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www.ats-usa.com



Clock Systems



- FLUSH MOUNT
- WALL MOUNT
- RACK MOUNT
- GPS
- COMPUTER CONTROLLED
- STAND ALONE



World Time Zone Clocks, Zulu Clocks



Process Indicators



- PRODUCTION MONITORS
- 4-20 MA INPUTS
- SERIAL INPUT
- TEMPERATURE, FLOW, PRESSURE
- COUNT - GOAL and ACTUAL
- RUN TIME ACCUMULATORS
- ELAPSED TIMERS



Custom Products and Systems

ATS understands that creative systems integrators, and contractors are often confronted with projects that require a unique solution.

Therefore, to complement one of the largest product offerings in this industry, ATS also provides custom products and systems to meet specific requirements.

Since ATS products are designed using modular sub-assemblies and “state-of-the-art” microprocessor based controllers, custom projects move quickly, and cost effectively from concept to finished product.

Contact us for your next custom project.



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AP21 BELL / BUZZER SYSTEMS

PLUG and PLAY - NO WIRING REQUIRED

Single Schedule, Single Zone with up to 30 Bell rings per day

Includes all the features of the AP21LV Time Switch

Easy to program

AP21-BP1 Bell Programmer System

Ideal solution for ringing bells in small schools and factories.

Covers up to 5,000 square feet

Pre-wired to a 24 VAC, Six-Inch Bell. A 15 foot cable is included so the bell can be located up to 15 feet from the keylocked box.

Powered with a 24 VAC power module (included).



AP21-BH1 Break / Buzzer System

Ideal for industrial work environments.

Covers up to 25,000 square feet

Pre-wired to a 24 VAC, Four-Inch, Extra Loud Horn/Buzzer.

A 90 foot cable is included so the Horn/Buzzer can be located up to 90 feet from the keylocked box. Powered with a 120 VAC / 24 VAC power module (included).

These systems consist of an AP21LV Time Switch mounted in a keylocked box (7"W x 12"H x 4"D). Mounting hardware is included. Simply hang the enclosure and bell or buzzer, plug it in and enter your program. The Horn/Buzzer must be mounted at least 10 ft above employee work areas.

See the AP21LV brochure and manual for more details on programming and operation.

TWO YEAR WARRANTY



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LOUD BREAK BUZZER SYSTEM



AP21-BH2 EXTRA LOUD TWO BUZZER SYSTEM

FOR LARGE, INDUSTRIAL WORK AREAS - COVERS UP TO 50,000 SQUARE FEET

PLUG and PLAY - NO WIRING REQUIRED . . .

Single Schedule, Single Zone with up to 30 signals per day.

The system consists of an AP21LV Time Switch mounted in a keylocked box (7"W x 12"H x 4"D), pre-wired to (2) Four-Inch, Extra Loud Buzzers and a 120 VAC to 24 VAC power module. A 90 foot cable is included with each Horn/Buzzer for locating them up to 90 feet from the keylocked box.

Mounting hardware is included. Simply hang the enclosure and Horn/Buzzers, plug it in, and enter your program. Each buzzer must be mounted at least 10 feet above employee work areas.

See the AP21LV brochure and manual for details on programming and operation.

TWO YEAR WARRANTY



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318-797-7508

DESCRIPTION

The AP21-BH2 is a self-contained, Plug and Play, Extra Loud Two Buzzer Signal System for large factories. It uses the time proven AP21LV Time Switch as the programmer. The AP21LV has an AUTO PROMPTING, alpha-numeric display and a 16 key, positive action keyboard that makes programming fast and simple.

It includes two high quality, low-voltage, 4-inch, High Output Buzzers (100 dB), which are pre-wired with a 90 foot cable for easy installation. Mounting hardware is included. No wiring is required. Simply hang the enclosure and the buzzers, plug it in, and enter your program. **Each buzzer must be mounted at least 10 feet above employee work areas.**

SPECIFICATIONS

AP21LV PROGRAMMING CAPABILITIES

EASY TO USE - 16 character alphanumeric, LCD display and "Auto Prompt" software provides display information to guide the operator during programming.

UP TO 30 POWERFUL PROGRAM STEPS - Select either a 16 step or 30 step program size from the keyboard. Each program step can be programmed for any day of the week, or for all 5 weekdays, or for both weekend days, or for everyday of the week providing up to 105 ON's and 105 OFF's, for a total of 210 events per week.

UP TO 10 SKIP PLANS - A 16 step program has 10 skip plans, a 30 step program has 3. Each skip plan has a starting and ending date during which all events are skipped.

PROGRAMMABLE DST ADJUSTMENT - The AP21 Series Time Switches can be programmed to automatically adjust their time for Daylight Savings Time changes according to U. S. law, even if the law changes.

AUTOMATIC LEAP YEAR ADJUSTMENT

MANUAL OVERRIDE - The output relay can be manually controlled from the keyboard.

PULSED / MOMENTARY OUTPUT - The output can be programmed to operate as a momentary contact, programmable from 1 to 99 seconds.

POWER FAIL BACKUP - In the event of a power failure, program and time keeping are maintained for 48 hours on a rechargeable capacitive backup system. The relay output and the display are disabled during backup. There are no batteries to replace.

TIME KEEPING - Synchronous with the AC power line. During a power failure it is quartz crystal controlled with an accuracy of +/- .003% throughout its full temperature range.

PROGRAMMED EVENTS - On/Off events are programmable with a one minute resolution and occur at the zero second of that minute.

ELECTRICAL / PHYSICAL

Power: 24 VAC, 60 Hz, 2.08 A Max. A 120 VAC to 24 VAC, 50VA Power Module included. Plugs into standard 120 VAC, 60 Hz outlet.

Output: Relay - Controls 24 VAC to Buzzers.

Buzzer: (2) 4-Inch Buzzers, 24 VAC, 0.9 Amps 100dB / 10 feet. Includes mounting box. Color - Gray.

Wiring: Pre-Wired with a 90 foot cable.

Enclosure: Painted steel (beige) with a hinged, keylocked door. Mounting hardware is provided (7" W x 12" H x 4" D).

Weight: Including the 4-inch Buzzers - 8 lbs.

Operating Temperature Range: 0 to 50 C.

ADD-ON BUZZERS

The AP21-BH2 System can be expanded for larger work areas by adding power supplies and buzzers. Installation is required. Call for assistance.



8901-1411-R Relay Power Supply
24VAC, 4A.. Control Relay Input.
Four fused outputs. Power cord included. Wall mount enclosure measures 12" x 12" x 4".

Power for up to four F-350-24 add-on Buzzers. Can be located up to 2000 feet away from the AP21-BH2.

F-350-24 High Output Horn/Buzzer
24 VAC, 0.9A 100 dB at 10 feet.
Covers up to 25,000 SQFT area.



F-3014 Weather-Proof Box
Used indoors or outdoors for surface mounting the F-350-24

MC41 BELL / BUZZER SYSTEMS

PLUG and PLAY - NO WIRING REQUIRED

Multi-Schedule, Single Zone with up to 100 signals per day

Fits any schedule requirement including "early-out" days and special events

Two Signal Durations - "Use a short duration for a Warning Bell"

Easy to program

MC41-BP1 Bell Programmer System

Ideal for small schools and factories with special schedule requirements.

Covers up to 5,000 square feet

Pre-wired to a 24 VAC, Six-Inch Bell. A 15 foot cable is included so the bell can be located up to 15 feet from the keylocked box.

Powered with a 24 VAC power module (included).



MC41-BH1 Break / Buzzer System

Ideal for industrial work environments with special schedule requirements.

Covers up to 25,000 square feet



Pre-wired to a 24 VAC, Four-Inch, Extra Loud Horn/Buzzer.

A 90 foot cable is included so the Horn/Buzzer can be located up to 90 feet from the keylocked box. Powered with a 120 VAC / 24 VAC power module (included).

These systems consist of an MC41LV Master Clock mounted in a keylocked box (7"W x 12"H x 4"D).

Mounting hardware is included. Simply hang the enclosure and bell or buzzer, plug it in and enter your program. The Horn/Buzzer must be mounted at least 10 ft above employee work areas.

See the MC41LV brochure and manual for more details on programming and operation.

TWO YEAR WARRANTY



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CLOCK / BELL SYSTEMS



MC22-BP SERIES CLOCK / BELL SYSTEMS

***Built-In RS232 I/O - Computer Programmable
Easy to Install . . .***

Multi-Schedule, Two Zone with up to 100 Bell rings per day.

Two Bell Durations - "Use a short duration for a Warning Bell".

Fits any bell schedule requirement including "early-out" days and special events.

Single Bell and Multi Bell Versions are available to fit a variety of applications.

***Built-In RS232 I/O Provides Interface for Computer, GPS, Digital Clocks
(Optional Ethernet I/O Available)***

Add digital clocks for a complete synchronized clock / bell system.

Key-Lock Box

Ideal for schools, warehouses, workshops, and factories.

TWO YEAR WARRANTY



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DESCRIPTION

The MC22-BP Series provides flexible, *Plug and Play* packages to meet a variety of system applications. The MC22BP Series use the time proven MC22LV Master Clock as the bell programmer / controller. Program memory can be adjusted to meet any specific application with up to 100 events per day, and up to 9 alternate 7 day plans or schedules for a total of 200 steps. Each program step can address any combination of the relay outputs, for any day of the week, including groups of days such as Monday, Wednesday and Friday, or Monday through Friday.

The Built-In RS232 I/O provides a computer interface for programming the MC22LV Series systems. Use MCPProgramming Software to create small or large bell schedule programs. Programs can be saved on your system, uploaded to, or downloaded from the MC22LV. MCPProgramming Software is included at no charge.

The Built-In RS232 I/O can also be connected to the ATS Digital Clocks and GPS Interface products.



MC22-BP1 SINGLE BELL SYSTEM

The MC22-BP1 is the basic starting package which includes (1) high quality, low voltage, six-inch bell, which is pre-wired with a 15 foot cable for easy installation. Mounting hardware is included. No wiring is required. Simply hang the enclosure and bells, plug it in, and enter your bell program.

LARGER MC22-BP SYSTEMS

For larger systems, Bells, and / or Bell Kits can be added as required.



F-4436-24A1
Add-On Bell Kit

The F-4436-24A1 Add-On Bell Kit includes a Six-Inch Bell with Back Box, Pre-wired with 100 feet of cable.

Up to (7) F-4436-24A1 Add-On Bell Kits can be added to the MC22-BP1.

A CC2002 Digital Clock can be added directly to the MC22-BP1.

For even larger systems, additional Power Supplies, Bells, and Digital Clocks can be added. Call or email for details (800) 444-7161, sales@ats-usa.com.

For Example: An MC22-BP System with a total of (4) bells and (1) digital clock includes:

(1) MC22-BP1 with (1) 0900-7084 Power Module, (3) additional F-4436-24A1 Add-On Bell Kits, and (1) CC2002 Digital Clock



MC22-BP1 with
0900-7084 Power Module

+



CC2002

+



F-4436-24A1

+



F-4436-24A1

+



F-4436-24A1

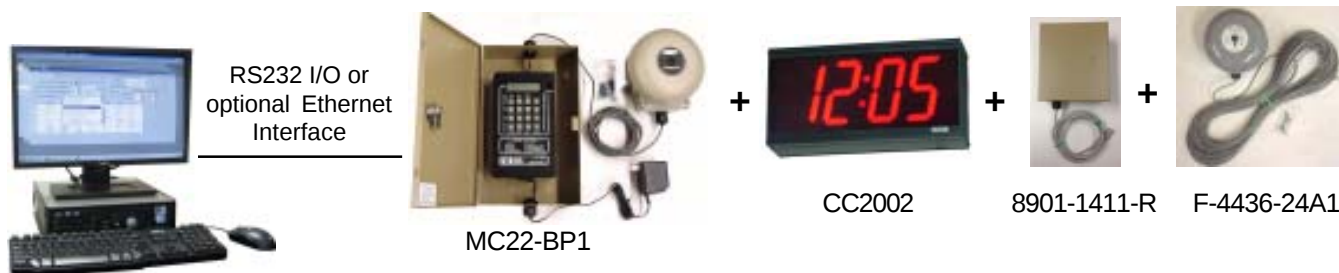
MC22-BP Packages are available to meet your specific system requirements.

CALL OR EMAIL FOR ASSISTANCE

Phone: (800) 444-7161 or Email: sales@ats-usa.com.

COMPUTER PROGRAMMABLE CLOCK / BELL SYSTEMS

Complete synchronized Clock and Bells systems are possible by adding ATS Digital Clocks and Clock / Calendars.



Add-On Digital Clocks and Clock/Calendars

A variety of Digital Clocks and Clock/Calendars are available with digits sizes ranging from 1-Inch to 12-Inches High. Up to (25) Clocks can be added directly to the MC22-BP System. An unlimited number of clocks are possible using add-on RS232 Driver Modules (AE-455DR6) as required.



For additional Clock and Clock/Calendar products visit our website www.sales@ats-usa.com.

Accessories for Expanding MC22-BP Systems



- | | |
|-------------|---|
| 9800-1010 | MCProgramming Software |
| AE-455DR6 | 8-Channel RS232 Expander Driver |
| 9200-0521 | Ethernet to RS23 Interface |
| 9110-1115 | Cable, DB9F to Pigtail Leads, 10 feet |
| F-350-24A1 | Add-On Buzzer Kit with 100 feet of cable |
| F-4436-24A1 | Add-On Bell Kit with 100 feet of cable |
| 8901-1411-R | Relay Power Supply - power for to (4) F-350-24A1 Buzzers, or up to (20) F-4436-24A1 Bells |



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SPECIFICATIONS

PROGRAMMING CAPABILITIES

EASY TO USE - 32 character alphanumeric, LCD display and "Auto Prompt" software provides display information to guide the operator during programming.

200 POWERFUL PROGRAM STEPS - Provides time, day or days of the week, and selected relays for each event.

UP TO 10 - CUSTOM WEEKS - define your special weeks to include any group of days such as Monday, Wednesday and Friday. Ideal for "early-out" days.

UP TO 10 - SEVEN DAY PLANS - 1 default plan and up to 9 alternate plans, each can have up to 100 steps.

20 ANNUAL PROGRAMS - Schedules the alternate plans with specific Start and End dates.

PROGRAMMABLE DST ADJUSTMENT - The MC41LV Master Clocks can be programmed to automatically adjust their time for Daylight Savings Time changes according to U. S. law, even if the law changes.

AUTOMATIC LEAP YEAR ADJUSTMENT

MANUAL OVERRIDE - The output relays can be manually energized or de-energized from the keyboard.

ADJUSTABLE BELL DURATIONS - The Bell can be programmed for two different durations, allowing a shorter bell to be used as a "Warning Bell". Each is programmable from 1 to 9 seconds.

SLEEP MODE - Select Sleep Mode to suspend the program (stops buzzer) until de-selected.

PROGRAM OVERRIDE - A different Alternate Plan can be selected to run for the current day.

POWER FAIL BACKUP - Program and time keeping are maintained for in the event of a power failure. The bell outputs and the display are disabled during backup.

TIME KEEPING - Synchronous with the AC power line. During a power failure a temperature compensated crystal time base keeps accurate time with an accuracy of +/-4 PPM throughout its full temperature range.

PROGRAMMED EVENTS - Bell events are programmable with a one minute resolution and occur at the zero second of that minute.

ELECTRICAL / PHYSICAL

Power:

24 VAC, 60 Hz, 300 mA max. A 120 VAC to 24 VAC 1.67A Power Module is included. Plugs into standard 120 VAC 60 Hz outlet.

Bell: F-4436-24 Six-Inch Bell - 24VAC, 200mA, 81 dB / 95 dBA. Includes an F-3014 cast aluminum box. Color: gray.

Outputs: Two SPDT relays rated at 15 A resistive at 48 VAC or 24 VDC.

Bell Wiring: Pre-wired to relays 1 and 2 with 15 foot cable.

Enclosure: Painted steel (beige) with hinged, keylocked door. Mounting holes and hardware provided.

Size: 7" W x 12" H x 4" D.

Weight: 7 lbs, Including the six inch bell

Operating Temperature Range: 0 to 50 C.

RS232 I/O: The RS232 I/O is provided by a DB-9 connector on the front panel of the MC22LV and also on the terminal block inside. Optional cable is required.

CALL OR EMAIL FOR ASSISTANCE

Phone: (800) 444-7161 or Email: sales@ats-usa.com.

CLOCK / BUZZER SYSTEMS



MC22-BH SERIES CLOCK / BUZZER SYSTEMS

***Built-In RS232 I/O - Computer Programmable
Easy to Install . . .***

Multi-Schedule, Two Zone with up to 100 Buzzer rings per day.

Two Buzzer Durations - "Use a short duration for a Warning Buzzer".

Fits any bell schedule requirement including "early-out" days and special events.

Single Buzzer and Multi Buzzer Versions are available to fit a variety of applications.

***Built-In RS232 I/O Provides Interface for Computer, GPS, Digital Clocks
(Optional Ethernet I/O Available)***

Add digital clocks for a complete synchronized clock / buzzer system.

Key-Lock Box

Ideal for warehouses, workshops, and factories.

TWO YEAR WARRANTY



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DESCRIPTION

The MC22-BH Series provides flexible, *Plug and Play* packages to meet a variety of system applications. The MC22BH Series use the time proven MC22LV Master Clock as the bell programmer / controller. Program memory can be adjusted to meet any specific application with up to 100 events per day, and up to 9 alternate 7 day plans or schedules for a total of 200 steps. Each program step can address any combination of the relay outputs, for any day of the week, including groups of days such as Monday, Wednesday and Friday, or Monday through Friday.

The Built-In RS232 I/O provides a computer interface for programming the MC22LV Series systems. Use MCProgramming Software to create small or large bell schedule programs. Programs can be saved on your system, uploaded to, or downloaded from the MC22LV. MCProgramming Software is included at no charge.

The Built-In RS232 I/O can also be connected to the ATS Digital Clocks and GPS Interface products.



MC22-BH1 SINGLE BUZZER SYSTEM

The MC22-BH1 is the basic starting package which includes (1) high quality, low voltage, four-inch extra loud buzzer, which is pre-wired with a 100 foot cable for easy installation. Mounting hardware is included. No wiring is required. Simply hang the enclosure and buzzer, plug it in, and enter your program.

LARGER MC22-BH SYSTEMS

For larger systems, Buzzers, and / or Buzzer Kits, and Digital Clocks can be added as required.



F-350-24A1
Add-On Buzzer Kit

The F-350-24A1 Add-On Buzzer Kit includes a Four-Inch Extra Loud Buzzer with Back Box, pre-wired with 100 feet of cable.

A CC2002 Digital Clock can be added directly to the MC22-BH1.

Add the 8901-1411-R Relay Power Supply. Each 8901-1411-R Relay Power Supply can power up to (4) F-350-24A1 Add-On Buzzer Kits.

For even larger systems, additional Relay Power Supplies, Buzzers, and Digital Clocks can be added. Call or email for details (800) 444-7161, sales@ats-usa.com.

For Example: An MC22-BH System with a total of (3) buzzers and (1) digital clock includes:

(1) MC22-BH1 with (1) 8901-1411-R Relay Power Supply and (2) additional F-350-24A1 Add-On Buzzer Kits each pre-wired with a 100 foot cable, and (1) CC2002 Digital Clock.



MC22-BH1

+



CC2002

+



8901-1411-R

+



F-350-24A1

+



F-350-24A1

MC22-BH Packages are available to meet your specific system requirements.

CALL OR EMAIL FOR ASSISTANCE

Phone: (800) 444-7161 or Email: sales@ats-usa.com.

COMPUTER PROGRAMMABLE CLOCK / BUZZER SYSTEMS

Complete Computer Programmable Clock/Buzzer Systems are possible using your PC and MCProgramming Software with any MC22-BH System.



RS232 I/O or
optional Ethernet
Interface



MC22-BH1

+



CC2002

+



8901-1411-R

+



F-350-24A1

Add-On Digital Clocks and Clock/Calendars

A variety of Digital Clocks and Clock/Calendars are available with digits sizes ranging from 1-Inch to 12-Inches High. Up to (25) Clocks can be added directly to the MC22-BH System. An unlimited number of clocks are possible using add-on RS232 Driver Modules (AE-455DR6) as required.



AE124 Digital Clock
12-Inch Digits



ANC818 Clock/Calendar



CC2002 Digital Clock
4-Inch Digits

For additional Clock and Clock/Calendar products visit
our website [www. sales@ats-usa.com](http://www.sales@ats-usa.com).

Accessories for Expanding MC22-BH Systems



F-350-24A1



8901-1411-R



AE-455DR6



F-4436-24A1

- | | |
|-------------|---|
| 9800-1010 | MCProgramming Software |
| AE-455DR6 | 8-Channel RS232 Expander Driver |
| 9200-0521 | Ethernet to RS23 Interface |
| 9110-1115 | Cable, DB9F to Pigtail Leads, 10 feet |
| F-350-24A1 | Add-On Buzzer Kit with 100 feet of cable |
| F-4436-24A1 | Add-On Bell Kit with 100 feet of cable |
| 8901-1411-R | Relay Power Supply - power for to (4) F-350-24A1 Buzzers, or up to (20) F-4436-24A1 Bells |



9200-0521

CALL OR EMAIL FOR ASSISTANCE

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SPECIFICATIONS

PROGRAMMING CAPABILITIES

EASY TO USE - 32 character alphanumeric, LCD display and "Auto Prompt" software provides display information to guide the operator during programming.

200 POWERFUL PROGRAM STEPS - Provides time, day or days of the week, and selected relays for each event.

UP TO 10 - CUSTOM WEEKS - define your special weeks to include any group of days such as Monday, Wednesday and Friday. Ideal for "early-out" days.

UP TO 10 - SEVEN DAY PLANS - 1 default plan and up to 9 alternate plans, each can have up to 100 steps.

20 ANNUAL PROGRAMS - Schedules the alternate plans with specific Start and End dates.

PROGRAMMABLE DST ADJUSTMENT - The MC41LV Master Clocks can be programmed to automatically adjust their time for Daylight Savings Time changes according to U. S. law, even if the law changes.

AUTOMATIC LEAP YEAR ADJUSTMENT

MANUAL OVERRIDE - The output relays can be manually energized or de-energized from the keyboard.

ADJUSTABLE BUZZER DURATIONS - The Buzzer can be programmed for two different durations, allowing a shorter duration to be used as a "Warning Buzzer". Each is programmable from 1 to 9 seconds.

SLEEP MODE - Select Sleep Mode to suspend the program (stops buzzer) until de-selected.

PROGRAM OVERRIDE - A different Alternate Plan can be selected to run for the current day.

POWER FAIL BACKUP - Program and time keeping are maintained for in the event of a power failure. The bell outputs and the display are disabled during backup.

TIME KEEPING - Synchronous with the AC power line. During a power failure a temperature compensated crystal time base keeps accurate time with an accuracy of +/- .4 PPM throughout its full temperature range.

PROGRAMMED EVENTS - Buzzer events are programmable with a one minute resolution and occur at the zero second of that minute.

ELECTRICAL / PHYSICAL

Power:

24 VAC, 50/60 Hz, 40VA max. A 120 VAC to 24 VAC 1.67 Amp Power Module is included. Plugs into standard 120 VAC 60 Hz outlet.

