



# HMS800-Series Passive Reader/Writers

## Features

- High Data Transfer Speed, 1000 Bytes/Second
- Serial Reader/Writer with Integrated Antenna
- Passive Tag, Requires No Batteries
- Meets FCC and International Specifications
- Simple Interface to Host Systems

## Applications

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

## Use With

- HMS-Series Tags
- CM11 / CM12 DeviceNet Modules
- CM21 InterBus-S Module
- CM30-Series Profibus Modules
- CM40-Series Modbus Plus Modules
- CM52 Remote I/O Module
- CM900 / CM1000
- CM1746 RFID Module
- MM80MicroMux Bus Module
- Any RS232 and RS485 Host

**E**scort 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, Reader/Writers and ancillary equipment. 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 Reader/Writer through any non-conductive material while moving or stationary.

Escort Memory Systems' HMS Series is the latest in the EMS line of high performance, industrial RFID equipment. The passive design of the HMS Reader/Writer system uses the RF field from the Antenna to power the Tag, eliminating the need for batteries.

The HMS Passive Reader/Writer system is designed to provide cost effective RFID data collection and control solutions to demanding automation applications.

### Technical Description

The HMS800 and HMS810 Reader/Writers contain an integrated, ferrite shielded Antenna encased in a NEMA 2 rated plastic housing with a metal backplate. The HMS805 and HMS815 feature a 30mm tubular remote Antenna for reaching restricted locations. The HMS system uses the internationally recognized ISM frequency of 13.56 MHz to both power the Tag, and to establish a radio link to transfer the information.

The HMS800 and HMS805 Reader/Writers are stand alone units that communicate to the host via an RS232 interface. The HMS800's standard program supports the well established ABx protocol and includes all the command functions for efficient serial and RFID communications.

The HMS810 and HMS815 offer multidrop capabilities, enabling up to 32 of these Reader/Writers to be networked together in slave mode via an RS485 and a proprietary Mux32 communication protocol.

The HMS800-Series Reader/Writers feature built-in CRC error detection and parity checking to provide data security and system confidence.

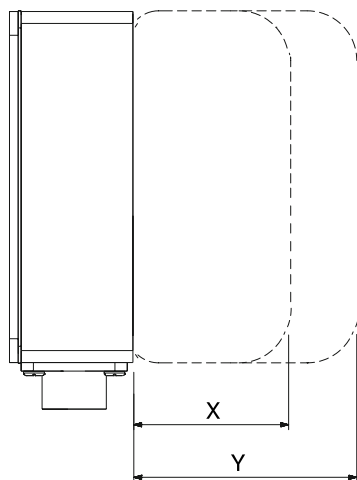
The HMS-Series Passive Read/Write Tags provide 736 bytes of re-programmable memory, and are specifically designed to communicate to the HMS800-Series Reader/Writers.

**INTEGRATED  
CONTROLLER  
AND  
ANTENNA**

# HMS800-Series Passive Reader/Writers

Electrical	Supply Voltage Current	14-30VDC 300mA
RF Interface	Data Transfer Rate Error Detection Antenna Type HMS800 / HMS810 HMS805 / HMS815	1000 Bytes/Second CRC and Parity Check Integrated, Ferrite-shielded 30mm Tubular Remote
Serial Host Interface	HMS800 / HMS805 HMS805 / HMS815 Baud Rate	RS232 RS485/Mux32 9600 and 19200
Mechanical Specifications	Dimensions (W x H x D) Remote Antenna (Dia. x L) Remote Antenna Cable Length Weight	5.50 x 3.70 x 1.30in. (140 x 94 x 33mm) 1.18 x 2.5 (30 x 64mm), Thread Pitch .5mm 3.3ft. (1m) 19oz. (538g)
Environment	Operating Temperature Storage Temperature Humidity Protection Class	32° to 120°F (0° to 49°C) -4° to 158°F (-20° to 70°C) 90% Non-condensing NEMA 2 (IP11) NEMA 4 (IP66) - Remote Antenna

## Read/Write Ranges



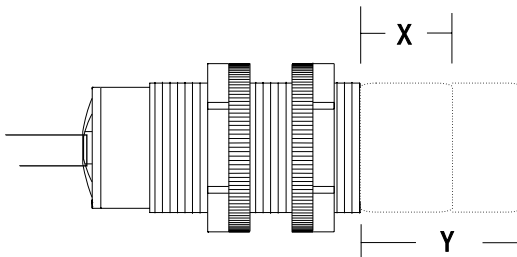
### HMS800 / HMS810 Passive Reader/Writers

#### Reading & Writing Ranges with HMS100-Series Passive Read/Write Tags

	HMS108	HMS112	HMS125(HT)	HMS150(HT)
Typical Range (Y) (inches/mm)*	**	**	1.10/28	2.75/70
Guaranteed Operating Range (X)	**	**	0.87/22	2.20/56

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

\*\* Not recommended.



