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Find the *Datalogic / EMS CM900* at our website: ***Click HERE***



Schneider Alliances

CM900 Automatic ID Module

Features

- Direct Connection to the Modicon Compact Backplane and Micro I/O Expansion Bus
- Two Serial Ports for Interface to Bar Code Scanners or other Serial Devices
- Flexible Standard Program to Eliminate Most Custom Programming Needs
- C Programmable for Custom/Unique Applications
- 32KB of Battery-Backed RAM
- 32KB EEPROM

Applications

- Material Handling
- Sortation Systems
- Work-in-Progress Monitoring
- Quality Control

Use With

- EMS Passive Read Only
- EMS Active Read/Write
- RS232 and RS422 Serial Devices

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 CM900 Automatic ID module, developed together with Modicon through the ModConnect Partners program, allows all serial devices as well as bar code and Read/Write Radio Frequency Identification (RFID) products, to be connected directly to the Modicon Compact series backplane and Micro I/O expansion bus. The CM900 expands the role of the Compact PLC by adding ASCII data handling capability.

In addition to the backplane interface, the CM900 has two serial ports and an RFID Antenna port.

The CM900 Module comes to the end-user already loaded with a standard program that allows the user to access all the CM900 functionality while remaining within the PLC programming environment.

The RFID command set of the standard program allows the user to perform the following functions: Fill Tag, Block Read/Writes and Non-Contiguous Read/Writes. Custom programs can be easily developed by using the development package.

Technical Description

The CM900 achieves high data exchange rates by utilizing an advanced high speed microprocessor. The master microprocessor executes the application program while communicating with the PLC backplane. The system has 32KB of battery-backed RAM for storage of run-time variables, pointers, tables, and in-process data transactions. The application program is stored on an ultra-reliable 32KB EEPROM. This combination of high speed microprocessor and large memory capacity allows the CM900 to internally handle serial and RFID transactions and simply pass the requested registers of data to the host PLC processor.

Data Transfer Rate of 3,000/Bytes Per Second

The RFID Antenna port is compatible with all EMS' HS/HL-Series Antennas. The electrical interface to the Antenna is similar to RS422 and uses two twisted pairs with a maximum cable length of 4000 feet. This interface has an effective data transfer rate to the RFID Tag of 3000 bytes per second.

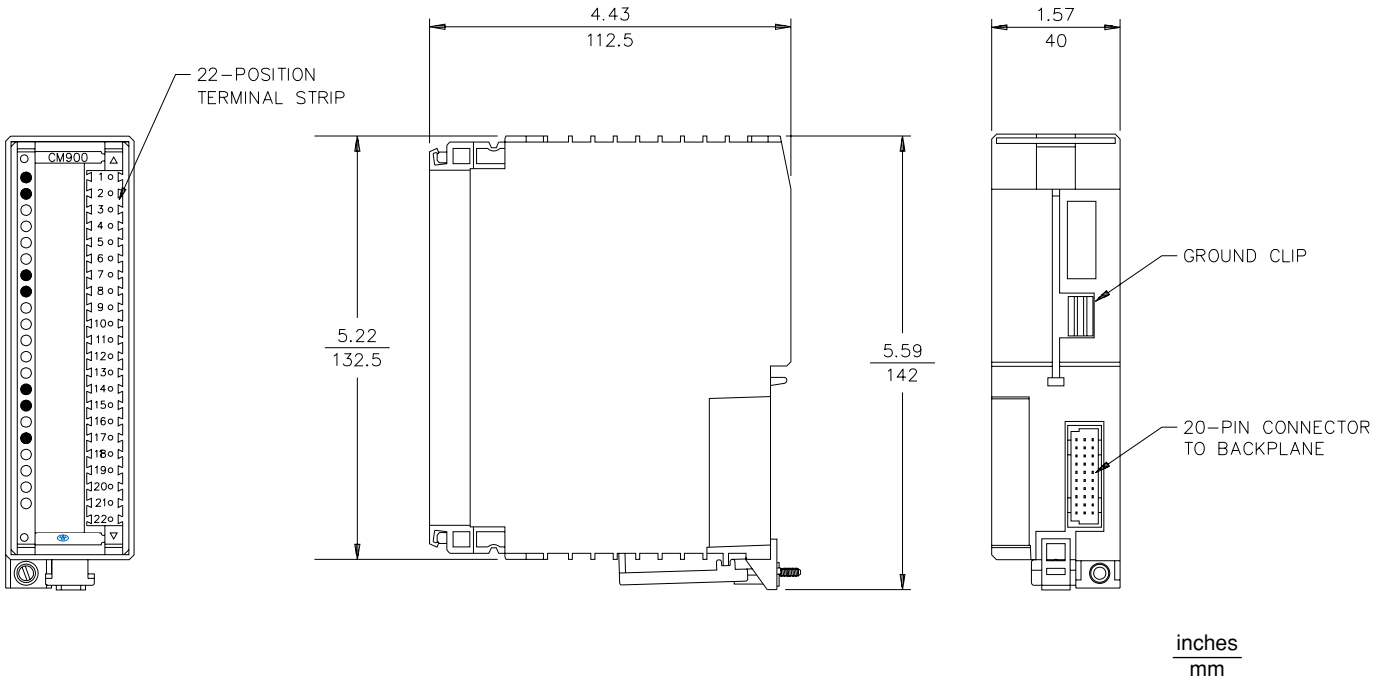
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CM900 Automatic ID Module