Buzzer: F-350-24 Four-Inch Extra Loud Buzzer 24VAC, 900mA, 100 db at 10 feet. Includes an F-3014 cast aluminum box. Color: gray.

Outputs: Two SPDT relays rated at 15 A resistive at 48 VAC or 24 VDC.

Buzzer Wiring: Pre-wired to relays 1 and 2 with 100 foot cable.

Enclosure: Painted steel (beige) with hinged, keylocked door. Mounting holes and hardware provided.

Size: 7" W x 12" H x 4" D.

Weight: 13 lbs, Including the buzzer

Operating Temperature Range: 0 to 50 C.

RS232 I/O: The RS232 I/O is provided by a DB-9 connector on the front panel of the MC22LV and also on the terminal block inside. Optional cable is required.

CALL OR EMAIL FOR ASSISTANCE

Phone: (800) 444-7161 or Email: sales@ats-usa.com.

PUSH BUTTON BELL/BUZZER SYSTEMS

SELF-CONTAINED, PRE-WIRED, PUSH BUTTON BELL AND BUZZER SYSTEMS

**GREAT FOR WAREHOUSES, LOADING DOCKS,
SHIPPING FACILITIES AND MORE**



F-4436PB1 Push Button Bell System

*Includes a 6-Inch Bell Pre-Wired with 100 Feet
of cable to a Push Button Controller
that can be mounted outside*

Ideal for Smaller, Low Noise Areas

Covers up to 5,000 SQFT

*Plug-in 24 VAC Power Module fits
any standard 120 VAC Outlet*

F-350PB1 Push Button Buzzer System

*Includes a 4-Inch, High Output Buzzer Pre-Wired
with 100 Feet of cable to a Push Button
Controller that can be mounted outside*

Ideal for Larger, Industrial Areas

Covers up to 25,000 SQFT

*Plug-in 24 VAC Power Module fits
any standard 120 VAC Outlet*



These systems are Low Voltage - 24 VAC. No special wiring is required. Simply mount the bell or buzzer, plug it in, and depress the push button control for the desired amount of time you want the buzzer to sound. Additional bells or buzzers can be add, if required.

CONTACT US FOR HELP WITH YOUR APPLICATION



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TRANSFORMER ASSEMBLIES

8901 SERIES

TRANSFORMER - POWER SUPPLY ASSEMBLIES

Power for Bells, Buzzers, Clocks, and Other Low Voltage Equipment



8901-1821 POWER SUPPLY ASSEMBLY **24 VAC, 200 VA (8 Amps)**

8 - Fused Outputs, Terminal Block Wiring.

Power for up to (25) CC2002 Series System Clocks, or (40) F-44XX-24 Bells.

Sturdy, Painted Steel Enclosure with Conduit Knockouts. (12" x 12" x 4").

Requires 120 VAC, 60 Hz input
(power cord included)

8901-1411 POWER SUPPLY ASSEMBLY (24 VAC, 4 AMP)

Smaller version of the 8901-1821. Provides 24 VAC, 100 VA (4 Amps) 4 - Fused Outputs, Terminal Block Wiring. Power for up to (12) CC2002 Series System Clocks, or (20) F-44XX-24 Bells, or up to (4) F-350-24 Buzzers. Sturdy, Painted Steel Enclosure with Conduit Knockouts. (8.5" x 7.63" x 3.75"). Requires 120 VAC, 60 Hz input (power cord included)

8901-1411-R RELAY POWER SUPPLY ASSEMBLY (24 VAC, 4 AMP BOOSTER)

Provides booster power for add-on bells and buzzers. 12 VDC or 24 VAC Relay Input. The Input Relay, when energized, activates the (4) 24 VAC Fused Outputs. Connects to the 24 VAC signal of an existing 24 VAC bell, buzzer, or power horn system. Terminal Block Wiring.

Remote power for up to (20) F-44XX-24 Bells, or up to (4) F-350-24 Buzzers. Sturdy, Painted Steel Enclosure with Conduit Knockouts. (8.5" x 7.63" x 3.75"). Requires 120 VAC, 60 Hz input (power cord included)



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TIME SWITCHES

AP21LV SERIES

LOW VOLTAGE TIME SWITCH

RING BELLS.. CONTROL LIGHTING AND SECURITY EQUIPMENT.



UP TO 30 POWERFUL PROGRAM STEPS - 210 EVENTS PER WEEK.

UP TO 10 ANNUAL SKIP PLANS FOR SKIPPING HOLIDAYS AND SPECIAL EVENTS.

EASY - AUTOPROMPT PROGRAMMING

POWER FAIL BACK-UP. KEEPS TIME AND PROGRAM FOR 48 HOURS.
NO BATTERIES REQUIRED!

PROGRAMMABLE, AUTOMATIC DAYLIGHT SAVINGS TIME, AND LEAP YEAR ADJUSTMENT.

RELAY OUTPUT - 15 AMP SPDT LATCHED or 0-99 SEC. MOMENTARY OPERATION.

DUAL POWER - 24 VAC, 60 HZ or 12 VDC (POWER MODULE IS INCLUDED). SEPARATE MODELS ARE NOT REQUIRED. 50 HZ OPTIONAL.

LOW POWER - IDEAL FOR SOLAR APPLICATIONS.

PROGRAM TRANSFER - AP21T

TWO YEAR WARRANTY



800-444-7161

BOX 5705 • SHREVEPORT, LOUISIANA. 71135 • 318-797-7508

FAX: 318-797-4864

www.ats-usa.com

DESCRIPTION

The AP21LV SERIES Time Switch is a Low Voltage version of the popular AP21 Series Time Switch. They are used for switching low voltage electric circuits according to a pre-set time and date program. They are designed to ring bells, control lighting, heating, ventilating, air conditioning and security systems where holiday skip operation is desired.

The AP21LV has an AUTO PROMPTING, alpha-numeric display and a 16 key, positive action keyboard that makes programming fast and simple. The AP21LVT is the identical except it has a Transfer Port. This port allows programs to be transferred from one AP21LVT to another, or to an AP21TR. Programs can be transferred from a computer with the optional AP21COMP Software and Adapter kit. The AP21TR is a plug-in relay module that is programmed from an AP21LVT, or a computer, using the AP21COMP Software. Once programmed, the AP21TR will provide the very same switching functions as the AP21LVT.

SPECIFICATIONS

PROGRAMMING CAPABILITIES

EASY TO USE - 16 character alphanumeric, LCD display and "Auto Prompt" software provides display information to guide the operator during programming.

UP TO 30 POWERFUL PROGRAM STEPS - Select either a 16 step or 30 step program size from the keyboard. Each program step can be programmed for any day of the week, or for all 5 weekdays, or for both weekend days, or for everyday of the week providing up to 105 ON's and 105 OFF's, for a total of 210 events per week.

UP TO 10 SKIP PLANS - A 16 step program has 10 skip plans, a 30 step program has 3. Each skip plan has a starting and ending date during which all events are skipped.

PROGRAMMABLE DST ADJUSTMENT - The AP21 Series Time Switches can be programmed to automatically adjust their time for Daylight Savings Time changes according to U. S. law, even if the law changes.

AUTOMATIC LEAP YEAR ADJUSTMENT

MANUAL OVERRIDE - The output relay can be manually energized or de-energized from the keyboard.

PULSED / MOMENTARY OUTPUT - The output can be programmed to operate as a momentary contact, programmable from 1 to 99 seconds.



FOR ASSISTANCE CALL 800-444-7161

ELECTRICAL / PHYSICAL

Dual Power: 24 VAC, 60 HZ (20 to 28 VAC)
A Power Module is provided for 120 VAC operation. (50HZ Optional).
Or 10.5 -15 VDC. Less than 1Watt.

Output: SPDT relay rated at 15 A resistive at 48 VAC or 24 VDC.

Wiring: Terminal block - can accommodate wire sizes from 14 to 24 AWG.

POWER FAIL BACKUP - Program and time keeping are maintained for 48 hours on a rechargeable capacitive backup system in the event of a power failure. The relay output and the display are disabled during backup.

TIME KEEPING - Synchronous with the AC power line. During a power failure it is quartz crystal controlled with an accuracy of +/- .003% throughout its full temperature range.

PROGRAMMED EVENTS - On/Off events are programmable with a one minute resolution and occur at the zero second of that minute.

Size: AP21LV - 3.7" W x 7.6" H x 1.6" D.
AP21LVT - 3.7" W x 8" H x 1.6" D.

Weight - Approximately 2 lbs.

Mounting - Mounting holes provided.

Operating Temperature Range: -30 to +74 C.

ORDERING INFORMATION

AP21LV Time Switch, 1 SPDT Output, 30 Events Per Day, Dual Power - 24 VAC 60 HZ or 12 VDC.

AP21LVT AP21LV with program transfer port.

OPTIONS and ACCESSORIES

9100-1021 Connector and 48" Mating Wiring Harness.

9110-0041 Transfer Cable, 6 feet long.

AP21COMP Software is also available for programming AP21LVT's and AP21TR's from a Windows computer. Contact the factory for all other versions.

MASTER CLOCKS

MC22LV

**CONTROL BELLS, BUZZERS, TONE GENERATORS,
DIGITAL CLOCKS, AND PLANT EQUIPMENT**



COMPUTER PROGRAMMABLE

TWO ZONES

UP TO 10 SCHEDULES

EASY - AUTOPROMPT PROGRAMMING

**SERIAL DATA I/O CONNECTS TO
COMPUTERS, GPS, AND CLOCKS**

200 POWERFUL PROGRAM STEPS.

UP TO 100 EVENTS PER DAY.

UP TO 10 - SEVEN DAY PLANS

CUSTOM WEEK SCHEDULES

20 ANNUAL PROGRAMS

**Power Fail Back-up. Keeps Time and Program for Indefinite Power Outages.
No Batteries Required!**

Programmable, Automatic Daylight Savings Time, and Leap Year Adjustment.

2 Relay Outputs - Rated at 15 Amps, Latched or 0-9 Second Momentary Operation.

Low Voltage Operation (24 VAC), or Use The 120 VAC Power Module Supplied.

TWO YEAR WARRANTY



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DESCRIPTION

The MC22LV Master Clocks provide accurate time keeping for controlling bells, buzzers, tone generators, and other electrical loads. Two independently programmable relay circuits can be used for timed event programming. Program memory can be adjusted to meet any specific application with up to 100 events per day, and up to 9 alternate 7 day plans or schedules for a total of 200 steps. Each program step can address any combination of the relay outputs, for any day of the week, including groups of days such as Monday, Wednesday and Friday, or Monday through Friday.

The RS232 Serial Data I/O can be interfaced with Computers, GPS Systems, and ATS Digital Clocks and Calendars. An optional Network Interface is available.

SPECIFICATIONS

EASY TO USE - 32 character alphanumeric, LCD display and "Auto Prompt" software provides display information to guide the operator during programming.

200 POWERFUL PROGRAM STEPS - Provides time, day or days of the week, and selected relays for each event.

UP TO 10 - SEVEN DAY PLANS - 1 default plan and up to 9 alternate plans, each can have up to 100 steps.

20 ANNUAL PROGRAMS - Schedules the alternate plans with specific Start and End dates.

PROGRAMMABLE DST ADJUSTMENT - The MC22LV Master Clocks can be programmed to automatically adjust their time for Daylight Savings Time changes according to U. S. law, even if the law changes.

AUTOMATIC LEAP YEAR ADJUSTMENT

MANUAL OVERRIDE - The output relays can be manually energized or de-energized from the keyboard.

PULSED / MOMENTARY OUTPUTS - Each output can be programmed to a specific duration to operate as a momentary contact, programmable from 1 to 9 seconds.

SLEEP MODE - Select Sleep Mode to suspend the program (disables relay outputs) until de-selected.

PROGRAM OVERRIDE - A different Alternate Plan can be selected to run for the current day.

POWER FAIL BACKUP - Program and time keeping are maintained in the event of a power failure. The relay outputs and the display are disabled during backup.

TIME KEEPING - Keyboard selected AC Line Synchronous, or temperature compensated crystal time base. Uses a 4 PPM crystal time base when selected and during power outages.

PROGRAMMED EVENTS - On/Off events are programmable with a one minute resolution and occur at the zero second of that minute.

ELECTRICAL / PHYSICAL

Power: 24 VAC Powered 20 TO 28 VAC, 50/60 HZ. A 120 VAC to 24 VAC A Power Module is provided for 120 VAC operation.

Outputs: Two SPDT relays rated at 15 A resistive at 48 VAC or 24 VDC.

Wiring: Clearly labeled terminal block.

Accuracy: AC Line synchronous, or 4 PPM Crystal time base.

Size: 4.75" W x 8" H x 2" D. Approximately 3 lbs.

Mounting: Mounting holes provided.

Operating Temperature Range: -30 to +74 C.

RS232 I/O: The RS232 I/O is provided by a DB-9 connector on the front panel, and also on the terminal block inside. Optional cable is required.



MC22LV
(Power Module Included)

ACCESSORIES

9110-1112 DB9M to DB9F Straight Through Cable

9200-0521 Ethernet to RS232 Interface.

GPS-TR3 GPS Master Clock Interface

Software: MCTProgramming and PCMCSET can be downloaded at no charge.

Bells, Buzzers, Clocks, Power Supplies, and Complete Systems

For Assistance, contact us at www.ats-usa.com, or call us at (800) 444-7161

MASTER CLOCKS MC SERIES

RING BELLS - CONTROL CLOCK SYSTEMS

**LOW COST, EASY SOLUTIONS TO
FIT ANY SIZE SYSTEM. Ideal for
Schools, Hospitals, Factories**

Corrects all major analog and digital secondary clocks,
including AE, AN, and CC Series Clocks and Clock/Calendars.

Multi-Zone, Multi-Schedule - Four and Eight Circuit models provide
Annual Programming with up to 100 events per day.

Non-Volatile Memory - Keeps time and program for indefinite
power outages.

Automatic Daylight Savings Time and Leap Year Correction.

Heavy Duty Relays rated at 48 VAC - 15 AMP (optional on MC41P)

Rack Mount, Wall Mount and Compact Wall Mount units are
available in Four and Eight Circuit (Zone) versions.

RS232 I/O for remote PC programming using MCPROGRAMMING
Software and for driving AE, AN, and CC Series Clocks and
Clock/Calendars (MC41LV model excluded)

Keyboard selectable Time Base - 50 Hz, 60 Hz, and .003% Crystal

Options available for some models, including:

Built-In AC and DC Power Supplies for driving secondary clocks and bells.

Connectors and Wiring Harnesses.

120 VAC - 50 Hz, 220 VAC- 60 Hz or 220 VAC- 50 Hz operation.
(24 VAC - 60 HZ is standard on most models)



MC4181LV



MC41P



MC4181NX



MC41LV



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MC SERIES MASTER CLOCKS

The MC Series Master Clocks are available in various configurations depending on the type of enclosure and the number of relay outputs required. All have the same powerful operating program which provides up to 100 events per day, Annual Programming and keyboard selectable, secondary clock correction. Correction for most analog and digital secondary clocks, including three-wire synchronous, minute impulse, bi-polar minute impulse and all Midnight synchronized digital clocks, is built-in. An RS232 Output driver comes standard in the MC4181NX, MC4181LV, and MC41P models for driving ATS AE and CC Series Large Digital clocks with the RS232 input.

Models available:



MC41LV Master Clock with 4 SPDT Relay Outputs. Compact, Wall Mount Enclosure - 4.75" W x 8" H x 2" D. Standard power - 24 VAC, 60 Hz. Terminal block is provided for all field wiring.

MC81LV - Master Clock with 8 SPDT Relay Outputs. Compact, Wall Mount Enclosure - 4.75" W x 8" H x 3.2" D. Standard power - 24 VAC, 60 Hz. Two connectors with 48" mating harnesses are provided for field wiring. **Call for details about this model*



MC41P - System Clock Master. Compact, Wall Mount Enclosure - 8.75" W x 4.63" H x 2.4" D. Standard power - 12 VAC, 50/60 Hz, 1 Amp maximum. Power and data cables are provided for field wiring. Relay outputs optional.



MC4181LV Rack Mount Master Clock with 8 SPDT Relay Outputs and an RS232 I/O Interface for remote PC programming and control using MCPROGRAMMING Software (included).

Rack Mount Enclosure - 19" W x 3.5" H x 9" D. Fits a standard 19 inch equipment rack. Standard power - 12 VAC, 60 Hz. A 120 VAC to 12 VAC power module is included. Terminal blocks are provided on the back panel for field wiring.



MC4181NX Master Clock with 8 SPDT Relay Outputs and an RS232 I/O Interface for remote PC programming and control using MCPROGRAMMING. Large Wall Mount Enclosure measures 12" W x 16" H x 4.5" D. Conduit knockouts are provided on all sides, top, bottom and back. Standard power - 120 VAC 60 Hz. Terminal blocks are provided for all field wiring.

Popular Options for the MC4181NX Model Only

MC-OPT-016 Built-In 24 VAC, 4 Amp Transformer for driving secondary clocks and bells.

MC-OPT-014 Built-In 24 VDC, 1/2 Amp Power Supply for driving secondary clocks.

MC-OPT-427 GPS Time Reference Input. Requires GPS-427 Antenna/Receiver.

MC-OPT-012 Built-In 24 VDC, 2 Amp Power Supply for driving secondary clocks.

MC-OPT-PWR Power options are available for 120 or 220 VAC and 50 or 60 Hz. Contact the factory.

For additional options refer to the Prices and Options Catalog or contact the factory.



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GPS MASTER CLOCK INTERFACE



ACCURATE TIME

*For 59th Minute and Midnight
synchronized clock systems*

*GPS-TR3 Master Clock - Tracks the Atomic Clock
Provides user selected correction for most
analog and digital clocks systems.*

Includes:

*59th Minute, Midnight, and Serial data correction.
Serial BCD correction is optional.*

Easy to install - terminal block wiring

*Relay output can be programmed to provide a sync signal at Midnight for re-setting
most existing digital clocks and master clocks.*

*For 59th minute clock systems the relay output can be programmed to provide an 8
second correction signal each hour at XX:57:54, and a 14 second correction signal at
5:57:54 AM and PM.*

*The serial data output provides the ATS 10-Byte message for synchronizing CC2000,
AE series digital clocks, AE Series Time Zone Clocks, and the MC4181LV Master
Clock.*

*The GPS-TR3 includes the GPS-427A Antenna/Receiver and the TR3 Master Clock
Interface.*

Complete systems are available. Call for details..



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CLOCK SYSTEM ACCESSORIES

Power for Bells, Clocks and Other Low Voltage Equipment



8901-1821 Power Supply Assembly

24 VAC, 200 VA (8 Amps) 120 VAC, 60 Hz Input
Eight, 24 VAC Fused Outputs. Terminal Block Wiring.
Power for up to (25) CC2002 Series System Clocks,
or (40) F-44XX-24 Bells

8901-1411 Transformer Assembly

24 VAC, 100 VA (4 Amps) 120 VAC, 60 Hz Input
Four, 24 VAC Fused Outputs. Terminal Block Wiring.
Power for up to (12) CC2002 Series System Clocks,
or (20) F-44XX-24 Bells

8901-1411-R Relay/Power Supply



24 VAC, 4 Amp Booster - Requires
120 VAC, 60 Hz Input
(Power cord included)
Four, 24 VAC Fused Outputs
Terminal Block Wiring
Power for up to (20)
F-44XX-24 Bells or up to (4)
F-350-24 Horns/Buzzers

AE-455DR6 RS232 Driver

Eight RS232 Output Drivers

Each driver output provides
data for up to (50)
AE, CC, or ANC Devices

Connects to the RS232 output
of your computer or
MC Series Master Clocks



F-4436-24

Bells & Buzzers

6" and 10", 24 VAC and 120 VAC Bells
4", 24 VAC and 120 VAC Buzzers

Low Operating Current - High dB Output - Easy to install - Mounts on standard 4" box

- F-4436-24** Bell, Six-Inch, 24 VAC .17 amps, 91 dB typical at 10 ft
- F-4431-24** Bell, Ten-Inch, 24 VAC .17 amps, 94 dB typical at 10 ft
- F-4436-120** Bell, Six-Inch, 120 VAC .05 amps, 92 dB typical at 10 ft
- F-4431-120** Bell, Ten-Inch, 120 VAC .05 amps, 99 dB typical at 10 ft
- F-350-24** Buzzer, High Output, 24 VAC, .9 amps, 100 dB typical at 10 ft
- F-350-120** Buzzer, High Output, 120VAC, .18 amps, 100 dB typical at 10 ft

F-350-24



F-3014

Cast aluminum
weatherproof box
for 1/2" conduit.

FREE SOFTWARE AVAILABLE

ATS Software Disk, 9800-1010, is available with Clock System purchases or can be downloaded from our website. Programs such as AECOMM and MCPROGRAMMING are included for controlling all AE, CC, and ANC Series Displays, as well as Complete Program Control for Master Clock and Computer Based systems.



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BUZZER / STROBE ASSEMBLY

High Output Buzzer / Strobe Assembly



F-350-24-YST

F-350-24-YST

Low Voltage Buzzer/Strobe Assembly

100dB at 10 feet

**High Intensity Rapid Flash
Yellow LED Strobe**

Low Power 24 VAC, 1 Amp

**Easy to Install
Surface Mount Enclosure**

The F-350-24-YST Buzzer / Strobe Assembly combines all the features of a High Output Buzzer with a High Intensity Yellow Rapid Flasing Strobe Indicator. F-350-24-YST Buzzer / Strobe Assemblies can be added to any ATS Bell or Buzzer System providing both visual and audio signals for factory break systems. They are easily controlled using any of the MC Series Master Clocks, or for smaller schools or factories the AP21LV Time Switch can be used.

Specifications

Buzzer: F-350-24, 100 dB typical at 10 ft, 24 VAC .9 Amp

Strobe: F-24-YST, 64 Super Bright Yellow LED's, 24 VAC, .1 Amp, 6 Alternating Rapid Flashes per Second

Total Power Required: 24 VAC, 1 Amp

Approximate Dimentions: 6"W x 12"H x 3"D. (See drawing F350-24-YST for details)

Use with Plug and Play, or Installed Systems

AP21-BH1 Plug-N-Play Single Buzzer, Single Schedule Extra Loud Break Buzzer System

MC22-BH1 Computer Programmable, Plug-N-Play Single Buzzer, Multi-Schedule Extra Loud Break Buzzer System

MC41-BH1 Plug-N-Play Single Buzzer, Multi-Schedule Extra Loud Break Buzzer System

MC4181NX 8-Circuit, Multi-Schedule Computer Programmable Master Clock for Installed Systems

8901-1411-R Relay Power Supply Assembly, 24 VAC, 4A (power for up to four F-350-24-YST Buzzer/Strobe Assemblies)

Call for a Plug-n-Play, or Installed Buzzer Systems to meet your requirements.



