



ESCORT MEMORY SYSTEMS

A DATALOGIC GROUP COMPANY

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FastTrack™

RFID

Long-Range Reader/Writers

LRP820-08 / LRP830-08

DeviceNet™

Features

- Read and Write to Dozens of Tags Simultaneously (Multiple-Tag-In-Field)
- Industrial Strength Reader/Writer (IP66)
- Long-Range Read/Write
- International Recognized Frequency of 13.56 MHz
- RS232/RS422/Mux32 (RS485) Bus Interfaces
- Four Industrial Input Points and Four Output Points
- LRP830-08 DeviceNet Reader/Writer

Applications

- Paint Ovens
- Automotive Manufacturing
- Parcel/Baggage Handling

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

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 Long-Range Reader/Writer (LRP820-08) is part of the FastTrack™ RFID family of Reader/Writers. The long-range, read/write capabilities make the LRP820-08 ideal for communicating to EMS' FastTrack™ family of Tags/Labels/PCBs. The LRP820 refers to the tough, IP66

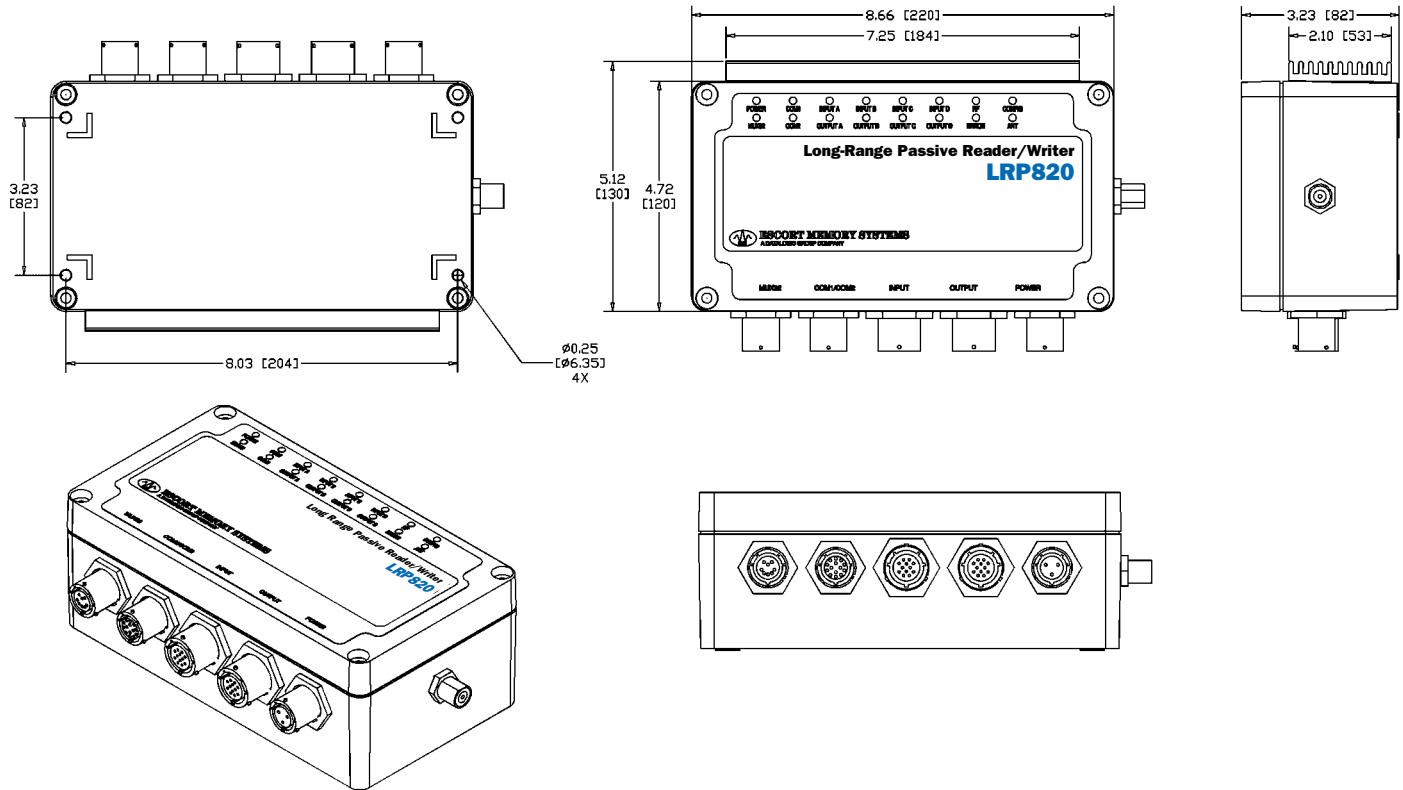
encased, industrial controller and is equipped with four input points and four output points. Sensors, light towers and photo eye switches can be directly hooked up to the LRP controller – greatly reducing wiring installations to the host PC/PLC.

