Marconi – LINK R2 - LORA

Long Range, Low Energy Consumption Radio Link

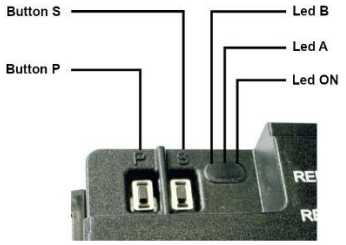
Cod. APE-519/0020 User Manual - *Vers.1.0*

The LINK R2 Marconi is a long-range transceiver with variable code decoding, designed to control 2 relay outputs and manage loads in pulse, bistable or timed mode.
In combination with the LINK T2 MARCONI, it creates a point-to-point connection, with display of the relay status and the radio connection quality index.
The status change function is available, which activates the output relays based on the LINK T2 MARCONI inputs status, ideal when the load must be controlled via radio for non-predetermined periods, in compliance with the RF bandwidth occupancy limits specified in EN 300 220-2.
The memory supports up to 100 remote controls and allows the deletion of a single device or of the entire archive.
The unit is housed in a plastic box with mounting holes; there are two buttons for programming and three red LEDs to indicate operating/programming status and power supply.
The permitted power supply is 8–24 Vac and 10–33 Vdc, values that allow integration as an aftermarket product in the main gate automation systems.
The connections use removable terminals with a pitch of 3.81 mm, suitable for conductors with a nominal cross-section of up to 1.5 mm^2.

Wiring Diagram

Contact N°	Name	Description
1	Positive power supply	Connect to 8-24Vac +10-33Vdc power source
2	Negative power supply	Connect to the negative pole of the power supply or GND
3	Relay B - N.O. contact	Normally open contact 5A 24Vdc, 0.25A 240Vac
4	Relay B contact	5A contact 24Vdc, 0.25A 240Vac
5	Relay A – N.O. contact	Normally open contact 5A 24Vdc, 0.25A 240Vac
6	Relay A contact	5A contact 24Vdc, 0.25A 240Vac
7	Antenna ground	Connect to coaxial cable shield (50Ω) or GND
8	Antenna	Connect to single pole antenna (50Ω) or coaxial cable center (50Ω)

Buttons and leds



In the upper left corner of the box, there is a recess containing two buttons, clearly visible and accessible with the index finger or an insulated tip, identified as Button P and Button S. To their left, a transparent area of the box allows you to see the three LEDs.

The table below summarizes the labels and selected functions associated with the LEDs and push buttons

Name	Description
Led ON	Red LED: blinks every 2 seconds to indicate the board is ON
Led A	Red LED: Indicates the operation and programming status of Relay A. Refer to the following sections for more details.
Led B	Red LED: Indicates the operation and programming status of Relay B. Refer to the following sections for more details.
Button P	- Relay selection. - Relay operation mode selection (pulse, bistable, timer s, timer m). More details in the following sections
Button S	-Remote control pairing - Single remote control deletion.

S. Lazzaro di Savena (BO) – 051/6259580
info@abtecno.com
www.abexo.tech

AUTOMATION ACCESSORIES

Operation

When the unit is turned on, LEDs A and B light up red for approximately one second. Under normal operating conditions, LEDs A and B remain off, while the ON LED flashes every 2 seconds.

Normal operation

During standard operation, LEDs A and B remain off; when a radio command is received from a stored transmitter, the LED corresponding to the relevant channel lights red for 1 second to indicate activation of the associated relay: LED A for relay A LED B for relay B.

Storing the Marconi T2E or remote control

During programming, LEDs A and B indicate which relay will be associated with the memory (relay A or relay B). The maximum capacity is 100 remote controls.
To start registering a new transmitter, or to change the settings of an existing one, press and hold the S button: every 2 seconds, the LEDs alternate (first LED A, then LED B, then the sequence starts again from LED A cyclically).
Once you have selected the desired option, release the button. Pressing the same button again will interrupt the procedure.
Next, press the remote control button until LEDs A and B remain lit continuously for about 2 seconds: this confirms that the memory has been successfully saved.
If, for example, you have registered a button on LED A and want to add another on LED B, you will need to repeat the procedure from the beginning.

Relay configuration and timer settings

Relay configuration and timer settings:
Each relay can be configured in one of four operating modes (impulsive, bistable, timed in seconds, timed in minutes).
The initial setting is impulsive.
To change the mode, proceed as follows:

1) Press and hold Button P for more than 2 seconds: LED A begins to flash and represents the operating mode of relay A. To switch to relay B, give a short press on Button P; the selection cycles continuously. At first startup, the Marconi Link R2 is set to pulse mode: each relay will show 1 flash.

1 flash	Pulse
2 flashes	Bistable
3 flashes	Timer Seconds
4 flashes	Timer Minutes

2) Per To change the mode of the selected relay, briefly press Button S: with each press, the number of flashes increases from 1 to 4 according to the table.
3) Per To exit the Impulsive or Bistable menus, press and hold the P button for at least 2 seconds. If no operation is performed, the timeout will occur after 30 seconds.
4) In seconds timer or minutes timer mode, after selecting them as in points 1 and 2, set the duration by holding down the P button for 2 seconds: the LED of the selected channel will flash at one-second intervals. Continue to hold down the button and count the flashes corresponding to the desired value (in seconds or minutes). When you release the button, you will exit the menu and the value will be saved.