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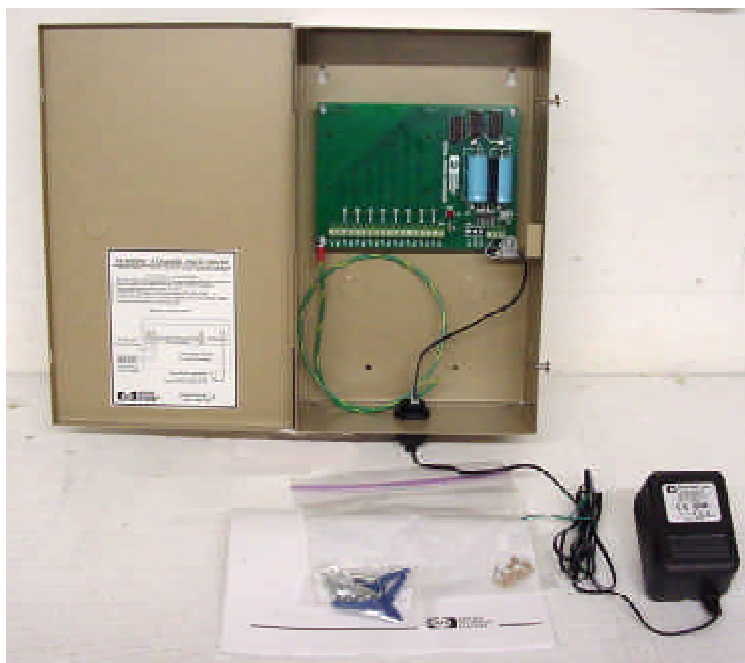
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IP ADDRESSABLE EXPANDER MODULE

AE-521DR Provides IP Addressable, RS232 Driver for ATS System Clocks and Displays.



AE-521DR Expander Module

Converts 10/100 Ethernet to Eight RS232 Driver Outputs.
Each driver output provides data for up to 50 AE, AN, and CC Series System Clocks or Displays.

RJ45 Connector for Ethernet connection and Terminal Block Wiring for all output drivers..

12 VAC Powered - 120 VAC to 12 VAC, 60 HZ Power Module is provided

Sturdy, Painted Steel Enclosure with Knockouts.
Dimensions: (9" W x 12" H x 4" D)



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ETHERNET INTERFACE

Optional Ethernet Interface

For ATS Master Clocks, Clocks, Timers, and Displays.

External Module

9200-0521
shown



— OR —

Built-In Connection

AE-OPT-521C
shown



AE-OPT-521

Uses the Lantronix XPort Module to Provide a Network Connection for ATS Digital Clocks, Timers, Master Clocks, and Large Displays

Easy Installation and Setup using Lantronix Device Installer and
ComPort Redirector for legacy software applications
For external module use ATS P/N 9200-0521

AE-OPT-521C

Provides an Automatic SNTP Connection for ATS Digital Clocks, Master Clocks, and Clock Systems

Acquires Coordinated Time and Date with Time Zone Offset
For external module use ATS P/N 9200-0521C

Other Configurations are Available

TWO YEAR WARRANTY



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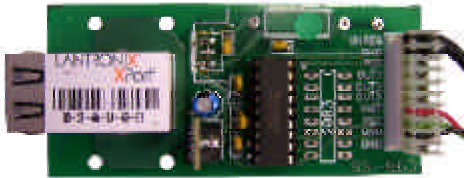
DESCRIPTION

Options AE-OPT-521 and AE-OPT-521C provide an ethernet interface for MC Series Master Clocks, and AE, AN, ANC, and CC Series Digital Clocks and Displays.

Built-In Ethernet Options

The PCB Assemblies for Options 521 and 521C are installed internally, including all power and wiring connections. The Ethernet Cable must be ordered separately.

Built-In Ethernet Option 521



Built-In Ethernet Option 521C



External Ethernet Modules

External Modules 9200-0521, and 9200-0521C can be added externally to most ATS Clocks, Displays and Master Clocks. A plug-in power module and data cable are provided. The Ethernet Cable must be ordered separately.

External Module 9200-0521



External Module 9200-0521C



For Installation and Setup Option 521 and 9200-0521 both require the Lantronix Device Installer and Com Port Re-Director programs (these can be downloaded from Lantronix). Once installed the device will appear as a standard comm port to the application software used. ATS Software includes: MCPProgramming, AEComm, PCMCSET, and others.

Before using Option 521C or 9200-0521C the Local Time Zone setting is required. A rotary switch selects the time zone, and jumpers select DST, and 12/24 Hour format. Once installed the device will query an SNTP Server via your internet approximately every 10 minutes. After acquiring Co-ordinated time and date it will update the ATS device every minute at the 30th second.

SPECIFICATIONS

Built-in Options 521 and 521C

Power: 12 VDC, 500 mA from the parent device.
No enclosure PCB Assembly installed in parent device.
I/O: ATS 10-byte serial data (internally connected)
Operating Temperature: -20 to 70 degrees C

External Modules 9200-0521 and 9200-0521C

12 VDC, 500 mA - plug-in power module provided.
Black ABS Enclosure (5"W x 2.8"H x 1" D)
I/O: ATS 10-byte serial data (10 foot cable included)
Operating Temperature: 0 to 50 degrees C

9110-1211 Ethernet Cable, 6 foot (ordered separately)

MULTI-TONE GENERATOR **F-TG4X**

SOUND TONES OVER YOUR INTERCOM / PAGING SYSTEM

Signal Shift Changes, Class Changes, Breaks

Low-Cost solution to any size application

*Easily connects to AP Series Time Switches,
MC Series Master Clocks, and Paging Amplifiers*



Four Inputs allow for up to Ten-plus Different Combinations including:

- Steady Tones
- Pulsed Tones
- Chime
- Whoop
- Siren

Adjustable Tone Level

Optional 8 Ohm Speaker Output

Plug-in Power Module Included

Screw Terminal Connections for Easy Field Wiring

The F-TG4X's audio input and output can be connected to any paging source, such as an intercom, a phone system paging port, or background music amplifier. When a contact closure is provided at any of the inputs, the paging or background music is pre-empted and the selected tone is generated over the paging system.

TWO YEAR WARRANTY



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DISPLAY GUARDS / MOUNTING OPTIONS

HEAVY DUTY, CLEAR POLYCARBONATE DISPLAY GUARDS

Light weight, strong, easy to install . . . Unobstructed view

DG-0716

For AE Series 2.3-Inch and 4-Inch Clocks and Displays. Also works with CC and ANC Series.
Size is 16"W x 7"H x 4"D

DG-0716



DG-1232



DG-1232

For AE Series 8-Inch Clocks and Displays.
Size is 32"W x 12"H x 4"D

DG-1750

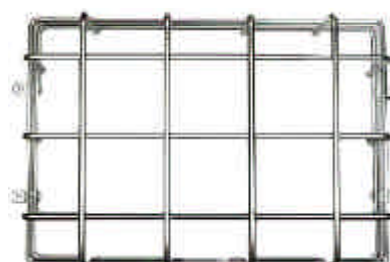
For AE Series 12-Inch Clocks and Displays.
Size is 50"W x 17"H x 4"D

Mounts to the wall, totally independent of the clock or fixture for maximum protection.

WG-2091

Wire Guard For AE Series 2.3-Inch and 4-Inch Clocks and Displays.
Also works with CC Series. Size is 17"W x 8"H x 5"D

WG-2091



SBG10

Wire Guard For AE Series 8-Inch Clocks and Displays.
Size is 35"W x 20"H x 8"D

Optional Mounting



Optional Eyehooks



Optional Stud Mounts



Optional Hub Mount



Optional Bezel Mount
(No Enclosures)



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SYSTEM CLOCK / CALENDAR

ANC818 SYSTEM CONTROLLED CLOCK/CALENDAR



For Hospitals Schools ,Churches , Museums, Theaters, and Boardrooms.

*Connects Directly to any MC4181LV or MC4181NX Master Clock Systems
Or use Your Computer along with AECOMM Software.*

*Displays Time of Day in 12 or 24 Hour Format.
Super Bright Red LED Digits*

2.3-Inch High for Hours and Minutes, 1-Inch High for Seconds

*Displays Day of the Week and Date
.8-Inch High Super Bright Red Alpha-Numeric Characters
Visible up to 50 feet away.*

Adjustable, Auto-Dimming Feature.

Low Voltage : 24VAC, 50/60 Hz Powered.

(Other Power and Mounting Options are Available)

ORDERING INFORMATION

ANC818 Series Clock/Calendar Displays are available in

ANC818-H	System Clock/Calendar, Sloping Front Wall Mount Enclosure (12"W x 6.25"H x 3.25"D)
ANC818-F	System Clock/Calendar, Flush Mount Enclosure (13.4"W x 8.4"H x 3.6"D)
ANC818	System Clock/Calendar, Black Anodized Aluminum Wall Mount Enclosure (12"W x 6.1"H x 3.5"D)
ANC818W2	System Clock/Calendar, Black Anodized Aluminum <u>Two-Sided Wall Mount</u> Enclosure (12"W x 6.1"H x 3.5"D)
ANC818C2	System Clock/Calendar, Black Anodized Aluminum <u>Two-Sided Ceiling Mount</u> Enclosure (12"W x 6.1"H x 3.5"D)



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ANC818 Wall Mount

Black Anodized Aluminum Enclosure (12"W x 6.1"H x 3.5"D)
Wall mount using the 1210-0101 Mounting Bracket Included.
Can be used free standing for desk top or shelf mounting applications.
Power and Signal - Pigtail leads exit from back panel



ANC818W2 Two-Sided Wall Mount

Black Anodized Aluminum Enclosure (12"W x 6.1"H x 3.5"D)
Mounts to a single gang, double gang or 4 inch box.
Power and Signal - Pigtail leads exit from side panel



ANC818C2 Two-Sided Ceiling Mount

Black Anodized Aluminum Enclosure (12"W x 6.1"H x 3.5"D)
Mounts to a 4 inch box.

Power and Signal - Pigtail leads exit from top panel



ANC818-H Wall Mount Sloping Front

Black Painted Steel Sloping Front Wall Mount Enclosure (12"W x 6.25"H x 3.25"D)
Mounts to a 4 inch box.

Power and Signal - Terminal Blocks Inside



ANC818-F Flush Mount

White Painted Steel Flush Mount Enclosure (13.4"W x 8.4"H x 3.6"D)
Mounting Back Box with conduit knockouts is included.

Power and Signal - Terminal Blocks Inside



SPECIFICATIONS:

Responds to a series of 10 Byte messages from MC Series Master Clocks, AE Series GPS Master Clocks, or a computer using AECOMM Software. There are three 10 Byte messages: Time Data - Address 15, Date Data - Address 13, and Day of the Week & Julian Day Data - Address 12. The data is read at 2400 Baud rate, no parity, 8 data bits and 1 stop bit.

Two-Line Display

Time - Hours and Minutes have 1.8-Inch High, 7-Segment, Super Bright Red LED Digits. Seconds are 1-Inch High.

Day and Date - .8-Inch High, 16-Segment, Alpha-Numeric, Super Bright Red LED Characters.

Day of the week and the Month have three character abbreviations.
Day has two digits

Adjustable Auto Dimming

RS232 Input - Serial Data, ATS - 10 Byte Message.

Sets Time in 12 or 24Hr format.

Sets Day of Week with a three character abbreviation.

Sets Month with a three character abbreviation

Sets Day with a two digit number.

Accuracy - 0.003% Crystal Timebase - Synchronized to a master clock or computer

Power: 24VAC, 50/60 Hz, 12 VA Max.

CONTACT US FOR HELP WITH YOUR APPLICATION

CLOCK / CALENDAR APPLICATIONS

ANC818 - DSP SERIES SYSTEM DISPLAYS



*For Hospitals, Schools, Churches, Museums, Theaters, and Boardrooms.
Connects Directly to any MC4181LV or MC4181NX Master Clock Systems
Or use Your Computer along with AECOMM Software.*

Displays Time of Day in 12 or 24 Hour Format.

Super Bright Red LED Digits

2.3-Inch High for Hours and Minutes, 1-Inch High for Seconds

AM / PM Indicator, Display Flash

Optional Piezo/Relay Output - Activated During Display Flash

Displays Day, Date, Alarms, and Messages

.8-Inch High Super Bright Red Alpha-Numeric Characters

Visible up to 50 feet away.

Adjustable, Auto-Dimming Feature.

Low Voltage : 24VAC, 50/60 Hz Powered.

(Other Power and Mounting Options are Available)

*Available in Flush Mount and Two-Sided Models - See ANC818 Brochure for the
complete line of ANC818 Models*



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SYSTEM CLOCK / CALENDAR

ANC2340 CLOCK / CALENDAR / DISPLAY



For Schools, Hospitals, Churches, Museums, Theaters, and Boardrooms.

*Connects Directly to any MC4181LV or MC4181NX Master Clock Systems
(Number of Messages limited when using Master Clock Systems)*

Or use Your Computer along with AECOMM Software.

Displays Time of Day in 12 or 24 Hour Format.

Super Bright Red LED Digits

4-Inch High for Hours, Minutes, and Seconds

Display Blanking and Display Flash

Optional Piezo/Relay Output - Activated During Display Flash

Displays Day, Date, Alarms, and Messages

2.3-Inch High Super Bright Red Alpha-Numeric Characters

Visible up to 100 feet away.

Display Blanking and Display Flash

Black Anodized Aluminum Wall Mount Enclosure

Measures 24"W x 12.2"H x 3.5"D.

Low Voltage : 24VAC, 50/60 Hz Powered.

(Other Power and Mounting Options are Available)

(RS232 Input Standard - Ethernet and Wireless Optional)



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DIGITAL CLOCKS

FOR SCHOOLS, HOSPITALS, FACTORIES, SPORTS FACILITIES, COURTROOMS, THEATERS, BOARDROOMS, CHURCHES, and MUSEUMS.

1.8 - Inch, 6 Digit -Stand-alone, RS232, USB, Single and Two Sided Versions

CC186 Single Sided

CC186/2 Two Sided

CC186U Single Sided USB

CC186U/2 Two Sided USB



4-Inch, 4 Digit -Stand-alone, Corrective Clock, RS232, Two Sided Versions Available



CC2002 Wall Mount



CC2002W2
2-Sided Wall Mount



CC2002F Flush Mount



CC2002C2
2-Sided Ceiling Mount

AE Series 2.3 - Inch, Multi-Function Clock/Timers



AE24 4-Digit Wall Mount

AE26 6-Digit Wall Mount

AE24F 4-Digit Flush Mount

AE2412 6-Digit Wall Mount, 1-Inch Sec.

AE26R 6-Digit Rack Mount

AE2412F 6-Digit Flush Mount,
1- Inch Sec.



Visible up to 100 feet

AE Series Super Bright 4-Inch, Multi-Function Clock/Timers



AE44S 4-Inch 4-Digit Dot LED Wall Mount

AE46S 4-Inch 6-Digit Dot LED Wall Mount

AE44D 4-Inch 4-Digit Bar Segment LED Wall Mount

AE46D 4-Inch 6-Digit Bar Segment LED Wall Mount



Visible up to 200 feet

AE Series Super Bright 8 and 12 - Inch, Multi-Function Clock/Timers



AE124 12-Inch, 4-Digit Wall Mount

AE126 12-Inch, 6-Digit Wall Mount

Visible up to 500 feet



AE84 8- Inch 4-Digit Wall Mount

AE86 8-Inch 6-Digit Wall Mount

Visible up to 350 feet

All AE Series Inch, Multi-Function Clock/Timers can be configured to your requirements. Numerous options include: RS232, USB, GPS, stand-alone, 59th minute and Midnight correction, Code Blue Override, Two-Sided, and various mounting options.



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MULTI - FUNCTION CLOCK / TIMERS

FOR SCHOOLS, CHURCHES, HOSPITALS, AND FACTORIES

- Time in 12 or 24 hour format . . . Ideal for Clock Systems
- Count Up / Count Down Elapsed Time . . . For timing Procedures, Speakers, Manufacturing Processes, etc.
- Stand Alone or Synchronized Sytems

2.3 - Inch VISIBLE UP TO 100 FEET



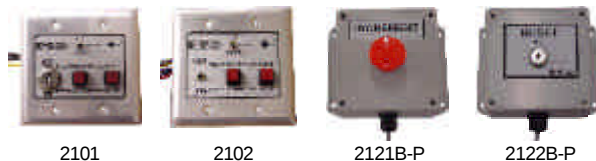
- AE24 4-Digit Wall Mount (12"W x 6.1"H x 3.5"D)
 AE24F 4-Digit Flush Mount (13.4"W x 8.4"H x 3.6"D)
 AE26 6-Digit Wall Mount (14"W x 6.1"H x 3.5"D)
 AE26R 6-Digit Rack Mount (19"W x 3.5"H x 6"D)
 AE2412F 6-Digit Flush Mount, 1-Inch Sec. (13.4"W x 8.4"H x 3.6"D)
 AE2412 6-Digit Wall Mount, 1-Inch Sec. (12"W x 6.1"H x 3.5"D)
 * 120 VAC, 60 Hz, 6 VA

8 - Inch VISIBLE UP TO 350 FEET



- AE84 8- Inch, 4-Digit Wall Mount (30"W x 10"H x 3.5"D)
 AE86 8-Inch, 6-Digit Wall Mount (44"W x 10"H x 3.5"D)
 * 120 VAC, 60 Hz, 50 VA

OPTIONAL REMOTE SWITCH PANELS



2101

2102

2121B-P

2122B-P

All AE Series Inch, Multi-Function Clock/Timers can be configured to your requirements.
 Built-In RS232, 59th minute and Midnight correction. Includes Code Blue Override, Built-In Controls.
 GPS, Two-Sided, and various mounting, wiring, and power options are available.

CONTACT US FOR HELP WITH YOUR APPLICATION

1 - Inch VISIBLE UP TO 50 FEET



- AE16 6-Digit Wall Mount (7.5"W x 6.1"H x 3.5"D)
 AE16L 6-Digit Desk Top (8"W x 2.5"H x 6.9"D)
 * 12 VAC, 60 Hz, 6 VA

4 - Inch VISIBLE UP TO 200 FEET



- AE44S 4-Inch, 4-Digit Dot LED Wall Mount (16"W x 6.1"H x 3.5"D)
 AE46S 4-Inch, 6-Digit Dot LED Wall Mount (24"W x 6.1"H x 3.5"D)
 AE44D 4-Inch, 4-Digit Bar Seg LED Wall Mount (16"W x 6.1"H x 3.5"D)
 AE46D 4-Inch, 6-Digit Bar Seg LED Wall Mount (24"W x 6.1"H x 3.5"D)
 * 120 VAC, 60 Hz, 15 VA

12 - Inch VISIBLE UP TO 500 FEET



- AE124 12-Inch, 4-Digit Wall Mount (48"W x 15"H x 3.5"D)
 AE126 12-Inch, 6-Digit Wall Mount (72"W x 15"H x 3.5"D)
 * 120 VAC, 60 Hz, 50 VA

TWO YEAR WARRANTY



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SYSTEM CLOCKS

CC186 SERIES

1.8 INCH, 6 DIGIT - RS232 CONTROLLED, SYSTEM CLOCKS



For Studios, Courtrooms, Museums, Theaters, Boardrooms, and Churches.

12 / 24 Hour Format... RS232 Controlled.

Bright Red Diffused LED Digits - Visible over 50 feet away.

Capacitive Backup - No Batteries Required.

Stand Alone, Wall Mount, and Double Sided models.

Low Voltage : 12 VAC Powered.

CC186 Series System Clocks can be manually set, or set and controlled via RS232 communications. All CC186 Series System Clocks can receive serial data input from computers or other controllers, for setting time and/or displaying short messages such as "FirE" and "bELL". Up to 50 clocks can be connected to a standard RS232 Port at distances of up to 2000 feet away. Signal drivers are available for adding additional clocks and greater distances.

MODEL AVAILABLE

All CC186 Series Clocks have a black anodized aluminum enclosure (12"W x 3.5"H x 3.5"D) with 1/8" red acrylic lenses.

CC186

System Clock, Single Sided, (w/ rubber feet), 12 VAC

CC186/2

System Clock, Double Sided, (w/ rubber feet), 12 VAC

1210-0102

Optional Mounting Angles for bottom and top mounting applications (Two Required).

1220-0303-2

Optional Wall Mount Plate for side mounting applications.



**APPLIED
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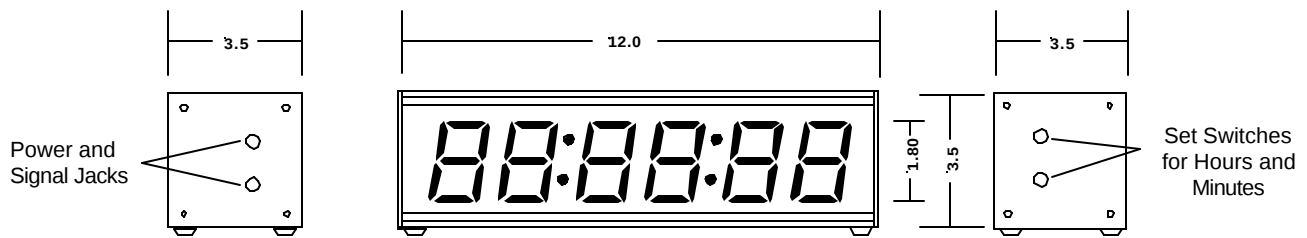
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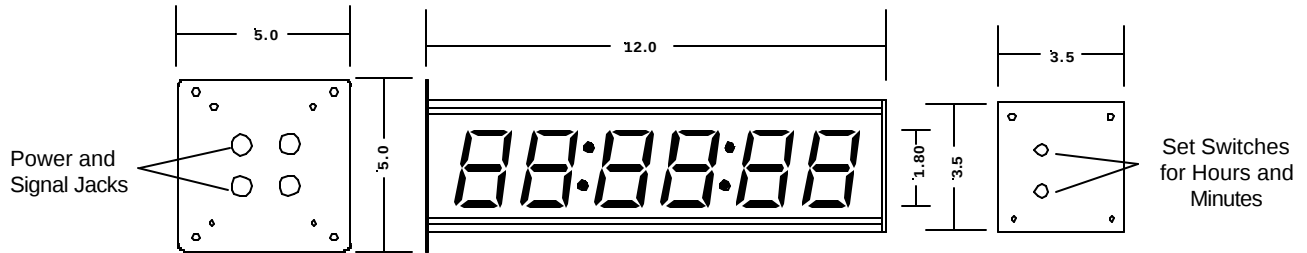
FAX: 318-797-4864

www.ats-usa.com

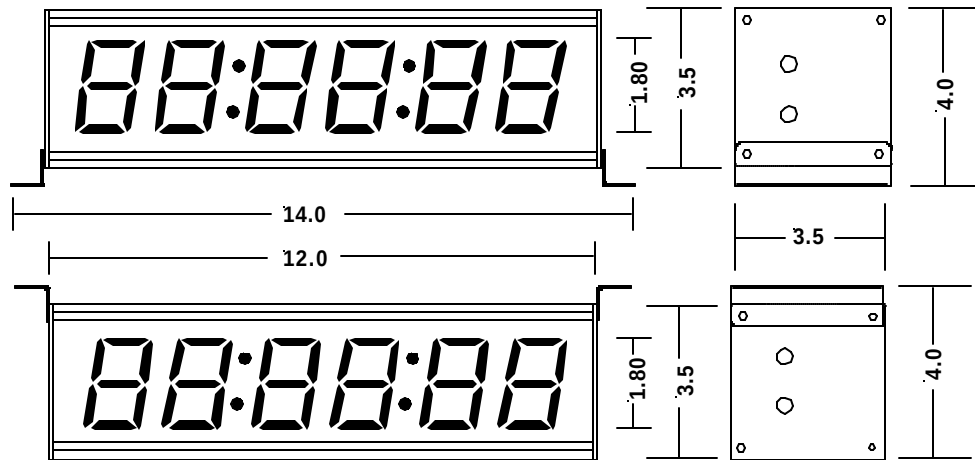
phone: 318-797-7508



CC186 and CC186/2 Single and Double-Sided, System Clocks with Rubber Feet



Wall Mount Plate for Single or Double-Sided models



Mounting Brackets for top and bottom mounting Single or Double-Sided models

WIRING:



SPECIFICATIONS:

CC186 Single Sided, 1.8" High Digits

Power: 12VAC, 8VA Max, 50/60 Hz (Internal Jumper Selected)

CC186/2 Double Sided, 1.8" High Digits

Power: 12VAC, 8VA Max, 50/60 Hz (Internal Jumper Selected)

120VAC to 12 VAC Power Module and data cable are included.

