



# HS510

## Long-Range Read/Write Antenna

### Features

- Up to 29 Inches Read/Write Range
- 3000 Bytes/Second Data Transfer Speed – Reading and Writing
- Epoxy Encapsulated
- Unaffected by Paint, Dust, Dirt and Solvents
- High Immunity to Metal
- Uses Safe Low-Frequency Radio Waves

### Applications

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

### Use With

- HS200LR-Series Tags
- HS850B Serial Eurocard Controller
- HS880B-Series Read/Write Controllers
- HS900 PC-Bus Read/Write Controller
- CM01 Asynchronous Serial Interface Module
- CM12 DeviceNet Module
- CM21 InterBus-S Module
- CM30-Series Profibus Modules
- CM40-Series Modbus Plus Modules
- CM52 Remote I/O Module
- CM80-Series ControlNet Interface Modules
- CM900 / CM1000
- CM1746 RFID Module

**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 HS510 Long-Range Read/Write Antenna connected to an Escort Memory Systems Controller provides a very convenient interface between a host computer or programmable Controller and the data in EMS Long-Range Tags.

The HS510 Antenna contains all the circuitry necessary to convert the digital signals received from the Controller to high speed RF signals from the Tags, and subsequently, convert the RF signals from the Tags back into digital signals for the Controller.

The distance from the Controller to the Antenna can be up to 4,000 feet. This is advantageous because the Controller portion of the RFID system is then afforded extra protection from noise that could be generated by electrical equipment positioned near the Read/Write station. Connection to the Controller is via an 8-pin circular connector. Antennas can be replaced on the line without changing any wiring.

The Antenna is equipped with a two-color status LED, indicating when power is present and the Antenna is on or not transmitting.

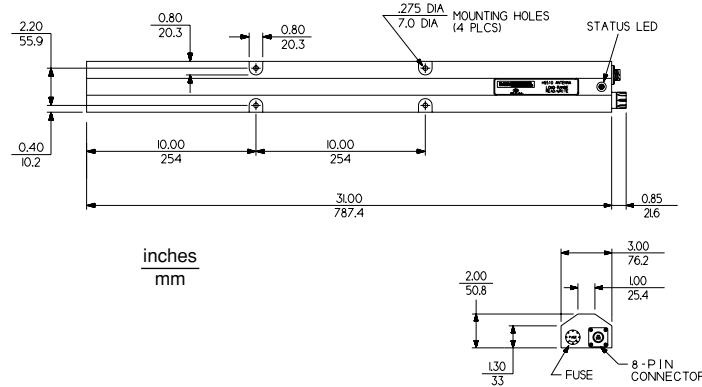
The HS510 is a solid state device, without moving parts or mechanical switches, and configuration is not required prior to installation. It has a metal backplate which helps to distribute stress from the mounting bolts and greatly increases immunity to additional metal in the Read/Write field.

**UP TO  
29 INCHES  
READ/WRITE  
RANGE**

# HS510 Long-Range Read/Write Antenna

Electrical	Supply Voltage Current Consumption	20-26VDC 500mA Maximum
RF Interface	Data Transfer Rate	3000 Bytes/Second
Interface with Controller	Maximum Cable Length	4000ft. (1200m)
Mechanical Specifications	Dimensions (W x H x D) Weight Enclosure Cable Connector Indicators	31 x 3.0 x 2.0in. (787 x 76 x 51mm) 9.5lbs (4.3kg) ABS Shell, Epoxy Encapsulated User Supplied 8-Pin Plastic Circular Power/Transmit LED
Environment	Operating Temperature Storage Temperature Humidity Protection Class	14° to 120°F (-10° to 49°C) -40° to 185°F (-40° to 85°C) Water-Resistant NEMA 4 (IP66)

## Mechanical Dimensions



## RF Field and Read/Write Ranges

### HS510 Long-Range Read/Write Antenna

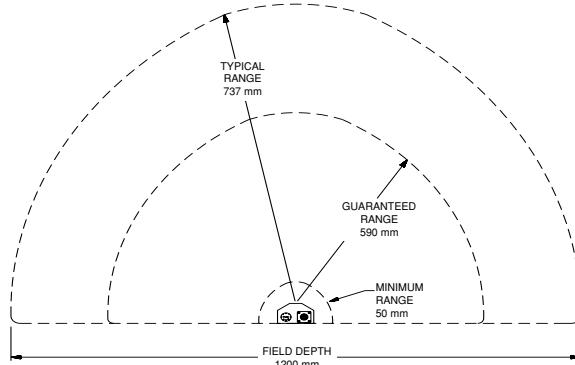
#### Reading & Writing Ranges to HS200-Series Read/Write Tags

##### HS200R   HS200XL   HS200LR

Typical Range (Y) (inches/mm)*	**	**	2.00-29.00/50-737
Guaranteed Operating Range (X)	**	**	2.00-23.23/50-590

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

\*\* Not recommended.



RF Field of HS510 when used with HS200LR-Series Tag.

## Available Models

Model	Description
HS510	Long-Range Read/Write Antenna

## Accessories

Model	Description
68-5001	Crimping Tool for 8-Pin Circular Connector (Amp 603547-1)
10-7026	Antenna Connector Kit for HS510 (Furnished with HS510, but also Available as a Spare Part)



## Active Read/Write Radio Frequency Identification (RFID) Typical & Guaranteed Read/Write Ranges

(inches/mm)\*

<b>Antennas</b>	<b>Tags</b>		
	<b>HS200R-Series</b>	<b>HS200XL-Series</b>	<b>HS200LR-Series</b>
<b>HS500(A)</b>	Typ. 5.91/150 Guar. 4.72/120	5.71/145 4.57/116	18.70/475 15.00/380
<b>HS501(A)</b>	Typ. 5.00/127 Guar. 4.02/102	5.00/127 4.02/102	13.00/330 10.40/264
<b>HS510</b>	Typ. ** Guar. **	** **	2.00-29.00/50-737 2.00-23.23/50-590
<b>HS550A</b>	Typ. 4.49/114 Guar. 3.58/91	5.90/150 4.72/120	16.50/420 13.20/335
<b>HS814</b>	Typ. 1.77/45 Guar. 1.42/36	1.77/45 1.42/36	1.77/45 1.42/36
<b>HS816</b>	Typ. 1.77/45 Guar. 1.42/36	1.77/45 1.42/36	1.77/45 1.42/36

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

\*\*Not recommended

## Active Read/Write Radio Frequency Identification (RFID) – European Typical & Guaranteed Read/Write Ranges

(inches/mm)\*

<b>Antennas</b>	<b>Tags</b>		
	<b>HL200R-Series</b>	<b>HL200XL-Series</b>	
<b>HL500(A)</b>	Typ. 3.74/95 Guar. 2.99/76	3.90/100 3.15/80	
<b>HL501(A)</b>	Typ. 3.70/94 Guar. 2.96/75	3.70/94 2.96/75	
<b>HL814</b>	Typ. 0.47/12 Guar. 0.39/10	0.47/12 0.39/10	
<b>HL816</b>	Typ. 0.47/12 Guar. 0.39/10	0.47/12 0.39/10	

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