The Long-Range DeviceNet Reader/Writer (LRP830-08) provides all the same benefits as the LRP820-08 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 Reader/Writer is the perfect solution.

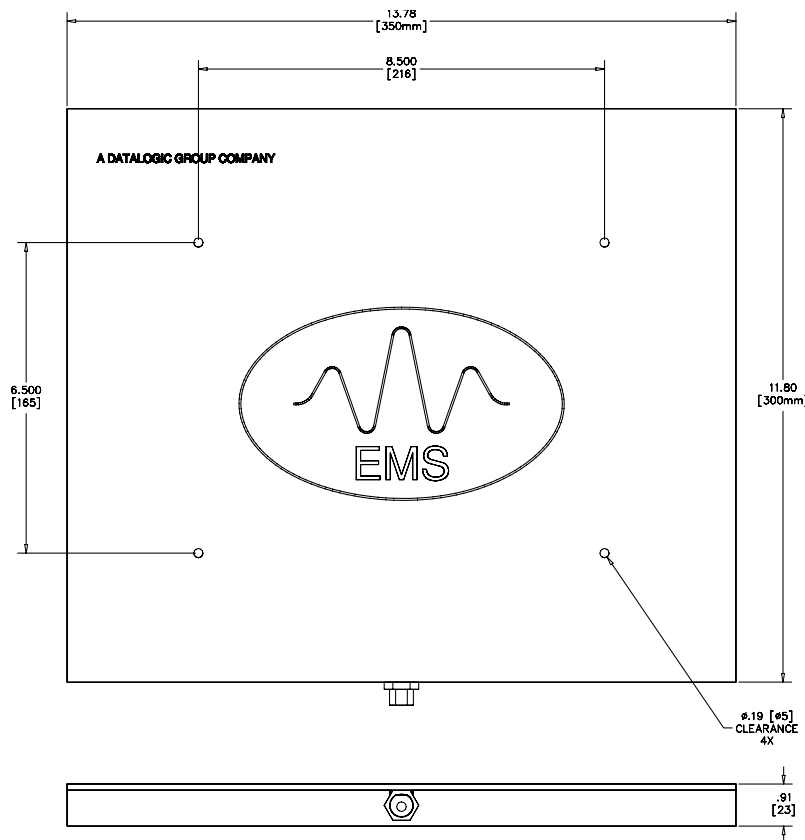


Electrical	Supply Voltage	18-30VdC
	Power Consumption	31W (1.3A @ 24VdC)
Memory	60KB Program Memory (System) 16KB Data Read/Write Memory 96KB Paged Data Read/Write Memory (32KB x 3)	
RFID Interface	LRP820-08 Long-Range Reader/Writer, 2 Meter Cable LRP830-08 Long-Range DeviceNet Reader/Writer, 2 Meter Cable	
Interface	COM1 RS232 RS422 Mux32 Bus Interfaces: Mux32 Optoisolated (LRP820-08) DeviceNet Interface (LRP830-08) 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 Imax 25mA Output Four Industrial-Level Outputs Vmax 30 VdC Imax 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 Wide Plate Antenna (L x W x H) 13.78 x 11.80 x 0.91in. (350 x 300 x 23mm)	
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)
Wide-Plate Antenna Spacing	Minimum Antenna to Antenna Spacing	15ft. (4.57m)
	Minimum Antenna Spacing from Metal	6 in. (152mm)