Capacitive Backup, 12 or 24 Hour Format (Mode Selected by Serial Data, only)

Set Switches are provided on the end panel for manually setting the Hours and Minutes (when not RS232 Controlled).

RS232 Input - Serial Data, ATS - 10 Byte Message

Sets Time in 12 or 24Hr format, runs elapsed time, and displays ASCII Messaging (Limited).

SYSTEM CLOCKS

CC186-521 SERIES

1.8 INCH, 6 DIGIT, SINGLE AND DOUBLE SIDED ETHERNET CONTROLLED CLOCKS



For Studios, Courtrooms, Museums, Theaters, Boardrooms, and Churches.

*12 / 24 Hour Format... Ethernet or RS232 Controlled
Bright Red Diffused LED Digits - Visible over 50 feet away
Capacitive Backup - No Batteries Required
Single and Double Sided models
Low Voltage : 12 VAC Powered*



CC186-521 Series System Clocks can be set and controlled via ethernet or RS232 communications. All CC186-521 Series System Clocks receive serial data input from computers or other controllers, for setting time and/or displaying short messages such as "FirE" and "bELL".

MODELS AVAILABLE

All CC186-521 Series Clocks have a black anodized aluminum enclosure (12"W x 3.5"H x 3.5"D) with 1/8" red acrylic lenses.

CC186-521	System Clock, Single Sided, (w/ rubber feet), 12 VAC, Power Module included
CC186/2-521	System Clock, Double Sided, (w/ rubber feet), 12 VAC, Power Module included
1210-0102	Optional Mounting Angles for bottom and top mounting applications (Two Required)
1220-0303-2	Optional Wall Mount Plate for side mounting applications



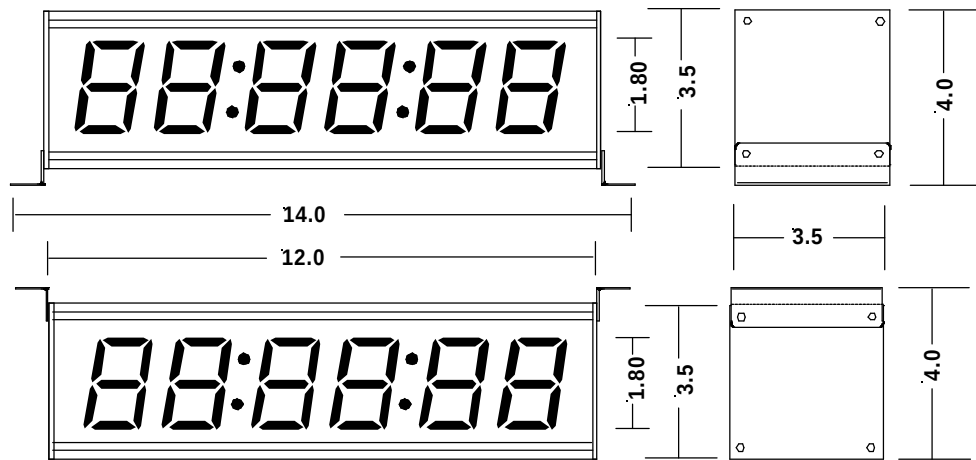
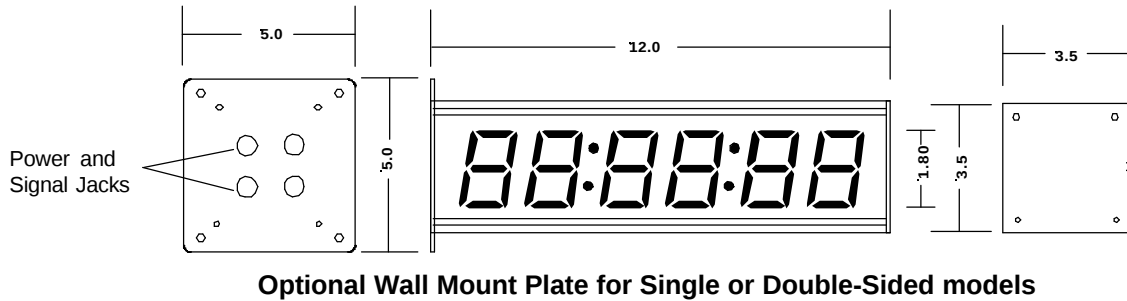
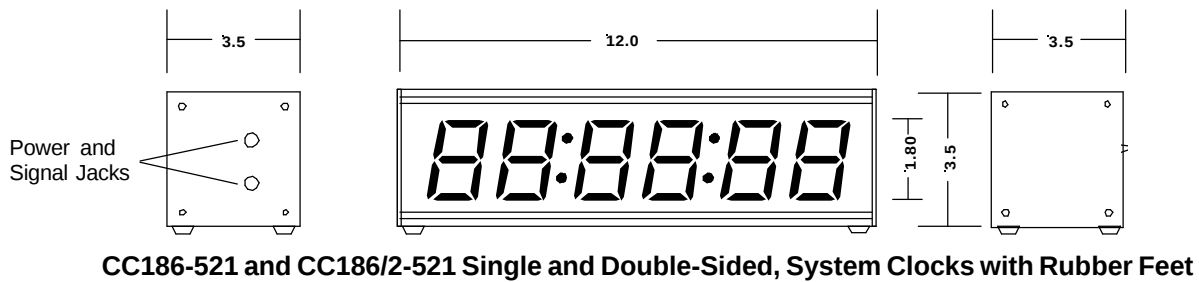
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FAX: 318-797-4864

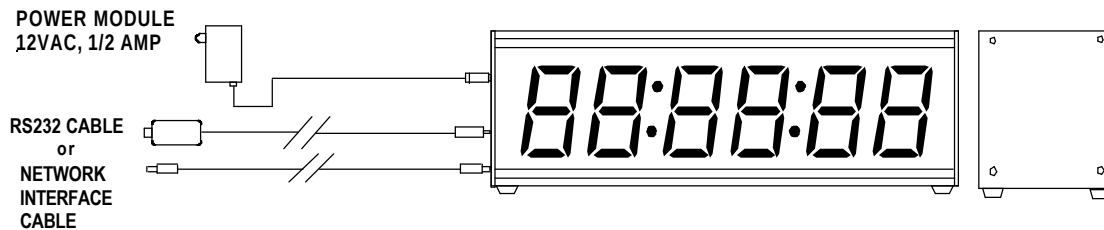
www.ats-usa.com

phone: 318-797-7508



Optional Mounting Brackets for top and bottom mounting Single or Double-Sided models

WIRING:



SPECIFICATIONS:

CC186-521 Single Sided, 1.8" High Digits
Power: 12 VAC, 6 VA Max, 50/60 Hz

CC186/2-521 Double Sided, 1.8" High Digits
Power: 12 VAC, 6 VA Max, 50/60 Hz

120 VAC to 12 VAC Power Module and data cables are included.

Capacitive Backup, 12 or 24 Hour Format (Mode Selected by Serial Data, only)

ETHERNET / RS232 Input - Serial Data, ATS - 10 Byte Message
Sets Time in 12 or 24 Hr format, runs elapsed time, and displays ASCII Messaging (Limited).

SYSTEM CLOCKS

CC186U SERIES

1.8 INCH, 6 DIGIT - USB CONTROLLED, SYSTEM CLOCKS



For Studios, Courtrooms, Museums, Theaters, Boardrooms, and Churches.

12 / 24 Hour Format... USB or RS232 Controlled

Bright Red Diffused LED Digits - Visible over 50 feet away

Capacitive Backup - No Batteries Required

Single and Double Sided models

Low Voltage : 12 VAC Powered



CC186U Series System Clocks can be set and controlled via USB or RS232 communications. All CC186U Series System Clocks receive serial data input from computers or other controllers, for setting time and/or displaying short messages such as "FirE" and "bELL".

MODELS AVAILABLE

All CC186U Series Clocks have a black anodized aluminum enclosure (12"W x 3.5"H x 3.5"D) with 1/8" red acrylic lenses.

CC186U

System Clock, Single Sided, (w/ rubber feet), 12 VAC

CC186U/2

System Clock, Double Sided, (w/ rubber feet), 12 VAC

1210-0102

Optional Mounting Angles for bottom and top mounting applications (Two Required).

1220-0303-2

Optional Wall Mount Plate for side mounting applications.



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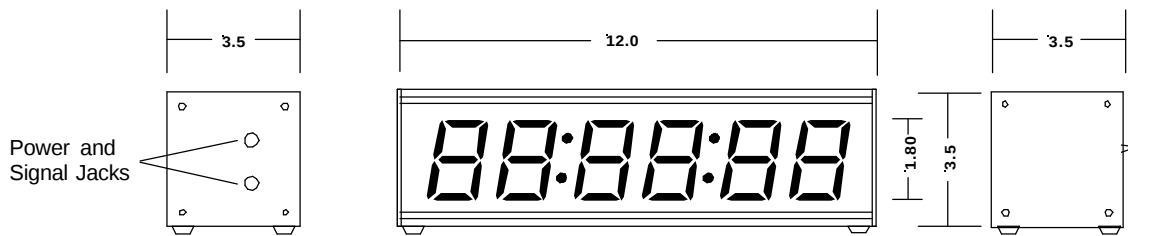
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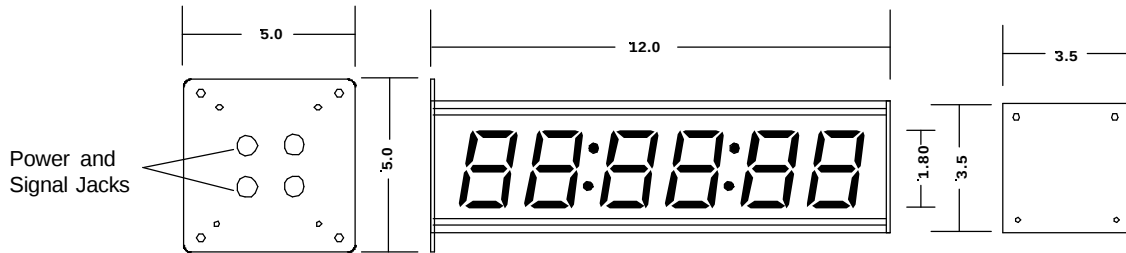
FAX: 318-797-4864

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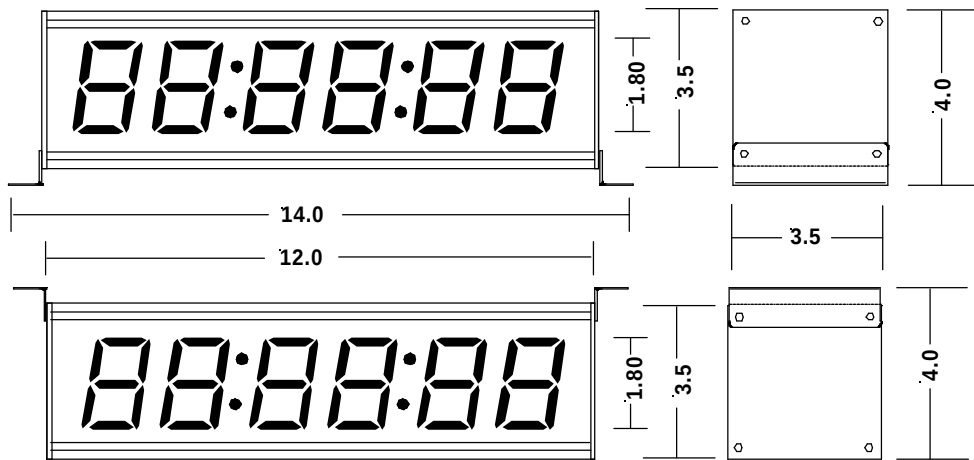
phone: 318-797-7508



CC186U and CC186U/2 Single and Double-Sided, System Clocks with Rubber Feet

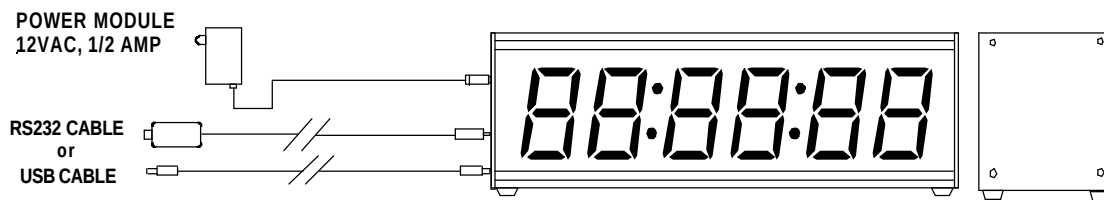


Optional Wall Mount Plate for Single or Double-Sided models



Optional Mounting Brackets for top and bottom mounting Single or Double-Sided models

WIRING:



SPECIFICATIONS:

CC186U Single Sided, 1.8" High Digits
Power: 12 VAC, 6 VA Max, 50/60 Hz

CC186U/2 Double Sided, 1.8" High Digits
Power: 12 VAC, 6 VA Max, 50/60 Hz

120 VAC to 12 VAC Power Module and data cables are included.

Capacitive Backup, 12 or 24 Hour Format (Mode Selected by Serial Data, only)

USB / RS232 Input - Serial Data, ATS - 10 Byte Message
Sets Time in 12 or 24 Hr format, runs elapsed time, and displays ASCII Messaging (Limited).

SYSTEM CLOCK

CC186R

RACK MOUNT

BRIGHT RED

Bar Segment LED's
VISIBLE UP TO 50 FEET



Easily Connects to Computers, Master Clocks,
or other system controllers via RS232

Specifications

1.8-Inch High Digits for Hours, Minutes, and Seconds

Simple two-wire input - Receives standard ATS 10-Byte control messages
from your computer or other host device via RS232 up to 2000 feet away

Displays 12 or 24 Hour Time, Count Up or Count Down
Elapsed Time, and 7-Segment ASCII Characters
for Messages such as Fire, Bell, Lunch.

Free AECOMM Software - send time, messages,
count up, and count down elapsed time from your computer.

12 VAC, 50/60 Hz Operation (6 VA Max).
(Plug-In Power Module and 10-Foot Data Cable are included)

Black Anodized Aluminum Rack Mount Enclosure
19"W x 3.5"H x 3.5"D
(Fits standard 19-inch rack)

TWO YEAR WARRANTY



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SYSTEM CLOCKS

CC2000H SERIES

FOUR INCH HIGH DIGITS

Visible up to 100 Feet Away

Sloping front configuration minimizes glare without losing contrast



Built-In 59th Minute and Midnight/Noon Correction.

***RS232 Input for connection to your computer,
or to our MC Series Master Clocks.***

Free "AECOMM" Software available.

Attractive, black textured finish , sloping front, steel enclosure

Easily mounts to a four inch , single gang, or double gang box

Four Inch High - Super Bright **Red** LED Digits - Visible over 100 feet away.

12 or 24 Hour Time Display - AM / PM Indicator

Keeps time during power outages - No Batteries Required.

24 VAC and 120 VAC Models Available

TWO YEAR WARRANTY

For Larger Synchronized System Clocks, see our AE Series Products



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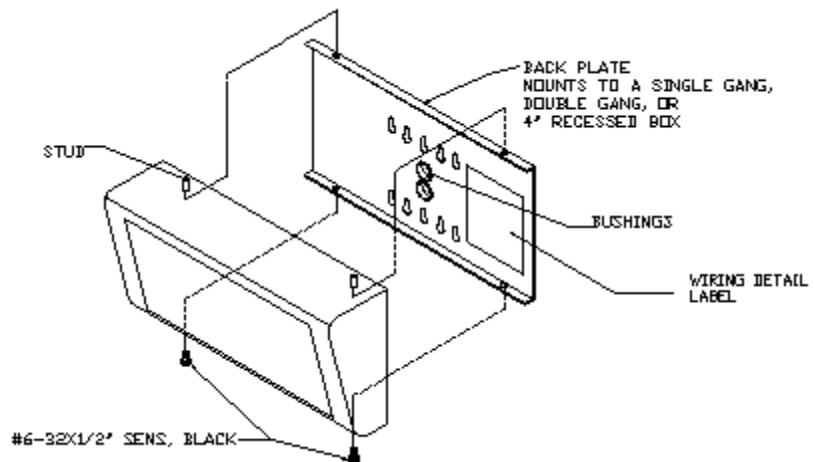
FAX: 318-797-4864

www.ats-usa.com

phone: 318-797-7508

INSTALLATION:

The CC2000H Series System Clocks can be surface mounted to a four-inch box, or to a single or double gang box.



WIRING

Pigtail lead wires are provided for all field wiring (see the wiring label inside on the back panel for detail).

CC2001H Power Wiring

120VAC Line	BLK
120VAC Neut	WHT
Ground	GRN/YEL

CC2002H Power Wiring

24VAC	YEL
24VAC	WHT/YEL
Ground	GRN/YEL

Signal Wiring:

For 59th Minute or Midnight/Noon Correction use:

Sync (+)	WHT/BLU
Sync (-)	WHT/BLK

For Serial Data Correction (RS232) use:

RS232 REC	WHT/ORG
RS232 GND	BLK/RED

SPECIFICATIONS:

Power:	CC2001H - 120VAC, 6VA Max, 50/60 Hz (Jumper selected). CC2002H - 24 VAC, 6VA Max, 50/60 Hz (Jumper selected).
Format:	12 or 24 Hour Format (Jumper or program selected). AM/ PM Indicator (upper left-hand corner of display)
Backup:	Capacitive Backup (no batteries reequired). Keeps time for up to one hour during power outages.
Accuracy:	Synchronous with the 50 or 60 HZ AC line. + / - 0.003% crystal during backup.
Sync Input:	Correction Pulse Voltage Range : 12V - 120V AC/DC (2 mA max at 120 VAC) 0 - 6 Second Duration: sets to 12:00 AM (0:00 when 24Hr Format) 7 - 10 Second Duration: sets to XX:58, XX = hour (Displays 12Hr Format Only) 11 - 17 Second Duration: sets to 5:58 (Displays 12Hr Format Only)
RS232 Input:	Serial Data, 10 Byte Message. Corrects Time - 12/24Hr, ASCII Messaging. Free AECOMM Software available. 12Hr Format: RS232 overrides and will display 12 or 24 Hr Format 24Hr Format: Jumper overrides will display 24Hr Format only
Enclosure:	Black texture painted sloping front steel enclosure with red acrylic lens. (12"W x 6.25"H x 3.25"D).

SYSTEM CLOCKS

CC2000 SERIES

FOUR INCH, FOUR DIGIT - LOW COST, SYSTEM CLOCKS

**FOR SCHOOLS, HOSPITALS, FACTORIES, SPORTS FACILITIES,
THEATERS, BOARDROOMS, CHURCHES, and MUSEUMS.**



CC2002 Wall Mount



CC2002W2 2-Sided Wall Mount



CC2002C2 2-Sided Ceiling Mount

Built-In, 12 / 24 Hour Format...

59th Minute, Midnight/Noon, and RS232 Correction.

Super Bright Red LED Digits - Visible over 100 feet away.

Capacitive Backup - No Batteries Required.

Wall Mount, Flush Mount, and Double Sided models.

24 VAC Standard, 120 VAC also available.



CC2002F Flush Mount

CC2000 Series System Clocks provide an economical solution for any size clock system. They are easily corrected by master clock systems with 59th minute and Midnight correction. In addition, all CC2000 Series System Clocks can receive serial data input from computers or other controllers, for setting time and/or displaying short messages such as "Fire" and "bELL". Up to 50 clocks can be connected to a standard RS232 Port at distances of up to 2000 feet away. Signal drivers are available for adding additional clocks and greater distances.

A 12 Volt to 120 Volt, AC or DC pulse for less than 2 seconds on the correction input sets the time to 12:00 (0:00 if 24 hour format). If the pulse is 8 seconds the CC2000 assumes the correction is 59th minute correction, and will set its time to XX:58:02. If the pulse is 12 seconds, the CC2000 will set its time to 5:58:06. For RS232 Correction, a 10 Byte message is required for complete control of the CC2000 including instant 12/24 Hour time correction and ASCII messages such as "Fire" and "bELL". See the AE Series Option 354 sheet for more details on the 10-Byte message format.

MODELS AVAILABLE

All wall mount and 2-sided versions have a black, extruded aluminum enclosure (12"W x 6.1"H x 3.5"D). Flush mount versions have a white, painted steel enclosure (13.4"W x 8.4"H x 3.6"D).

