

LMB_6012/LMB_6013

Compact Readers - 2,45 GHz

Range : 2m / 3m - Antenna Pattern : 90°x90°



HYPER X™

IDENTIFICATION SYSTEMS
Long Range Technology

I - INTRODUCTION

The HYPERX™ LMB_6012 and LMB_6013 compact readers enable high speed identification of all tags in the HYPERX™ product range. The readers are available in - 2 meter and 3 meter ranges in a fully integrated small footprint design.

The compact design contains all the functional parts of the reading unit: antenna, RF source, demodulator, processor, and interface modules. The casing is solid cast aluminium.

The readers can be mounted against metallic surfaces and should be mounted on a support that can be adjusted to direct the identification field toward the direction of the tags.

A special housing is required for outdoor installation of these IP40 cased readers. Each reader has a buzzer and bicolor LED to inform tag holders of identification.

II - OPERATING PRINCIPLE

Electromagnetic radiation characteristics in the 2.45 GHz frequency band allow high data transmission rates and directional antenna beams. Tag detection is therefore very rapid and relatively insensitive to environmental interference.

The HYPERX™ tag is electro-magnetically inactive when outside of the reader's range. It's state-of-the-art 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 standard serial interface.

III - COMMUNICATIONS

These readers can substitute for most of the traditional contact and proximity card readers. Connection is made to the host system via the available standard data links.

Two standard data link types are available on the HYPERX readers :

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

For computer serial links, a complete dialogue can be implemented utilizing the JBUS™ /MODBUS™ protocols (by interruption from readers or by polling from the system).

IV - INTERFACES

These readers dispose of :

- 2 optocoupled OUTPUTS that commute when the host system sends commands (via JBUS), or automatically for each identification burst according to set-up.
- 2 optocoupled INPUTS that enable validation or interpretation of identifications in real time or in deferred mode through the on-board log.

V - ON-BOARD LOG

The HYPERX™ readers allow the logging of the last 2000 events. The messages are dated and time-stamped. The interface system can retrieve the messages via the RS link and JBUS protocol.

VI - POWER SUPPLY

These readers have an integrated regulator that is powered from 12 to 24VDC.

A "switch-off" device puts the reader in standby mode when the voltage is insufficient.

Connection to the mains is made with an external 12W power supply (not included).

HIGH SPEED IDENTIFICATION

DEPENDABLE IDENTIFICATION

**MULTIPLE READERS
IN CLOSE PROXIMITY**

EASY AND QUICK INSTALLATION

**LOW ENVIRONMENTAL
INTERFERENCE**

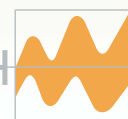
INTERFACES :

- **WIEGAND 26bits,**
- **ISO2**
- **RS232, RS422/485**

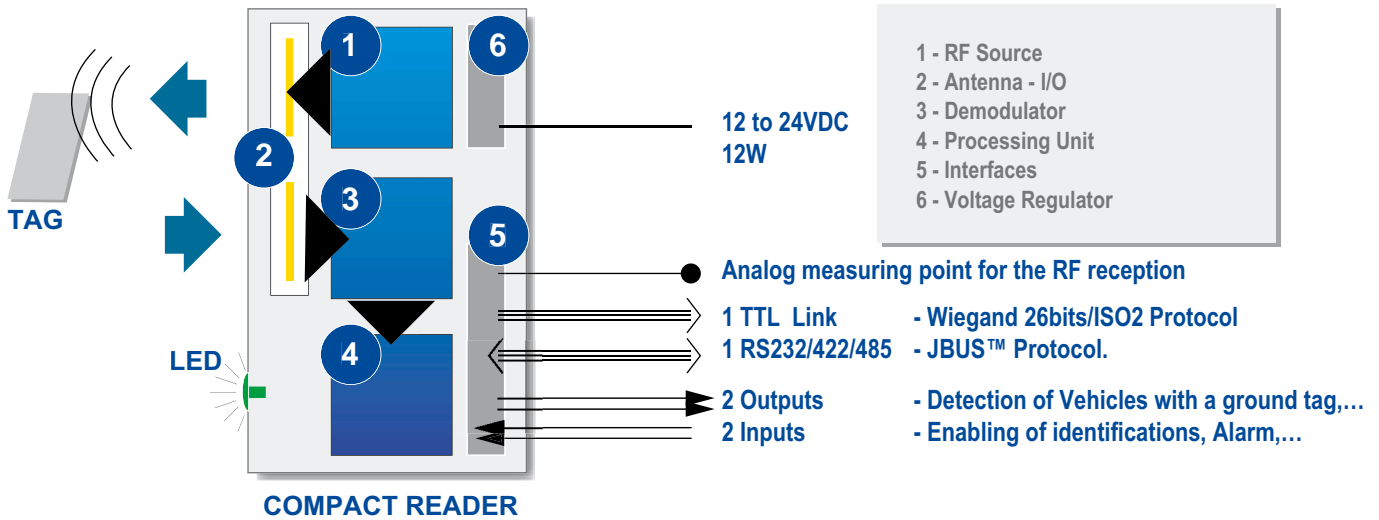


Installation on a parking terminal.

BALOGH



ARCHITECTURE



TECHNOLOGY

APPLICATIONS



Access control and people/asset tracking
 - Automate accesses (as with a detector)
 - Simultaneous identification of all tag holders
 - Many readers can be installed in the same area



Anti-theft
 - Identify the stolen objects - e.g. Laptops, ...
 - Differentiate the real owners and the thieves.
 eg : association of laptops and the owner ID



Secure the special patients in the hospitals
 - Prevent the special patients from crossing the hospital exits.
 e.g.- Block doors to these patients only.



Vehicle access control - narrow lane
 - High speed identification of tag behind windshield
 - Conditional identifications when vehicles enter reading field
 - Tag installation in the central location of windshields.
 NB - necessity with the athermic windshields.

CHARACTERISTICS

Dimensions	263 x 178 x 32 mm
Weight	1,5 Kg
Color	Black & Light Grey
Operating temperatures	- 20°C to +70° C
Storage temperatures	- 25°C to + 80°C
Protection level	I.P. 40
Relative humidity	90% without condensation
Power supply	12 to 24 VDC - 12 W
Frequency band	2.45 GHz
Data Rate (Between Tag&Reader)	30000 bauds
Number of reading channels	31
Fault reading protocol	HDLC
Modulation type	BPSK
Rate of (Fault reading/Failure reading*)	1E-7/1E-4*
Radiated power (LMB_6012/13)	10mW/75mW
Reading distances (LMB_6012/13)	2m/3m
Reading adjustment	20cm; 50%; 75%; 100%
Approvals	ETS 300 440 - CE 0165
(*) Normal conditions of use	
(**) Specifications do not form part of any contract and may be changed without notice	

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 (<5mm) reduces the reading distance.

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