

**ESCORT MEMORY SYSTEMS****FastTrack™****RFID**

Features

- RFID Tunnel Antenna – Perfect for Material Handling/Postal Applications
- Read and Write to Dozens of Tags Simultaneously (Multiple-Tag-In-Field)
- Industrial Strength Reader/Writer (IP66)
- Large Read/Write Area
- International Recognized Frequency of 13.56 MHz
- RS232/RS422/Mux32 (RS485) Bus Interfaces
- Four Industrial Input Points and Four Output Points
- LRP830-10 DeviceNet Tunnel Antenna

Applications

- Postal/Courier
- Parcel/Baggage Handling
- Manufacturing

Use With

- FastTrack™ Series Passive Read/Write Tags/Labels/PCBs
- 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 Automatic ID Module
- CM1000 Automatic ID PLC Module
- CM1746 RFID Module
- MM80 MicroMux Bus Module
- Any RS232 or RS422 Hosts

Tunnel Antennas

LRP820-10 / LRP830-10

DeviceNet™

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!

EMS' FastTrack™ line of RFID Tags/Labels/PCBs and Reader/Writers (or Antennas) provides outstanding RFID solutions for demanding industrial environments. From scorching paint ovens to post office parcel tracking applications, the FastTrack™ family of RFID Tags/Labels/PCBs and Reader/Writers deliver on all of your data collection and tracking demands.

The Tunnel Antenna (LRP820-10) is part of the FastTrack™ RFID family of Reader/Writers. Mount the cube-shaped Tunnel Antenna snugly over the conveyor and read/write data to the FastTrack™ Passive Read/Write Labels as they pass through the field.

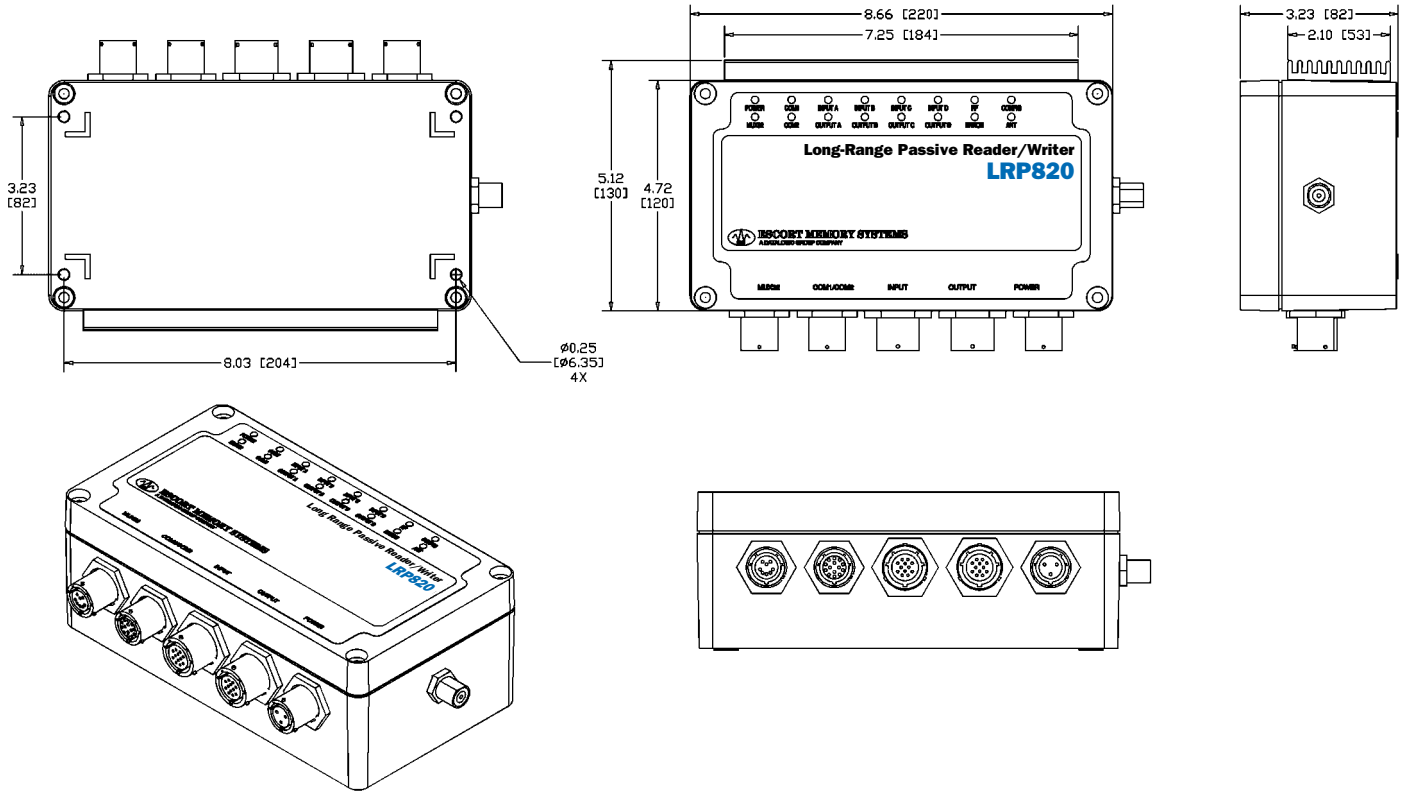
The DeviceNet Tunnel Antenna (LRP830-10) provides all the same benefits as the LRP820-10 with

