



HMS100-Series Passive Read/Write Tags

Features

- Extremely Durable
- No Batteries
- Small and Easy to Mount
- Long Life
- No Moving Parts
- High Temperature Capability

Applications

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

Use With

- HMS800 / HMS805 Passive Reader/Writers
- HMS810 / HMS815 Passive Reader/Writers
- HMS814 / HMS816 Portable Reader/Writers
- HMS820 / HMS830 Passive Reader/Writers
- HMS820-04 / HMS830-04 Series Passive Conveyor Reader/Writers
- HMS820-08 / HMS830-08 Series Passive Wide-Plate Reader/Writers
- HMS827-Series Passive Reader/Writers
- HMS827-04 Passive Conveyor 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, 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 Read/Write system uses the RF field from the Antenna to power the Tag, eliminating the need for batteries.

The HMS100-Series Tags are available in six versions, varying in range, size and operating temperature. The effective range is determined by the Tag coil size. The HMS150 has a larger coil and subsequently offers a longer Read/Write range than the HMS108.

The HMS100-Series Tags are unique compared to other Tags since they do not experience power-on delays. Typically, Tags have capacitors on the coil that must be charged up

before data communication can begin. The HMS100-Series Tags do not rely on capacitors, thereby reducing precious Read/Write time needed to communicate information to and from the Tag. The HMS 100-Series Tags are powered up almost instantaneously, allowing the end-user to speed up the conveyor or assembly process and reduce manufacturing time. When researching Tags, this is an often overlooked but extremely important feature.

Escort Memory Systems' HMS100-Series Tags are very durable, small in size and resistant to high temperature applications. Our patent-pending HMS125HT and HMS150HT Tags can survive temperatures up to 464°F (240°C), perfect for paint oven or hot chemical bath applications.

**HMS125HT
AND
HMS150HT
TAGS CAN
WITHSTAND
TEMPERATURES
UP
TO 240°C**

HMS100-Series Passive Read/Write Tags

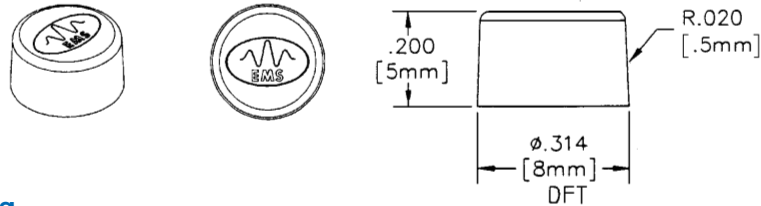
HMS108 Passive Read/Write Tag

Features

| | |
|-----------------------|------------------------------|
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -4° to 185°F (-20° to 85°C) |
| Storage Temperature | -40° to 185°F (-40° to 85°C) |
| Protection Class | NEMA 6P/13 (IP68) |

Note: "Operating Temperature" is the range of temperatures at which read, write and fill operations can be performed

Mechanical Dimensions



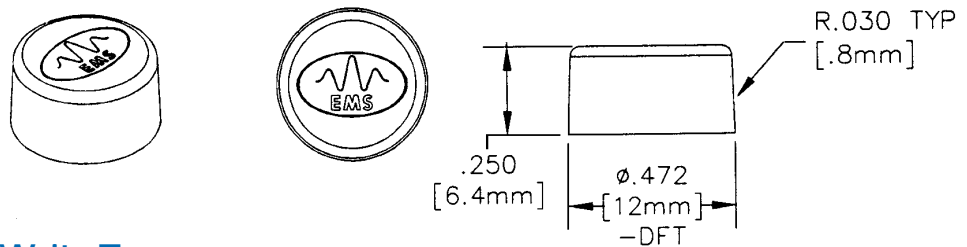
HMS112 Passive Read/Write Tag

Features

| | |
|-----------------------|------------------------------|
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -4° to 185°F (-20° to 85°C) |
| Storage Temperature | -40° to 185°F (-40° to 85°C) |
| Protection Class | NEMA 6P/13 (IP68) |

Note: "Operating Temperature" is the range of temperatures at which read, write and fill operations can be performed

