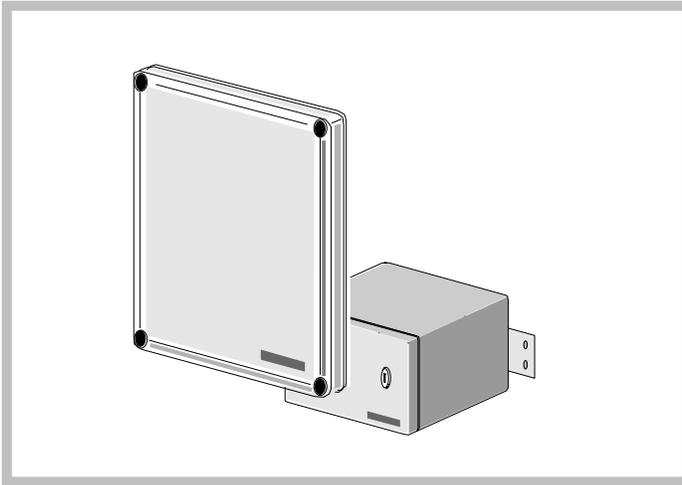


## Modular READER 5 Meters (16feet) Range Up to 40 Km/h (15miles/h)

# LML-3033

Long range identification with total freedom of movement



- Long range : 5 meters (16feet) range
- Tag identification behind the windshield
- Tag identification up to 40 Km/h
- Multitag identification,
- Immune to environmental disturbance
- Robust, Weatherproof

Specifications do not form part of any contract and may be changed without notice

### I - INTRODUCTION

The reader consists of two parts : an AT3 antenna (see picture above) and a chassis containing all the electronic modules. The antenna can be installed outside against a wall (metallic or not) or on a post (about Ø 50mm). The purpose of this element is to read the tags which enter the reading area. In the latter case, the optional swivel allows turning the antenna, directing the beam toward the identification area.

This antenna is connected to a chassis by means of coaxial cables (supplied). The chassis houses the different electronic modules which perform the signal processing and transmit the codes to the user interface.

The chassis comes in a models short closed box - 42E (/C).

The modular frame of the chassis coming with standard dimension Europe boards offers advantages for maintenance and product evolution.

### II - OPERATING PRINCIPLE

The electromagnetic radiation characteristics in the 2.45 GHz frequency band allow high data transmission rates and directional antenna beams. Tag detection is thus very quick and relatively insensitive to environmental interference.

Outside of the reader's range, the tag is electromagnetically inactive. It's unique feature (registered patent) is its capacity to reflect incident microwaves - a tag receiving a 2.45 GHz carrier will echo this signal, modulated by its individual identification code, back to the reader.

The reader receives and processes this signal, sending the data to a host system via a standardized serial interface

### III - COMMUNICATION

These products can take the place of most of the usual card-contact readers. One only has to connect them to the host system via the available standard data links. Two standard data link types come with these readers :

- TTL links (Open Collector) : ISO2, Wiegand (26 bits)
- Computer Serial Links : RS232, RS422, RS485

In the latter case, a complete dialogue can be implemented with the help of the JBUS™ /MODBUS™ protocols (by interruption from readers, or by polling from the system).

Moreover, the readers come with a relay which are operated either by the host system via JBUS™ link and protocol or automatically after each tag identification.

### IV - POWER SUPPLY MODULES

The reader comes with a power supply module. This is a filter board which allow use of the available secondary source of 12VDC in the installation.

