



HS550A

Wide-Field

Read/Write Antenna

Features

- Up to 16 Inch Wide Read Field
- 3000 Bytes/Second Data Transfer Speed – Reading and Writing
- Epoxy Encapsulated
- Unaffected by Paint, Dust, Dirt and Solvents
- High Immunity to Metal

Applications

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

Use With

- HS200R-Series Tags
- HS200XL-Series Tags
- 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 Module
- 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 HS550A Wide-Field 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 Tags.

The HS550A Antenna contains all the circuitry necessary to convert the digital signals received from the Controller to high speed RF signals for the Tags, and subsequently, convert the RF signals from the Tags back into digital signals for the Controller.

The wide RF field of the HS550A makes it ideal for use in factory automation environments where Tags will be moving at greater speeds as they pass the Antennas. To further

ease installation, the distance from the Controller card 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 a 6-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 is not transmitting.

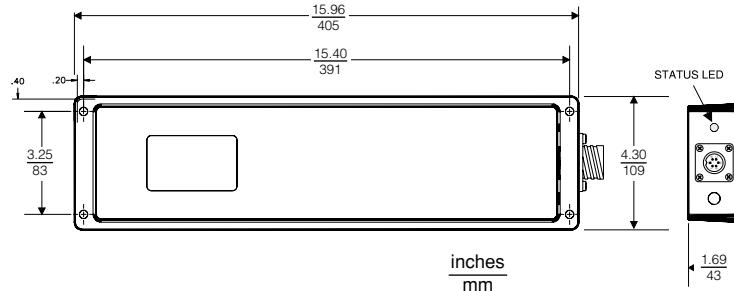
The Antenna is a solid state device, without moving parts or mechanical switches, and configuration is not required prior to installation. It has a metal backplate which helps to distribute stress from the mounting bolts and greatly increases immunity to additional metal in the Read/Write field.

WIDE
READ/WRITE
FIELD MAKES
TRACKING
FAST MOVING
PRODUCTS
EASY

HS550A Wide-Field Read/Write Antenna

Electrical	Supply Voltage Maximum Current Maximum Ripple	20-26VDC 500mA 2% of DC Voltage
RF Interface	Data Transfer Rate	3000 Bytes/Second
Interface with Controller	Maximum Cable Length	4000ft. (1200m)
Mechanical Specifications	Dimension (W x H x D) Weight Enclosure Cable Connector Indicators	15.96 x 4.30 x 1.69in. (405 x 109 x 43mm) 5lbs. (2.3kg) ABS Shell, Epoxy Encapsulated User Supplied 6-Pin Metal, Circular (Mating End Purchased Separately) 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 4X (IP66)

Mechanical Dimensions



Read/Write Ranges

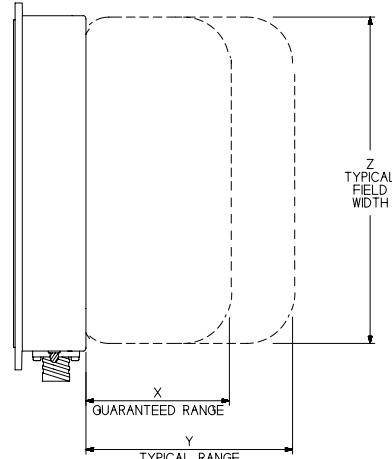
HS550A Wide-Field Read/Write Antenna

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

	HS200R	HS200XL	HS200LR
Typical Range (Y) (inches/mm)*	4.49/114	5.90/150	16.50/420
Guaranteed Operating Range (X)	3.58/91	4.72/120	13.20/335
Reading Field (Z)	13.00/330	13.00/330	13.00/330

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

** Not recommended.



Available Models

Model	Description
HS550A	Wide-Field Read/Write Antenna (Mating Connector not included)

Accessories

Model	Description
46-1291	Mating Connector for HS550A, 6-pin, circular, metal, straight, requires Cable Clamp 46-5073
46-1292	Mating Connector for HS550A, 6-pin, circular, metal, right angle, requires Cable Clamp 46-5073
46-5073	Cable Clamp for 46-1291 and 46-1292 Connectors, maximum cable O.D. 11/32"
68-5001	Crimping Tool for Circular Connector (AMP 169341-1)



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

(inches/mm)*

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

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

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