N.B.The value is only stored in timed modes. The interval can be set from 1 to 255. The two timers are alternatives: the count is expressed in minutes or seconds depending on the mode selected.

Deleting a Remote Control

To start removing a remote control, press and hold the S button: every 2 seconds, the LEDs will alternate in sequence (LED A, then LED B, then LED A again, and so on).
At this stage, the selection displayed is not relevant; you can therefore release the button at any time.
Pressing the same button again will interrupt the procedure.
To delete, press the P button: the two LEDs on the receiver will light up continuously. Press any button on the remote control until LEDs A and B turn off; this confirms that deletion is complete and the transmitter will no longer be recognised.

NB: Timely removal requires the remote control possession. If the transmitter has been lost and you want to delete it from the RX-2CH-LORA memory, the only option is to completely erase the memory.

Deleting all remote controls

Press and hold the P and S buttons on the Marconi Link R2 simultaneously for 10 seconds: LEDs A and B will start flashing rapidly for 5 seconds. At the end of the operation, LEDs A and B will turn off and the memory will be empty, with no remote controls associated with it.

Cloning a remote control already stored or distance storage

To add a new remote control as a copy of one already registered, you can proceed without intervening on the receiver. With a transmitter already stored, press the upper buttons (1 and 2) together for more than 2 seconds, until the TX LED starts flashing blue; at the same time, the RX LEDs A and B flash red.

Abexo
AUTOMATION ACCESSORIES

At this point, press any button on the new remote control to be registered until the receiver's LEDs A and B turn off. From that moment on, the new remote control is stored and will control the outputs like the reference sample.

Error messages

The RX-2CH-LORA provides indications that help quickly identify anomalies related to pairing or remote-control recognition. Currently, two notifications are managed, identified by the LEDs A and B combination:

Led A on	Led B blinking	Remote control code not found.
Led A blinking	Led B on	Memory full (100 remotes stored).

Technical Specifications

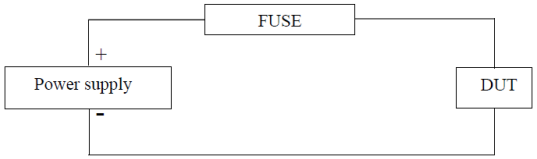
	Min.	Tipico	Max.	Unità
DC Supply Voltage	10	12	33	V
AC Supply Voltage	9		24	V
Idle current consumption (+Vs 12V)		9,5		mA
RF transmission current (+Vs 12V)		55		mA
RF transmission current with relays on			90	mA
Max relay contact current			5A-24Vdc, 0,25A-240Vac	A
RF Frequency	869,525			MHz
RF Output Power	19		22	dBm
RF Modulation	LORA™			
Receiver Sensitivity		-127		dBm
Operating Temperature	-20		+70	°C
Storage Temperature	-40		+100	°C
Dimensions with connectors	77x42x18			mm

Standard reference

The device complies with the following harmonised standards:
- EN 62479
- EN 62368-1
- EN 301 489-3
- EN 300 220-2

Receiver class: 2

Regarding electrical safety (EN 62368-1), the product is considered a sub-assembly: the assembler is responsible for integrating it into the final equipment in order to ensure its overall safety. The device must only be connected to external circuits classified as ES1 and powered by a source (battery or power supply) that is also ES1, complies with EN 62368-1 and is equipped with short-circuit protection. This protection must be verified at the complete system level.



Example of short-circuit protection

It should also be noted that EN 62368-1 requires sealed portable secondary cells and batteries (excluding button cells) containing alkaline electrolyte or other non-acid electrolytes to comply with IEC 62133.

Manufacturer's EU Declaration of Conformity

The manufacturer AB Tecno S.r.l. declares compliance of the radio equipment model LINK R2 - LORA with Directive 2014/53/EU (RED).

The device operates at a frequency of 869.525 MHz (ISM band 869.4–869.6 MHz) with a maximum radiated power of 20 dBm.
The equipment is classified as 'Class 1' pursuant to Article 1(1) of the European Commission Decision No. 2000/299/EC of 06/04/2000.
Class 1 radio equipment may be placed on the market and used without restrictions in all Member States of the European Union

Recommendation CEPT 70-03

The device operates in a harmonized frequency band and, in order to comply with the applicable regulations, it must be used with a maximum hourly duty cycle of 10%; in practice, this means no more than 10 minutes of transmission every 100 minutes.

AUTOMATION ACCESSORIES

WEEE Disposal

	At the end of its life cycle, the product must be disposed of separately from household waste. It is the user's responsibility to take the equipment to collection points dedicated to electrical and electronic equipment waste. Failure to comply with this requirement will result in the application of administrative penalties provided for in EU Member States.

Bologna, 10/12/2025

AUTOMATION ACCESSORIES

ABEXO is a registered trademark owned by Ab Tecno srl
S. Lazzaro di Savena (BO) – 051/6259580
info@abtecno.com
www.abexo.tech