EC205 Ethernet Time Clock

TIME & ATTENDANCE TRACKING OVER *ETHERNET* NETWORKS

Ethernet Time Clock

The *EC205 Ethernet Time Clock* is a low cost data collection device that communicates over a 10BaseT network using TCP/IP protocol. It captures employee time & date stamp records and stores them locally until downloaded by a host computer. The operator interface consists of an LCD display and membrane switch keypad with inputs for bar code and RS-232 serial. Custom prompts and validation logic can be uploaded into the clock. The *EC205* can also be configured to trigger alarms at certain times of the day. An optional mag-stripe reader as well as and up to four optional relay outputs to control external devices are available as factory installed components.

Theory of Operation

The *EC205* Time Clock is designed to serve as a data collection device and configured for a time and attendance application. A configuration file provides the prompt logic, validation information, and alarm data. The default prompting logic can be modified by uploading a new configuration file in to the clock. The collected data (employee IDs, keyboard inputs, badge swipes, etc.), are stored in a data file in the clock until downloaded by the host computer. Once the data has been downloaded it is erased from the clock memory.

The *EC205* Time Clock connects directly to a standard 10BaseT Ethernet hub. Network communications is provided by standard TCP/IP protocol. Each clock requires a network address and must be configured with a unique IP address and net mask before it is installed on the network (see Network Setup Mode). File transfer is provided by TFTP protocol and a Telnet server is provided to support the command mode.

The *EC205* can be programmed to trigger an alarm at a certain time of day. Up to 24 alarms can be set in the clock and each alarm can either activate the internal bell or one of the optional relay outputs.

Operator Interface

The *EC205* includes an LCD display and a numeric keypad as the primary operator interface console. In addition, the terminal may include optional bar code and/or mag-stripe input readers and an aux RS-232 port for connection of a serial input device. Optional digital inputs with counters and software controlled relay outputs provide machine control for external devices.

EC205 Features

Display

The *EC205* display is a two (2) line by twenty four (24) column LCD character display. It can display the 96 standard ASCII characters and 96 non-standard symbols in a 5 x 7 dot matrix font. The cursor position is identified by a blinking box and can be positioned under software control. Display backlighting is available as an option for low light installations.

Keypad

The *EC205* operator keyboard consists of a four (4) row by six (6) column membrane switch keypad. Two (2) shift keys (S1 and S2) are provided to generate upper case alpha characters and several special characters. The keypad also includes eight (8) functions keys (F1 - F8) which can be used to select specific prompt sequences. The keypad is covered by a windowed overlay that allows the function key legends to be changed by inserting a new graphic between the overlay and membrane switch array. The shift keys are only used to expand the number of ASCII characters that can be entered by the keypad.

- Hermetically sealed key switches.
- Audible key-click for tactile feedback.
- Key spacing — .8" vertical, .75" horizontal.
- Key switch travel — .006"-.008" typical.
- Actuating force — 4-6oz.
- Rated Life — 10,000,000 cycles (per switch element)

Network Communications

The *EC205* provides network communications for data transfer and configuration. Data files are transferred to/from the clock using TFTP protocol. Access to the clock operating parameters can also be made over the network using the Telnet protocol. A Windows based utility program (ET200UP) is included which provides both TFTP and Telnet clients as well as the data download function.

Bar Code Decoding Input Port

This feature adds the electronics and a panel mounted connector to the *EC205* for interfacing a digital bar code wand or any laser or CCD scanner which produces signals compatible therewith. The decoding option will autodiscriminate Code 39, Extended Code 39, UPC-A, UPC-E, EAN-8 EAN-13, CODABAR, I2of5, and Code 128. Each of these symbologies can be enabled/ disabled in the EC205 configuration file. The bar code port has a 5-pin DIN connector.

Auxiliary Serial Port

The Auxiliary Serial Communications Port enables the *EC205* to receive data from an external serial source. The baud rate, BPS, parity, and data string terminator, can be user-defined in the *EC205* configuration file.

Options

Magnetic Stripe Card Reader (MCSR) Interface

This option adds the electronics to decode the raw data from the MR-211 manual swipe reader which can read the magnetically recorded information found on Track 2 of a standard ABA credit card. The MSCR interface reads the 40 digit numeric data record off the card as it passes through the read station, decodes the data, and processes it the same as key-entered from the keyboard. The MSCR interface normally connects to the MR-211 reader with a six-inch cable. Other mounting options are available

Relay Output Option

This equips the *EC205* with up to four (4) solid state relay (SSR) outputs. These outputs can be triggered by a valid operator response to a prompt or an alarm event. Each relay has a single "form A" contact rated at 10va (100vdc, 100ma.) maximum. If larger loads must be controlled an external relay is required. This option could be used to actuate a door strike or to open a cash drawer, etc.

Accessories

1. Wand Holder (910219)
2. QS6000 Handheld Laser Barcode Scanner
3. CCD-81T Handheld CCD Scanner
4. SL1003 Barcode Slot (ID Badge) Reader
5. MR211 Magnetic Stripe
6. SSW-40 (Barcode Wand Scanner)
7. Tilt/mounting bracket (desktop model only)
8. WA3800 Barcode Image Scanner

Specifications

Construction

Light weight aluminum extrusions on front and back aluminum top and bottom panels with left and right ABS panels.

Dimensions (width x height x depth) (cm/in.)

Wall-Mount: 22 x 22.5 x 9.2 (8.6 x 8.8 x 3.6)
NEMA Rated: 22.5 x 29.2 x 11.2 (8.8 x 11.5 x 4.4)

Weights (kg / lbs.)

Wall-mount - 1.82/4
NEMA Rated - 4.02/8.8
Power Adapter - .226/.5

Operating Environment

Temperature: 0° to 60° C (32 to 140°F)
Humidity: 5% to 95% non-condensing

Storage Environment

Temperature: -20° to 70° C (-4° to 158°F)
Humidity: 0% to 100%

Power Consumption

Standard EC205: 130ma.
With Backlight Display: +35ma.

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