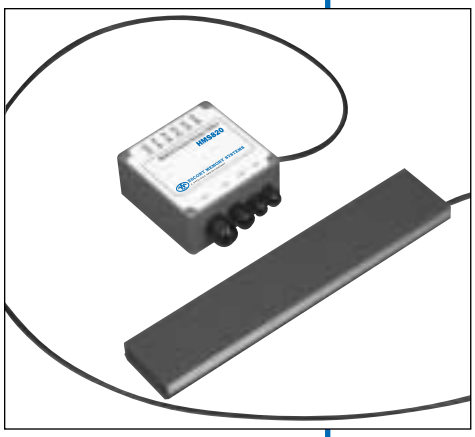


ESCORT MEMORY SYSTEMS
A DATALOGIC GROUP COMPANY

HMS820-04/ HMS830-04 Series Passive Conveyor Reader/Writers

Features

- Four Input Points and Four Output Points
- Host Interface (COM1): RS232/RS422/Mux32 (HMS820-04)
- Host Interface (COM1): RS232/RS422 and DeviceNet Interface (HMS830-04)
- Auxiliary RS232 Serial Port
- 1000 Bytes/Second Data Transfer Speed
- NEMA 4 (IP66)
- 13.5″ Wide Reading Field
- Easily Mounts Underneath Conveyor
- No Moving Parts
- Long-Life Passive Tags
- Passive Tag, Requires No Batteries

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 Module
- CM900 / CM1000
- CM1746 RFID Module
- MM80MicroMux Bus Module
- Any RS232 or 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!

The HMS820-04 Passive Conveyor Reader/Writer is designed to provide cost effective RFID data collection to demanding material handling and automation applications.

The patent pending design of the Conveyor Reader/Writer addresses a prominent concern which has vexed the material handling industry for years. In the past, the positioning of a Reader/Writer relative to the passing totes was critical. Read/Write ranges had to accommodate different sized totes or the totes had to be positioned to pass near the Reader/Writer. Escort Memory Systems' Conveyor Reader/Writer solves this concern since the Reader/Writer can now be snugly mounted underneath the path of the tote. The 14.0″ wide Reader/Writer can substitute a roller's position or may even be installed between the conveyor rollers. Reader/Writer adjustments are a thing of the past, since the Conveyor Reader/Writer can track any size tote/pallet on the same path without time-consuming adjustments.

Conveyor Reader/ Writer with Self-Contained I/O

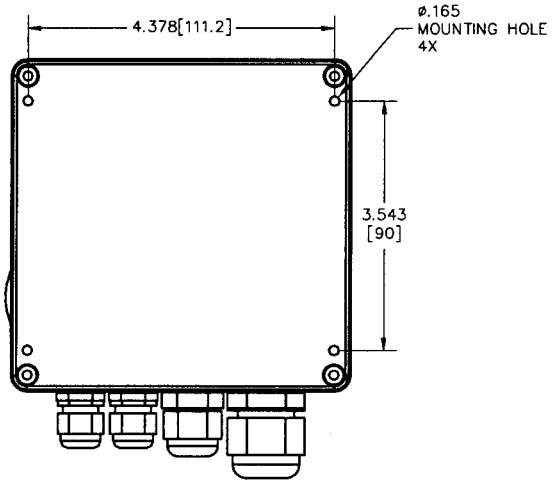
Equally important, the HMS820-04 Reader/ Writer is compatible with Escort Memory Systems' HMS100-Series Passive Read/Write Tags. These Tags are extremely durable, low-cost electronic identifiers that can be attached to any object, even in the harshest environments. The Read/ Write Tags do not contain moving parts, and provide practically unlimited life with no maintenance requirements. In a typical application, the Read/Write Tag is attached to a tote/pallet in a material handling process. Once attached, the Tag allows the RFID Reader/Writer to identify the pallet at any point in the process.

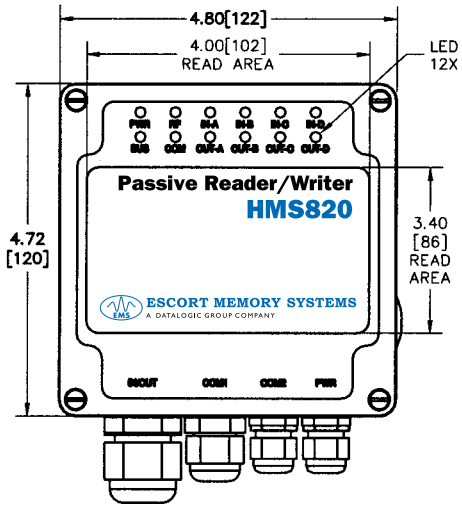
The HMS830-04 is available with a DeviceNet interface and a RS232/RS422 point-to-point interface.

