8KByte Read/Write Tag
HS208XL

ESCORT MEMORY SYSTEMS
A DATALOGIC GROUP COMPANY

HS200XL-Series Read/Write Tags

Features
- Over Five-Inch Read/Write Range
- Up to 32KB of Memory
- 3000 Bytes/Second Data Transfer — Reading and Writing
- Epoxy Encapsulated
- Unaffected by Paints, Dust, Dirt and Solvents

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

Use With
- HS500-Series Antennas
- HS814 / HS816 Portable Reader/Writers

Escort Memory Systems® (EMS) offers a complete family of field-proven Read/Write Radio Frequency Identification (RFID) products and network interface modules. The system consists of Tags, Antennas and Controllers. Tags can be attached to a product or its carrier and act as an electronic identifier, job sheet, portable database, or manifest. Tags are read and updated via an EMS Antenna through any non-conductive material while moving or stationary.

Technical Description
The HS200XL-Series Tags incorporate from 64 bytes up to 32KB of fast, random-access memory and are epoxy encapsulated to withstand the harshest environments. Advanced digital signal processing techniques allow a data transmission speed of 3,000 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 six-inch Read/Write range of the HS200XL-Series Tags makes 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. The very long life of the Tag means that it doesn't have to be removed. Other than replacing the batteries, the Tag does not require maintenance.

The HS200XL-Series battery will power the Tag for 800 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. For example, if the application calls for 800 bytes to be transferred to or from the Tag every minute for eight hours per day, seven days per week. Multiplying 800 bytes/operation times 480 operations/day yields 384,000 operations per day. The battery can therefore be expected to have a lifetime of 2,083 days (5.7 years).

> **HS200XL TAGS WILL POWER THE TAG FOR 800 MILLION BYTES TRANSFERRED OR TEN YEARS**

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.

Unlike competitive RFID systems, the HS200XL-Series Tags are virtually insensitive to the direction of travel or the orientation of the Tag face to the Antenna.

HS200XL-Series Read/Write Tags

| Electrical | Battery Type | Replaceable Long-Life Lithium Batteries |
| | Battery Life | 10 Years or 800 Million Bytes Transferred to/from Tags |

Memory	Memory Type	CMOS Static RAM
	Memory Capacity	
	HS200XL	64Bytes
	HS208XL	8KB
	HS232XL	32KB

| RF Interface | Data Transfer Rate | 3000 Bytes/Second |

Mechanical Specifications	Dimensions (W x H x D)	3.60 x 2.13 x 0.85in. (91 x 54 x 22mm)
	Weight	5.75oz. (163g)
	Enclosure	ABS Shell, Epoxy Encapsulated

Environment	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
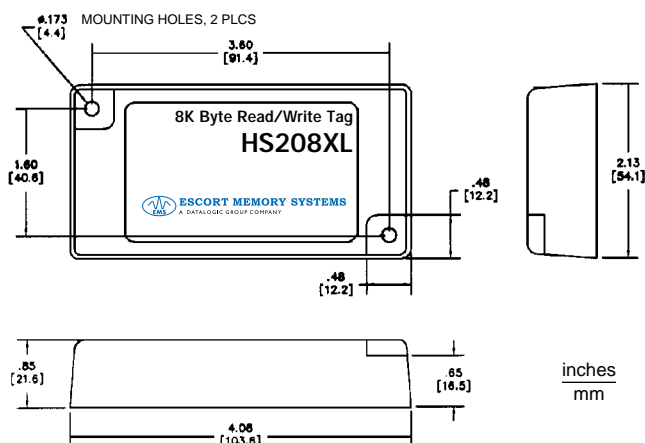
Tag-to-Antenna Orientation
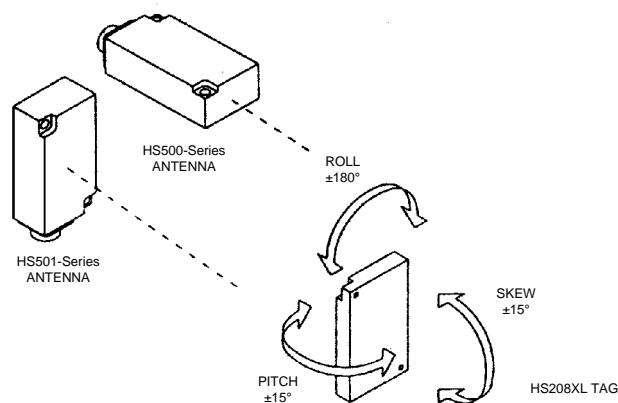
Read/Write Ranges

HS200XL-Series Read/Write Tags

Reading & Writing Ranges with HS500-Series Read/Write Antennas

	HS500(A)	HS501(A)	HS510	HS550A	HS814	HS816
Typical Range (Y) (inches/mm)*	5.71/145	5.00/127	**	5.90/150	1.77/45	1.77/45
Guaranteed Operating Range (X)	4.57/116	4.02/102	**	4.72/120	1.42/36	1.42/36

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

**Not recommended.

Available Models

Model	Description
HS200XL	64Bytes Read/Write Tag
HS208XL	8KB Read/Write Tag
HS232XL	32KB Read/Write Tag