RFID TRANSPONDER **TECHNOLOGY**

LFLP 125KHz UNIQUE.Q5,T5577 ULTRA LOW POWER READER

LFLP-PCB

1.0 FEATURES AND SPECIFICATIONS

The **LFLP** is a Serial Code Reader with **built-in Antenna operating at ultra low current absorption**, specifically studied for **Battery operated plants**.

POWER SUPPLY:LEAD-ACID BATTERY 6VDC min 5.5VDC max 7.5VDC
LIPO BATTERY 3.7VDC min 3.6V DC max 4.2VDC
SERIAL COMM: TTL at 3.3VDC or 5VDC baud rate:9600-8-N-1
ABSORTION SAMPLING: with no card present **70uA** at 1,2 second sampling time.
At any tag read the module send 3 times the string REPLAY#0 at 500ms interval.
ABSORTION READ-SEND: consumption 0,00071mah. Ex: 100 read/day 0.071mah.

TAG SUPPORTED:
UNIQUE   Serial Code Number 5 bytes.
Q5   Serial Code Number 5 bytes.
T5577   Serial Code Number 5bytes.
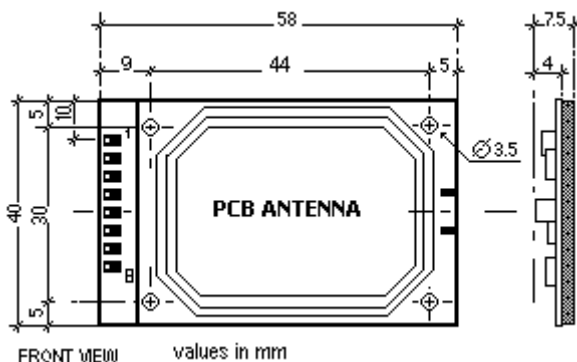
2.0 VERSIONS
LFLP-TTL-QH-6V   For battery LEAD-ACID 6VDC.
LFLP-TTL-QH-3.7V   For battery LIPO 3.7VDC.

Glossary: **HFLP=**Model
         TTL=Interface
         Q= TAG Unique,Q5,T5577
         H= Spontaneous mode

2.0 MOUNTING

DIMENSIONS

FRONT VIEW   values in mm

CONNECTION LFLP-TTL
 The on-board connector is an 8 pin .1" soldering type.

Pin Number	Description
1	**BATTERY 6VDC** 5.5V to 7.5V **BATTERY 3.7VDC** 3.5V to 4.2V
2	**GND**
3	
4	**TX** TTL output
5	
6	
7	
8	

INSTALL

Due to the Radio Frequency emissions of the Reader Antenna is important to avoid the usage of metal panels in front, rear and lateral sides of the Reader.

Although the LFLP provides an high resistance to EMC corruption, avoid to install it in high RF emission environments, the reading distance may result reduced.

FRONT PANEL
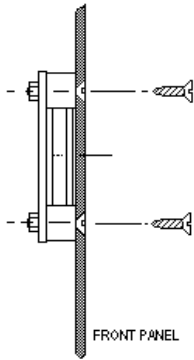
3.0 PROTOCOL

The standard protocols for the LFLP :

QH Spontaneous   Suitable for application point to point. The LFLP transmits data only when a TAG is read. The HOST normally works in receive mode.

The protocol FORMAT is described below.

STX   Start of string synchronization code.
DEVICE..Is the Device Number always **00H.**
LENGTH...Is the number of bytes following the LENGTH.
                                    Example: STX-DEVICE-LENGTH-STATUS-DATA0....DATAn-BCC
STATUS...Is the STATUS of the operation executed.
DATA0 to DATAn..................................Are the data exchanged.
BCC.......................................…..................Is calculated as the XOR of all bytes from STX to last DATA included.
                                    Example: STX-DEVICE-LENGTH-STATUS-BCC → 02H-00H-02H-01H-BCC
                                    where BCC= 01H.

3.1 PROTOCOL LFLP

REPLY#0 :   **SERIAL CODE**

DESCRIPTION	STX	DEVICE	LENGTH	STATUS	DATAn n=5	BCC
HEX VALUE	02H	00H	07H	SeeVALUE	HEX	HEX

FUNCTION   **VALUE**   **DESCRIPTION**
READ COMPL   **04H**   **LENGHT=07H** **DATAn=5 bytes** contains the **Serial Code Number**.

4.0 READER SPECIFICATIONS

OPERATING

Power Requirements max. Ripple 10mVp-p	Max 12 VDC Min 3.5 VDC
Serial interface **Data = 8bit Parity = none Stop = 1bit**	BINARY asynchronous half duplex, spontaneous protocol
Baud Rate	9600 bits per second
Reading Distance (with TAG in center of RF field)	CARD: typ. 40mm

MECHANICAL PCB

Dimensions	40mm x 58mm x 10 mm
Weight	Max 60g

ENVIRONMENTAL

Temperature	Operating	-20°C to 60°C
	Storage	-30°C to 70°C
Humidity	Operating	10% to 90% non condensing
	Storage	0% to 95% non condensing