ESCORT MEMORY SYSTEMS
A DATALOGIC GROUP COMPANY

DeviceNet™

HMS820-08/ HMS830-08
Passive Wide-Plate Reader/Writers

Features

- 81 Square Inches of Read/Write Field
- Four Input Points and Four Output Points
- Host Interface (COM1): RS232/RS422/Mux32 (HMS820-08)
- Host Interface (COM1): RS232/RS422 and DeviceNet Interface (HMS830-08)
- Auxiliary RS232 Serial Port
- 1000 Bytes/Second Data Transfer Speed
- NEMA 4 (IP66)

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 or RS422 Hosts

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 HMS820-08 / HMS830-08 Series Passive Reader/Writers are extremely compact solid state devices housed in a durable two-part ABS plastic NEMA 4 enclosure. The HMS820 is available with a RS485 multidrop interface (Mux32 protocol) and a RS232/RS422 point-to-point interface. The HMS820 / HMS830 achieves Tag to Antenna data transfer speeds of 1000 bytes/second.

In addition, the HMS820 / HMS830 have a slave serial port which can serve many purposes including writing Tag information to a marquis or accepting barcode scanner inputs.

Excellent Read/Write Ranges of five inches can be attained with the patent pending Wide-Plate Reader/Writer with 81 square inches of Read/Write field.

Reduced interface expenditures, faster identification/tracking response times and powerful memory capabilities will allow your assembly or production environment to realize noticeably greater productivity, efficiency and quality results.

The HMS830-08 is also available with a DeviceNet interface and a RS232/RS422 point-to-point interface.

WIDE-PLATE READER/ WRITERS WITH SELF-CONTAINED I/O

# HMS820-08 / HMS830-08 Series Passive Wide-Plate Reader/Writers

Electrical	Supply Voltage	18-30VDC
	Current	270mA@24VDC

Memory	60KB Program Memory (System + User)	
	20KB Data Read/Write Memory (Flat)	

RF Interface	Data Transfer Rate	1000 Bytes/Second
	Error Detection	CRC and Parity Check
	Antenna Type	
	HMS820 / HMS830-08	External 250mm Reader/Writer with 2 Meter Cable

Interface	**COM1**	
	RS232	
	RS422	
	Bus Interfaces:	
	Mux32 Optoisolated (HMS820-08)	
	DeviceNet Interface (HMS830-08)	
	COM2	
	RS232 (Use for Barcode Scanner Input, Program Downloading, Downloading Configuration Parameters)	
	Baud Rate	
	RS232/RS422 (COM1)	1200, 2400, 4800, 9600, 19200, 38400
	RS232 (COM2)	1200, 2400, 4800, 9600, 19200
	RS485/Mux32 (COM1)	9600 or 346K
	I/O	
	Input	
	Voltage Input Range	4.5-30VDC
	Imax	25mA
	Output	
	Vmax	30VDC
	Imax	500mA

Mechanical Specifications	HMS820 (W x H x D)	4.72 x 4.80 x 2.17in. (122 x 120 x 55mm)
	Wide-Plate Reader/Writer Dimensions (W x H x D)	9.84 x 0.92 x 9.84in. (250 x 23 x 250mm)

Environment	Operating Temperature	-4° to 120°F (-20° to 49°C)
	Storage Temperature	-40° to 185°F (-40° to 85°C)
	Humidity	95% Non-Condensing
	Protection Class	NEMA 4 (IP66)

