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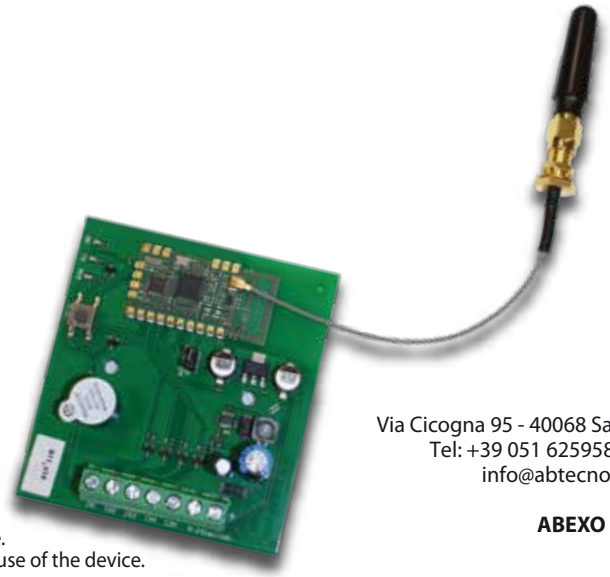
ENCODER 4CH

MARCONI LINK T4E

cod.
APE-519/0025



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Assembly and use instructions

The technical characteristics can be subject to variations without advance notice.
AB Tecno S.r.l. doesn't take responsibilities for damages caused by the improper use of the device.

LINK T4 is a device that integrates a transceiver operating at 868.3MHz with LoRaTM modulation and is capable of ensuring very long distance, high immunity to interference, high sensitivity and low power consumption. The device, combined with the MARCONI LINK R4 decoder board, allows remote loads to be activated and is ideal for very long distance (8km at sight) activation and control applications such as irrigation systems, alarms, etc. Bi-directional communication lets you know the status of the activated output. Below you can find the connections:

TERMINAL	1	2	3	4	5	6	7
NAME	CH1	CH2	CH3	CH4	COM	-V	+V

Functioning

The device includes 4 inputs dry contacts and it can be associated with a 4CH MARCONI DECODER board. The device without active inputs is off and doesn't consume energy. As soon as one of the 4 inputs gets activated (forced low input) for at least 30 msec, the device turns on and transmits a pack of data with rolling code codification. The led TX ON stays active for all the duration of the RF transmission. When all the inputs are disabled the device stays on for about 2 seconds, to allow the reception of the ACK to the combined encoder, then it turns off. There are two available operating modes activated/disabled through the RETRY jumper.

WITHOUT RETRY mode (jumper ON)

This mode is suggested when the 4CH MARCONI DECODER works in impulsive mode. In this mode the device transmits packs of 150 msec length separated by pauses of 80 msec. When the input is disabled, the RF transmission stops and the device waits for the ACK pack from the DECODER unit. In case the transmission went accordingly, the ACK led and the buzzer are contemporarily activated for about 100 msec.

WITH RETRY mode (jumper OFF)

This mode is suggested when the 4CH MARCONI DECODER works in latch mode. In this mode the device transmits a pack and waits for the ACK from the DECODER unit. If the transmission goes accordingly the ACK led and the buzzer are contemporarily activated for about 100 msec. If the ACK is not received it retries the transmission with a random amount of pause between an attempt and the next one (from 135 msec to 335 msec).
Refer to the user's manual of the MARCONI LINK T4 module, which is integrated inside the device, for operation details related to input management and radio coding.

Technical characteristics

	Min.	Typ	Max	Unità
DC Voltage	9	12	26	V
AC Voltage	12	24	26	V
Maximum consumption during the transmission		45		mA
Receive current consumption		16		mA
Frequency RF TX		868,30		MHz
RF power		10		dBm
RF modulation		LORA™		
RX sensitivity @ 125kHz , SF 8		-126		dBm
Operating Temperature	-20		+70	°C
Storage Temperature	-40		+100	°C

Reference Standards

The device complies with the harmonized standards: EN 62479 / EN 60950-1 / EN301 489-3 / EN 300 220-2 / Receiver class: 2.
With respect to the electrical safety standard EN 60950-1, the device is considered as a subassembly. It is the responsibility of the assembler to incorporate the device as a component to ensure that the entire equipment is safe. The device is intended to be electrically connected to other circuits SELV and must be powered from a power source (battery or power supply) that ensures SELV-type voltages (very low voltage of safety) conforming to EN 60950-1 and provided with short-circuit protection. The protection must be tested throughout the equipment.

Example of protection against short circuits

Consider also EN 60950-1 requires that portable cells and batteries secondary sealed (other than button cells) containing an electrolyte alkaline or other nonacidic type must comply with IEC 62133.

As required by the Directive 2012/19/CE concerning the Waste of Electronic and Electrical Equipment (WEEE) it is necessary: to not dispose of WEEE as municipal mixed waste and make a separate collection of such WEEE; contact your municipality of residence for information about the separate collection centers for WEEE. This symbol on the electronic device indicates the separate collection of electrical and electronic equipment (Ref. Directive 2012/19/CE). Appropriate separate waste collection for the subsequent start-up of the disposed appliance to environmentally compatible recycling and treatment and helps to avoid possible negative effects on the environment and on health and favors the recycling of the materials to which the product is composed.

Manufacturer's Declaration for EU Compliance

The manufacturer hereby declares that the type of LINK T4E radio equipment is in conformity Directive 2014/53/EU. The device operates at 868.3MHz (in the ISM band 868 - 868.6 MHz) with maximum radiated power 10dBm. The device is an equipment "Class 1" radio equipment as denoted in Article 1(1) of Decision of the European Commission No. 2000/299/EC dated 06/04/2000. The Class 1 Radio Equipment may be placed on the market and used without any restriction in all EU member states.

CEPT Recommendation 70-03

The device operates in a harmonized frequency band and therefore, in order to comply with current regulations, it must be used on a time scale with a maximum hourly duty-cycle of 1% (equivalent to 36 seconds of use out of 60).

DECLARATION OF EU CONFORMITY

Product: MARCONI LINK-T4E
Manufacturer: AB TECNO S.r.L. - Via Cicogna, 95 - 40068 San Lazzaro di Savena (BO)
The Manufacturer declares under its own responsibility that the product covered by the declaration meets all the provisions applicable in the following Directives:
2014/35/EU - on the harmonization of the laws of the Member States relating to the making available on the market of electrical equipment intended for use within certain voltage limits.
2014/30/EU - for the harmonization of the laws of the Member States relating to electromagnetic compatibility and complies with the relevant harmonization legislation of the Union: **CEI EN 60947-1: 2008/A1: 2012/A2: 2015, CEI EN 60947-5-1: 2005/A1: 2010**

Bologna, lì 01/02/2018

AB TECNO's CEO
Ulisse Pagani