### HMS805 / HMS815 Passive Reader/Writers

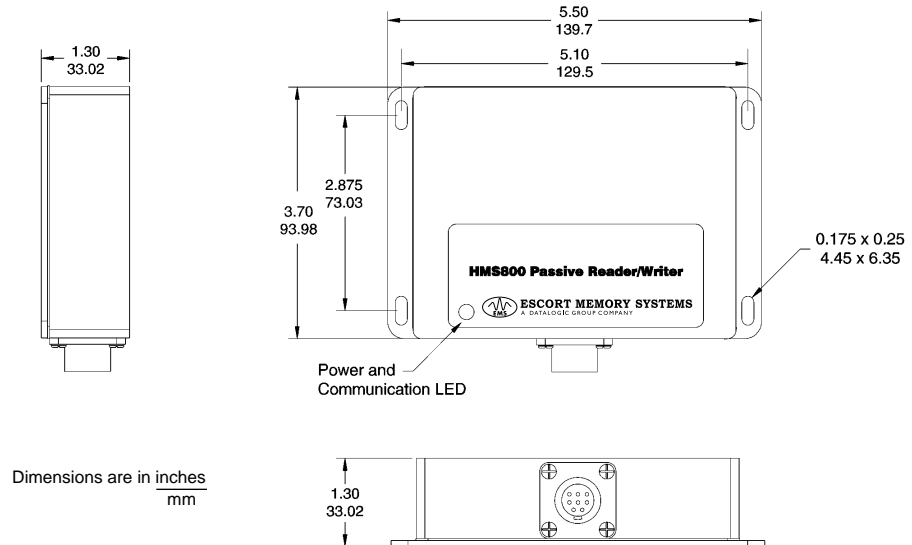
#### Reading & Writing Ranges with HMS100-Series Passive Read/Write Tags

	HMS108	HMS112	HMS125(HT)	HMS150(HT)
Typical Range (Y) (inches/mm)*	0.43/11	0.67/17	1.14/29	1.38/35
Guaranteed Operating Range (X)	0.35/9	0.55/14	0.91/23	1.10/28

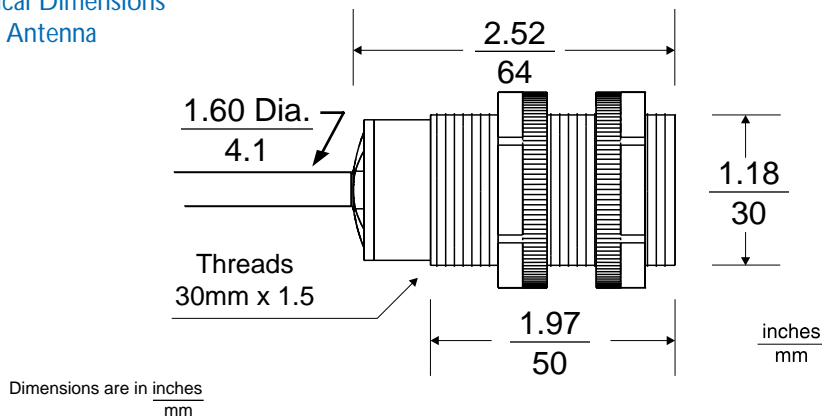
\* Proximity to metal, CRT devices and other sources of electromagnetic radiation may affect the range of the Antenna.

