



HMS827-Series Passive Reader/Writers

Features

- Serial Reader/Writers with Integrated Antenna
- Menu Configurable RS232 and RS485 Multidrop Interface
- Dip Switch Configurable Horizontal and Vertical Reading
- 1000 Bytes/Second Data Transfer Speed
- Passive Tag Requires No Batteries
- NEMA 12 (IP65)
- 24VDC Operation

Applications

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

Use With

- HMS-Series Tags
- CM01 Asynchronous Serial Interface Module
- CM11 / CM12 DeviceNet Modules
- CM21 InterBus-S Module
- CM30-Series Profibus Modules
- CM40-Series Modbus Plus Modules
- CM52 Remote I/O Module
- CM80-Series ControlNet Modules
- CM900 / CM1000
- CM1746 RFID Module
- MM80MicroMux Bus Module
- Any RS232 and RS485 Host

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!

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 HMS827-Series Passive Reader/Writers are extremely compact units housed in durable, two part ABS plastic enclosures. The HMS827 Reader/Writers are available with a RS485 multidrop interface (Mux32 protocol) and an RS232 point-to-point interface. The HMS827 Reader/Writers also have selectable horizontal and vertical read positions.

The patented industry standard limit switch body of the HMS827 Reader/Writers makes it ideal for use in factory automation environments where space is limited. The Reader/

Writers are solid state devices and are housed in a NEMA 12, ABS enclosure.

The HMS827 incorporates two user selectable integrated Antennas, one for horizontal reading and the other for vertical reading. The patented head design provides the ability to read from the top or any of the four sides.

Technical Description

The HMS827 interface block contains the power supply, logic, serial interface and terminal blocks for external connections. The head block contains the integrated Antenna and the analog transmitter. The HMS827 Reader/ Writers uses

the internationally recognized ISM frequency of 13.56 MHz to both power the Tag and to establish a radio link to transfer the data.

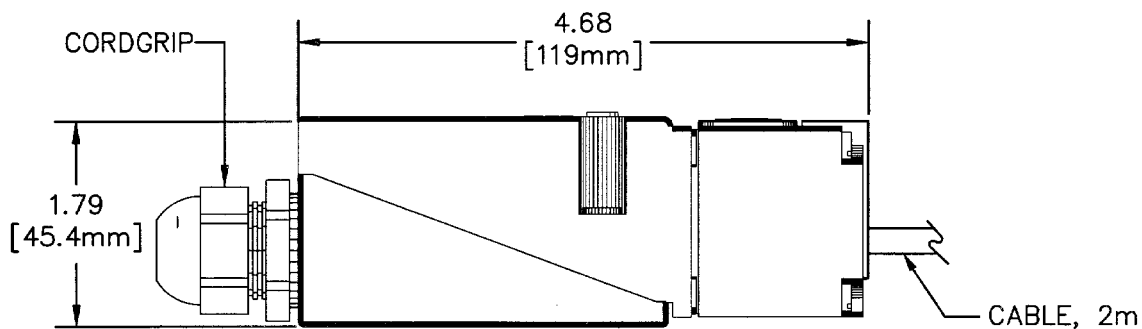
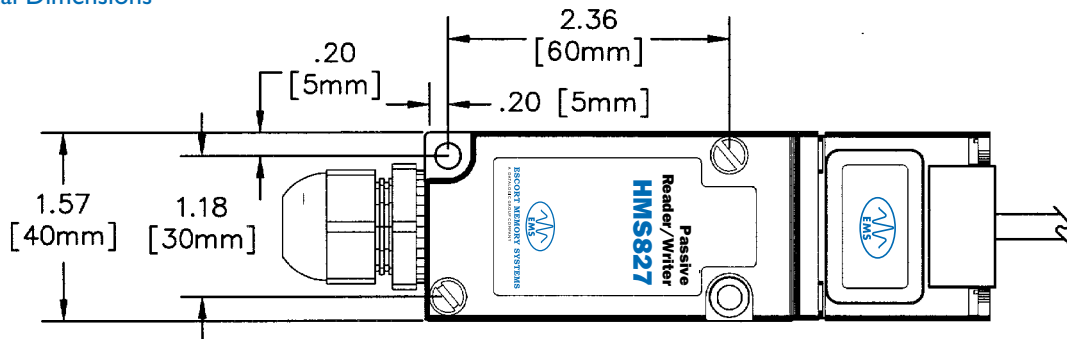
Error checking routines ensure that the Tag data is correctly received by the Antenna even in environments of heavy RF interference. A bi-color (red/green) LED provides continuous operational feedback. The HMS827's small size, multi-drop features and high data transfer speed, combined with a versatile assortment of Tags, provide a powerful solution for any application.