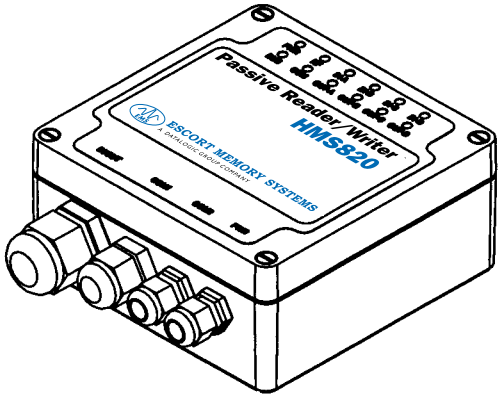
HMS820-04 / HMS830-04 Series Passive Conveyor Reader/Writers

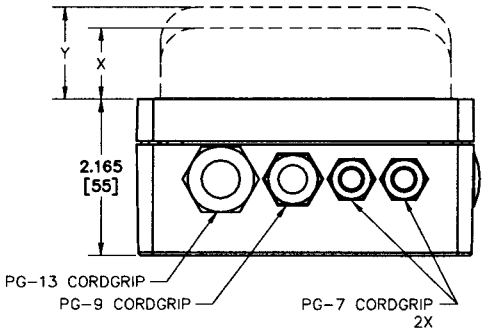
Electrical	Supply Voltage	18-30VDC
	Current	270mA@24VDC
Memory	60KB Program Memory (System + User)	
	20KB Data Read/Write Memory (Flat)	
RF Interface	Data Transfer Rate	1000 Bytes/Second
	Error Detection	CRC and Parity Check
	Antenna Type	
	HMS820-04	356mm Rectangular Antenna, 2 Meter Cable
Interface	**COM1**	
	RS232	
	RS422	
	Bus Interfaces:	
	Mux32 Optoisolated (HMS820-04)	
	DeviceNet Interface (HMS830-04)	
	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)
	Conveyor Reader/Writer (W x H x D)	14.50 x 2.80 x 0.92in. (368 x 71 x 23mm)
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 Mechanical Dimensions