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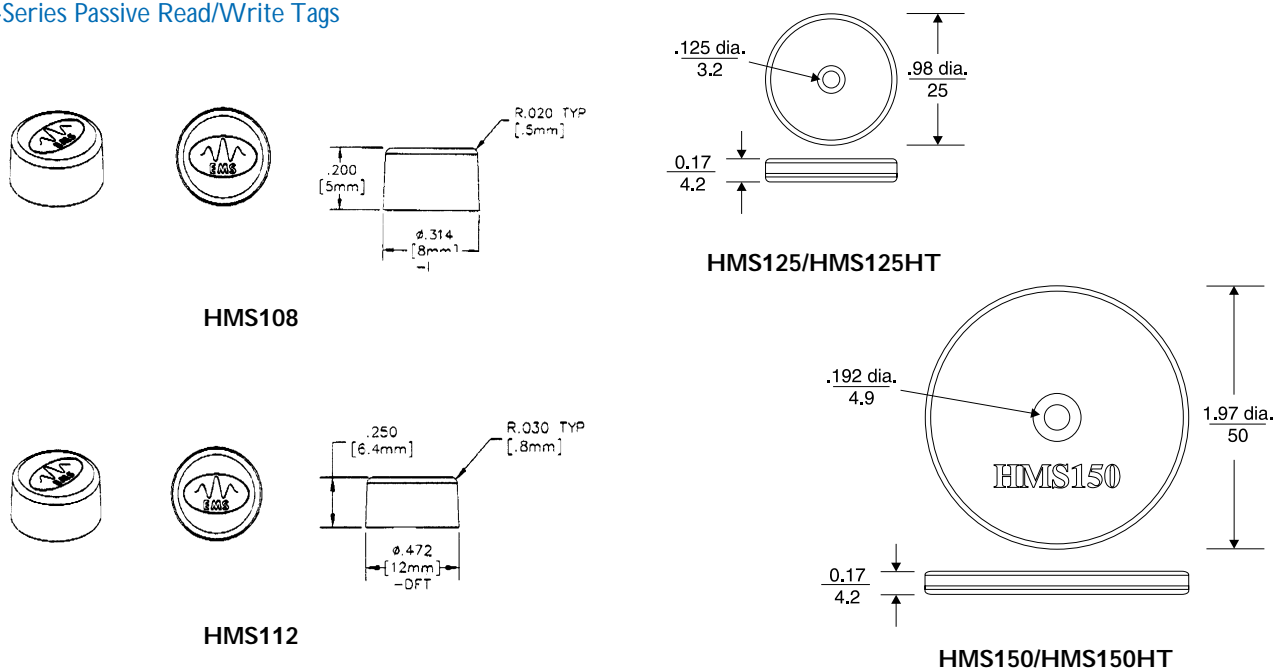
## Mechanical Dimensions Reader/Writer



## Mechanical Dimensions Remote Antenna



## Mechanical Dimensions HMS100-Series Passive Read/Write Tags

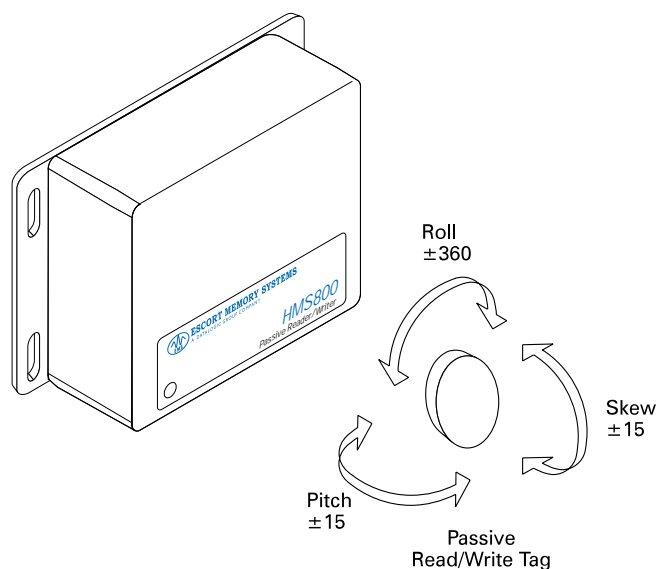


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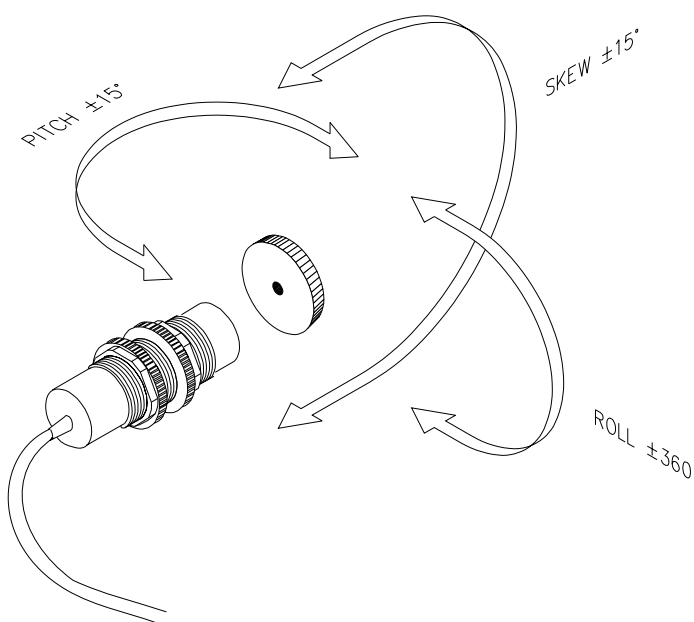
## Available Models

Model	Description
HMS800	Passive Reader/Writer, RS232 Communications
HMS805	Passive Reader/Writer, RS232 Communications, 30mm Tubular Remote Antenna
HMS810	Passive Reader/Writer, RS485/Mux32 Communications
HMS815	Passive Reader/Writer, RS485/Mux32 Communications, 30mm Tubular Remote Antenna

## Tag-to-Reader/Writer Orientation



**HMS800 / HMS810 to Tag**



**HMS805 / HMS815 to Tag**