Mechanical Dimensions



HMS125(HT) Passive Read/Write Tag

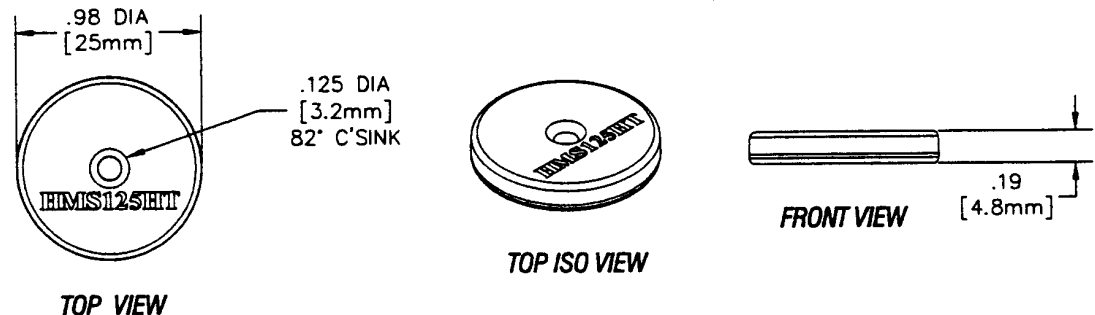
Features

| | |
|-----------------------|------------------------------|
| HMS125 | |
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -4° to 185°F (-20° to 85°C) |
| Storage Temperature | -40° to 185°F (-40° to 85°C) |
| Protection Class | NEMA 6P/13 (IP68) |

| | |
|-----------------------|-------------------------------|
| HMS125HT | |
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -40° to 275°F (-40° to 135°C) |
| Storage Temperature | -40° to 464°F (-40° to 240°C) |
| Protection Class | NEMA 6P/13 (IP68) |

Note: "Operating Temperature" is the range of temperatures at which read, write and fill operations can be performed

Mechanical Dimensions



HMS100-Series Passive Read/Write Tags

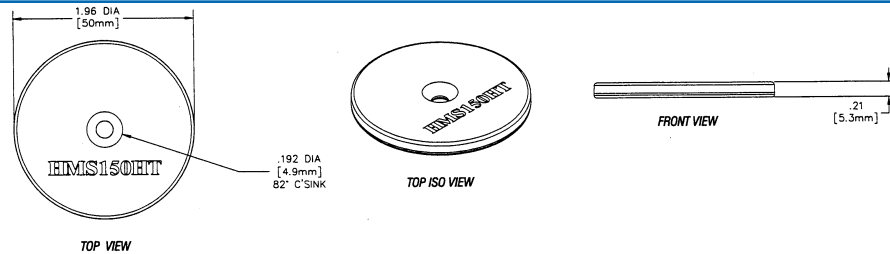
HMS150(HT) Passive Read/Write Tag

Features

| | |
|-----------------------|-------------------------------|
| HMS150 | |
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -4° to 185°F (-20° to 85°C) |
| Storage Temperature | -40° to 185°F (-40° to 85°C) |
| Protection Class | NEMA 6P/13 (IP68) |
| HMS150HT | |
| Memory | 736 Bytes |
| Data Transfer Rate | 1000 Bytes/Second |
| Operating Temperature | -40° to 275°F (-40° to 135°C) |
| Storage Temperature | -40° to 464°F (-40° to 240°C) |
| Protection Class | NEMA 6P/13 (IP68) |

Note: "Operating Temperature" is the range of temperatures at which read, write and fill operations can be performed.

Mechanical Dimensions



Typical & Guaranteed Read/Write Ranges (inches/mm)*

| Readers/Writers | Tags | | | | |
|----------------------|--------|---------|------------|------------|----------|
| | HMS108 | HMS112 | HMS125(HT) | HMS150(HT) | |
| HMS800 | Typ. | ** | ** | 1.10/28 | 2.75/70 |
| | Guar. | ** | ** | 0.87/22 | 2.20/56 |
| HMS805 | Typ. | 0.43/11 | 0.67/17 | 1.14/29 | 1.38/35 |
| | Guar. | 0.35/9 | 0.55/14 | 0.91/23 | 1.10/28 |
| HMS810 | Typ. | ** | ** | 1.10/28 | 2.75/70 |
| | Guar. | ** | ** | 0.87/22 | 2.20/56 |
| HMS815 | Typ. | 0.43/11 | 0.67/17 | 1.14/29 | 1.38/35 |
| | Guar. | 0.35/9 | 0.55/14 | 0.91/23 | 1.10/28 |
| HMS814 | Typ. | 0.28/7 | 0.35/9 | 0.63/16 | 0.59/15 |
| | Guar. | 0.24/6 | 0.28/7 | 0.51/13 | 0.47/12 |
| HMS816 | Typ. | 0.28/7 | 0.35/9 | 0.63/16 | 0.59/15 |
| | Guar. | 0.24/6 | 0.28/7 | 0.51/13 | 0.47/12 |
| HMS820 | Typ. | ** | ** | 1.10/28 | 1.97/50 |
| | Guar. | ** | ** | 0.87/22 | 1.57/40 |
| HMS820-05 | Typ. | 0.39/10 | 0.59/15 | 0.91/23 | 1.38/35 |
| | Guar. | 0.31/8 | 0.47/12 | 0.70/18 | 1.10/28 |
| HMS820-04 | Typ. | ** | ** | 0.71/18 | 1.57/40 |
| | Guar. | ** | ** | 0.55/14 | 1.26/32 |
| HMS830-04 | Typ. | ** | ** | 0.71/18 | 1.57/40 |
| | Guar. | ** | ** | 0.55/14 | 1.26/32 |
| HMS820-08 | Typ. | ** | ** | 1.18/30 | 5.00/127 |
| | Guar. | ** | ** | 0.94/24 | 4.02/102 |
| HMS830-08 | Typ. | ** | ** | 1.18/30 | 5.00/127 |
| | Guar. | ** | ** | 0.94/24 | 4.02/102 |
| HMS830 | Typ. | ** | ** | 1.10/28 | 1.97/50 |
| | Guar. | ** | ** | 0.87/22 | 1.57/40 |
| HMS830-05 | Typ. | 0.39/10 | 0.59/15 | 0.91/23 | 1.38/35 |
| | Guar. | 0.31/8 | 0.47/12 | 0.70/18 | 1.10/28 |
| HMS827-Vert. | Typ. | 0.43/11 | 0.67/17 | 1.18/30 | 1.89/48 |
| | Guar. | 0.35/9 | 0.55/14 | 0.94/24 | 1.50/38 |
| HMS827-Horiz. | Typ. | 0.39/10 | 0.55/14 | 0.98/25 | 1.57/40 |
| | Guar. | 0.31/8 | 0.43/11 | 0.79/20 | 1.26/32 |
| HMS827-03 | Typ. | 0.35/9 | 0.47/12 | 0.79/20 | ** |
| | Guar. | 0.28/7 | 0.39/10 | 0.63/16 | ** |
| HMS827-04 | Typ. | ** | ** | 0.71/18 | 1.57/40 |
| | Guar. | ** | ** | 0.55/14 | 1.26/32 |
| HMS827-06 | Typ. | 0.47/12 | 0.59/15 | 1.06/27 | ** |
| | Guar. | 0.39/10 | 0.47/12 | 0.87/22 | ** |

