

HS880B-Series Read/Write Controllers

Features

- Controls up to Four Antennas
- Antenna Cable Length up to 4000 Feet (1200 Meters)
- 3000 Bytes/Second Data Transfer—Reading and Writing
- Programmable in C Language
- HS403B Industrial I/O Board Available
- High-Speed CPU with Real-Time Clock/Calendar

Applications

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

Use With

- HS200R-Series Tags
- HS200XL-Series Tags
- HS200LR-Series Tags
- HS500-Series Antennas
- HS403B I/O Board
- HS64xB-880 Enclosures

Escort Memory Systems® (EMS) offers a complete family of field-proven Read/Write Radio Frequency Identification (RFID) products and network interface modules. The system consists of Tags, Antennas and Controllers. Tags can be attached to a product or its carrier and act as an electronic identifier, job sheet, portable database or manifest. Tags are read and updated via an EMS Antenna through any non-conductive material while moving or stationary.

Technical Description

The HS880B-Series Controllers incorporate high-level language capability, two fully-buffered bi-directional serial ports, a separate program/debug port, 32KB of RAM, 64 programmable TTL-level I/O points and an interface to up to four EMS HS500-Series Antennas.

The HS880B-Series Controllers utilizes programs written in the powerful "C" language, so no special "proprietary languages" need to be learned for applications development. Programs are written and compiled on a PC-compatible computer using the development package available from EMS. Once compiled, the program is downloaded into the EEPROM memory of the HS880B-Series Controllers for execution. In addition to the native functions of the C compiler, the development package includes a complete library of functions specific to the operation of the Controller. The separate program/debug port allows new programs to be downloaded to the HS880B without having to disconnect either of the two serial ports. Additionally, the program/debug port may be used to transmit status or error messages to aid program development.

The HS880B offers a high-speed CPU with a real-time clock/calendar for date stamping data critical to process control. The connection between the Controller and each Antenna is via two twisted pair wires (four wires). Using good quality shielded cable, the connection length between the Controller and Antenna can be up to 4000 feet (1200 meters).

Ten status LEDs are mounted on the front of the Controller to aid in system debug and maintenance. Each serial port has separate transmit and receive indicators, each Antenna port has a transmit indicator, and two LEDs are provided for systems error indication and power.

The HS403B industrial I/O board can be used to convert the TTL-level signals on the HS880B to 24 Volt DC optically-isolated industrial I/O.

The HS880B-Series Controllers can be installed in three different enclosures. The HS640B-880 is a single card enclosure giving access to 32 TTL-level I/O. The HS641B holds two cards, the Controller and one HS403B, providing 32 industrial level I/O. HS643B enclosure accepts the HS880-Series Controllers and up to two HS403B I/O boards, provides 64 industrial I/O with two HS403Bs installed.

THE HS880B-SERIES IS THE WORKHORSE OF OUR CONTROLLER LINE

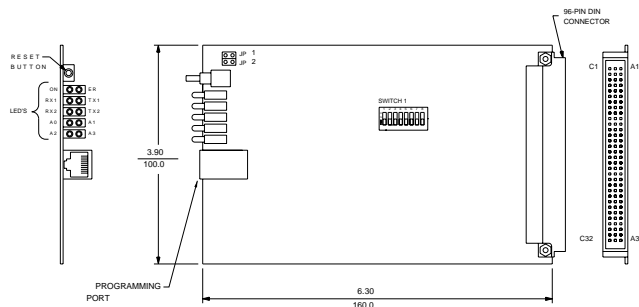
HS880B-Series Read/Write Controllers

| | | |
|---------------------------|------------------------|--|
| Electrical | Supply Voltage | 21-28VDC |
| | Maximum Current | 300mA |
| Memory | EEPROM | 2KB Used by System, 30KB Used for User Program Storage |
| | RAM | 32KB, for User Variables and Programs |
| Interface With Antenna | Maximum Cable Length | 4000ft. (1200m) |
| Input/Output | Inputs | 32 TTL-Level |
| | Outputs | 32 TTL-Level |
| Communication With Host | Interface Options | Two RS232 or RS422 Bi-Directional Serial Ports, One RS232 Program/Debug Port |
| | Baud Rate | 300, 1200, 4800, 9600, 19200 |
| | Parity | Odd, Even or None |
| | Data Bits | 7 or 8 |
| | Stop Bits | 1 |
| Processor | HS882 | 24MHz with Real-Time Clock/Calendar |
| Mechanical Specifications | Dimensions (W x H) | 3.9 x 6.3in. (100 x 160mm) |
| | Connector | 96-Pin DIN (32 x 3) |
| | Indicators | On, Error, RX, TX and Antenna LEDs |
| Environment | Operating Temperatures | 32° to 120°F (0° to 49°C) |
| | Storage Temperature | -40° to 185°F (-40° to 85°C) |
| | Humidity | 95% Non-Condensing |
| | Protection Class | NEMA 1 (IP30) |

HS403B I/O Board

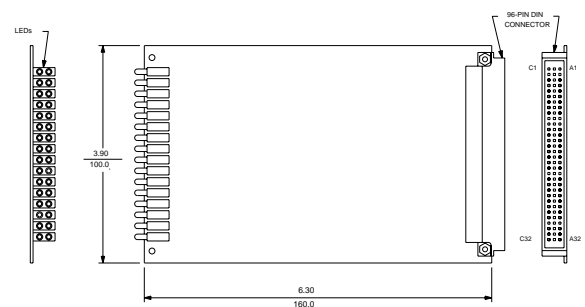
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|---------------------------|-----------------------|----------------------------------|
| Electrical | Voltage | 20-26VDC |
| | Maximum Current | 200mA |
| Input/Output | 16 DC Inputs | 24VDC, Optically-Isolated |
| | 16 DC Outputs | 24VDC, 100mA, Optically-Isolated |
| Mechanical Specifications | Dimensions (W x H) | 3.9 x 6.3in. (100 x 160mm) |
| | Connector | 96-Pin DIN (32 x 3) |
| | Indicators | 32 I/O LEDs |
| 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 |