CC2002	System Clock, Wall Mount, 24 VAC
CC2002W2	System Clock, 2-Sided Wall Mount, 24 VAC
CC2002C2	System Clock, 2-Sided Ceiling Mount, 24 VAC
CC2002F	System Clock, Flush Mount (Includes back box), 24 VAC

CC2001	Same except 120 VAC
CC2001W2	Same except 120 VAC
CC2001C2	Same except 120 VAC
CC2001F	Same except 120 VAC



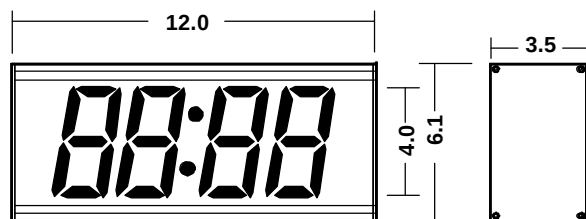
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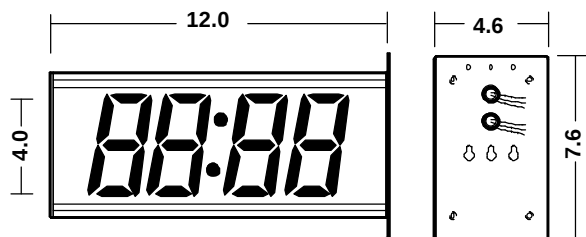
FAX: 318-797-4864

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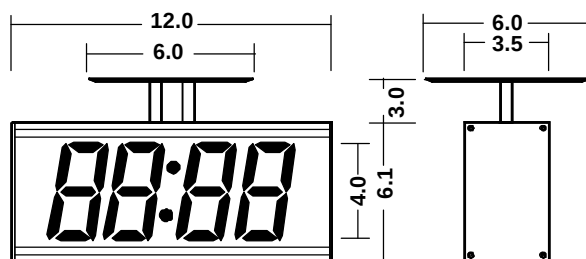
phone: 318-797-7508



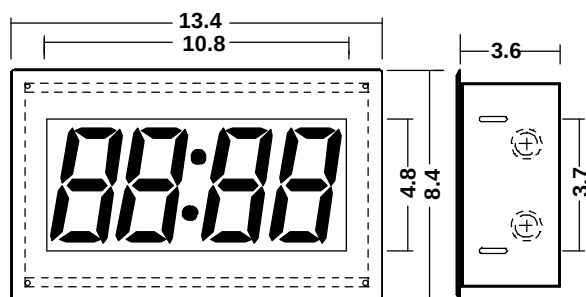
CC2002 Wall Mount



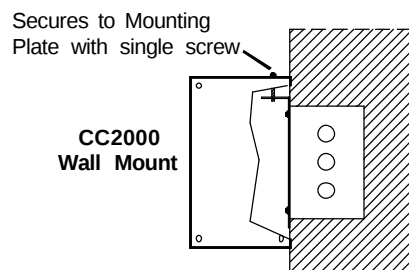
CC2002W2 2-Sided Wall Mount



CC2002C2 2-Sided Ceiling Mount

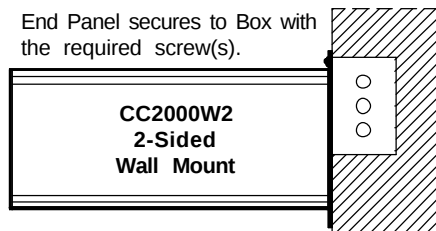


CC2002F Flush Mount



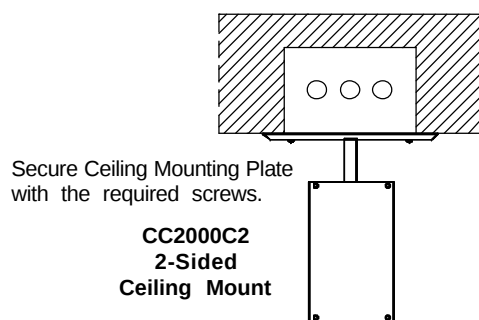
CC2000 Wall Mount

Mounts to Single Gang, Double Gang, or 4" Box



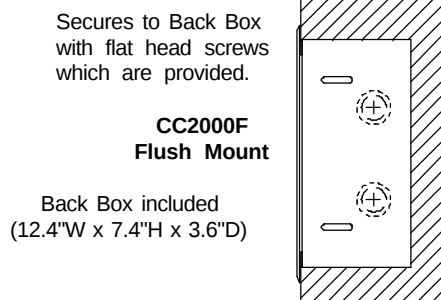
CC2000W2 2-Sided Wall Mount

Mounts to Single or Double Gang Box



CC2000C2 2-Sided Ceiling Mount

Mounts to 4" Box



CC2000F Flush Mount

Back Box includes conduit knockouts and mounting holes.

SPECIFICATIONS: * ALL INTERNAL JUMPERS ARE FACTORY SELECTED.

Power: Single Sided: 120VAC, 6VA Max, 50/60 Hz (Internal Jumper Selected)
24VAC, 6VA Max, 50/60 Hz (Internal Jumper Selected)
Double Sided: 120VAC, 8VA Max, 50/60 Hz (Internal Jumper Selected)
24VAC, 8VA Max, 50/60 Hz (Internal Jumper Selected)

Capacitive Backup, PM Indicator (upper left-hand corner of display)
12 or 24 Hour Format (Internal Jumper Selected)
Set Switches - Increment Hours and Minutes, access at back panel (CC2001and CC2002 only)

Sync Input - Correction Pulse Voltage Range : 12V - 120V AC/DC (2 mA max at 120 VAC)
0 - 6 Second Duration: sets to 12:00 AM (0:00 when 24Hr Format)
7 - 10 Second Duration: sets to XX:58, XX = hour (Displays 12Hr Format Only)
11 - 17 Second Duration: sets to 5:58 (Displays 12Hr Format Only)

RS232 Input - Serial Data, 10 Byte Message
Features: Corrects Time - 12/24Hr, ASCII Messaging
12 Hr Format: RS232 overrides and will display 12 or 24 Hr Format
24 Hr Format: Jumper overrides will display 24 Hr Format only

WIRING

Power (120VAC Models)

120VAC Line BLK
120VAC Neut WHT
Ground GRN/YEL

Power (24VAC Models)

24VAC YEL
24VAC WHT/YEL
Ground GRN/YEL

Signal:

Sync (+) WHT/BLU
Sync (-) WHT/BLK
RS232 REC WHT/ORG
RS232 GND BLK/RED

LARGE SYSTEM CLOCKS

Eight and Twelve Inch System Clocks

Easily Connect to Computers, Master Clocks,
or other system controllers via RS232

Eight Inch High Digits
SUPER BRIGHT RED Dot LED's
4 and 6 Digit Models Available
Visible up to 350 feet



AE84-354 SYSTEMCLOCK



AE124-354 SYSTEMCLOCK

Twelve Inch High Digits
SUPER BRIGHT RED Dot LED's
4 and 6 Digit Models Available
Visible up to 500 feet

Specifications

Simple two-wire input - Receives standard ATS 10-Byte control messages
from your computer or other host device via RS232 up to 2000 feet away

Free AECOMM Software - send time, messages,
count up, and count down elapsed time from your computer.

120 VAC, 60 Hz Operation
(24VAC and other power optional)

Black Anodized Aluminum Wall Mount Enclosures
Two-Sided Versions are available

TWO YEAR WARRANTY



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DESCRIPTION

Option 354 provides an Intelligent Serial Input for the AE Series Displays. This is not a standard RS232 input. However, up to 50 AE Series Devices with this option can be connected to a standard RS232 port, at distances up to 2,000 feet away. Signal drivers are available to provide systems with unlimited numbers of displays. This option allows AE Series Displays to communicate with host Computers, Master Clocks, Process Computers (PLC's), Multi-Media System Controllers, and AE21 Display Controllers. Applications include computer controlled master clock systems, production monitors, time to next show timers, process indicators, and message displays.

A simple 10 Byte message is required to send data or control information to the display. It provides addressing, mode selection, six characters of data, and display attributes. Free software is available for Computer and Master Clock based systems.

SPECIFICATIONS

INPUT:	TWO WIRE SYNCHRONOUS (RECEIVE ONLY) RS232 OR OPTIONAL RS485. 2400 BAUD, NO PARITY, 8 DATA BITS, 1 STOP BIT.																
CONTROL:	TEN BYTE MESSAGE:																
BYTE 0:	START CHARACTER - 11H																
BYTE 1:	ADDRESS BYTE - RANGE IS 0 TO 15 (OPTIONAL 0-255). ADDRESS 0 PROVIDES AN ALL CALL.																
BYTE 2:	MODE BYTE - RANGE IS 0 TO 255. SELECTS DISPLAY FUNCTION. USES BYTES 3 TO 8 AS INPUT DATA. SOME OF THE MODES INCLUDED: <table><tr><td>MODE 0</td><td>ASCII CHARACTER MODE.</td></tr><tr><td>MODE 1</td><td>NUMBER MODE.</td></tr><tr><td>MODE 2</td><td>GRAPHIC CHARACTER MODE.</td></tr><tr><td>MODE 3</td><td>12 HOUR TIME / TIMER MODE.</td></tr><tr><td>MODE 4</td><td>24 HOUR TIME / TIMER MODE.</td></tr><tr><td>MODE 5</td><td>COUNT DOWN TIMER MODE.</td></tr><tr><td>MODE 6</td><td>DISPLAYS SOFTWARE VERSION</td></tr><tr><td>MODE 7</td><td>DAYCOUNTER</td></tr></table>	MODE 0	ASCII CHARACTER MODE.	MODE 1	NUMBER MODE.	MODE 2	GRAPHIC CHARACTER MODE.	MODE 3	12 HOUR TIME / TIMER MODE.	MODE 4	24 HOUR TIME / TIMER MODE.	MODE 5	COUNT DOWN TIMER MODE.	MODE 6	DISPLAYS SOFTWARE VERSION	MODE 7	DAYCOUNTER
MODE 0	ASCII CHARACTER MODE.																
MODE 1	NUMBER MODE.																
MODE 2	GRAPHIC CHARACTER MODE.																
MODE 3	12 HOUR TIME / TIMER MODE.																
MODE 4	24 HOUR TIME / TIMER MODE.																
MODE 5	COUNT DOWN TIMER MODE.																
MODE 6	DISPLAYS SOFTWARE VERSION																
MODE 7	DAYCOUNTER																
BYTES 3 TO 8:	SIX CHARACTER BYTES - DISPLAY DATA OR SETTINGS FOR THE MODE SELECTED IN BYTE 2.																
BYTE 9:	MISCELLANEOUS DIGIT BYTE - PROVIDES COLONS, AM/PM INDICATORS, AND OTHER DISPLAY ATTRIBUTES.																
BATTERY:	RECHARGEABLE NI-CAD BATTERY BACK-UP KEEPS TIME OR RETAINS THE LAST DATA SENT DURING POWER OUTAGES.																

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "354" to the end of the model number indicates the RS232 Serial Input option is installed.

FOR ASSISTANCE CALL 800-444-7161

WEATHERPROOF DIGITAL CLOCK

***Six-Digit Clock For Outdoor Applications
2.3-Inch High, Super Bright Red, LED Digits
Visible Up To 100 Feet***

AE26SWX

**FOR FACTORIES, PARKING
GARAGES, LOADING DOCKS,
BUS STOPS, THEME PARKS,
CONSTRUCTION SITES,
OUTDOOR TRACKS...**



***Displays Time of Day in Hours and Minutes - 12 or 24 Hour Format
Receives Time Updates from a Computer, Master Clock, or GPS System
Heavy Duty Aluminum Enclosure with Visor (18.75"W x 8"H x 5.5"D)
NEMA 4X and NEMA 12 Versions Also Available
Correction Scheme: ATS 10-Byte Serial Data
120 VAC Power - Power and Data Cables Included
Low Voltage Versions Also Available***

Numerous Mounting and Wiring Configurations Available

TWO YEAR WARRANTY



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Description

The AE26SWX Digital Clock is specially configured for outdoor applications. The Super Bright LED digits are visible up to 200 feet in most outdoor light conditions. The AE26SWX requires a host device such as a computer, master clock, or GPS Interface for time updates. Numerous configurations are available.

Standard Configuration



120 VAC, 60 Hz power - Six foot SO type cord provided.

ATS 10-Byte Serial Data Correction. Six foot, 2-conductor Data cable provided.

Four mount holes on the back panel (sealing washers and hole plugs are provided).

Optional Configurations

The AE26SWX can be configured for your specific application. Many mounting and wiring options are available.



Conduit Compression Fittings with 2-foot pigtail leads for power and data. Conduits and hardware are not included.



2-Gang Weatherproof Wiring Box with cover. Pigtail leads for power and data. Conduits and hardware not included.



Blank bottom, no conduit holes. User punches holes as required. Pigtail leads for power and data are provided inside the enclosure.

Optional Power includes: 12 VAC, 24 VAC, 50 Hz

Optional Control Schemes include: GPS Synchronization, 59th Minute, Midnight/Noon, and BCD Correction.

AE26SWX SPECIFICATIONS

Display

Six, 2.3-Inch high super bright red Dot LED Digits

Displays Time in Hours and Minutes (HH:MM:SS) in 12 or 24 Hour format.

Power

120 VAC, 60 Hz, 12 Watts. A six foot, SO type cord is provided for termination in a weatherproof wiring box. Optional power and wiring is available. A rechargeable battery backup keeps time up to 12 hours without power.

Weatherproof Enclosure

Heavy duty aluminum (mill finish) enclosure with visor and clear polycarbonate lens (18.75"W x 8"H x 5.5"D).

Other

Operating Temperature: -20 to 70 degrees C

Accuracy: Line synchronous between updates from the host device. 0.003% crystal timebase during power fail backup.

WEATHERPROOF DIGITAL CLOCK

***Four-Digit Clock For Outdoor Applications
4-Inch High, Super Bright Red, LED Digits
Visible Up To 200 Feet***

AE44SWX

**FOR FACTORIES, PARKING
GARAGES, LOADING DOCKS,
BUS STOPS, THEME PARKS,
CONSTRUCTION SITES,
OUTDOOR TRACKS...**



***Displays Time of Day in Hours and Minutes - 12 or 24 Hour Format
Receives Time Updates from a Computer, Master Clock, or GPS System
Heavy Duty Aluminum Enclosure with Visor (18"W x 7.8"H x 5.5"D)***

NEMA 4X and NEMA 12 Versions Also Available

***Correction Schemes Include: ATS 10-Byte, BCD,
59th Minute, and Midnight/Noon***

***120 VAC Power - Power and Data Cables Included
Low Voltage Versions Also Available***

Numerous Mounting and Wiring Configurations Available

TWO YEAR WARRANTY



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WEATHERPROOF GPS CLOCK

***4-Inch, Four-Digit Outdoor Clock with GPS
Super Bright Red, LED Digits
Visible Up To 200 Feet***

AE44SWX / GPS-427TZ



Easy to Install

FOR FACTORIES, PARKING GARAGES, LOADING DOCKS, BUS STOPS, THEME PARKS, CONSTRUCTION SITES, OUTDOOR TRACKS...

Displays Time of Day in Hours and Minutes - 12 or 24 Hour Format

Receives Time Updates from the GPS-427TZ

Heavy Duty Aluminum Enclosure with Visor (18.75"W x 8"H x 5.5"D)

***120 VAC Power - Power and Data Cables Included
Low Voltage Versions Also Available***

Numerous Mounting and Wiring Configurations Available

TWO YEAR WARRANTY



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WEATHERPROOF CLOCK

AE84WX

8-Inch, 4-Digit Outdoor Clock

**Super Bright Red, LED Digits
Visible Up To 400 Feet**

RS232 Input, or Optional GPS

Easy to Install



**FOR FACTORIES, PARKING GARAGES, LOADING DOCKS, BUS STOPS, THEME
PARKS, CONSTRUCTION SITES, OUTDOOR TRACKS...**

Displays Time of Day in Hours and Minutes - 12 or 24 Hour Format

Receives Time Updates via RS232 from a computer, master clock, or GPS.

Heavy Duty Aluminum Enclosure with Visor (34"W x 14"H x 7"D)

***120 VAC Power - Power and Data Cables Included
Low Voltage Versions Also Available***

Optional Built-In or Externally Mounted GPS Antenna/Receiver



GPS-427TZ

Receives Accurate Coordinated Time from GPS Satellites.

***Sends Time in 12 or 24 Hour Format for all US Time Zones to
the AE84WX (Select Local Time Zone Inside the AE84WX)***

Numerous Mounting and Wiring Configurations Available

TWO YEAR WARRANTY



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Description

The AE84WX WeatherproofClock is specially configured for outdoor applications. The Super Bright LED digits are visible up to 400 feet in most outdoor light conditions. An optional GPS-427TZ can be mounted next to the AE84WX or can also be installed inside of the enclosure. Numerous configurations are available.

Standard Configuration



120 VAC, 60 Hz power - Six foot SO type cord provided.

ATS 10-Byte Serial Data Correction. Six foot, 2-conductor Data cable provided.

Four mount holes on the back panel (sealing washers and hole plugs are provided).

Optional Configurations

The AE84WX can be configured for your specific application. Many mounting and wiring options are available.

Optional Power includes: 12 VAC, 24 VAC, 50 Hz



Conduit Compression Fittings with 2-foot pigtail leads for power and data.

Conduits and hardware are not included.



Option WB2

Add 2-Gang Weatherproof Wiring Box with cover.

Pigtail leads are provided for power and data.



Optional GPS-427TZ Antenna/Receiver

NEMA 4X Plastic Enclosure (5.1"W x 5.1"H x 3"D)

Provides accurate Time data and DST settings every minute for all U.S. Time Zones including: EST, CST, MST, PST, HI, Atlantic, and GMT. Specify other zones if required.

"Power" (Green LED) on steady when power supplied

"Lock" (Green LED) on steady once locked onto GMT

"Data" (Red LED) flashes as data is sent

AE84WX SPECIFICATIONS

Display

Four, 8-Inch high super bright red Dot LED Digits (34"W x 14"H x 7"D)

Time

Displays Time in Hours and Minutes (HH:MM) in 12 or 24 Hour format.

Power

120 VAC, 60 Hz, 25 Watts. A six foot, SO type cord is provided for termination in a weatherproof wiring box. Optional power and wiring is available. A rechargeable battery backup keeps time up to 12 hours without power.

Weatherproof Enclosure

Heavy duty aluminum (mill finish) enclosure with visor and clear polycarbonate lens. Measures 34"W x 14"H x 7"D.

Other

Operating Temperature: -20 to 70 degrees C

Accuracy: Line synchronous between updates from the host device. 0.003% crystal timebase during power fail backup.

DISPLAY MODULES

For OEM's and System Integrators.

Standard ATS Clock/Timer Modules display time in 12 or 24 Hour Format and Count Up or Count Down elapsed time. Control options include: On-Board Push Buttons for setting time, Sync Input for external synchronization such as 59th Minute and Midnight/Noon Correction, and Serial Data Inputs (TTL and RS232) for sending time and data from a computer or master clock. Other custom features can be specified.



8900-0C184
1.8-Inch, Four Digit Clock/Timer/
Display Red Super-Bright LED



8900-0C24
2.3-Inch, Four Digit Clock/Timer/Display
Module, Red Super-Bright LED. True
Green and Yellow LED's are optional



8900-0C44
4-Inch, Four Digit Clock/Timer/
Display Module, Red Super-
Bright LED



8100-0087
4-Inch, Four Digit CC44S Clock/Timer/
Display Module, Red Super-Bright Dot
LED's. Green and Yellow LED's are
optional.



8100-0058
2.3-Inch, 16-Segment, Six
Character Display, Red
Super-Bright LED. Green
and Yellow are optional



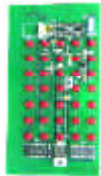
8100-0080
1.8-Inch, 18-Digit ANC818 Clock/
Calendar Module. 1-Inch Seconds,
.8-Inch alpha characters.
Red Super-Bright LED



8100-0078
2.3-Inch, Six Digit Display,
Super-Bright Red Dot LED's.
Green and Yellow are optional



8100-0036
1-Inch, Six Digit Clock/Timer/
Display Module, Super-Bright Red LED's.
Green and Yellow are optional



8100-0042 3-Inch, Single Character
5X7 Dot Matrix Display Module with
on-board CPU. Red Super-Bright Dot
LED's. Optional Green and Yellow LED's



8100-0071
2.3-Inch, Three Digit Elapsed Timer
Module, Red Super-Bright LED. True
Green and Yellow LED's are optional



8100-0035 .56-Inch, Six Digit CC56
Module, Red Super-Bright LED.
Optional Green and Yellow Digits



8100-0082 .6-Inch, 8 Character RD-255B
Alph-Numeric Display Module
Back-Lighted LCD

More details are provided on each product brochure.

Custom Versions Available.

Additional modules are available for almost any application. Typical examples are: Counters, Process Indicators, Day Counters,



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CLOCK / DISPLAY MODULE 8900-0C24

2.3 INCH, 4 DIGIT - CLOCK / DISPLAY MODULE



*For OEM's and Clock System Integrators.
Fits most clock manufacturer's existing enclosures.*

*2.3-Inch High, Super Bright Red Diffused LED Digits - Visible up to 100 feet away.
Wider, Brighter Segments... more visible than the
typical narrow, segments used by most clock manufacturers.*

12 / 24 Hour Format... On-Board Push Buttons for setting time.

59th Minute and Midnight/Noon Correction.

TTL and RS232 Serial Data Inputs.

*Interfaces with most master clocks, computers, and *wireless systems.*

*Set Time, Count Up or Down Elapsed Time, and Display 7-Segment Messages
using the Serial Data Inputs and your system controller.*

Connects directly to the AE21 Controller, or a computer with AECOMM Software.

Capacitive Backup - No Batteries Required.

Low Voltage : 12 VAC/DC Powered.

Custom Versions Available.

**Receiver is required for wireless systems applications.*

ORDERING INFORMATION

8900-0C24

System Clock Module, Subassembly - no enclosure, 12 VAC



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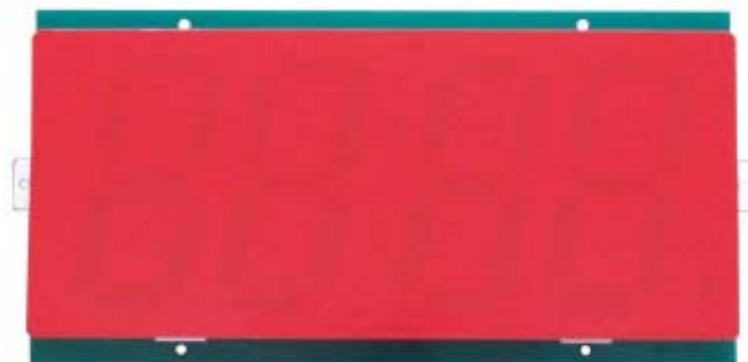
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CLOCK / DISPLAY MODULES

8100-0091 SERIES CLOCK / DISPLAY MODULES



*For OEM's and Clock System Integrators.
Fits most clock manufacturer's existing enclosures.*

4-Inch High, Super Bright Red Diffused LED Digits - Visible up to 100 feet away.

*12 / 24 Hour Format . . . TTL and RS232 Serial Data Inputs.
Interfaces with most master clocks, computers, and *wireless systems.*

*Set Time, Count Up or Down Elapsed Time, and Display 7-Segment Messages
using the Serial Data Inputs and your system controller. Connects directly
to MC Series Master Clocks, AE21 Controllers, or a computers
using AECOMM or PCMCSET Software.*

*Low Voltage : 12 VAC and 24 VAC Powered versions available.
Custom Versions Available.*

** Receiver is required for wireless systems applications.*

ORDERING INFORMATION

8100-00091-12	Clock Module Subassembly for stand-alone applications (12 VAC powered)
8100-00091-24	System Clock Module, Subassembly for system controlled applications (24 VAC powered)
8100-00091-183	System Clock Module, Subassembly for wireless or system controlled applications (12 VAC powered)



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The 8900-0091 Series Clock/Display Modules are intended for OEM's and Clock System Integrators. Its form fit design allows it to drop into many existing clock enclosures, including the typical flush mount and sloping front enclosures. Serial data inputs allow this product to work with system controllers, computers, and master clock systems for setting time, elapsed time, and displaying 7-Segment ASCII Messages (Limited), such as "FIRE", "HELP", and "bELL". Runs elapsed time in Hours and Minutes, Counts down elapsed time in Hours and Minutes, and Minutes and seconds. Up to 50 clocks can be connected to a standard RS232 Port at distances of up to 2000 feet away. Signal drivers are available for adding additional clocks and greater distances.