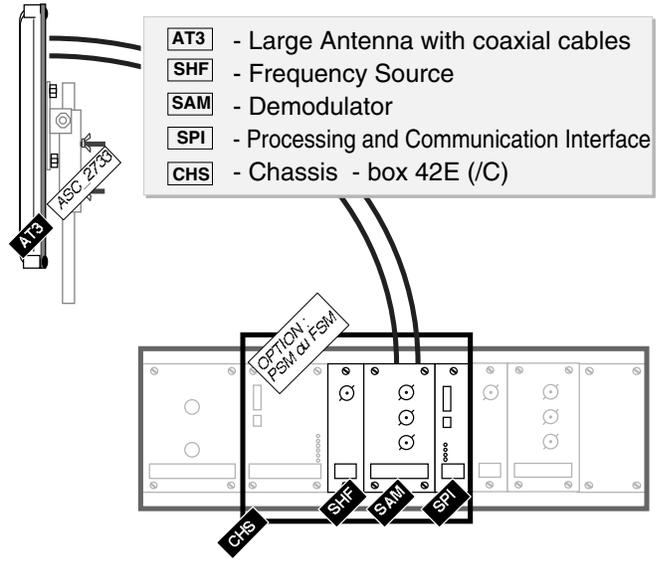
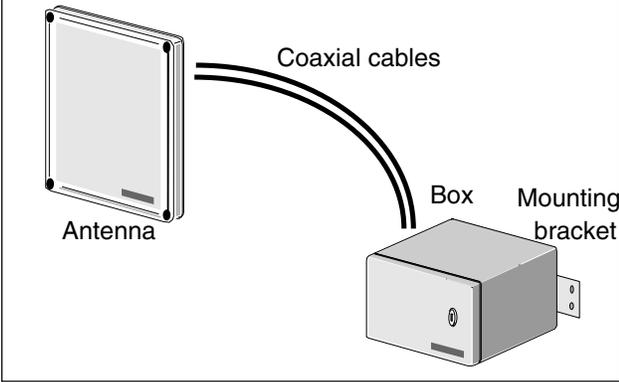
HYPER X™ is a trademark of BALOGH

# HYPER X



**LML-3033 - 2 x 5 meters of coaxial cables**

NB.: The reading antennas come with a couple of coaxial cables

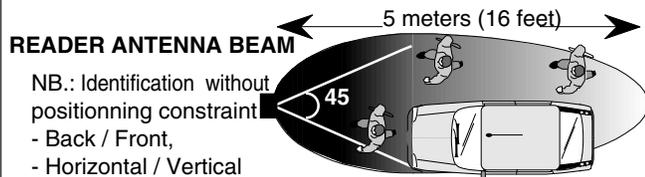


**CHARACTERISTICS**

- **5 meters (16feet) range reader**
  - reading distance suitable for vehicles or pedestrian for obstacle-free access control
- **Reading distance adjustment from few centimeters to several meters, using of potentiometer**
- **Simultaneous multitag identification 5 tags in one second**
  - (Tags Normal Mode)
    - Traffic statistics
    - Obstacle-free access control
    - Multi-tags applications - e.g.: Driver and vehicle to manage a fleet
- **Identification of a tag inside a moving vehicle at the speed up to 40 Km/h (15miles/H)**
  - Automatic vehicle identification
  - Easy access to sites or car parks
  - Burst identification calculation
- **Coexistence of 31 readers in same zone**
  - Series of gates, access control side to side
- **Directivity due to 2.45 GHz RF frequency band :**
  - Identification relatively insensitive to environment
  - Reading area can be fitted to tag trajectory,
  - Tag identification behind a windshield of a moving vehicle

**CAUTION**

- Metallic surfaces or persons coming between tags and the reading antennas create shadow zones in the identification area.
- The proximity of a tag and a metallic surface or a person (<5 mm) reduces the reading distance.



**SPECIFICATIONS**

- **Chassis dim. - 42E closed box** :240 x 170 x 270 mm
- **AT3 Antenna dim. (without swivel).**:380 x 280 x 80mm
- **Weight of 42E closed box (/C)** ....:4.2 Kg
- **Weight of AT3 Antenna** .....:3 Kg
- **Operating temperature range** ....: - 20C to +70 C
- **Storage temperature range** .....: - 25C to + 80C
- **Relative humidity** .....:90% without condensation
- **Protection level - 42E box (/C)** :IP 55
- **Protection level - AT3 Antenna** :IP 55
- **Consumption**
  - o with FSM\_2550 (12VDC 0/+3VDC) ....:900 mA
- **Frequency band** .....:2.45 GHz
- **Number of reading channels** ....:31
- **Data Rate (between Tag&Reader)** .....:30000 bauds
- **Error detection** .....:HDLC
- **Fault reading rate** .....:1E-7
- **Detected reading rate** .....:1E-4
- \*In the normal conditions of use
- **RF power emission** .....:<75 mW E.I.R.P.. \*
- **Suitable range up to** .....:5 meters (16feet)
- **Relay - Maximum power** .....:24VDC & 1A
- **Reference for FCC Certification** : LML-3033

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(\*) EIRP: Equivalent Isotropic Radiation Power

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**Reference : North America - Version 1.2**  
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