the added advantage of an integrated DeviceNet interface module. If your application involves a DeviceNet bus network, and you demand absolute data capture accuracy, then the all-in-one FastTrack™ DeviceNet Tunnel Antenna is the perfect solution.

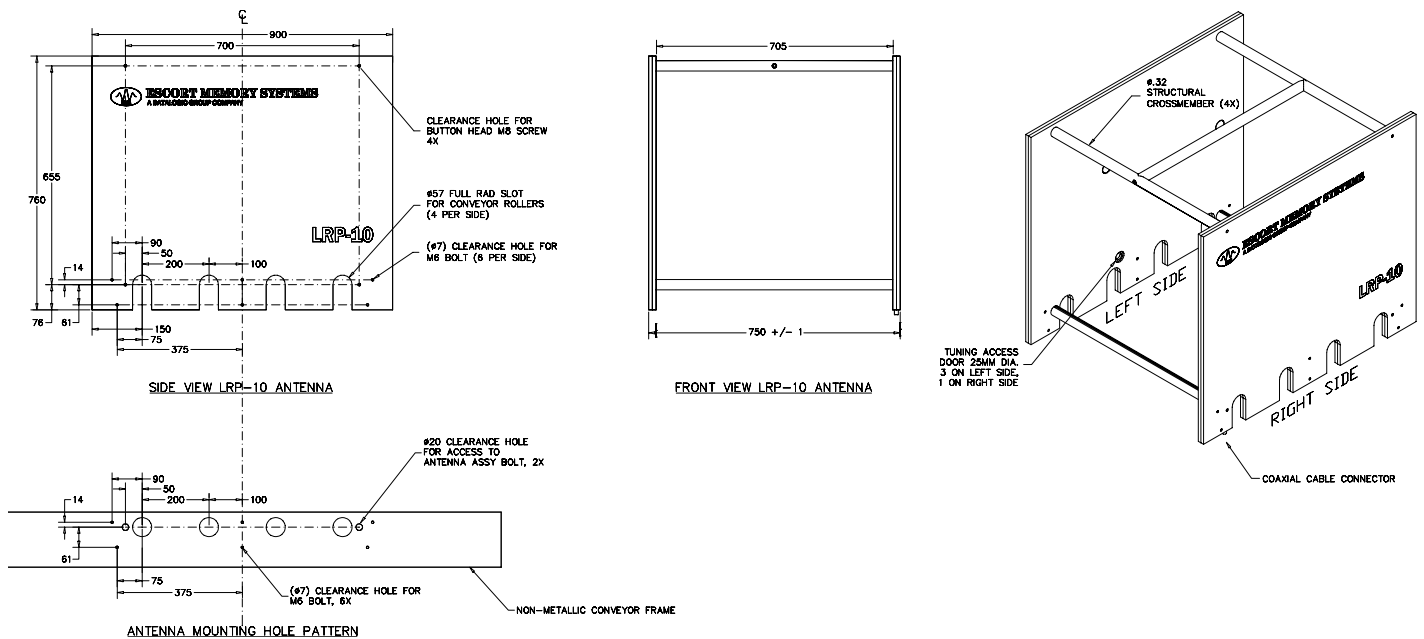
**PROVEN
POST OFFICE
INSTALLATIONS
WITH THE
TUNNEL
ANTENNA**

Electrical	Supply Voltage	18-30Vdc
	Power Consumption	31W (1.3A @ 24Vdc)
Memory	60KB Program Memory (System)	
	16KB Data Read/Write Memory	
	96KB Paged Data Read/Write Memory (32KB x 3)	
RFID Interface	LRP820-10 Tunnel Antenna, 2 Meter Cable	
	LRP830-10 DeviceNet Tunnel Antenna, 2 Meter Cable	
Interface	COM1 RS232 RS422 Mux32 Bus Interfaces: Mux32 Optoisolated (LRP820-10) DeviceNet Interface (LRP830-10)	
	COM2 RS232	
	Baud Rate RS232/RS422 (COM1) 1200, 2400, 4800, 9600, 19200, 38400 bps RS232 (COM2) 1200, 2400, 4800, 9600, 19200 bps RS485/Mux32 (COM1) 9600 or 346K bps	
	Inputs Four Industrial-Level Inputs Voltage Input Range 4.5 – 30Vdc I _{max} 25mA	
	Output Four Industrial-Level Outputs V _{max} 30 Vdc I _{max} 500mA	
Mechanical Specifications	LRP820 Dimensions (L x W x H) 8.66 x 4.72 x 3.22in. (220 x 120 x 82mm) Weight 3.5lbs. (1.59kg) Enclosure Cast Aluminum Alloy Tunnel Antenna (L x W x H) 35.43 x 29.52 x 29.92in. (900 x 750 x 760mm)	
Environment	Operating Temperature	32° to 120°F (0° to 49°C)
	Storage Temperature	-41° to 158°F (-20° to 70°C)
	Humidity	95% Non-Condensing
	Vibration Resistance	IEC 68-2-6 Test FC 1.5mm 10 to 55Hz: 2 Hours each Axis
	Shock Resistance	IEC 66-2-27 Test EA 30g; 11 msec: 3 Shocks each Axis
	Protection Class	NEMA 4 (IP66)