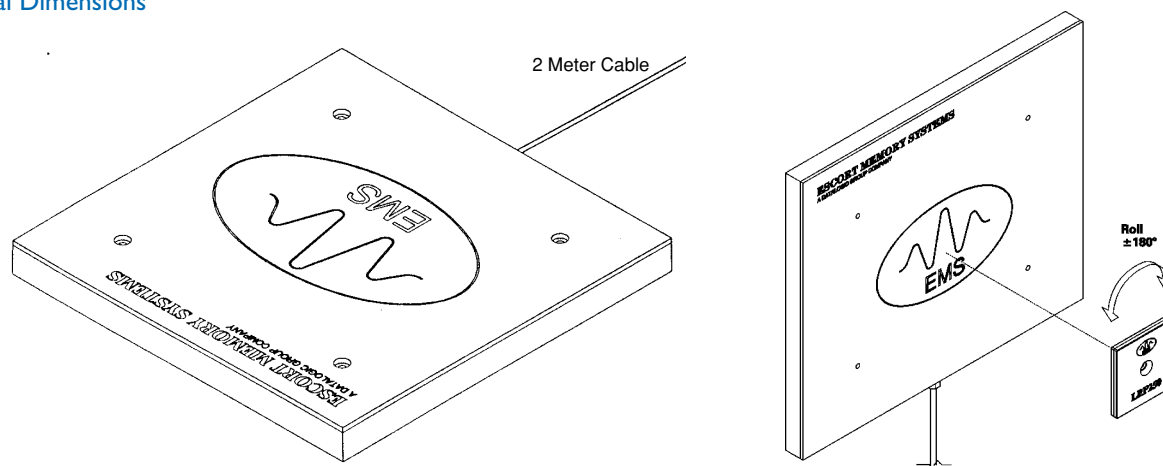
LRP820 / LRP830 Mechanical Dimensions



Wide-Plate Antenna Mechanical Dimensions



Mechanical Dimensions



RFID Field and Read/Write Ranges

LRP820-08 / LRP830-08 Passive Reader/Writers

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

	LRP125(HT)	LRP250(HT)	LRP250HT-FLX
Typical Range (Z) (inches/mm)*	8.00/203	17.00/432	17.00/432
Guaranteed Operating Range	7.00/178	15.00/381	15.00/381

LRP820-08 / LRP830-08 Passive Reader/Writers

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

	LRP-L5555	LRP-L4982	LRP-L2666	LRP-L90140
Typical Range (Z) (inches/mm)*	17.00/432	17.00/432	16.00/406	25.00/635
Guaranteed Operating Range	15.00/381	15.00/381	13.00/330	22.00/559

LRP820-08 / LRP830-08 Passive Reader/Writers

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

	LRP-P125	LRP-P3858	LRP-P5050
Typical Range (Z) (inches/mm)*	8.00/203	17.00/432	17.00/432
Guaranteed Operating Range	7.00/178	15.00/381	15.00/381

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

Available Models

Model	Description
LRP820-08†	Long-Range Reader/Writer
LRP830-08†	Long-Range DeviceNet Reader/Writer
00-1131	FastTrack™ LRP820-08 Long Range Reader/Writer Demo Kit. Includes LRP820-08, Demo Cables, LRP-L90140-SMP RFID Labels, Tags, 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)*

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

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