Applications

PCB Module - Retro-Fits many existing enclosures (11.7"W x 5.7"H x 1.8"D)

CC2002, CC2003
Wall Mount and
Double Mount
Enclosures



CC2002N4XA
NEMA 4X
Stainless Steel
Enclosure



CC2002F
Flush Mount
Enclosure



CC2002H
Sloping Front
Enclosure



Typical Display 7-Segment Messages

8100-0091-12

Power - 12 VAC, 6VA 50/60 Hz (DIP Switch selected)
Power Jack is provided.

Capacitive Backup - Keeps time up to 1 hour during power loss.

Accuracy - Line Synchronous on AC Power, .003% during backup or on Crystal Time Base

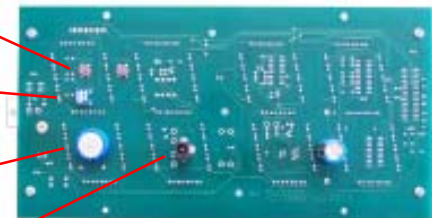
Time - 12/24 Hr format and Seconds display
(DIP Switch selected)

Hours / Minutes
Push-Buttons

DIP Switches

1FD Capacitive
Backup

12 VAC
Power Jack



Ref DWG 8100-0091-12

8100-0091-24

Power - 24 VAC, 6 VA Max., 50/60 Hz (Jumper selected)

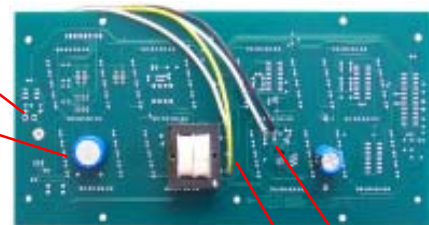
Time - 12 or 24 Hr format (Jumper selected, or serial data controlled)

TTL and RS232 Inputs - For ATS Serial Data, 10 Byte Messages. Sets Time in 12 or 24 Hr format. Controls Count Up and Count Down elapsed timers, and displays 7-Segment ASCII Messages (Limited).

K1 Sync Input - 12 to 24 V AC/DC for Midnight and 59th Minute Correction.

K1 Input

Optional 1FD
Capacitive Backup



24VAC Input RS232 Input

Ref DWG 8100-0091-24

8100-0091-183

Power - 12 VAC, 6 VA Max., 50/60 Hz (Jumper selected)

Time - 12 or 24 Hr format (Jumper selected, or serial data controlled)

TTL and RS232 Inputs - For ATS Serial Data, 10 Byte Messages. Sets Time in 12 or 24 Hr format. Controls Count Up and Count Down elapsed timers, and displays 7-Segment ASCII Messages (Limited).

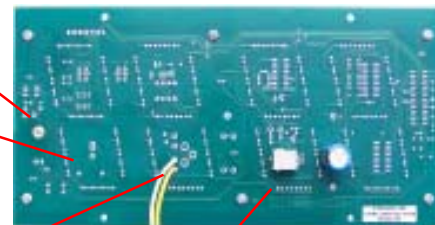
K1 Sync Input - 12 to 24 V AC/DC for Midnight and 59th Minute Correction.

K1 Input

Optional 1FD
Capacitive Backup
Installed here

12VAC Input

RJ11 TTL Input



Ref DWG 8100-0091-183

COMMON SPECIFICATIONS:

Digits - Four, 7-Segment, Super Bright Red LED Digits, 4-Inches High

Crystal Time Base- Optional on all models (.003%)

Size - PCB Module (11.7"W x 5.7"H x 1.8"D, No Enclosure)

Capacitive Backup - Keeps time up to 1 hour during power loss. Optional on 8100-0091-24 and 8100-0091-183

DISPLAY CONTROL TERMINAL AE21 SERIES



Control AE Series RS232 Displays

Set Time

Send Numbers

**Run Count Up and Count
Down Elapsed Timers**

For all 2, 3, 4, 5, or 6 Digit AE Series RS232 Displays

Also works with CC2000 Series Displays

Easily connect multiple displays of any size on one system using simple two-conductor cable, up to 2000 feet away. All system displays require local power.



AE Series
8" Display

AE21
Terminal

CC2000 Series
4" Display

*Each AE21 Display Control Terminal
comes complete with a power module
and ten-foot data cable.*

Menu Driven - Easy to use

Set time in 12 or 24 hour format

Start count up elapsed timer from zero

Preset, start, stop, and reset count down
elapsed timer

Send up to six numbers

Send "Fire", "bELL", or "HELP" messages

AE SERIES DISPLAYS are available with: 1", 2.3", 4", 8", and 12" High Digits.

Visible from 5 feet to 500 feet away...

TWO YEAR WARRANTY



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REMOTE SWITCH PANELS

REMOTE SWITCH PANELS FOR CONTROLLING AE SERIES LARGE DISPLAYS IN FLUSH MOUNT OR SURFACE MOUNT ENCLOSURES

2101 Flush Mount



2101 Surface Mount



2102 Flush Mount



2102 Surface Mount



The 2101 and 2102 Remote Switch Panels provide complete control of all AE Series Multi-Function Clock/Timer Displays, including programming the time in 12 or 24 hour format, presetting the Up and Down counting elapsed timers, and providing the Start/Stop and Reset functions. A piezo alarm output is built-in.

The 2101 Remote Switch Panel has a keylock switch for the Run/Set functions, which locks out any changes to the time or elapsed timer presets. All models mount easily to a double gang box. Pigtail lead wires are included for field wiring. These panels can be located up to 100 feet from the AE Display.

The 2103 Remote Switch Panel can be used with all AE Series Event Counter Displays (AE Series Displays with Option 483). It provides Up and Down push button switches for increasing and decreasing the event count and a toggle switch to reset count.



2103

Additional cable: 1380-8456 6-Conductor Cable (Belden 5456) or equivalent
1380-8444 4-Conductor Cable (Belden 8444) or equivalent
1380-8443 3-Conductor Cable (Belden 8443) or equivalent

Be sure to check your local codes for all wiring requirements.

CUSTOM SWITCH PANELS ARE AVAILABLE TO FIT NEARLY ANY APPLICATION



210XB-P6



2105-515



2105B-P



210XB-P-479A



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CONTROL STATIONS

2121B-P SERIES

CONTROL STATIONS FOR AE SERIES LARGE DISPLAYS



2121B-P

The 2121B-P Control Station has a large red, momentary push button switch. Ideal for Start/Stop, Increment, Count, and Reset functions

Contact Rating: 2 Amps @ 48 VDC,
6 Amps @ 120 VAC

Wiring: Terminal screws on contact block inside. Compression fitting for up to 3/8" Dia. cable. Cable not included.

Specify Label: Start/Stop, Reset, Increment, Decrement, or custom.

The 2122B-P Control Station has a keylock switch for application where only a key operator has the authority to control Reset and Run functions.

Contact rating: 4 Amps @ 120 VAC or 28 VDC.

Wiring: Pigtail lead wires inside, terminate with wire nuts to incoming cable. Compression fitting for up to 3/8" Dia cable. Cable not included

Specify Label: Run/Reset, On/Off, or custom.



2122B-P

Enclosures: All models have a gray, flame retardant ABS plastic enclosure with mounting tabs. Dimensions: 4.6" x 4.6" x 2.3". Surface mounts to a wall or panel .

Optional: Two Conductor #22 for low voltage applications. Order ATS P/N:1380-8442

Cable /ft Power Cable, 18-3 SJT-3, Black for 120 VAC applications. Order ATS P/N: 1385-19348



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phone: 318-797-7508

DIGITAL CLOCK / TIMERS

2.3 and 4 Inch Stand Alone Clock / Timers

Plug and Play - Built-In Controls

High Quality - Best Six-Digit Clocks Available

FOR SCHOOLS, HOSPITALS, FACTORIES, SPORTS FACILITIES,
COURTROOMS, THEATERS, BOARDROOMS, CHURCHES, and MUSEUMS.



AE26/CC Super Bright 2.3-Inch, 6-Digit,
Multi-Function Clock/Timer



AE46D/CC Super Bright 4-Inch, 6-Digit,
Multi-Function Clock/Timer

Displays Time of Day and Elapsed Time in Hours, Minutes, and Seconds

Time of Day in 12 or 24 Hour Format

Count Up, or Count Down Elapsed Time - Programmable Presets

Black Anodized Aluminum Enclosure - Wall Mount or Free-Standing

Low Voltage Power Module Plugs into standard 120 VAC Outlet



AE44D/CC Super Bright 4-Inch, 4-Digit,
Multi-Function Clock/Timer

4", 4-Digit Model Also Available

Displays Time of Day in Hours and Minutes

Counts Elapsed Time in Minutes and Seconds

AE Series Multi-Function Clock/Timers are available with digit sizes up to 12-Inches in numerous configurations to meet your requirements. Including RS232, USB, and GPS inputs, and Two-Sided, Wall Mount, Ceiling Mount, and Custom versions.

TWO YEAR WARRANTY



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4-INCH DIGITAL CLOCK / TIMERS

Plug and Play - Visible Up To 200 Feet - Built-In Controls

Super Bright, Dot LED'S Visible In Sunlight

**FOR SCHOOLS, HOSPITALS, FACTORIES, SPORTS FACILITIES,
COURTROOMS, THEATERS, BOARDROOMS, CHURCHES, and MUSEUMS.**



AE46S/CC Super Bright 4-Inch, 6-Digit, Multi-Function Clock/Timer

6-Digit Model

Displays Time of Day and Elapsed Time in Hours, Minutes, and Seconds

Time of Day in 12 or 24 Hour Format

Count Up, or Count Down Elapsed Time - Programmable Presets

Black Anodized Aluminum Enclosure - Wall Mount or Free-Standing

Low Voltage Power Module Plugs into standard 120 VAC Outlet



*AE44S/CC Super Bright 4-Inch, 4-Digit,
Multi-Function Clock/Timer*

4-Digit Model Also Available

Displays Time of Day in Hours and Minutes

Counts Elapsed Time in Minutes and Seconds

AE Series Multi-Function Clock/Timers are available with digit sizes up to 12-Inches in numerous configurations to meet your requirements. Including RS232, USB, and GPS inputs, and Two-Sided, Wall Mount, Ceiling Mount, and Custom versions.

TWO YEAR WARRANTY



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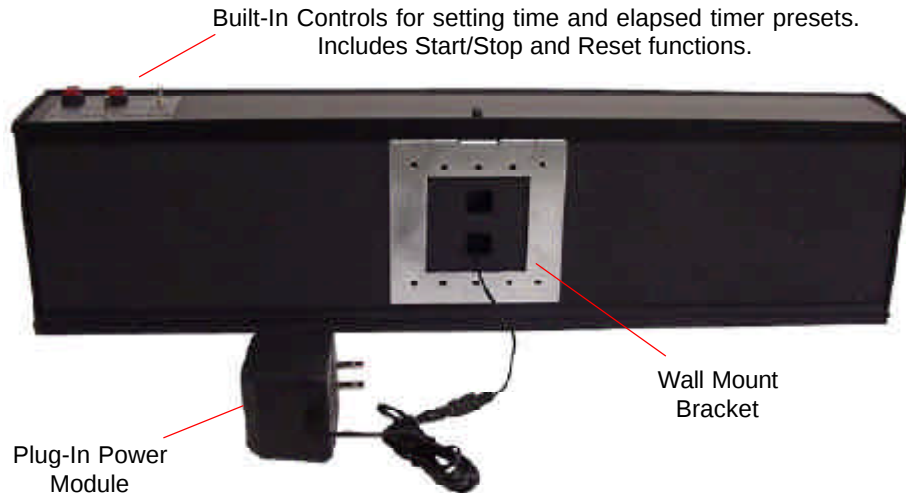
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Phone: 318-797-7508

Description

The AE44S/CC and the AE46S/CC are plug and play Multi-Function Clock/Timers, specially configured for stand-alone applications. With Super Bright Dot LED's that are visible in bright sunlight, this model can be used for temporary outdoor applications. No wiring is required. Built-in controls and a plug-in power module provide quick and easy set up. They can be used as a portable device, or can be permanently installed using the wall mount bracket provided.

AE Series Multi-Function Clock/Timers operate simultaneously as a time of day clock, a count up elapsed timer, and a count down elapsed timer. Built-in controls on the top panel allow the operator to select the desired function, as it is in progress, without affecting the other functions.



AE44S/CC

Four, 4-Inch high super bright red Dot LED's
(16"W x 6.1"H x 3.5"D)

Time

Displays Hours and Minutes (HH:MM) in 12 or 24 Hour format.

Elapsed Time

Displays Minutes and Seconds (MM:SS).

Counts up elapsed time to a preset value and holds at the preset (Max preset 59:59). Without a preset, it counts up to 59:59 and rolls over to 00:00 continuing to count.

Counts down elapsed time from a preset value (Max preset 59:59). Counts down to 00:00 and holds.

AE46S/CC

Six, 4-Inch high super bright red Dot LED's
(24"W x 6.1"H x 3.5"D)

Time

Displays Hours, Minutes, and Seconds (HH:MM:SS) in 12 or 24 Hour format.

Elapsed Time

Displays Hours, Minutes, and Seconds (HH:MM:SS).

Counts up elapsed time to a preset value and holds at the preset (Max preset 30:59:59). Without a preset, it counts up to 99:59:59 and rolls over to 00:00:00 continuing to count.

Counts down elapsed time from a preset value (Max preset 30:59:59). Counts down to 00:00:00 and holds.

Power

12 VAC, 12 Watts. A 120 VAC/12 VAC 60Hz. Power module is included. Plugs into standard 120 Volt AC outlet. Built-in rechargeable battery backup. Keeps time and counts up to 12 hours without power.

Other

Operating Temperature: 0 to 50 degrees C

Accuracy: Line synchronous for best long term accuracy. 0.003% crystal during power fail backup.

LARGE DIGITAL CLOCK/TIMERS

EIGHT AND TWELVE INCH CLOCKS STAND ALONE PLUG AND PLAY BUILT-IN CONTROLS

Eight Inch High Digits
SUPER BRIGHT RED Dot LED's
4 and 6 Digit Models Available
Visible up to 350 feet



AE84/CC Multi-Function Clock Timer



AE124/CC
Multi-Function Clock/Timer

Twelve Inch High Digits
SUPER BRIGHT RED Dot LED's
4 and 6 Digit Models Available
Visible up to 500 feet

***Displays Time of Day in 12 or 24 Hour Format in Hours and Minutes,
and Elapsed Time in Minutes, and Seconds.
(Six Digit Models are available for Hours, Minutes, and Seconds)***

Count Up, or Count Down Elapsed Time - Programmable Presets

Black Anodized Aluminum Enclosures - Wall Mount or Free-Standing

Low Voltage Power Modules Plugs into standard 120 VAC Outlets

AE Series Multi-Function Clock/Timers are available in numerous configurations to meet your requirements. Including RS232, USB, and GPS inputs, and Two-Sided, Wall Mount, Ceiling Mount, and Custom versions .

TWO YEAR WARRANTY



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LARGE DIGITAL CLOCKS

CC2003

FOUR INCH HIGH DIGITS Visible up to 100 Feet Away

For Home, Office, or Business



Stand-Alone, Plug and Play - Easy to install

Attractive, black anodized aluminum enclosure

Easily hangs on the wall - or set it on a shelf

*Four Inch High - Super Bright **Red** LED Digits - Visible up to 100 feet away.*

12 or 24 Hour Time Display

AM / PM Indicator

Keeps time during power outages - No Batteries Required.

Includes 12 VAC Power Module

TWO YEAR WARRANTY

For Synchronized System Clocks see the CC2000 and AE Series Products



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MEETING TIMER

AE21-MT1 FOUR DIGIT CLOCK / TIMER SYSTEM

Time Speakers, Meetings, Procedures

For City Council Chambers, Boardrooms, Courtrooms, and Conference rooms.



CC2002, 4-Inch Clock/Timer Display with AE21 Controller

Plug and Play - Easy to Install - Easy to Use

***Count Up or Count Down Elapsed Time - Automatically switches
from Hours and Minutes to Minutes and Seconds when
Count Down Time is less than 1 hour***

Display Time in 12 or 24 Hour Format

***Attractive Desk-Top Terminal Controls all Functions
Up to 2000 Feet Away***

All clock and timer functions are programmed and controlled from the AE21 Terminal. The system consists of an AE21 Terminal connected to a CC2002 Display and a 120 VAC to 24 VAC Power Module. A 100 foot data cable is included so that the AE21 Terminal can be located up to 100 feet away. Additional displays can be added to this system and data cable length can be up to 2000 feet. Give us a call for additional displays and custom cable length.

Ordering Information:

AE21-MT1 Desk-Top Terminal with back-lighted display, power module, 100 foot data cable, and CC2002 Single Sided Display with Four, 4" High Red LED Digits and power module.

1380-8442 Cable, 2 Cond #22 - Belden

AE 8" and AE 12" Series Displays also available



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COUNCIL CHAMBER TIMER

SIX DIGIT CLOCK / TIMER SYSTEM

Time Speakers, Meetings, Proceedings



AE21, Controller



CC186/2, Two-Sided Display

Plug and Play - Easy to Install - Easy to Use

***Display 12 or 24 Hour Time of Day,
Count Up or Count Down Elapsed Time***

***Attractive Desk-Top Terminal Controls all Functions
Up to 2000 Feet Away***

For City Council Chambers, Boardrooms, Courtrooms, and Conference rooms.

CC Series Clock / Timer Systems function as 12 or 24 hour stand-alone or secondary clocks, and simultaneously as presettable up or down counting elapsed timers. All clock and timer functions are programmed and controlled from the AE21 Terminal. Each system requires one AE21 Terminal and one or more CC Series Displays.

Models:

AE21 Desk-Top Terminal with back-lighted display, power module and 10-foot data cable are included.

CC186 Single Sided Display with Six 1.8" High Red LED Digits, power module is included.

CC186/2 Double Sided Display with Six 1.8" High Red LED Digits per side, power module is included.



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TIME ZONE CLOCK SYSTEMS

Synchronized World Time Zone Displays

For Boardrooms, Trading Rooms, Hotel Lobbies, Airports, Zulu Clocks.



Synchronized Time For Up To 24 World Time Zones

12 or 24 Hour Format - With or Without Seconds

1", 2.3", 4", 8" and 12" High Super Bright Led Digits

Visible from 5 feet to 500 feet away

Stand-alone Versions, or Complete Master Clock or Computer Controlled Systems

Programmable Offsets from GMT and Seasonal Adjustments.

Attractive Black Anodized Aluminum Enclosures

From one zone to ten zones in a single enclosure.

Enclosures can be stacked end to end or on top of each other as required.

Optional Name Rails

Optional Name Rails with Labels can be attached to any 4", 8", or 12" models

(Not required for 1" and 2.3" models)

Optional GPS Antenna / Receiver tracks the Atomic Clock



TZ-OPT-MC Stand Alone Option



Built-in Master Controller

Sliding Cover hides the Master Controller after setup

Add Option TZ-OPT-MC to any model Time Zone Clock for a complete self-contained, stand alone system - Operate multiple displays - Optional GPS Interface available.

TWO YEAR WARRANTY



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TIME ZONE CLOCK SYSTEMS

Configured from Stock Sub-Assemblies to meet your requirement

Cost Effective, Quick Delivery, Easy to Install

Master Clock or Computer Controlled Systems

Connects to master clock or computer with simple 2-conductor cable up to 2,000 feet away.



4" Digits, Nine Zones (180"W x 6.1"H x 3.5"D). Shown with optional name rail for zone labels.



8" Digits, Five Zones (186"W x 16.1"H x 3.5"D). Shown with optional name rail for zone labels

World Time Zone Master Clocks

MC4181-388



Controls up to 15 zones with programmable offsets from GMT and seasonal changes.
Optional GPS Antenna / Receiver tracks the Atomic Clock.



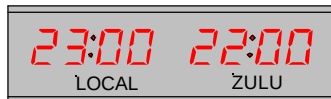
GPS-427A Antenna / Receiver

MC41P-388

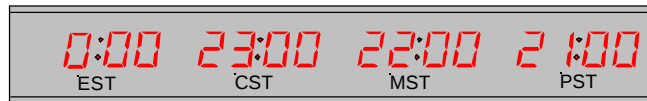


Sample Models

Call for your requirements



AE24-388-2 2.3" Digits, Two Zones (24"W x 6.1"H x 3.5"D)



AE24-388-4 2.3" Digits, Four Zones (48"W x 6.1"H x 3.5"D)



AE44D-388-4 4" Digits, Four Zones (84"W x 6.1"H x 3.5"D)



AE44D-388-5 4" Digits, Five Zones (107"W x 6.1"H x 3.5"D) Shown with optional name rail for zone labels.

800-444-7161



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SYSTEMS**

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GPS-427TZ ANTENNA/RECEIVER

GPS TIME ZONE ANTENNA/RECEIVER



Weatherproof Enclosure

5.1"W x 5.1"H x 3"D

Provides accurate GMT Time and Data for ATS Time Zone Clock Systems

GMT Offsets and DST settings transmitted every minute

(Required time zones should be specified with order)

Mounted up to 1,000 feet away from Master Clock or other equipment

Enclosure is NEMA 4X Plastic with PVC Conduit fitting

(12-inch piece of 1-inch conduit supplied)

"Power" (Green LED) on steady when power is supplied

"Lock" (Green LED) on steady once locked onto GMT

"Data" (Red LED) flashes as data is sent

TWO YEAR WARRANTY



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ALPHA-NUMERIC SYSTEM DISPLAY

AN212 ALPHA-NUMERIC SYSTEM DISPLAY

*STATUS AND SECURITY MESSAGES FOR SCHOOLS,
HOSPITALS, FACTORIES, STUDIOS, GOVERNMENT FACILITIES, ...*



*Display Day, Date, Security Status, Room Numbers,
"Bell", "Lunch Break", "Fire", "Code Blue", "Lockdown"*

*Twelve, 2.3-Inch High Super Bright Red LED
Alpha-Numeric Characters. Visible up to 100 Feet Away*

*RS232 Serial Input for Easy Interface to Computers, PLC's,
Master Clocks, A/V Controllers and Wireless Systems.*

*Clock/Display Combinations are
provided by stacking the AN212 with
an AE46D Digital Clock. Each line
has its own address. One, 2-wire
serial input receives time set and
message data from the host device.*



*Can be Factory Configured for up to Five Digital Inputs for
Displaying up to 32 Factory Stored Messages.*

TWO YEAR WARRANTY



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PANEL MOUNT

DISPLAY

AN86P Multi-Function Clock / Timer / Display



Black Panel Mount Enclosure Conforms to DIN 43700

Six character, alpha-numeric Panel Mount Display features easy, user selected functions.

Use it as a four or six digit clock/timer, serial data display, system clock, count up or down elapsed timer, run accumulator, or analog input display.

Six, **BRIGHT RED**, 0.8 - Inch Alpha-Numeric Characters are visible up to 40 feet away.

Easily interfaces with computers, PLC's, ATS control panels, terminals, and master clocks. Supports popular time correction schemes such as Midnight Sync, 59th Minute, RS232, GPS Correction.