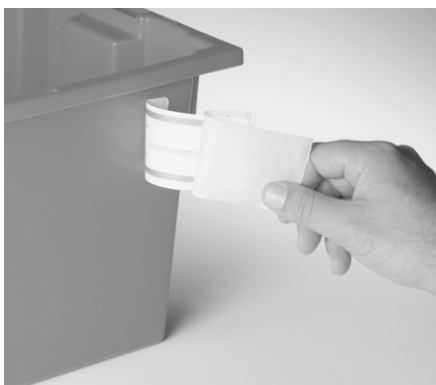
LRP820 / LRP830 Mechanical Dimensions



Tunnel Antenna Mechanical Dimensions



Mechanical Dimensions



RFID Field and Read/Write Ranges

LRP820-10 / LRP830-10 Passive Reader/Writers

Reading & Writing Ranges with FastTrack™ Passive Read/Write Labels

Labels – LRP-L90140

See EMS for Application Specific Requirements

Available Models

Model	Description
LRP820-10†	Tunnel Antenna with Controller
LRP830-10†	DeviceNet Tunnel Antenna with Controller
00-1132	FastTrack™ LRP820-10 Tunnel Antenna Demo Kit. Includes LRP820-10, Demo Cables, LRP-L90140-SMP RFID Labels, Visual Basic Program and a Demo Suitcase

† Mating Connectors not included. Must be ordered separately (part #00-1122).

Accessories

Model	Description
00-1122	Connector Kit, LRP820, 5 pieces, Mux32, COM1/2, Input, Output, PWR
00-1123	Connector Kit, LRP830, 4 pieces (COM1/2, Input, Output, PWR)
CBL-1452	Cable Assembly, LRP Demo (COM1/2 to DE-9)
CBL-1454	Cable Assembly, Power Supply for LRP Demo
17-1269	Manual, LRP820
17-1271	Manual, LRP830



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. 0.43/11 Guar. 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. 0.43/11 Guar. 0.35/9	0.67/17 0.55/14	1.14/29 0.91/23	1.38/35 1.10/28
HMS814	Typ. 0.28/7 Guar. 0.24/6	0.35/9 0.28/7	0.63/16 0.51/13	0.59/15 0.47/12
HMS816	Typ. 0.28/7 Guar. 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. 0.39/10 Guar. 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. 0.39/10 Guar. 0.31/8	0.59/15 0.47/12	0.91/23 0.70/18	1.38/35 1.10/28
HMS827-Vert.	Typ. 0.43/11 Guar. 0.35/9	0.67/17 0.55/14	1.18/30 0.94/24	1.89/48 1.50/38
HMS827-Horiz.	Typ. 0.39/10 Guar. 0.31/8	0.55/14 0.43/11	0.98/25 0.79/20	1.57/40 1.26/32
HMS827-03	Typ. 0.35/9 Guar. 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. 0.47/12 Guar. 0.39/10	0.59/15 0.47/12	1.06/27 0.87/22	0.83/22 0.70/18

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

** Not recommended



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

(inches/mm)*

Antennas	Tags		
	LRP820-08 / LRP830-08	LRP820-04 / LRP830-04 without metal	LRP820-04 / LRP830-04 with metal
LRP125(HT)	Typ. 8.00/203 Guar. 7.00/178	3.00/76 2.25/57	2.50/64 2.00/51
LRP250(HT)	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP250HT-FLX	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP-P125	Typ. 8.00/203 Guar. 7.00/178	3.00/76 2.25/57	2.50/64 2.00/51
LRP-P3858	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP-P5050	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP-L5555	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP-L4982	Typ. 17.00/432 Guar. 15.00/381	8.50/216 7.50/191	7.00/178 6.00/152
LRP-L2666	Typ. 16.00/406 Guar. 13.00/330	7.00/178 6.00/152	6.00/152 5.00/127
LRP-L90140	Typ. 25.00/635 Guar. 22.00/559	12.00/305 11.00/279	9.00/229 8.00/203

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