DeviceNet™

HMS820 / HMS830
Passive Reader/Writers

Features

- Serial Reader/Writer with Integrated Antenna
- Four Input Points and Four Output Points
- Host Interface (COM1): RS232/RS422 /Mux32 (HMS820)
- Host Interface (COM1): RS232/RS422 and DeviceNet Interface (HMS830)
- 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 and HMS830 Passive Reader/Writers are extremely compact solid state devices housed in durable two part ABS plastic NEMA 4 enclosures. The HMS820 is available with a RS485 multidrop interface (Mux32 protocol) and a RS232/RS422 point-to-point interface. The HMS830 is available with a DeviceNet interface and a RS232/RS422 point-to-point interface. Both the HMS820 and HMS830 achieve Tag to Antenna data transfer speeds of 1000 bytes/second.

In addition, the HMS820 and HMS830 have a slave serial port which can serve many purposes including writing Tag information to a marquis or accepting barcode scanner inputs.
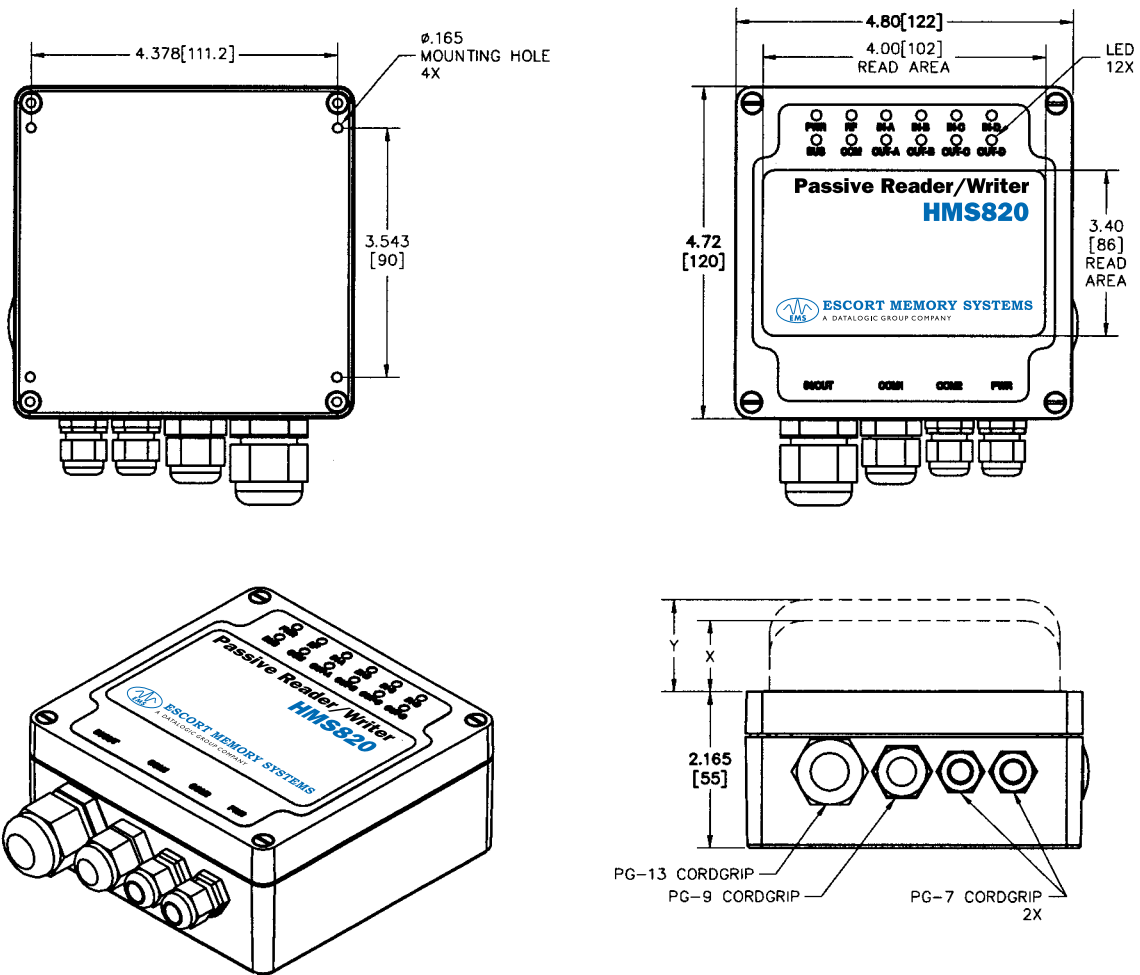
READER/
WRITER
WITH SELF-
CONTAINED
I/O