**PATENTED
ROTATING
HEAD ALLOWS
GREATER
FLEXIBILITY**

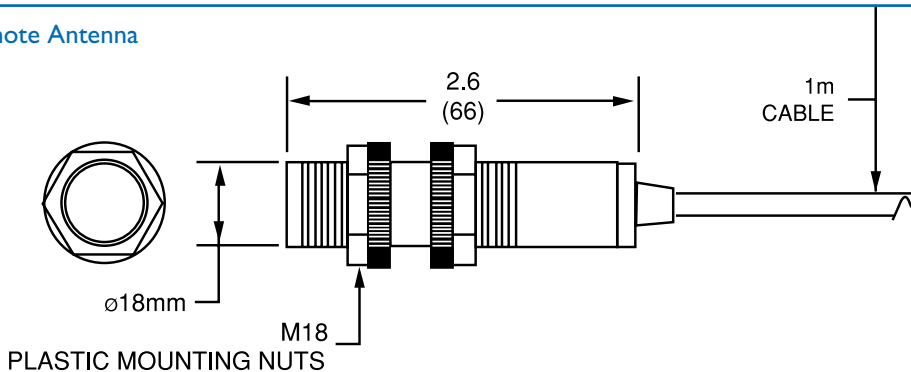
HMS827-Series Passive Reader/Writers

Electrical	Supply Voltage Current	18-30VDC \pm 10% 160mA@24VDC (3.84W)
RF Interface	Data Transfer Rate Error Detection Antenna Type HMS827 HMS827-03 HMS827-06	1000 Bytes/Second CRC and Parity Check Integrated 2 Axis, User Selectable Horizontal and Vertical Reading 18mm Tubular, 1Meter Cable 30 x 40 x 12mm Rectangular Remote Antenna
Interface	Serial Host Interface Baud Rate (RS232) Baud Rate (RS485/Mux32)	RS232 RS485/Mux32 1200, 2400, 4800, 9600, 19200, 38400, 57600, 115200 9600 or 346K
Mechanical Specifications	Dimensions (W x H x D)	4.68 x 1.79 x 1.57in. (119 x 45 x 40mm)
Environment	Operating Temperature Storage Temperature Humidity Protection Class	-4° to 120°F (-20° to 49°C) -40° to 185°F (-40° to 85°C) 95% Non-Condensing NEMA 12 (IP65)

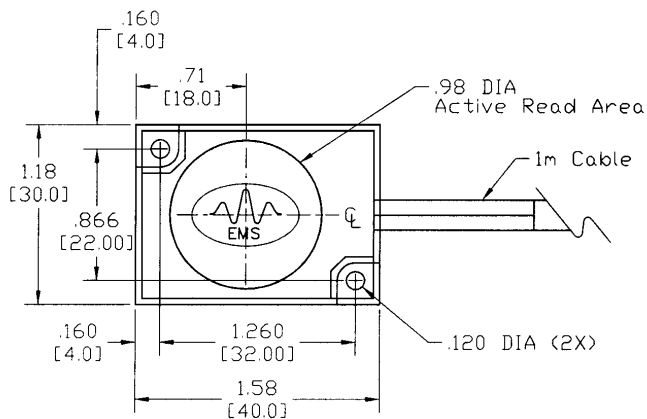
Mechanical Dimensions



HMS827-03 Tubular Remote Antenna



HMS827-06 30mm x 40mm x 12mm Remote Antenna



HMS827-Series Passive Reader/Writers

Typical & Guaranteed Read/Write Ranges

(inches/mm)*

Reader/Writers	Tags				
	HMS108	HMS112	HMS125(HT)	HMS150(HT)	
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	**
HMS827-06	Typ.	0.47/12	0.59/15	1.06/27	0.83/22
	Guar.	0.39/10	0.47/12	0.87/22	0.70/18

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

** Not recommended

Available Models

Model	Description
HMS827	Passive Reader/Writer
HMS827-03	Passive Reader/Writer with 18mm Tubular Remote Antenna
HMS827-04	Passive Conveyor Reader/Writer
HMS827-06	Passive Reader/Writer with 30mm x 40mm x 12mm Remote Antenna

**Passive Read/Write Radio Frequency Identification (RFID)
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	0.83/22
	Guar.	0.39/10	0.47/12	0.87/22	0.70/18

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