* Proximity to metal, CRT devices and other sources of electromagnetic radiation may affect the range of the Antenna.
 ** Not recommended

HMS100-Series Passive Read/Write Tags

Available Models*

| Model | Description |
|-----------|--------------------------------------------------------------------------------------------------------------------|
| HMS108 | Passive Read/Write Tag, 8mm, 736 Bytes; -40° to 185°F (-40° to 85°C) Storage Temperature |
| HMS112 | Passive Read/Write Tag, 12mm, 736 Bytes; -40° to 185°F (-40° to 85°C) Storage Temperature |
| HMS125 | Passive Read/Write Tag, 25mm, 736 Bytes; -40° to 185°F (-40° to 85°C) Storage Temperature |
| HMS125HT | High Temperature Passive Read/Write Tag, 25mm, 736 Bytes; -40° to 464°F (-40° to 240°C) Storage Temperature |
| HMS150 | Passive Read/Write Tag, 50mm, 736 Bytes; -40° to 185°F (-40° to 85°C) Storage Temperature |
| HMS150HT | High Temperature Passive Read/Write Tag, 50mm, 736 Bytes; -40° to 464°F (-40° to 240°C) Storage Temperature |
| HMS125THT | High Temperature Passive Read/Write Teflon Tag, 25mm, 736 Bytes; -40° to 464°F (-40° to 240°C) Storage Temperature |

* Note: For complete chemical resistancy chart, refer to Appendix D on page 170.

Compatible Products

| 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 |
| HMS814 | Portable RF Reader/Writer |
| HMS816 | Portable RF Reader/Writer with RS232 Interface |
| HMS820 | Passive Reader/Writer |
| HMS820-04 | Passive Conveyor Reader/Writer |
| HMS830-04 | Passive Conveyor Reader/Writer with DeviceNet Interface |
| HMS820-05 | Passive Reader/Writer with 30mm Remote Antenna |
| HMS820-08 | Passive Wide-Plate Reader/Writer |
| HMS830-08 | Passive Wide-Plate Reader/Writer with DeviceNet Interface |
| HMS830 | Passive Reader/Writer with DeviceNet Interface |
| HMS830-05 | Passive Reader/Writer with DeviceNet Interface, 30mm Remote Antenna |
| HMS827 | Passive Reader/Writer |
| HMS827-04 | Passive Conveyor Reader/Writer |
| HMS827-03 | Passive Reader/Writer with 18mm Tubular Remote Antenna |
| HMS827-06 | Passive Reader/Writer with 30mm x 40mm x 12mm Remote Antenna |

Accessories

| Model | Description |
|---------|--------------------------------------------------------------------------|
| 00-1116 | Spacer Kit for HMS125 Passive Read/Write Tag, 20 Spacers and 20 Screws |
| 00-1117 | Spacer Kit for HMS150 Passive Read/Write Tag, 20 Spacers and 20 Screws |
| 00-1118 | Spacer Kit for HMS125HT Passive Read/Write Tag, 10 Spacers and 10 Screws |
| 00-1119 | Spacer Kit for HMS150HT Passive Read/Write Tag, 10 Spacers and 10 Screws |