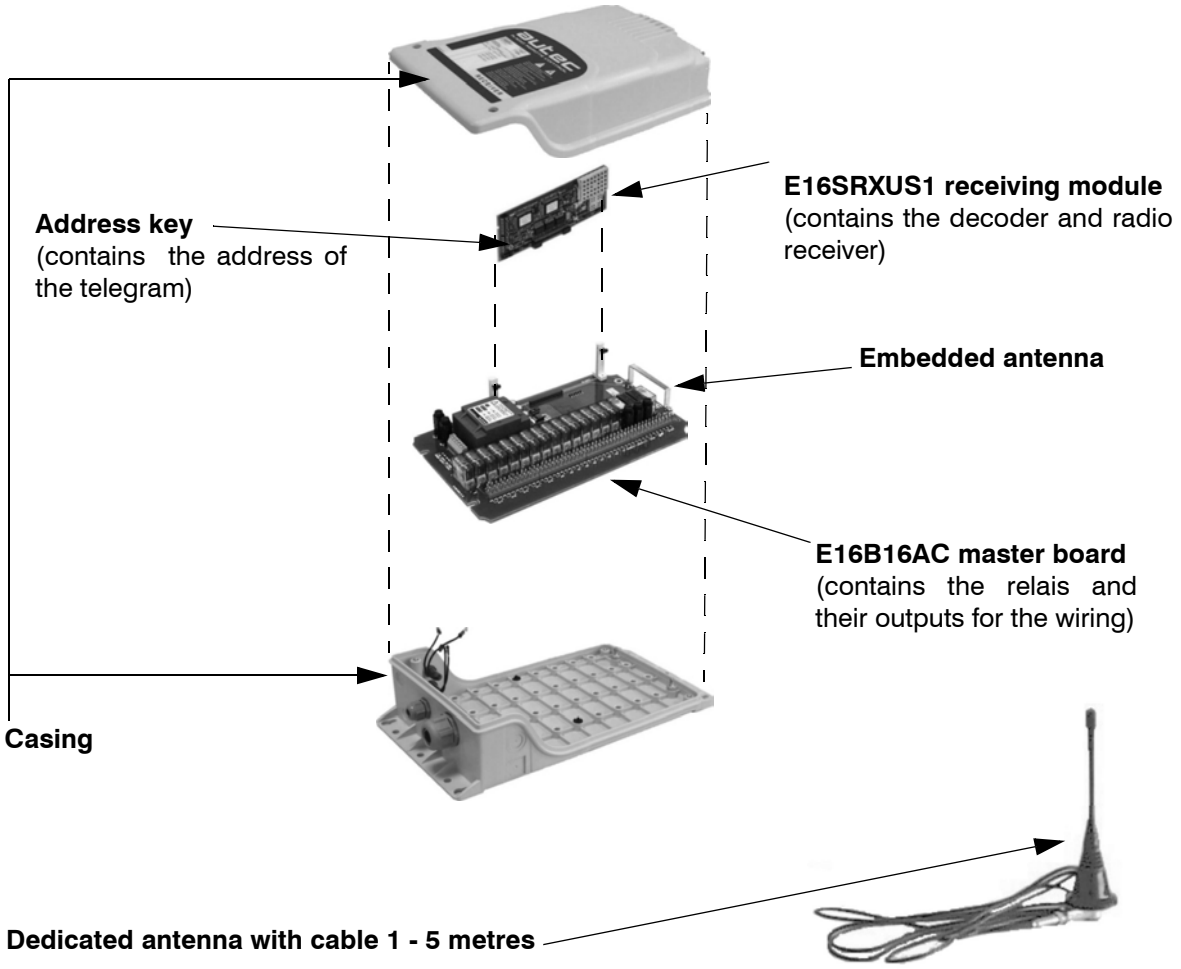
3 Operational description

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 E16SRXUS1. It is the radio receiving module.
A double conversion supeheterodyne radio circuit demodulates the tuned carrier (32 different frequencies in the 902-928 MHz band, channel spacing 25 kHz) 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 E16B16AC master board, together with a suitable power supply section *(for details see relative 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 0.35 or 1 sec (user selectable).

4 Exploded view



5 Technical data E16SRXUS1 receiving radio module

Used frequency band	**902 - 928 MHz**
Type of modulation	**2200 - 2600 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	**embedded ***
Data telegram	**132 bit**
Hamming distance	**> 8**
Probability of non-recognition of error	**<10 exp-11**

***** if the antenna is dedicated, it is $\lambda/4$ monopole antenna with cable 1-5 metres (see exploded view).