HMS820 / HMS830 Dimensions

HMS820 / HMS830
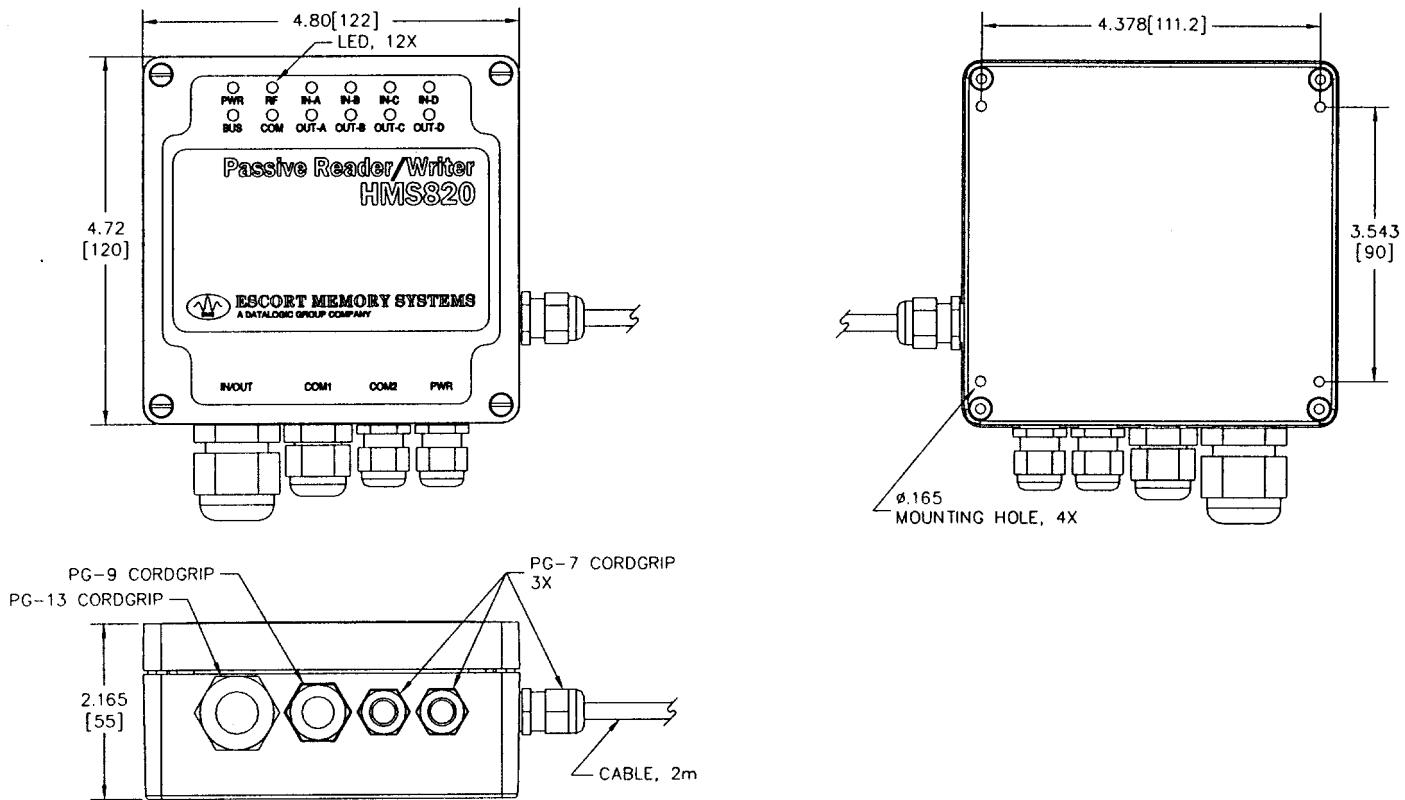
Wide-Plate Reader/Writer
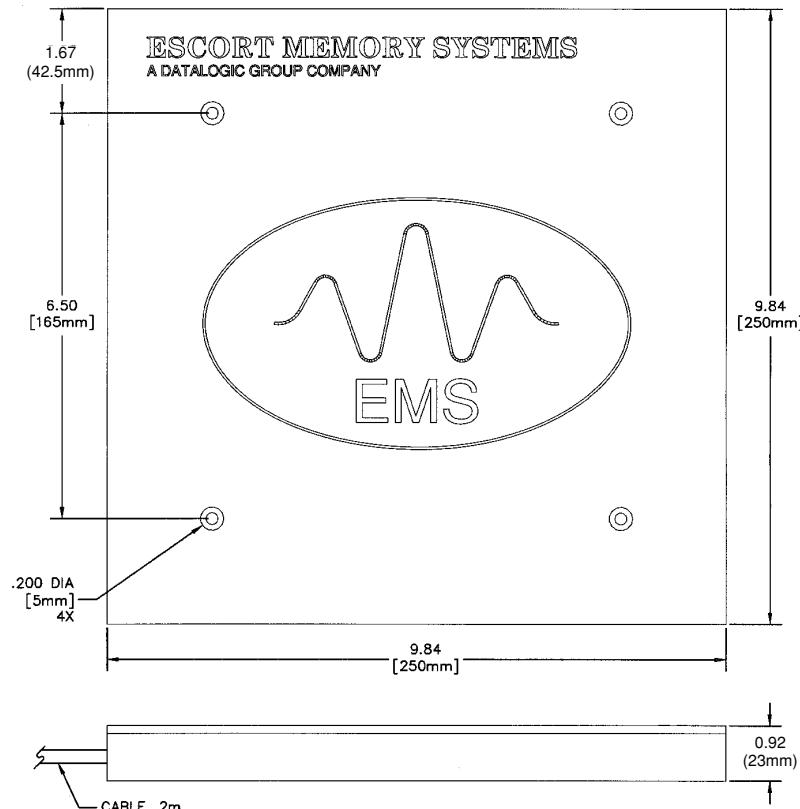
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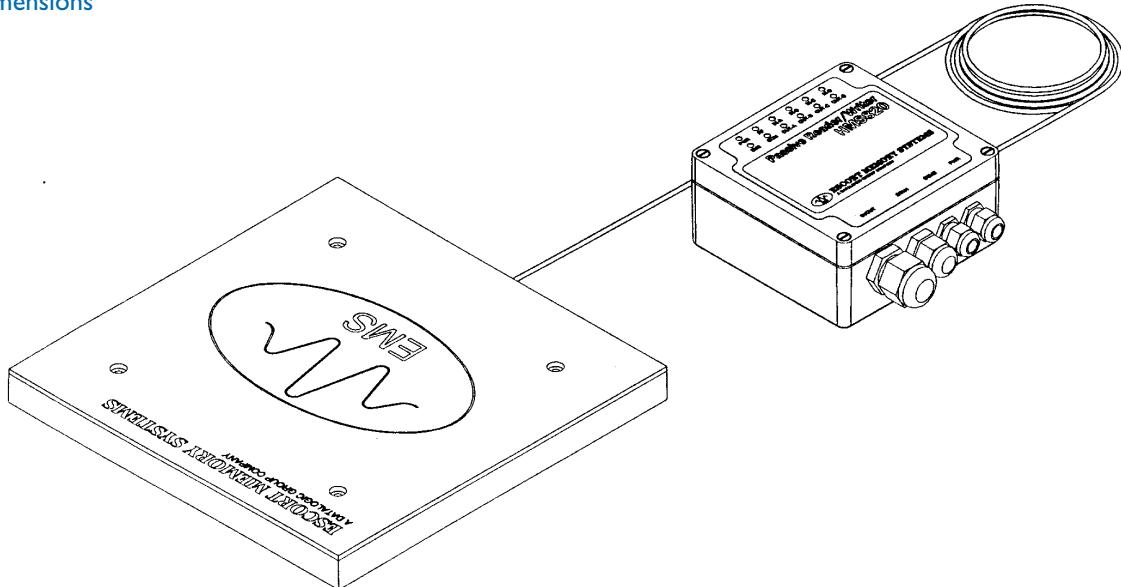
RF Field and Read/Write Ranges