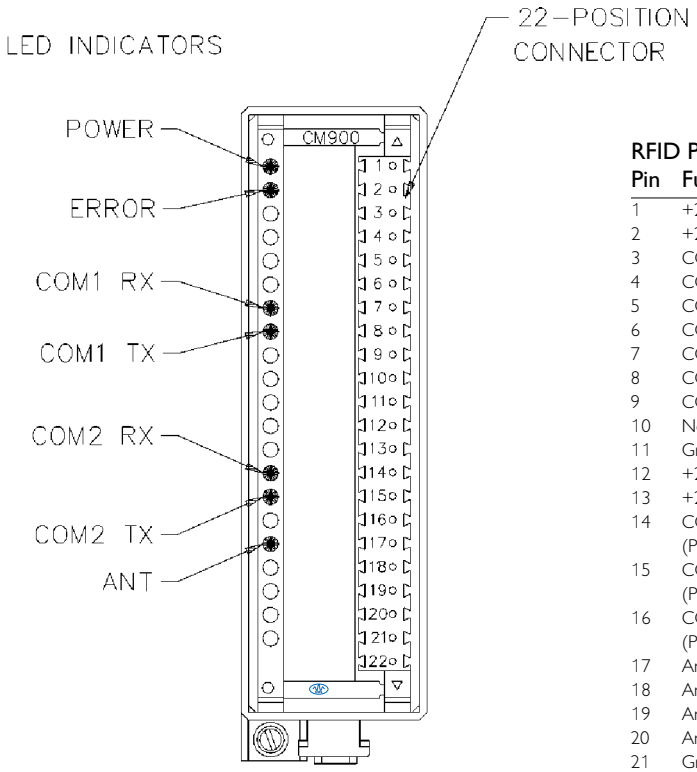
Electrical	**Backplane—Supplied by PLC**	
	Supply Voltage	5VDC ±5%
	Maximum Current	250mA
	Front End—External Supply Required	
	Supply Voltage	24VDC ±15%
	Maximum Current	250mA (without Antenna) 750mA (with Antenna)
	Maximum Ripple	2.0% of DC Voltage
Communication		Modicon Compact PLC, Direct – Connect to Backplane and Micro I/O Expansion Bus
Ports	COM1	RS232/RS422
	COM2	RS232
	RFID Port Name	ANT
	Maximum Cable Length	4000ft. (1200m)
Internal Memory	Master Microprocessor	32KB Battery-Backed Static RAM
	Application Program Storage	32KB EEPROM, 2KB Used by System
Interface to Serial Devices	Serial Port Names	COM1, COM2 (Programming/Debug)
	Compatibility	EMS Bar Code Scanners Any Third-party External Serial Device
	Baud Rate	300, 600, 1200, 2400, 4800, 9600, 19200
	Parity	None, Odd, Even
	Data Bits	7 or 8
	Stop Bits	1 or 2
Interface to Modicon Backplane	Traffic-Cop Compatibility	CM900 for 6-Register Transfer Requiring 96 Inputs and 96 Outputs
	SP1004 Loadable	PLC Function Block Allows Transfer of 1-127 Registers of Data Between PLC and CM900
Mechanical Specifications	Dimensions (W x H x D)	4.43 x 5.59 x 1.57in. (113 x 142 x 40mm)
	Weight	0.62lbs. (0.304kg)
	Connectors	(2) 11-Position Plug-in Terminal Strips (Mating Connector Furnished)
	Backplane	Direct Plug-in to Modicon Compact PLC Housings
Environment	Operating Temperature	32° to 120°F (0° to 49°C)
	Storage Temperature	-40° to 185°F (-40° to 85°C)
	Humidity	95% Non-Condensing
	Shock Resistance	30G for 11ms
	Vibration Resistance	30G at 3-500Hz for 23 Minutes Per Plane, 1 Octave/Minute in All Three Planes
	Altitude	15,000ft. (4,540m), Per MIL-STD-810, Method 500.2, Low Pressure
	ESD Immunity	8kV to All Surfaces, Per IEC 801-2, Level Tests
	Magnetic Immunity	Per IEC 801-3, Level 3
	Noise Emissions	FCC Part 15, Subpart B, Class A; CDC Class B