User Selected Functions Include:

Four or Six Digit Multi-Function Clock/Timer	Serial Data Controlled Display/Timer
12 or 24 Hour Time of day Clock	Run Time Accumulator
Presettable Count Up Elapsed Timer	Presettable Count Up Elapsed Timer
Presettable Count Down Elapsed Timer	Presets and Alarms
Analog Input Display	

TWO YEAR WARRANTY



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AN86P Multi-Function Clock / Timer / Display

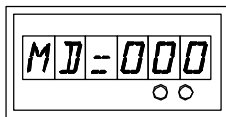
The AN86P Multi-Function Clock/Timer/Display is a user defined panel-mount display. Most panel mount displays are intended for measuring or controlling process variables. The AN86P provides the more specialized time functions along with annunciator features all in one. Ideal as a system clock or cycle timer on any control panel. Multiple, look-alike displays are easily combined to provide a complete panel application.



Alpha-Numeric Message Display

Each AN86P can be programmed with its own unique address, or group address.

Serial Data Messages can be sent from your computer or PLC.



Set up is easy. Simply connect the terminals for set-up and enter the desired Mode (MD)



Connects to the 2101 Control Station for Count UP and Count DOWN Elapsed Time Functions with piezo alarm

Specifications

Six 0.8-Inch High Alpha-Numeric Characters

BRIGHT RED 16-Segment LED's

Two 12 to 24 Volt AC/DC Opto-Isolated Inputs

Five TTL Digital Inputs

One 0-10 Volt DC Analog Input (10 Bit A/D)

RS2322 Serial Data Input

One Digital Output (12 VDC, 50 mA)

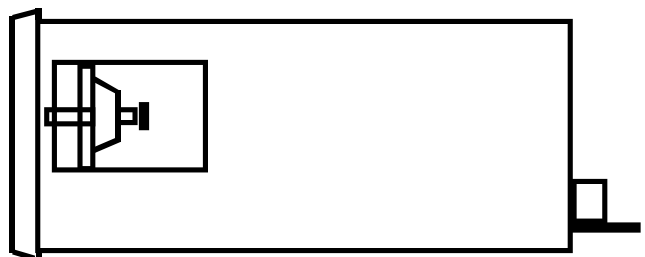
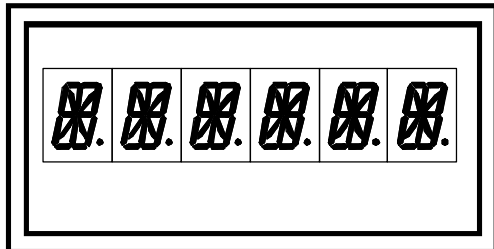
2 PPM Temperature Compensated Crystal Time Base

Programmable Functions - Four or Six Digit, 12 or 24 Hour Time, Count Up or Count Down Elapsed Time with presets, Run Time Accumulator, Serial Data Display, and 0-10 VDC Indicator.

12 Volt AC/DC Powered (150 mA max.)

Panel Mount Enclosure with mounting hardware.
Conforms to DIN 43700 (144mm x 72mm x 166.5mm)

NEMA 12 rated with gaskets. Optional NEMA 4 Type seal is available.



DAY COUNTERS



Plug and Play

Count Up or Count Down
"Accident Free Days"
"Project Completion"
"Julian Day"

Super BRIGHT RED

LED Digits

Easy setup. Enter the starting day count and time. Select Count Up or Count Down. Count automatically advances each night at Midnight



Specifications

2.3", 4", 8", & 12" High Super Bright Red LED Digits

Built-In Controls - Optional computer controlled versions available

Power: Plug-in power module - 120 VAC / 12 VAC, 60 Hz, 6 VA Max

*Other power is optional.

Attractive black anodized aluminum Wall Mount Enclosure

*Wall mount bracket included

CUSTOM LABELING IS AVAILABLE



TWO YEAR WARRANTY



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CUSTOM PROJECT CLOCKS

Shows the remaining number of Days, Hours, Minutes and Seconds to Project Completion Date, or Upcoming Event

Custom Name Rails and Lettering Available

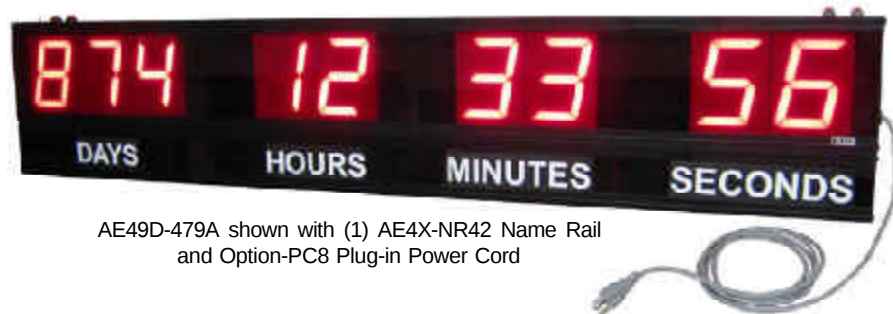
Also used as Custom Julian Clock



AE49S-479A shown with (2) AE4X-NR42 Name Rails and Custom White Vinyl lettering

JULIAN CLOCK

Shows the Day of the year, and Time of Day in Hours, Minutes and Seconds, in 24 hour format.



AE49D-479A shown with (1) AE4X-NR42 Name Rail and Option-PC8 Plug-in Power Cord



AE29-479A shown with (2) AE4X-NR42 Name Rails and Custom White Vinyl lettering

SUPER BRIGHT RED LED DIGITS

1", 2.3", 4", 8" or 12" High

TWO YEAR WARRANTY

CONTACT US FOR HELP WITH YOUR APPLICATION



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CUSTOM PRODUCTS & SYSTEMS

CUSTOM DISPLAYS



Let ATS customize a display to fit your application!

ATS understands that creative systems integrators, and contractors are often confronted with projects that require a unique solution.

Digit sizes range from .56 Inches to 12 Inches high and are available in Red, Green, and Yellow on most models.

ATS products are designed using modular sub-assemblies, "state-of-the-art" microprocessor based controllers, and labeled to fit your application. Therefore, custom displays move quickly, and cost effectively from concept to finished product.

Modular design - allows you to create nearly any desired configuration. Combine counters, timers, clocks, process indicators, and serial data inputs.

CONTACT US FOR YOUR NEXT CUSTOM DISPLAY



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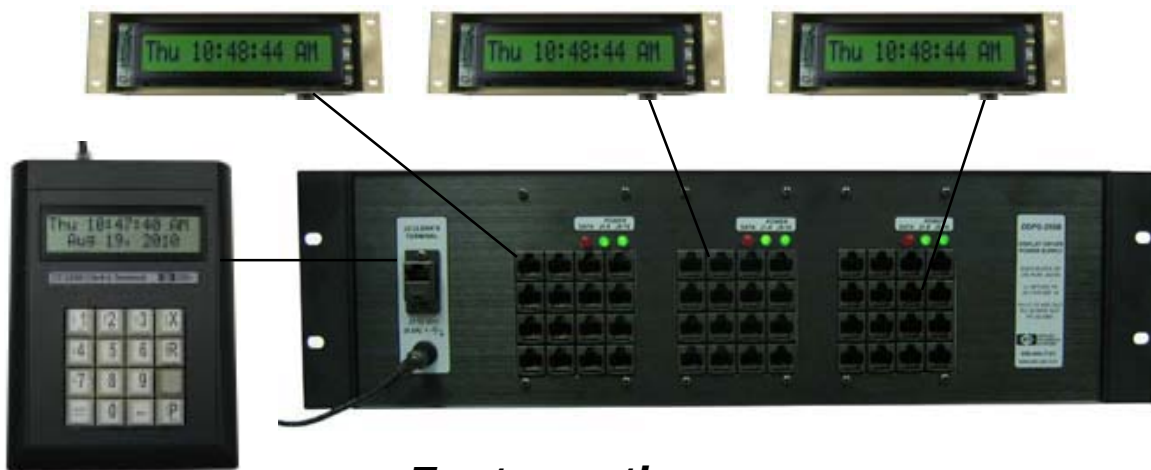
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Ph: 318-797-7508

TIMED DEBATE CLOCK SYSTEM

The TDCS-255B Timed Debate Clock System

Provides a Clerk Controlled, Multi-Zone Display System Configurable for Any Size Multi-Station Requirement.



Features the ---

CT-255B Controller provides all time, date, and elapsed timer controls from a central location (Clerk's Desk). Attractive Desktop Enclosure. Built-In Precision Real Time Clock Provides Accurate Time and Date.

RD-255B Remote Displays provide local display of time, date, and elapsed timer progress for an unlimited number of stations.

DDPS-255B Display Driver Power Supply provides power and data for the Clerk's Terminal, and up to 48 Remote Displays.

Modular System - easy installation. Low voltage components are connected using modular jacks and CAT 5 cable.

TDCS-255B Timed Debate Systems can be customized for your specific application.

TWO YEAR WARRANTY



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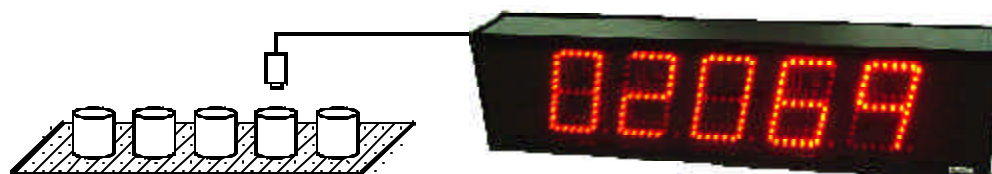
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DISPLAY PRODUCTION COUNT

LARGE DIGIT UP and UP/DOWN COUNTERS

Easily Connect To All Types Of Input Signals



2, 3, 4, 5, and 6 Digit Models
Configured To Your Requirements

Use suffix "230" for count up only
Use suffix "483" for count up/down



2.3-Inch Bar-Segment
Visible up to 100 feet away
* 120 VAC, 60 Hz, 6 Watts

AE24-xxx 4-Digit Counter (12"W x 6.1"H x 3.5"D)
AE26-xxx 6-Digit Counter (14"W x 6.1"H x 3.5"D)

4-Inch Super Bright

Visible up to 200 feet away

* 120 VAC, 60 Hz, 15 Watts



AE42S-xxx 2-Digit Counter (7.5"W x 6.1"H x 3.5"D)
AE43S-xxx 3-Digit Counter (12"W x 6.1"H x 3.5"D)
AE44S-xxx 4-Digit Counter (16"W x 6.1"H x 3.5"D)
AE45S-xxx 5-Digit Counter (24"W x 6.1"H x 3.5"D)
AE46S-xxx 6-Digit Counter (24"W x 6.1"H x 3.5"D)



4-Inch Bar-Segment
Visible up to 200 feet away
* 120 VAC, 60 Hz, 15 Watts

AE42D-xxx 2-Digit Counter (7.5"W x 6.1"H x 3.5"D)
AE43D-xxx 3-Digit Counter (12"W x 6.1"H x 3.5"D)
AE44D-xxx 4-Digit Counter (16"W x 6.1"H x 3.5"D)
AE45D-xxx 5-Digit Counter (24"W x 6.1"H x 3.5"D)
AE46D-xxx 6-Digit Counter (24"W x 6.1"H x 3.5"D)



8-Inch Super Bright
Visible up to 400 feet away
* 120 VAC, 60 Hz, 15 to 50 Watts

AE82-xxx 2-Digit Counter (16"W x 10"H x 3.5"D)
AE83-xxx 3-Digit Counter (24"W x 10"H x 3.5"D)
AE84-xxx 4-Digit Counter (30"W x 10"H x 3.5"D)
AE85-xxx 5-Digit Counter (37"W x 10"H x 3.5"D)
AE86-xxx 6-Digit Counter (44"W x 10"H x 3.5"D)

12-Inch Super Bright

Visible up to 600 feet away

* 120 VAC, 60 Hz, 50 Watts

AE122-xxx 2-Digit Counter (24"W x 15"H x 3.5"D)
AE123-xxx 3-Digit Counter (35"W x 15"H x 3.5"D)
AE124-xxx 4-Digit Counter (48"W x 15"H x 3.5"D)
AE125-xxx 5-Digit Counter (60"W x 15"H x 3.5"D)
AE126-xxx 6-Digit Counter (72"W x 15"H x 3.5"D)

TWO YEAR WARRANTY

* Other power, wiring, and mounting options are available



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DESCRIPTION

AE Series Counters are available in 2, 3, 4, 5, and 6 digit versions with digit sizes ranging from 1 inch high to 12 inches high. Standard signal types for COUNT and RESET include: Dry Contacts from limit switches, proximity detectors, or relays; DC Voltage Signals from PLC's, TTL Outputs (NPN or PNP) from instruments and detectors; and AC Voltage Signals from PLC's or other control equipment. The opto-isolated inputs allow the controls to be up to 1000 feet away from the display.

AEXX- 230 Models

Count Both Count and Reset Inputs are opto-isolated inputs that work with dry contacts, DC voltages from 12 VDC to 120 VDC, or AC voltages from 12 vac to 120 vac (use suffix "230AC"). Duration must be greater than 20 msec. The Reset Input overrides the Count Input.

AEXX- 483 Models

Count: Both Count Up and Count Down Inputs are opto-isolated inputs that work with dry contacts, DC voltages from 12 VDC to 120 VDC, or AC voltages from 12 VAC to 120 VAC (use suffix "483AC"). Duration must be greater than 20 msec.

Reset The Reset Input requires a dry contact or a DC voltage up to 24 VDC. The Reset Input overrides both Count Inputs.

AEXX-230 and AEXX- 483 Models

Count speed: Up to 25 Hz with a DC signal of a duration greater than 20 msec. Up to 5 hz with AC Count Inputs (suffixes "230AC" and "483AC").

Battery: Rechargeable NI-CAD battery back-up retains count during power outages.

Output: 12 to 15 VDC, 100 mA output for sensor power.

Mounting: Standard models include a wall / surface mount bracket. Other mounting options are available.

Wiring: Pigtail lead wires are provided from the back panel for power and signal inputs. Power cords and other wiring options are available.

Power: Standard power is 120 VAC, 60 Hz. Other power options are available.

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies for fast delivery.

Select a model number for the desired size and number of digits, and add the suffix "230" (Count UP only), or "483" (Count UP/DOWN) to the end of the model number as described above.

Your configuration can include: Optional Power - power cords, 12 VAC or DC power, 24 VAC or DC power.

Optional Mounting - eyebolts, hub mounts, stud mounts, NEMA rated enclosures, and labels.

Optional Wiring - conduit compression fittings, cables with cord grips, and connectors.

FOR ASSISTANCE CALL 800-444-7161

SERIAL INPUT DISPLAYS

OPTION 354



**RS232 or RS485 SERIAL INPUT - SEND TIME OR DATA
TO MULTIPLE DISPLAYS THROUGHOUT YOUR FACILITY**



2.3-Inch Bar-Segment

Visible up to 100 feet away

120 VAC, 60 Hz, 6 Watts

AE24-354 4 - Digit Display (12"W x 6.1"H x 3.5"D)

AE2412-354 6 - Digit Display (12"W x 6.1"H x 3.5"D)

AE26-354 6 - Digit Display (14"W x 6.1"H x 3.5"D)

4-Inch Bar-Segment



Visible up to
200 feet away

120 VAC, 60 Hz, 15 Watts

AE42D-354 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)

AE43D-354 3 - Digit Display (12"W x 6.1"H x 3.5"D)

AE44D-354 4 - Digit Display (16"W x 6.1"H x 3.5"D)

AE45D-354 5 - Digit Display (24"W x 6.1"H x 3.5"D)

AE46D-354 6 - Digit Display (24"W x 6.1"H x 3.5"D)

AE4422-354 6 - Digit Display (20"W x 6.1"H x 3.5"D)

4-Inch Super Bright

Visible up to 200 feet away



120 VAC, 60 Hz, 15 Watts

AE42S-354 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)

AE43S-354 3 - Digit Display (12"W x 6.1"H x 3.5"D)

AE44S-354 4 - Digit Display (16"W x 6.1"H x 3.5"D)

AE45S-354 5 - Digit Display (24"W x 6.1"H x 3.5"D)

AE46S-354 6 - Digit Display (24"W x 6.1"H x 3.5"D)



12-Inch Super Bright

Visible up to 600 feet away

120 VAC, 60 Hz, 50 Watts

AE122-354 2 - Digit Display (24"W x 15"H x 3.5"D)

AE123-354 3 - Digit Display (35"W x 15"H x 3.5"D)

AE124-354 4 - Digit Display (48"W x 15"H x 3.5"D)

AE125-354 5 - Digit Display (60"W x 15"H x 3.5"D)

AE126-354 6 - Digit Display (72"W x 15"H x 3.5"D)



8-Inch Super Bright

Visible up to 400 feet away

120 VAC, 60 Hz, 15 to 50 Watts

AE82-354 2 - Digit Display (16"W x 10"H x 3.5"D)

AE83-354 3 - Digit Display (24"W x 10"H x 3.5"D)

AE84-354 4 - Digit Display (30"W x 10"H x 3.5"D)

AE85-354 5 - Digit Display (37"W x 10"H x 3.5"D)

AE86-354 6 - Digit Display (44"W x 10"H x 3.5"D)

Other power, wiring, enclosures, and mounting options are available

TWO YEAR WARRANTY



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www.ats-usa.com

FAX: 318-797-4864

Phone: 318-797-7508

DESCRIPTION

Option 354 provides an Intelligent Serial Input for the AE Series Displays. This is not a standard RS232 input. However, up to 50 AE Series Devices with this option can be connected to a standard RS232 port, at distances up to 2,000 feet away. Signal drivers are available to provide systems with unlimited numbers of displays. This option allows AE Series Displays to communicate with host Computers, Master Clocks, Process Computers (PLC's), Multi-Media System Controllers, and AE21 Display Controllers. Applications include computer controlled master clock systems, production monitors, time to next show timers, process indicators, and message displays.

A simple 10 Byte message is required to send data or control information to the display. It provides addressing, mode selection, six characters of data, and display attributes. ***Free software is available for Computer and Master Clock based systems.***

SPECIFICATIONS

INPUT: TWO WIRE SYNCHRONOUS (RECEIVE ONLY) RS232 OR OPTIONAL RS485.
2400 BAUD, NO PARITY, 8 DATA BITS, 1 STOP BIT.

CONTROL: TEN BYTE MESSAGE:

BYTE 0 : START CHARACTER - 11H

BYTE 1 : ADDRESS BYTE - RANGE IS 0 TO 15 (OPTIONAL 0-255).
ADDRESS 0 PROVIDES AN ALL CALL.

BYTE 2 : MODE BYTE - RANGE IS 0 TO 255. SELECTS DISPLAY FUNCTION. USES
BYTES 3 TO 8 AS INPUT DATA. SOME OF THE MODES INCLUDED:

MODE 0	ASCII CHARACTER MODE.
MODE 1	NUMBER MODE.
MODE 2	GRAPHIC CHARACTER MODE.
MODE 3	12 HOUR TIME / TIMER MODE.
MODE 4	24 HOUR TIME / TIMER MODE.
MODE 5	COUNT DOWN TIMER MODE.
MODE 6	DISPLAYS SOFTWARE VERSION
MODE 7	DAY COUNTER

BYTES 3 TO 8: SIX CHARACTER BYTES - DISPLAY DATA OR SETTINGS FOR THE MODE
SELECTED IN BYTE 2.

BYTE 9: MISCELLANEOUS DIGIT BYTE - PROVIDES COLONS, AM/PM INDICATORS,
AND OTHER DISPLAY ATTRIBUTES.

BATTERY: RECHARGEABLE NI-CAD BATTERY BACK-UP KEEPS TIME OR RETAINS
THE LAST DATA SENT DURING POWER OUTAGES.



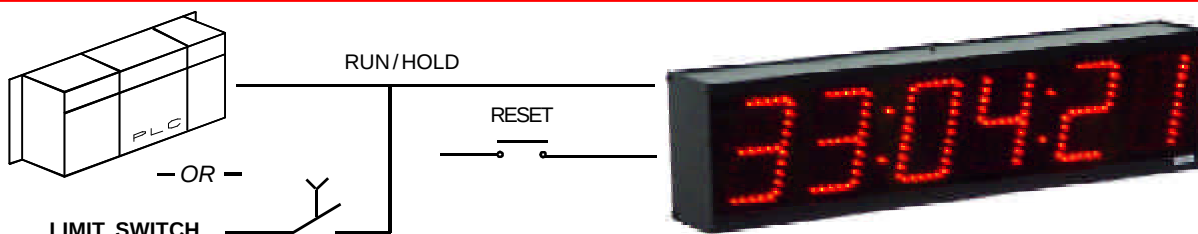
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CONTACT US FOR ASSISTANCE WITH YOUR APPLICATION

RUN TIME ACCUMULATOR OPTION 373



Monitor Production Line Down Time, Machine Run Time, or Cycle Time



2.3-Inch Bar-Segment

Visible up to 100 feet away

120 VAC, 60 Hz, 6 Watts

- AE24-373 4 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE2412-373 6 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE26-373 6 - Digit Display (14"W x 6.1"H x 3.5"D)

4-Inch Bar-Segment



Visible up to
200 feet away

120 VAC, 60 Hz, 15 Watts

- AE42D-373 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)
- AE43D-373 3 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE44D-373 4 - Digit Display (16"W x 6.1"H x 3.5"D)
- AE45D-373 5 - Digit Display (24"W x 6.1"H x 3.5"D)
- AE46D-373 6 - Digit Display (24"W x 6.1"H x 3.5"D)
- AE4422-373 6 - Digit Display (20"W x 6.1"H x 3.5"D)



8-Inch Super Bright

Visible up to 400 feet away

120 VAC, 60 Hz, 15 to 50 Watts

- AE82-373 2 - Digit Display (16"W x 10"H x 3.5"D)
- AE83-373 3 - Digit Display (24"W x 10"H x 3.5"D)
- AE84-373 4 - Digit Display (30"W x 10"H x 3.5"D)
- AE85-373 5 - Digit Display (37"W x 10"H x 3.5"D)
- AE86-373 6 - Digit Display (44"W x 10"H x 3.5"D)

4-Inch Super Bright

Visible up to 200 feet away



120 VAC, 60 Hz, 15 Watts

- AE42S-373 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)
- AE43S-373 3 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE44S-373 4 - Digit Display (16"W x 6.1"H x 3.5"D)
- AE45S-373 5 - Digit Display (24"W x 6.1"H x 3.5"D)
- AE46S-373 6 - Digit Display (24"W x 6.1"H x 3.5"D)



12-Inch Super Bright

Visible up to 600 feet away

120 VAC, 60 Hz, 50 Watts

- AE122-373 2 - Digit Display (24"W x 15"H x 3.5"D)
- AE123-373 3 - Digit Display (35"W x 15"H x 3.5"D)
- AE124-373 4 - Digit Display (48"W x 15"H x 3.5"D)
- AE125-373 5 - Digit Display (60"W x 15"H x 3.5"D)
- AE126-373 6 - Digit Display (72"W x 15"H x 3.5"D)

Other power, wiring, enclosures, and mounting options are available

TWO YEAR WARRANTY



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FAX: 318-797-4864

Phone: 318-797-7508

DESCRIPTION

Option 373 provides an elapsed time accumulator function for the AE Series of Process Indicator Displays. They are available in 1, 2, 3, 4, 5, and 6 digit versions with digit sizes ranging from 1 inch high to 12 inches high. Standard signal types for RUN/HOLD and RESET include: dry contacts from limit switches, proximity detectors, or relays; DC Voltage Signals from PLC's, TTL Outputs (NPN or PNP) from instruments and detectors; and AC Voltage Signals from PLC's or other control equipment. The opto-isolated inputs allow the controls to be up to 1000 feet away from the display.

