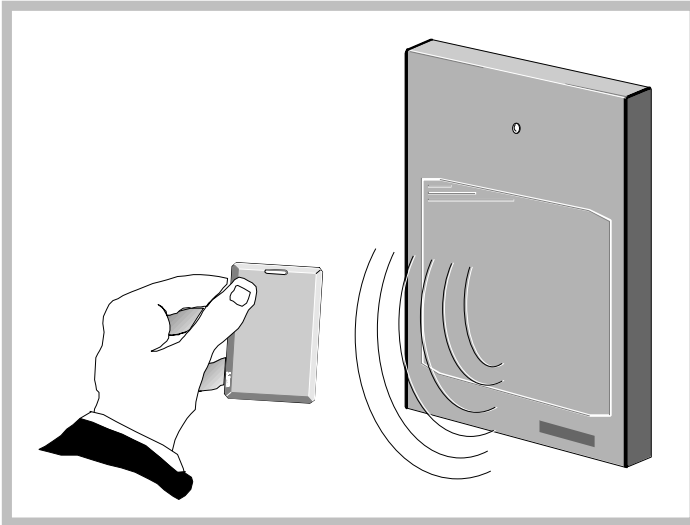


**Compact READERS :**  
**Range - 0.5m(1.5 feet) 1m(3 feet)**

LPR-3010  
LML-3015

## Contactless identification devices for HYPER X™ Tags



- Low cost readers for the HYPER X™ line
- Ease of use: «Extended proximity to «Hands Free»,
- Secure Data Transmission,
- Parallel installation of several readers,
- Immune to environmental disturbance,
- Compact readers,
- Ease of installation

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

### I - PRESENTATION

These readers offer a cheap alternative to identify the HYPER X™ tags from 10 to 50 centimeters (0.3 to 1.5feet) with the LPR-3010 and to 1 meter (3feet) with the LML-3015. The reading distances are user-configurable.

The compact reader box houses all operational parts of the reader : Antennas, Frequency Source, Demodulator, Processor and Communications Interface.

These readers have relatively small dimensions and a slim design to be directly installed on walls, even on metallic surfaces. It is possible to put the reader inside a building if the materials are transparent to the 2.45 GHz radio frequency band.

Generally (IP40), outside installations need a non-metallic waterproof cover. During identification, a dual color LED situated on the reader front panel informs the cardholder of his access rights.

### 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. They only need to be connected 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 is operated either by the host system via JBUS™ link and protocol or automatically after each tag identification.

### IV - POWER SUPPLY

These readers must be supplied with 12VDC.  
NB.: Mains transformer is not supplied.

### V - OPTIONS

No options are needed.

HYPER X™ is a trademark of BALOGH

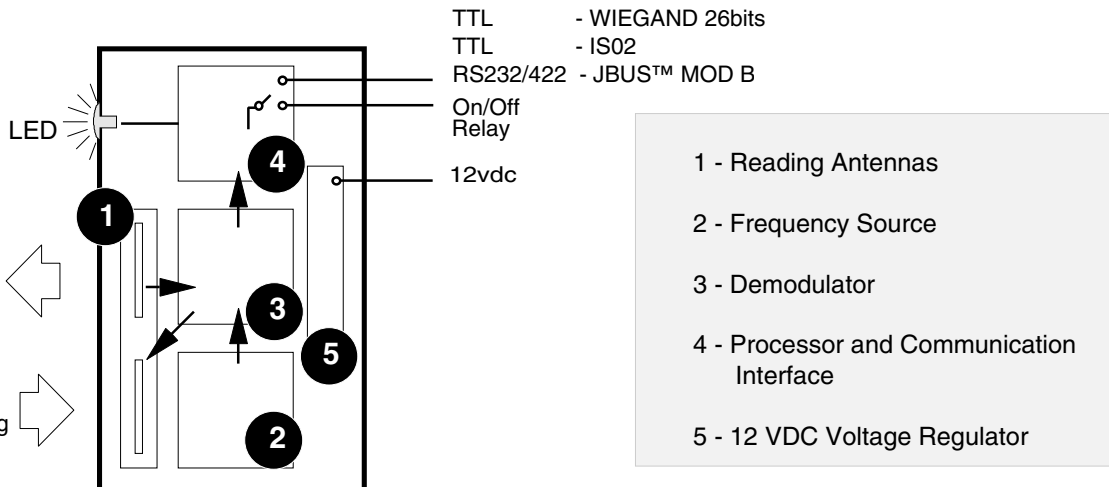
HYPER X

BALOGH



## ARCHITECTURE

**COMPACT PROXIMITY READER - Ref.: LPR-3010**  
**COMPACT HANDS FREE READER - Ref.: LML-3015**



## CHARACTERISTICS

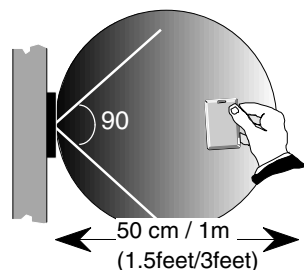
- Proximity Reader with a range over 0.5 meter (1.5 feet)
- Hands Free Reader with a range over 1 meter (3 feet)
- 3 Reading distances from 10cm (0.33feet) to 50cm/1m (1.5 to 3 feet) using jumpers.
- Directivity due to 2.45 GHz frequency band :
  - Identification relatively insensitive to environment,
  - Reading area can be fitted to tag trajectory,
  - Installation of reading antenna against metal walls without range reduction,
- Simultaneous multitag identification, 5 tags in one second  
 NB.: Tags in Normal Mode
- Up to 29 readers in same zone
  - Series of gates, access control side by side,

### 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.

### READING

- NB: Identification without positioning constraint :
- Back / Front,
  - Horizontal / Vertical.



## SPECIFICATIONS

<b>Reader Dimensions</b>	.....	263 x 178 x 30 mm
<b>Reader Weight</b>	.....	1.5 Kg
<b>Operating temperature range</b>	.....	- 20C to +70 C
<b>Storage temperature range</b>	.....	- 25C to + 80C
<b>Relative humidity</b>	.....	90% without condensation
<b>Protection level</b>	.....	IP 40
<b>Input Voltage</b>	.....	10 to 15VDC
<b>Consumption</b>	.....	500mA
<b>Frequency band</b>	.....	2.45 GHz
<b>Number of reading channels</b>	.....	29
<b>Data Rate (Between Tag&amp;Reader)</b>	.....	30000 bauds
<b>Fault reading rate</b>	.....	HDLC (1E-7)
<b>Reading success rate</b>	.....	99,99% *
* In normal using conditions		
<b>LPR-3010 Radiated power</b>	.....	1mW - Typical E.I.R.P.*
<b>LML-3015 Radiated power</b>	.....	10mW - Typical E.I.R.P.*
<b>LPR-3010 Range</b>	.....	50 cm (1.5feet)
<b>LML-3015 Range</b>	.....	1 meter (3feet)
<b>Range selected by</b>	.....	2 Jumpers (3 distances)
<b>Directivity</b>	.....	90
<b>Relay power cut</b>	.....	24 VDC & 1A
<b>Reference for FCC certification</b>	.....	LPR-3010 & LML-3015

\*EIRP : Equivalent Isotropic Radiated Power

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**Reference : North America - Version 2.1**  
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**HYPER X™**

