REV.	DATE	DESCRIPTION	AUTHOR	APPROVED
R1	2011-10-28	First issues	SB	
R2	2012-06-04		SB	
R3	2012-06-22		SB	

1. Overview

The CONTROLLER4 is an output module unit designed to work in conjunction with Sistematica S.p.A RTX family handheld remote controls. It's able to receive commands sent by the user through the remote control in order to switch its outputs on or off. The main feature of CONTROLLER4 are listed below:

- Operating supply voltage:12-24 Vdc ±10%
- Operating temperature: -20 ÷ +70 °C
- Current consumption: < 50 mA in stand-by status (no output active)
- Enclosure protection: IP66
- Number of output: up to 4
- Output technology: solid state high side power MOS-FET
- Maximum current available per output: 5 A
- Maximum total current available for all active output: 10 A
- CAN Bus interface available
- Integrated antenna
- 1 m connection cable
- Operating frequency: 915 - 918 MHz
- Type of communication: bidirectional - half duplex
- RF Chipset: NORDIC nRF905 Transceiver

2. Operational description

The CONTROLLER4 output module acts the commands received from the remote control switching its output on or off in accordance with the customer demand.

A pairing procedure allow the user to register its remote control as the unique device able to give commands to CONTROLLER4 which will save the unique id of the remote control in its memory.

A working session starts at the reception of the START command from the remote; before of this, each command with the aim of activate some CONTROLLER outputs will be ignored.

Each received command is validated and accepted verifying two conditions:

- Match the remote control unique ID saved during the pairing procedure with the one enclosed into the received command in order to be sure that the command if from the paired transmitter
- Check the integrity of the 32 bit CRC enclosed in the command packet

Once the command is validated with the two point above, it will be acknoledged by the CONTROLLER to the remote control with the transmission of an ACK frame.