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.
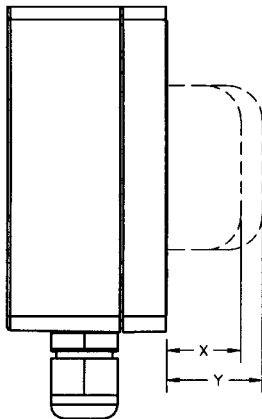
HMS820 / HMS830 Passive Reader/Writers

| 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)	Integrated Antenna
	(HMS820-05 / HMS830-05)	External 30mm Antenna

Interface	**COM1**	
	RS232	
	RS422	
	Bus Interfaces:	
	Mux32 Optoisolated (HMS820/05)	
	DeviceNet Interface (HMS830/05)	
	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 | Dimensions (W x H x D) | 4.72 x 4.80 x 2.17in. (122 x 120 x 55mm) |
| | Weight | 24oz. (676g) |

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)

Mechanical Dimensions

HMS820 / HMS830 Passive Reader/Writers

Read/Write Ranges

HMS820 / HMS830 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	1.97/50
Guaranteed Operating Range (X)	**	**	0.87/22	1.57/40

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

** Not recommended.

Mechanical Dimensions

HMS820-05 / HMS830-05 Passive Reader/Writers with 30mm Remote Antenna

CABLE
1m

PLASTIC MOUNTING NUT
2X
M30

ø30mm

2.53
[64.5]

