



# HL200R - Series Read/Write Tags (European)

## Features

- Up to 8KB of Memory
- 750 Bytes/Second Data Transfer — Reading and Writing
- Epoxy Encapsulated
- Replaceable Lithium Batteries
- Unaffected by Paints, Dust, Dirt and Solvents

## Applications

- Material Handling
- Sortation Systems
- Work-in-Progress Monitoring
- Quality Control

## Use With

- HL500-Series Antennas
- HL814 / HL816 Portable Reader/Writers

**EMS**, a Datalogic Group Company, is the field-proven leader in the development and application of Radio Frequency Identification (RFID) Tags/Labels/PCBs, Antennas, Controllers and network interface modules for tough industrial environments. With over a dozen years of RFID successes in the automotive, electronics, material handling and food processing industries, EMS has built a global reputation in providing customers with complete supply chain solutions – from production to retail EMS has the complete solution!

### Technical Description

The HL200R-Series Tags incorporate from 64 Bytes up to 8KB of fast, random-access memory and are epoxy encapsulated to withstand the harshest industrial environments. Advanced digital signal processing techniques allow a data transmission speed of 750 bytes per second while still using reliable, safe, low-frequency RF. EMS Tags are the only low-frequency RF Tags on the market with such high speed data transfer capability.

The approximately four-inch Read/Write range of the HL200R-Series Tags make them ideal for use in pallet based automated systems. Once the Tag is mounted, the pallet becomes “intelligent,” and can carry with it all information regarding the product or material on the pallet. Other than replacing batteries, the Tag does not require maintenance.

The HL200R-Series Tags contain a replacement battery power source. The battery will power the Tag for 40 million bytes transferred or ten years, whichever comes first. The lifetime of the battery can be easily calculated according to the number of bytes to be transferred to and from the Tag per day.

Battery life can be tracked using the Tag's internal battery counter. Byte 0 of the Tag contains the results of an internal timer, which keeps approximate track of the total time which the Tag has been active. Byte 0 reads 70 hours of actual transmitting time. For the HL200R-Series Tags, the battery should be replaced when the timer value reaches fifteen.

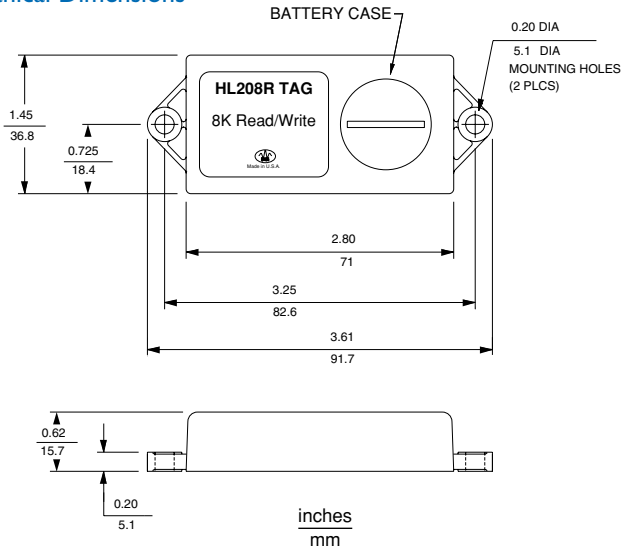
Unlike competitive RFID systems, the HL200R-Series Tags are insensitive to the direction of travel or to the orientation of the Tag face to the Antenna. Data transfer operations are insensitive to non-conductive materials in the RF field and are unaffected by wet environments.

REPLACEABLE  
BATTERIES  
GIVE THE  
HL200R  
TAGS  
VIRTUALLY  
UNLIMITED LIFE

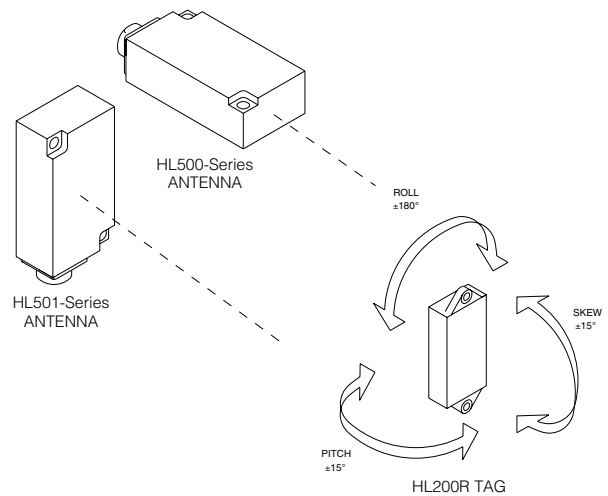
# HL200R-Series Read/Write Tags

<b>Electrical</b>	Battery Type	Replaceable Long-Life Lithium Batteries
	Battery Life	10 Years or 40 Million Bytes Transferred to/from Tags
<b>Memory</b>	Memory Type	CMOS Static RAM
	Memory Capacity	
	HL200R	64Bytes
HL208R	8KB	
<b>RF Interface</b>	Data Transfer Rate*	750 Bytes/Second
	* Typical values with HL500-Series Antennas, Reading and Writing.	
<b>Mechanical Specifications</b>	Dimensions (W x H x D)	3.61 x 1.45 x 0.62in. (92 x 37 x 16mm)
	Weight	2.6oz. (74g)
	Enclosure	ABS Shell, Epoxy Encapsulated
<b>Environment</b>	Operating Temperature	-14° to 120°F (-10° to 49°C)
	Storage Temperature	-40° to 185°F (-40° to 85°C)
	Humidity	Water-Resistant
	Protection Class	NEMA 4X (IP67)

## Mechanical Dimensions



## Tag-to-Antenna Orientation



## Read/Write Ranges

### HL200R-Series Read/Write Tags

#### Reading & Writing Ranges with HL500-Series Antennas

	HL500(A)	HL501(A)	HL814	HL816
Typical Range (Y) (inches/mm)*	3.74/95	3.70/94	0.47/12	0.47/12
Guaranteed Operating Range (X)	2.99/76	2.96/75	0.39/10	0.39/10

\* Proximity to metal, CRT devices and other sources of electromagnetic radiation may affect the range of the Antenna.

## Available Models

Model	Description
HL200R	64Byte Read/Write Tag
HL208R	8KB Read/Write Tag