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Mechanical Dimensions



Serial Port Connectors Electrical Connections



RFID Port/Power Pinouts

Pin	Function
1	+24 VDC
2	+24 VDC
3	COM 1 RS422 RX+
4	COM 1 RS422 RX-
5	COM 1 RS422 TX+
6	COM 1 RS422 TX-
7	COM 1 RS232 RX
8	COM 1 RS232 TX
9	COM 1 RS232 GND
10	No Connection
11	Ground
12	+24 VDC
13	+24 VDC
14	COM2 RS232 RX (Programming Port)
15	COM2 RS232 TX (Programming Port)
16	COM2 Signal Ground (Programming Port)
17	Antenna, Pin 1
18	Antenna, Pin 2
19	Antenna, Pin 3
20	Antenna, Pin 4
21	Ground
22	Ground

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CM900 Automatic ID Module

Available Models

Model	Description
CM900	Automatic ID Module for Compact and Micro-Series PLCs. Mating Connectors Included. Requires SP1004 to Run Standard Program.

Accessories

Model	Description
SP1011-LIB	Software Manual and Libraries for Use in Developing Custom Application Programs for the CM900 Auto ID Module. Diskette Includes Libraries and Standard Program Source Code. Does Not Include Compiler, Tools or Compiler Manual.
88-1001	Franklin C Compiler for CM900 Software Development.
SP1004	Software Loadable Program for most Models of the Modicon 984 CPU (Excluding 984-A,-B,-X) and most Models of the Modicon Compact Series, (Excluding Compact CPU - 120 Models). Required to Run Standard Program.
CBL-1182	Demonstration Cable Set. Includes Two 10′ Long RS232 Connection Cables to the Main (DB-25S) and Programming Ports (DE-9P), 10′ Long Connection Cable for HS500/HS501 Antenna, and 24VDC Wall Mount Power Supply. Terminal Strip Connectors Included.
CBL-1183	Demonstration Cable Set. Includes Two 10′ Long RS232 Connection Cables to the Main (DB-25S) and Programming Ports (DE-9P), 10′ Long Connection Cable for HS / HL500A / HS / HL501A Antenna, and 24VDC Wall Mount Power Supply. Terminal Strip Connectors Included.
CBL-1184	Cable Assembly, PC AT-to-CM900 Programming Cable, 10′ long, DE-9P to Terminal Strip. Includes Power Supply.
CBL-1185	Cable Assembly, PC XT-to-CM900 Programming Cable, DB-25S to Terminal Strip. Includes Power Supply. 10′ Long.
46-1285	Connector Assembly, CM900, for Connection to Pins 12-22
46-1286	Connector Assembly, CM900, for Connection to Pins 1-11

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