

# Operational Description of transmitting unit Type UTX97 Model RB71.1

## 1 Identification of the unit

|                           |                                                     |
|---------------------------|-----------------------------------------------------|
| Type                      | UTX97                                               |
| Model                     | RB71.1                                              |
| Equipment                 | remote control transmitting unit                    |
| Transmitting radio module | MTXUS06B                                            |
| Used frequency band       | 902 - 928 MHz                                       |
| Trade name                | AUTEC C26 PRO PRO-M                                 |
| FCC Identifier            | OQA-TX97RB71                                        |
| Manufacturer              | AUTEC srl Via Pomaroli, 65<br>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

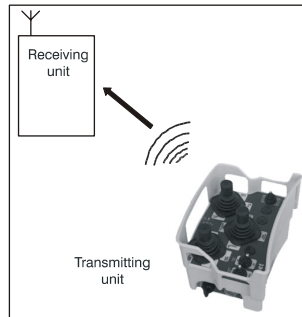
TRADE NAME: commercial reference

## 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 AUTEK C26 PRO PRO-M transmitting unit is a waist-portable unit.



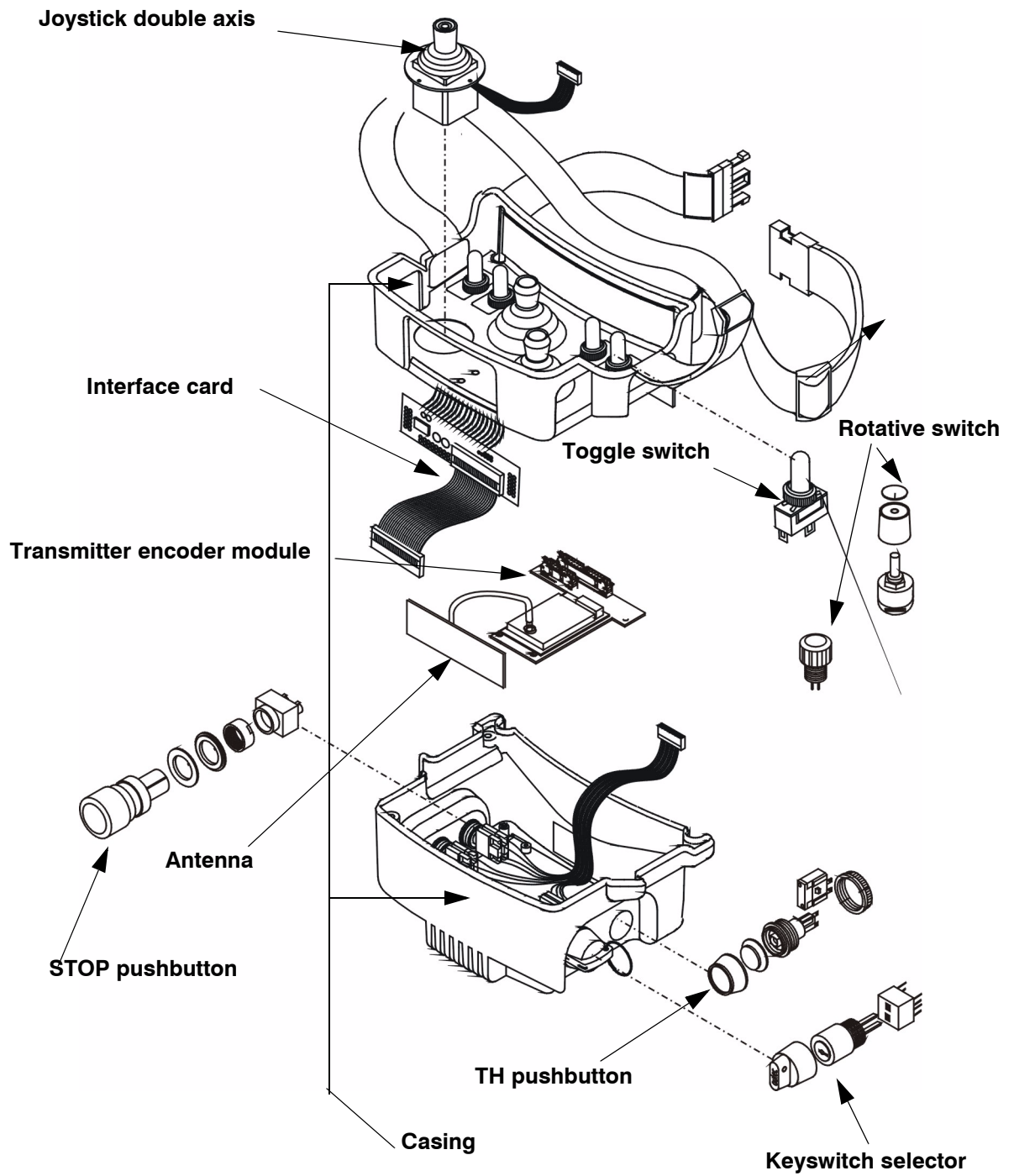
The AUTEK C26 PRO PRO-M contains MTXUS06B. It is the radio transmitting module.

A logic section collects commands coming from various actuators and combines them with an address code stored in an EEPROM memory ("address Key"); a serial data telegram at 4800 baud is so obtained. After a Gaussian spectrum shaping filter, the telegram is frequency modulated on a carrier generated by a PLL synthesizer and then transmitted over a 25kHz channel in the 902-828 MHz band divided in 8 subbands each 3.2 MHz wide; 256 different frequencies may be chosen in each subband, so as to allow coexistence of multiple units on the same location (*for details see related block diagrams*).

Transmission is continuous (100% duty cycle) even with no command activated, since the receiver is expected to monitor continuously the presence of a valid radio signal.

A receiving unit will decode only messages coming from a transmitter with the same address code. This excludes the possibility of an interference activating any function unwantedly.

### 3 Exploded view



#### 4 Technical data MTXUS06B trasmitting radio module

|                                         |                                                                  |
|-----------------------------------------|------------------------------------------------------------------|
| Used frequency band                     | <b>902 - 928 MHz</b>                                             |
| Type of modulation                      | <b>4800 Baud GFSK</b>                                            |
| Channel spacing                         | <b>25 kHz</b>                                                    |
| Designation of emission (ITU code)      | <b>10K0F1D</b>                                                   |
| Strenght field                          | <b>see related Test Report</b>                                   |
| Duty cycle                              | <b>up to 100 % (continuous duty),<br/>depends on user's need</b> |
| Duplex direction                        | <b>simplex</b>                                                   |
| Antenna type                            | <b>integrated διπολε</b>                                         |
| Data telegram                           | <b>232 bit</b>                                                   |
| Hamming distance                        | <b>&gt; 8</b>                                                    |
| Probability of non-recognition of error | <b>&lt;10 exp-11</b>                                             |

## 5 Power supply: MH0707L battery pack



|                                          |          |
|------------------------------------------|----------|
| number of NiMH elements                  | 6        |
| nominal voltage of 1 element (V)         | 1,2      |
| total nominal voltage of the battery (V) | 7,2      |
| battery voltage after discharge (V)      | 6        |
| voltage of the charged battery (V)       | 8,4      |
| capacity (Ah)                            | 1,3      |
| number of cycles in average life         | 400      |
| autonomy (hours)                         | up to 25 |
| recharge time                            | about 4  |

MH0707L batteries must be only recharged by one of the CH26\_R battery chargers.

The battery should be used until it is totally discharged (the led of the transmitting unit flashes quickly when the battery used is discharged).