X
Y

Passive Reader/Writer
HMS820

ESCORT MEMORY SYSTEMS
A DATALOGIC GROUP COMPANY

PG-7
CORDGRIP
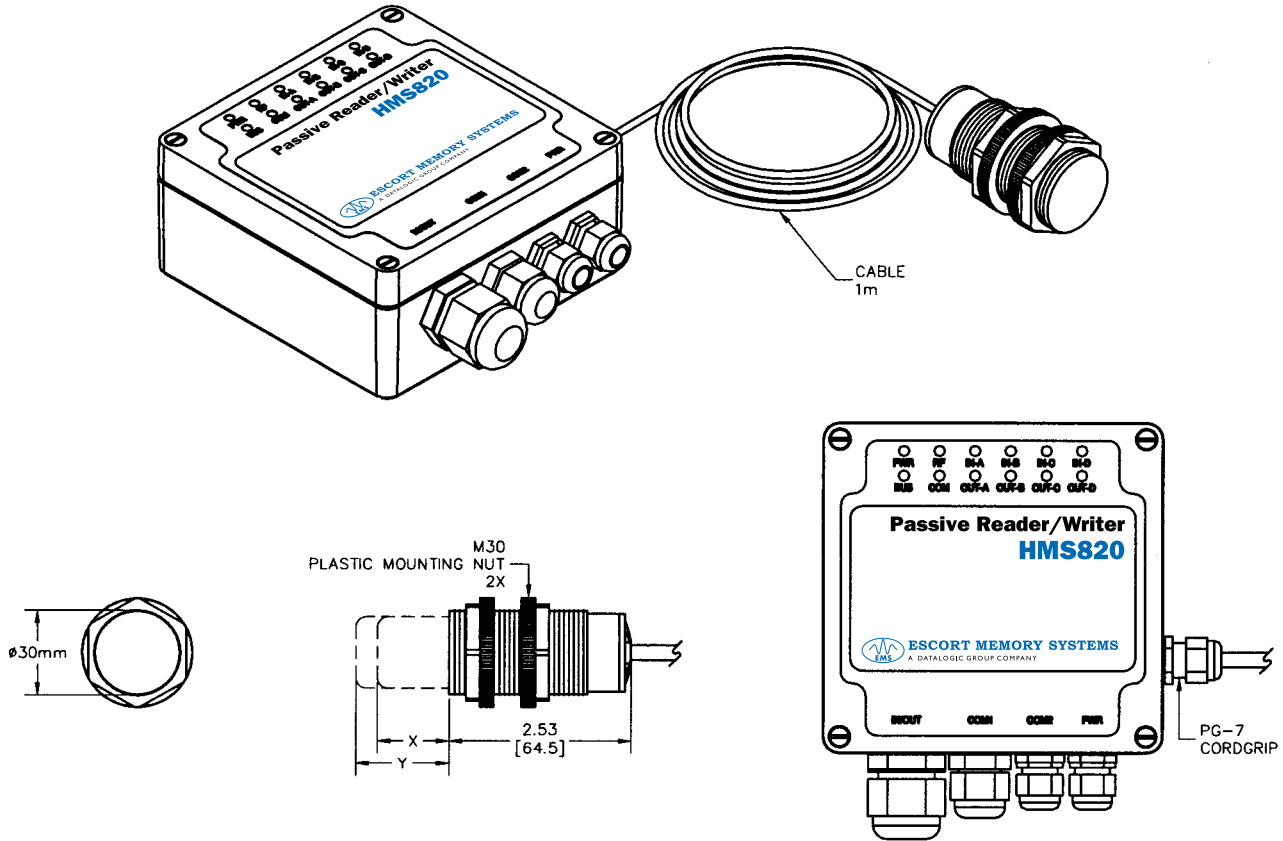
Read/Write Ranges

HMS820-05 / HMS830-05 Passive Reader/Writers

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

	HMS108	HMS112	HMS125(HT)	HMS150(HT)
Typical Range (Y) (inches/mm)*	0.39/10	0.59/15	0.91/23	1.38/35
Guaranteed Operating Range (X)	0.31/8	0.47/12	0.70/18	1.10/28

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

Available Models

Model	Description
HMS820	Passive Reader/Writer
HMS820-05	Passive Reader/Writer with 30mm Remote Antenna
HMS830	Passive Reader/Writer with DeviceNet Interface
HMS830-05	Passive Reader/Writer with DeviceNet Interface, 30mm Remote Antenna

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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. Guar.	** **	** **	1.10/28 0.87/22	2.75/70 2.20/56
HMS805	Typ. Guar.	0.43/11 0.35/9	0.67/17 0.55/14	1.14/29 0.91/23	1.38/35 1.10/28
HMS810	Typ. Guar.	** **	** **	1.10/28 0.87/22	2.75/70 2.20/56
HMS815	Typ. Guar.	0.43/11 0.35/9	0.67/17 0.55/14	1.14/29 0.91/23	1.38/35 1.10/28
HMS814	Typ. Guar.	0.28/7 0.24/6	0.35/9 0.28/7	0.63/16 0.51/13	0.59/15 0.47/12
HMS816	Typ. Guar.	0.28/7 0.24/6	0.35/9 0.28/7	0.63/16 0.51/13	0.59/15 0.47/12
HMS820	Typ. Guar.	** **	** **	1.10/28 0.87/22	1.97/50 1.57/40
HMS820-05	Typ. Guar.	0.39/10 0.31/8	0.59/15 0.47/12	0.91/23 0.70/18	1.38/35 1.10/28
HMS820-04	Typ. Guar.	** **	** **	0.71/18 0.55/14	1.57/40 1.26/32
HMS830-04	Typ. Guar.	** **	** **	0.71/18 0.55/14	1.57/40 1.26/32
HMS820-08	Typ. Guar.	** **	** **	1.18/30 0.94/24	5.00/127 4.02/102
HMS830-08	Typ. Guar.	** **	** **	1.18/30 0.94/24	5.00/127 4.02/102
HMS830	Typ. Guar.	** **	** **	1.10/28 0.87/22	1.97/50 1.57/40
HMS830-05	Typ. Guar.	0.39/10 0.31/8	0.59/15 0.47/12	0.91/23 0.70/18	1.38/35 1.10/28
HMS827-Vert.	Typ. Guar.	0.43/11 0.35/9	0.67/17 0.55/14	1.18/30 0.94/24	1.89/48 1.50/38
HMS827-Horiz.	Typ. Guar.	0.39/10 0.31/8	0.55/14 0.43/11	0.98/25 0.79/20	1.57/40 1.26/32
HMS827-03	Typ. Guar.	0.35/9 0.28/7	0.47/12 0.39/10	0.79/20 0.63/16	** **
HMS827-04	Typ. Guar.	** **	** **	0.71/18 0.55/14	1.57/40 1.26/32
HMS827-06	Typ. Guar.	0.47/12 0.39/10	0.59/15 0.47/12	1.06/27 0.87/22	0.83/22 0.70/18

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** Not recommended