END/SIDE VIEW
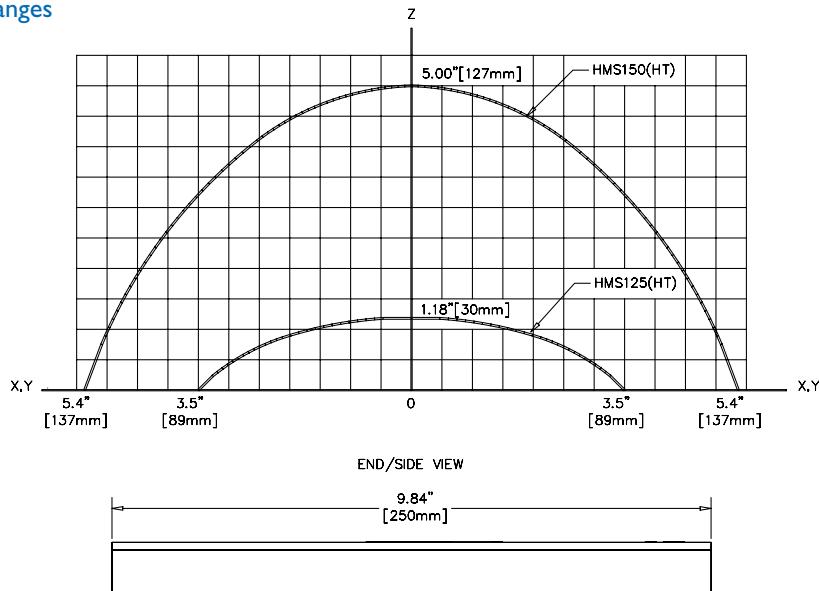
HMS820-08 / HMS830-08 Series Passive Wide-Plate Reader/Writers
Reading & Writing Ranges with HMS100-Series Passive Read/Write Tags

Tags

	HMS108	HMS112	HMS125(HT)	HMS150(HT)
Typical Range (Z) (inches/mm)*	**	**	1.18/30	5.00/127
Guaranteed Operating Range	**	**	0.94/24	4.02/102
Reading Field (Y)	**	**	7.00/178	10.80/274
Reading Field (X)	**	**	7.00/178	10.80/274

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

Available Models

Model	Description
HMS820-08	Passive Wide-Plate Reader/Writer
HMS830-08	Passive Wide-Plate Reader/Writer with DeviceNet Interface

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

(inches/mm)*

Readers/Writers		HMS108	HMS112	Tags 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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** Not recommended