Mechanical Dimensions



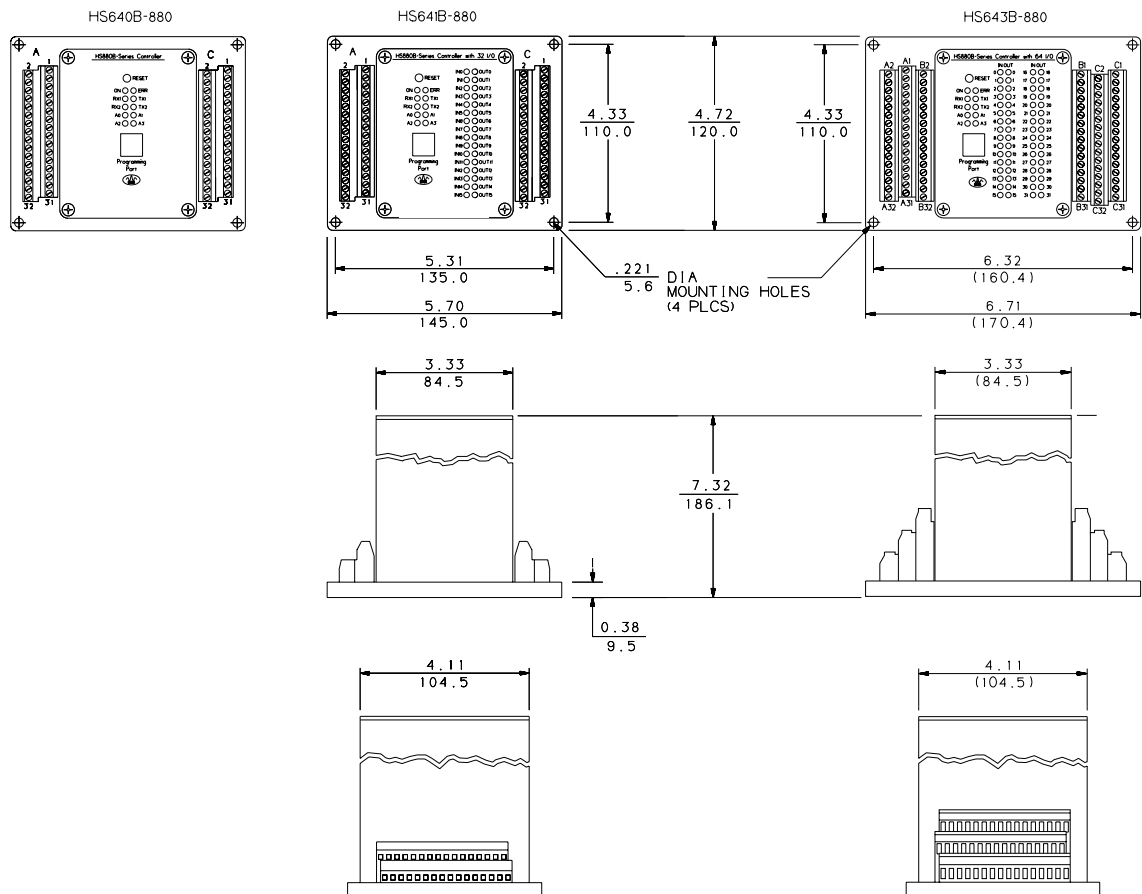
HS882B-Series Controller

inches
mm



HS403B I/O Board

Mechanical Dimensions HS640B-880, HS641B-880, and HS643B-880 Enclosures



HS880B-Series Read/Write Controllers

Available Models

| Model | Description |
|----------|---|
| HS880B-4 | C-Programmable Controller |
| HS882B-4 | C-Programmable Controller with High-Speed CPU and Built-In Clock/Calendar |
| HL882B-4 | Controller, RFID Euro, CLF, 4-Antenna |

Accessories

| Model | Description |
|------------|---|
| CBL-1150 | Programming/Debug Cable with 6 Pin Modular Connector Terminating in a DE9-S Connector |
| HS403BH | Industrial I/O Board, for HS880B-Series Controllers, Current Sourcing |
| HS403BL | Industrial I/O Board, for HS880B-Series Controllers, Current Sinking |
| HS640B-880 | Single-Card Eurocard Enclosure for Use with the HS880B-Series Controllers, Provides 32TTL-Level I/O |
| HS641B-880 | Two-Card Eurocard Enclosure for Use with the HS880B-Series Controllers and one HS403B I/O Board, Provides 32 Industrial-Level I/O |
| HS643B-880 | Three-Card Eurocard Enclosure for Use with the HS880B-Series Controllers and one HS403B, I/O Board Provides 64 Industrial-Level I/O |
| SP1008-LIB | Software Development Package for HS880B, with Libraries and Utilities |
| SP1014-LIB | Software Development Package for HS882B, with Libraries and Utilities |
| 88-1001 | Franklin Compiler for HS880-Series Software Development |
| SP1017 | Interface Package for Allen-Bradley DB-A Module, Includes Custom HS882 Program, Firmware for DB-A Module and Manual |
| SP1016 | Interface Package for Allen-Bradley DB-B Module, Includes Custom HS882 Program, Firmware for DB-B Module and Manual |
| 10-5158 | Interface Firmware for Allen-Bradley DB-A Module |
| 10-5749 | Interface Firmware for Allen-Bradley DB-B Module |

Connection to EMS Antennas