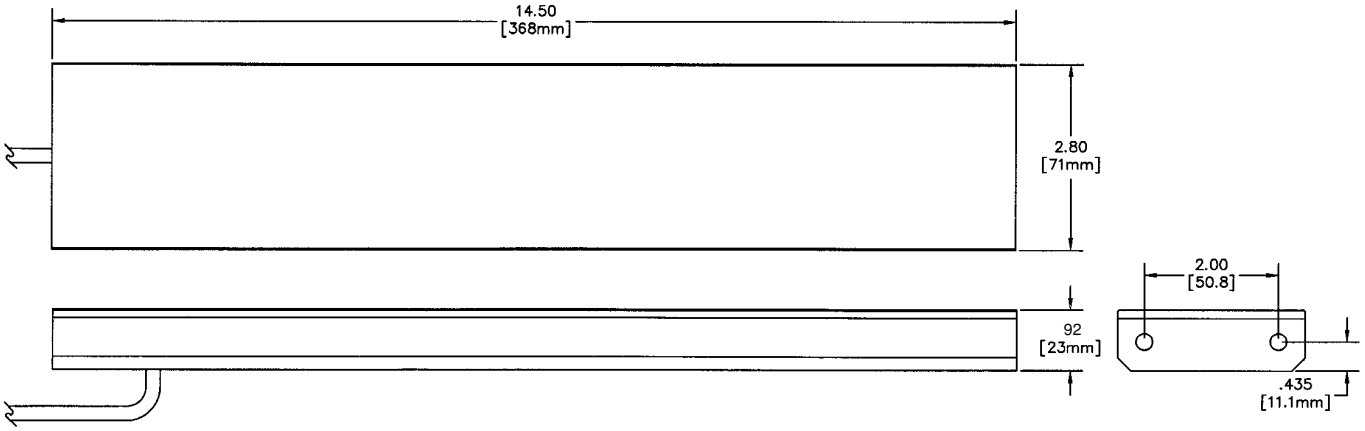






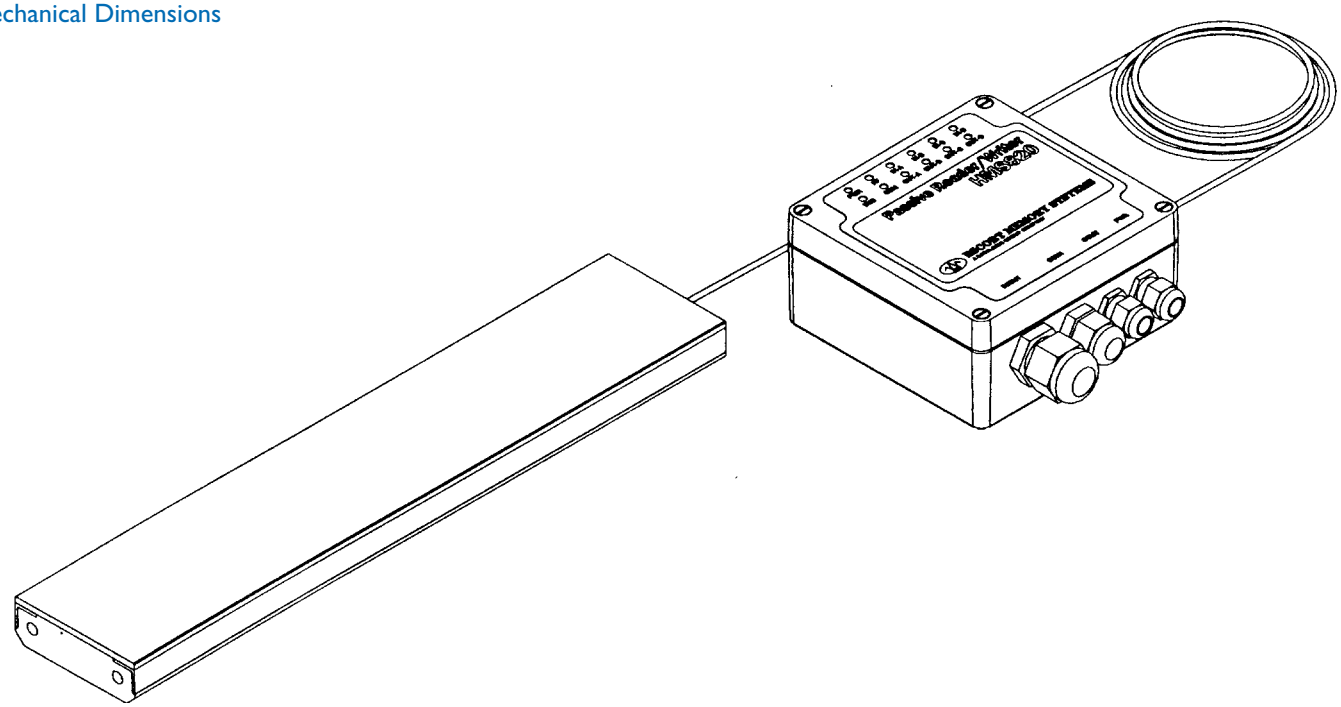


Conveyor Reader/Writer

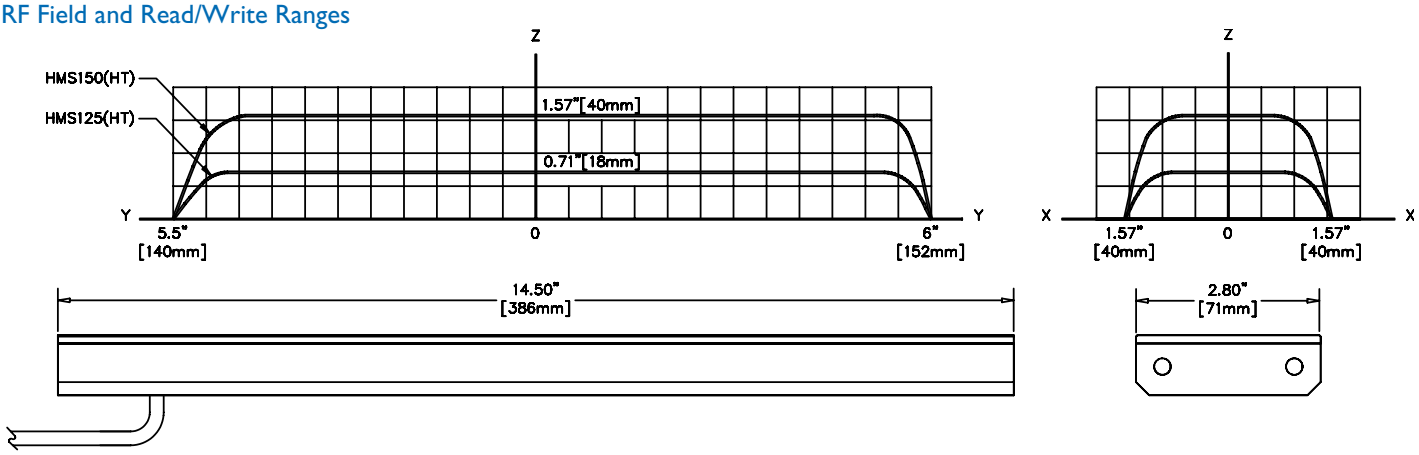


HMS820-04 / HMS830-04 Series Passive Conveyor Reader/Writers

Mechanical Dimensions



RF Field and Read/Write Ranges



HMS820-04 / HMS830-04 Series Passive Conveyor Reader/Writers

Reading/Writing Ranges with HMS100-Series Passive Read/WriteTags

Tags

	HMS108	HMS112	HMS125(HT)	HMS150(HT)
Typical Range (Z) (inches/mm)*	**	**	0.71/18	1.57/40
Guaranteed Operating Range	**	**	0.55/14	1.26/32
Reading Field (Y)	**	**	11.50/292	11.50/292
Reading Field (X)	**	**	3.14/80	3.14/80

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

Available Models

Model	Description
HMS820-04	Passive Conveyor Reader/Writer
HMS830-04	Passive Conveyor Reader/Writer with DeviceNet Interface

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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** Not recommended