

2.45 GHz

LMB_6023-X2

**Compact Reader for Explosive Atmospheres - 2.45 GHz
Range : 4m - Antenna Pattern : 45°x 90°****ATEX Approved****HIGH SPEED IDENTIFICATION****DEPENDABLE IDENTIFICATION****MULTIPLE-READERS
IN CLOSE PROXIMITY****EASY AND QUICK INSTALLATION****LOW ENVIRONMENTAL
INTERFERENCE****INTERFACES :****WIEGAND 26bits,****ISO2****RS232, RS422/485****ATEX APPROVALS****Zone 2, CE 0682 Ex II 3G - Ex nA II T4**

I - INTRODUCTION

The HYPERX LMB6023-X2 compact reader enable high-speed identification of all tags in the HYPERX product range, i.e. 4meters.

This reader is designed in specific cabinets to be installed in zone 2. This box is also waterproof housing which protects the electronic devices against harsh weather conditions. Its compact design contains all the functional parts of the reading unit: antenna, RF source, demodulator, processor, and interface modules.

The reader can be mounted against the wall, with a hinge that allows swiveling. When this reader is mounted on a pole, it can be turned to direct the identification field toward the direction of the tags.

The HYPERX compact readers have (2) optocoupled outputs that can be used to inform tag holders of identification by activating lights or gates.

I - 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 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 HYPER X 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.

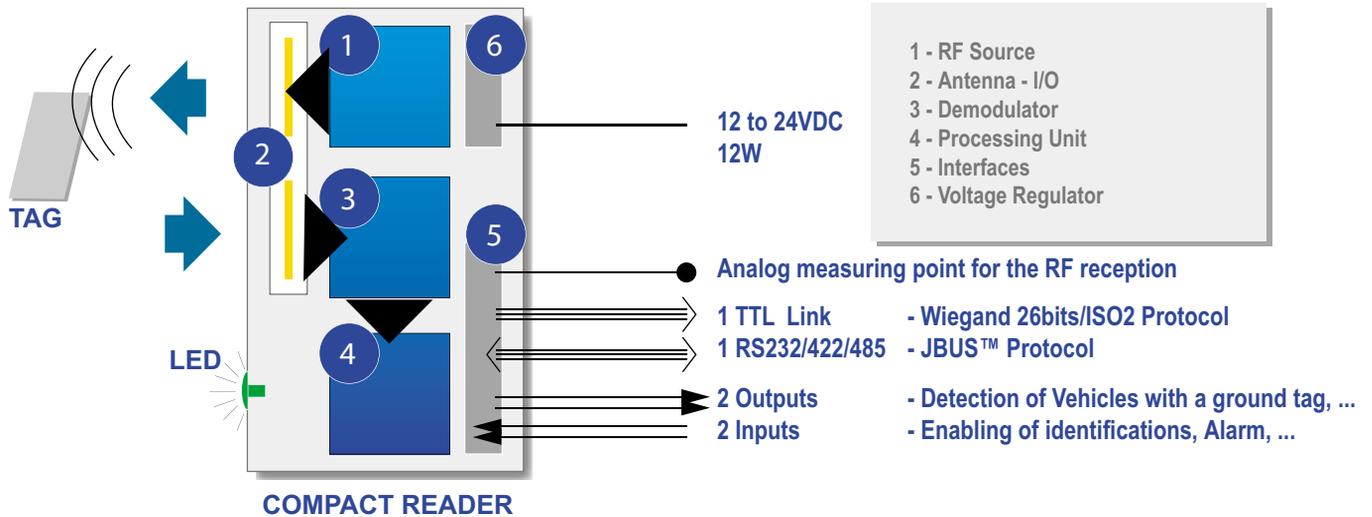
VI - POWER SUPPLY

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 15W power supply (not included).



ARCHITECTURE



TECHNOLOGY

APPLICATIONS



Access control and people/asset tracking

- Automate gates (as with detector)
- Simultaneous identification of all tag holders
- Many readers can be installed in the same area



Fleet management

- Long range identification of vehicles
- No stop vehicle tracking
- Multi-ID of drivers, trucks and tow containers



Railway convoys

- Relatively insensitive to environment
- Many readers can be installed in the same area
- On-board log for dated messages



Special vehicle access control

- Simultaneous ID of tag holders and their vehicles
- Tag identification in any position
- Small readers to reduce shock damage.

CHARACTERISTICS

Dimensions	380 x 280 x 130 mm
Weight	9 Kg
Color	Light Grey
Operating temperatures	- 10°C to +50°C
Storage temperatures	- 25°C to +80°C
Protection level	I.P. 66
Relative humidity	90%, without condensation
Power supply	12 to 24 VDC - 15 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	350mW
Reading distances*	4m
Speed	100Km/h
Reading adjustment	20cm; 50%; 75%; 100%
Radiofrequency Approvals	ETS 300.440
ATEX Approvals - LMB6023-X2	CE 0682 Ex II 3G - Ex na II T4

* Normal condition of use

** Specifications do not form any part of 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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