For multiple display systems, the Master/Driver Option (348) can be added. This option allows you to connect up to 40 remote displays to the AE Series Process Indicator for displaying the same ELAPSED TIME in many locations.

APPLICATIONS: Monitor and display: "Production Down Time", "Production Up Time", "Machine Cycle Time"

SPECIFICATIONS

INPUTS: The RUN/HOLD and RESET inputs are opto-isolated for long wire hookups. They can be set up for a variety of signal types.

RUN/HOLD INPUT: Elapsed time accumulates when this signal is applied. Elapsed Time stops and holds when this signal is absent. Elapsed Time count resumes when this signal is re- applied. Counts up to 99:59:59 (HH:MM:SS) and rolls over to 00:00:00. Requires dry contact, DC voltage from 6 VDC to 120 VDC, or AC voltage from 12 VAC to 120 VAC, 3mA maximum (specify with order).

RESET INPUT: Resets elapsed time count to 00:00:00 when present. Requires dry contact, DC voltage from 6 VDC to 120 VDC, or AC voltage from 12 VAC to 120 VAC, 3 mA maximum (specify with order). Duration must be greater than 20 msec. RESET overrides the RUN/HOLD input.

BATTERY: Rechargeable NI-CAD battery back-up retains elapsed time count during power outages.

OUTPUT: Optional 12 to 15 VDC, 100 mA output for sensor power.

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "373" to the end of the model number indicates the Run Time Accumulator Option is installed.

SPECIFY INPUT SIGNAL: _____ RESET SIGNAL: _____

ELAPSED TIME RANGE: _____



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PRODUCTION MONITORS

AE24-503J

Monitor Production "GOAL" and "ACTUAL" Performance

2.3-Inch High LED Digits . .
Red for Goal, Green for Actual
Visible up to 100 feet

Built-In Controls
for Stand-Alone Operation

Production GOAL automatically
advances at a programmable pace

Computer Interface for
Data Acquisition and Control



The AE24-503J provides: a programmable pace that automatically paces the "GOAL" display, a "COUNT" input that increments the count by one each time the input is activated, a "RUN/HOLD" switch to hold the pace during breaks or down periods, and separate "RESET" buttons for both the "GOAL" and "ACTUAL" displays. Blank Anodized Aluminum Enclosure (16"W x 10"H x 3.5"D).



Add the Optional 2121B-P Remote COUNT Switch

The AE24-503J has an Opto-Isolated "COUNT" Input that can be connected to a variety of push-buttons, limit switches, or control equipment.

For Computer Control and Data Acquisition.

Using your computer, set the display parameters, and collect Goal, Count, and Run Time data from up to 32 AE24-503J and/or AE44-503J Production Monitors. Requires AEQuery Software and one 9200-0509, RS232 to RS485 Adapter per system.



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PRODUCTION MONITORS

AE24-503J-L3

Monitor Production "GOAL" and "ACTUAL" Performance Display Production "EFFICIENCY" as a Percentage

**2.3-Inch High LED Digits - Red for Goal,
Green for Actual, Yellow for Efficiency
Visible up to 100 feet**

**Built-In Controls
for Stand-Alone Operation**

**Production GOAL Automatically
advances at a Programmable Pace**

Efficiency Percentage automatically Calculated

**Computer Interface for
Data Acquisition and Control**



The AE24-503J-L3 provides: a programmable pace that automatically paces the "GOAL" display, a "COUNT" input that increments the count by one each time the input is activated, "% EFFICIENCY" that is automatically calculated and displayed based on the "GOAL" and "ACTUAL" counts, a "RUN/HOLD" switch to hold the pace during breaks or down periods, and separate "RESET" buttons for both the "GOAL" and "ACTUAL" displays. Black Anodized Aluminum Enclosure (16"W x 14.5"H x 3.5"D).



Add the Optional 2121B-P Remote COUNT Switch

The AE24-503J-L3 has an Opto-Isolated "COUNT" Input that can be connected to a variety of push-buttons, limit switches, or control equipment.

For Computer Control and Data Acquisition.

Using your computer, set the display parameters and collect Goal, Count, and Run Time data from up to 32 AE24-503J-L3 and/or AE44-503J Production Monitors. Requires AEQuery Software and one 9200-0509, RS232 to RS485 Adapter per system.



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PRODUCTION MONITORS

AE44-503J

Monitor Production "GOAL" and "ACTUAL" Performance

*Four-Inch High LED Digits . .
Red for Goal, Green for Actual
Visible up to 150 feet*

*Built-In Controls
for Stand-Alone Operation*

*Production GOAL automatically
advances at a programmable pace*

*Computer Interface for
Data Acquisition and Control*



The AE44-503J provides: a programmable pace that automatically paces the "GOAL" display, a "COUNT" input that increments the count by one each time the input is activated, a "RUN/HOLD" switch to hold the pace during breaks or down periods, and separate "RESET" buttons for both the "GOAL" and "ACTUAL" displays. Painted Steel Enclosure (24"W x 18"H x 4"D).



Add the Optional 2121B-P Remote COUNT Switch

The AE44-503J has an Opto-Isolated "COUNT" Input that can be connected to a variety of push-buttons, limit switches, or control equipment.

For Computer Control and Data Acquisition.

Using your computer, set the display parameters, and collect Goal, Count, and Run Time data from up to 32 AE44-503J Production Monitors. Requires AEQuery Software and one 9200-0509, RS232 to RS485 Adapter per system.



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PRODUCTION MONITORS **AE44-503C SERIES**



AE44-503C
Dual Line Display

MONITOR PRODUCTION "GOAL" and "ACTUAL" PERFORMANCE

Four-Inch High, LED Digits
Red for Goal, Green for Actual
Visible up to 150 feet.

Rugged Steel Enclosure
24"W x 18"H x 4"D

EASILY CONFIGURED TO YOUR NEEDS. .

Used with the AE-503DX1 Remote Display Interface

The AE-503DX1 provides a programmable pace that automatically paces the "GOAL" display, a RUN/HOLD switch to hold the pace during breaks or down periods, and separate RESET buttons for both the GOAL and ACTUAL displays. Count Up and Count Down push-buttons or signals are connected to the AE-503DX1. It then sends all data to the AEXX-503C Displays at distances up to 2000 feet away. The RS485 I/O port allows it to be connected to a PC for data acquisition (Requires AEQuery Software).



AE-503DX1 Controller

Used with your Computer or PLC

The "GOAL" and "ACTUAL" counts can be sent via RS232 from your Computer or PLC to the display, up to 2000 feet away. Uses the same data signal as the popular AE Series Option 354 Displays. The AE-503DX1 is not required for this system.

Other digit sizes and configurations are also available. Call us with your specifications.

TWO YEAR WARRANTY



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PRODUCTION MONITORS

AE45-503C SERIES

MONITOR PRODUCTION "GOAL" and "ACTUAL" PERFORMANCE



AE45-503C Dual Line Display

Four-Inch High, LED Digits
Red for Goal, Green for Actual
Visible up to 150 feet.

Counts up to 65,500

Painted Black Aluminum Enclosure
30"W x 12.2"H x 3.5"D

**EASILY CONFIGURED TO
YOUR NEEDS**

Used with the AE-503DX1 Remote Display Interface

The AE-503DX1 provides a programmable pace that automatically paces the "GOAL" display, a RUN/HOLD switch to hold the pace during breaks or down periods, and separate RESET buttons for both the GOAL and ACTUAL displays. Count Up and Count Down push buttons or signals are connected to the AE-503DX1. It then sends all data to the AEXX-503C Displays at distances up to 2000 feet away. The RS485 I/O port allows it to be connected to a PC for data acquisition (Requires AEQuery Software).



AE-503DX1 Controller

Used with your Computer or PLC

The "GOAL" and "ACTUAL" counts can be sent via RS232 from your Computer or PLC to the display, up to 2000 feet away. Uses the same data signal as the popular AE Series Option 354 Displays. The AE-503DX1 is not required for this system.

TWO YEAR WARRANTY

Other digit sizes and configurations are also available. Call us with your specifications.



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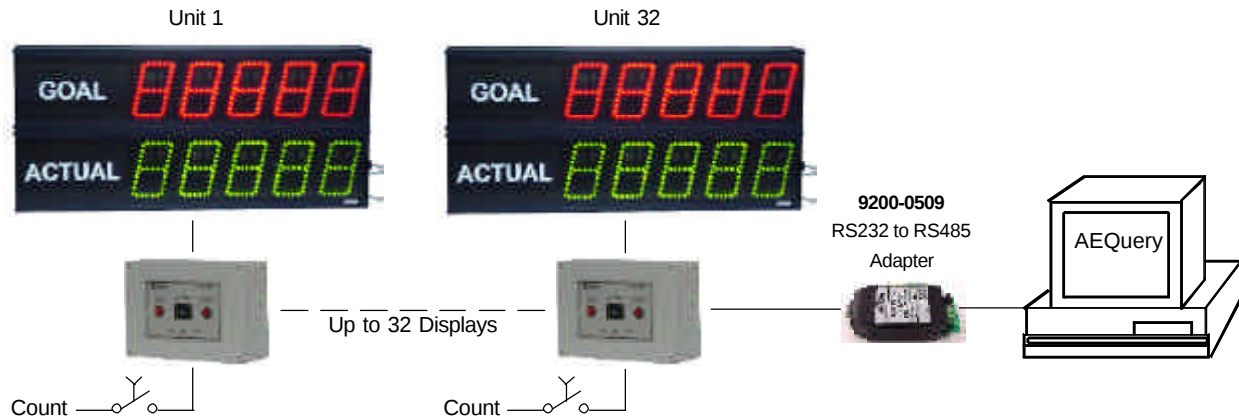
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FAX: 318-797-4864

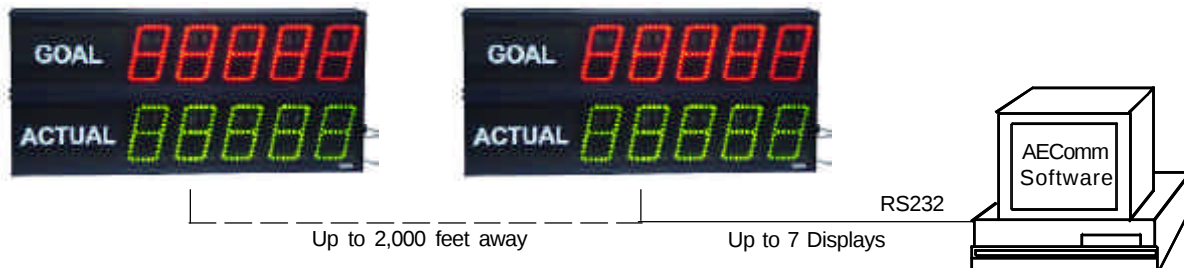
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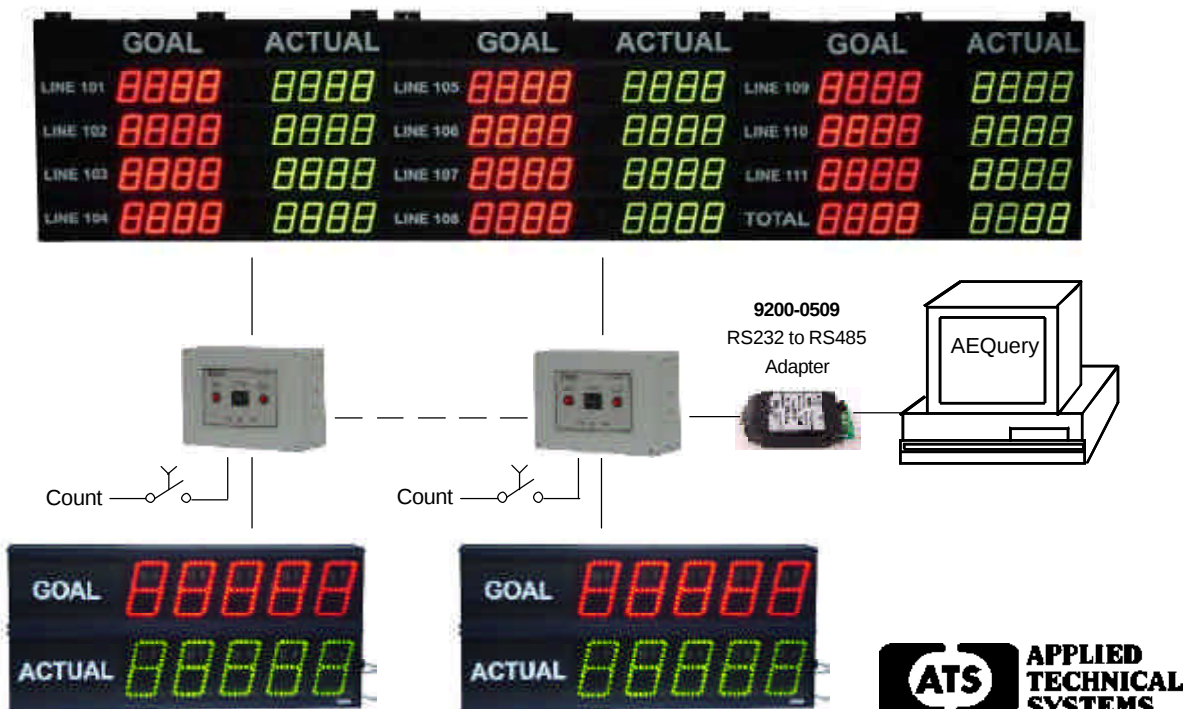
Computer Control using the AE-503DX1 Remote Display Interface and AEQuery Software



Computer Control using the AECComm or other User provided Software



Complete Production Performance Systems



PRODUCTION PERFORMANCE DISPLAYS



AE4X46-503J

Clearly Display Total Production Performance

Helps to IMPROVE PRODUCTIVITY

Creates Competition

Used on the factory floor, break room or cafeteria

Line workers and supervisors see continuously updated Goal and Actual counts

Enhances management decisions concerning
completion times, shipping schedules and overtime requirements

Better informed workers and management result in better production

Affordable - for large or small factories

Modular design - allows you to create any desired display configuration

Connects to a PC, PLC or to any AE Series Production Monitoring Displays

Call us with YOUR requirement



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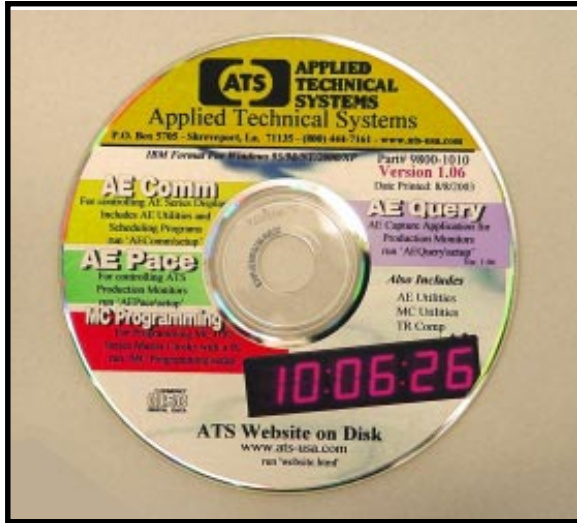
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Monitors and ANDON
Display Systems***

AE QUERY

**Address production lines individually or by group.
Monitor and control up to 32 Production Monitoring Displays.**

**Preset GOAL and ACTUAL
counts**

**Activate ANDON lights and
signals**

**Program count rates
Select Run or Hold mode**

**Totalize GOAL and ACTUAL
counts from selected
production lines.**

**Generate reports for an production line or group of
production lines.**

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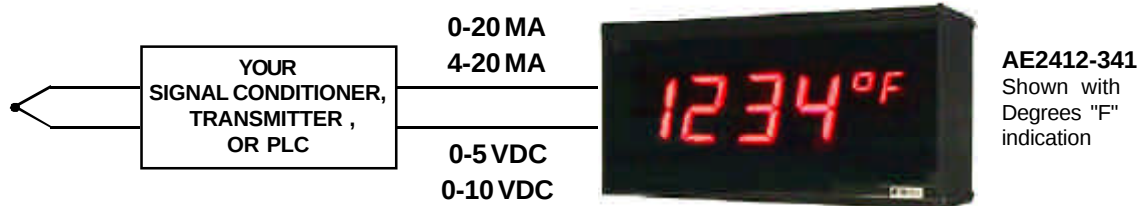
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ANALOG INPUT

AE SERIES - OPTION 341



**SCALE AND DISPLAY TEMPERATURE, PRESSURE, FLOW...
FROM 5 FEET TO 500 FEET AWAY**



2.3-Inch Bar-Segment

Visible up to 100 feet away

120 VAC, 60 Hz, 6 Watts

- AE24-341 4 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE2412-341 6 - Digit Display (12"W x 6.1"H x 3.5"D)*
- AE26-341 6 - Digit Display (14"W x 6.1"H x 3.5"D)*



4-Inch Bar-Segment

Visible up to 200 feet away

120 VAC, 60 Hz, 15 Watts

- AE42D-341 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)
- AE43D-341 3 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE44D-341 4 - Digit Display (16"W x 6.1"H x 3.5"D)
- AE45D-341 5 - Digit Display (24"W x 6.1"H x 3.5"D)*
- AE46D-341 6 - Digit Display (24"W x 6.1"H x 3.5"D)*

4-Inch Super Bright

Visible up to 200 feet away

120 VAC, 60 Hz, 15 Watts

- AE42S-341 2 - Digit Display (7.5"W x 6.1"H x 3.5"D)
- AE43S-341 3 - Digit Display (12"W x 6.1"H x 3.5"D)
- AE44S-341 4 - Digit Display (16"W x 6.1"H x 3.5"D)
- AE45S-341 5 - Digit Display (24"W x 6.1"H x 3.5"D)*
- AE46S-341 6 - Digit Display (24"W x 6.1"H x 3.5"D)*



8-Inch Super Bright

Visible up to 400 feet away

120 VAC, 60 Hz, 15 to 50 Watts

- AE82-341 2 - Digit Display (16"W x 10"H x 3.5"D)
- AE83-341 3 - Digit Display (24"W x 10"H x 3.5"D)
- AE84-341 4 - Digit Display (30"W x 10"H x 3.5"D)
- AE85-341 5 - Digit Display (37"W x 10"H x 3.5"D)*
- AE86-341 6 - Digit Display (44"W x 10"H x 3.5"D)*

12-Inch Super Bright

Visible up to 600 feet away

120 VAC, 60 Hz, 50 Watts

- AE122-341 2 - Digit Display (24"W x 15"H x 3.5"D)
- AE123-341 3 - Digit Display (35"W x 15"H x 3.5"D)
- AE124-341 4 - Digit Display (48"W x 15"H x 3.5"D)
- AE125-341 5 - Digit Display (60"W x 15"H x 3.5"D)*
- AE126-341 6 - Digit Display (72"W x 15"H x 3.5"D)*

Other power, wiring, enclosures, and mounting options are available

2, 3, 4, 5, and 6 Digit Models Available - *Fixed "0"s, Degrees "C" or "F" indication for digits 5 & 6

TWO YEAR WARRANTY



**APPLIED
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DESCRIPTION

Option 341 provides a 12 bit, analog input for the AE Series of Process Indicator Displays. They are available in 2, 3, 4, 5, and 6 digit versions with digit sizes ranging from 1inch high to 12 inches high. Standard input signals include: 0-20 mA, 4-20 mA, 0-5 VDC, and 0-10 VDC. They can be programmed to indicate any engineering units over the range of the analog input signal by using the built-in program switches. The 12 bit A/D converter can resolve up to 4 digits. However, five and six digit versions are available with the least significant digits fixed to 00. On displays that will be used for displaying temperature, digits five and six can be set up to give a degrees C or F indication.

Other features include: "Overrange" and "Underrange" indication, selectable Decimal Point, and Leading Zero Blanking. Range can be scaled from " - " to " + " indication.

For other types of input signals, such as thermocouple or millivolt signals, specific signal conditioners can be used.

For multiple display systems, the Master/Driver Option (348) can be added. This option allows you to connect up to 40 remote displays to the AE Series Process Indicator for displaying the same variable in many locations.

SPECIFICATIONS

ANALOG INPUT: 0-20 mA, 4-20 mA, 0-5 VDC, or 0-10 VDC (specify with order).

RESOLUTION: (4096 COUNTS)

0-20 mA	4.88 uA	4-20 mA	4.88 uA
0-5 VDC	1.22 mV	0-10 VDC	2.44 mV

PROGRAMMABLE: Two digit display: from 00 to 99
RANGE Six digit display: from 000000 to 999900
" - " to " + " indication: from -99990 to 99990 (factory configured)
Low range limit does not have to be zero.
Example: Barometric pressure displays from 28.00" to 32.00" HG.
Built-in switches are provided for programming the range.
Range Calibration is stored in non-volatile memory.
Underrange - all digits display U's.
Overrange - all digits display upside down U's.

ACCURACY: 1% of the range, + or - one count.

DECIMAL POINT/: Switch selectable on PCB assembly.
LEADING ZERO
BLANKING

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "341" to the end of the model number indicates the Analog Input Option is installed.

SPECIFY Input Signal: _____ Display Range: _____
Decimal Point: _____ Leading Zero Blanking: YES NO

FOR ASSISTANCE CALL 800- 444 - 7161

PRECISION TIMER

STD-11-2

***Measure and Display Accurate Elapsed Time
from 0.000 to 9999.999 Seconds***

**Interchanges with
Standard Electric Time models.**

**No panel modifications
are required.**

Four range settings.

1-millisecond resolution.



SPECIFICATIONS

- Digits:** .56-Inch High, Super-Bright Red LED Digits - visible up to 25 feet away.
- Function:** Measures elapsed time from 0 to 9999.999 Seconds. Displays elapsed time on four ranges: 9.999, 99.99, 999.9, and 9999 Seconds. A Single, front panel, push-button switch selects the desired range without affecting the elapsed time measurement..
- Inputs:** Start, Stop, and Reset controls operate from switches, relays, dry contacts, photo-electrics, transistors, or logic gates. Control cable is provided.
- Accuracy:** .003%, +/- 1 digit on any range. 0 to 50 degrees C
- Enclosure:** Black, high strength ABS plastic enclosure. Shelf mount or panel mount. Measures 5"W x 5"H x 5"D.
- Power:** 120 VAC, 60 Hz (less than 2 VA) - Six foot power cord is included.

TWO YEAR WARRANTY



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800-444-7161

BOX 5705 • SHREVEPORT, LOUISIANA. 71135

FAX: 318-797-4864

www.ats-usa.com

phone: 318-797-7508

PRECISION TIMER

STD-525T

Measure and Display Accurate Elapsed Time in Minutes, Seconds, Tenths of Seconds, and Hundredths of Seconds

**Interchanges with
Standard Electric Time models.**

**No panel modifications
are required.**

**Range 00.00.00 to 99.59.99
MM.SS.TH**

0.01 second resolution.



SPECIFICATIONS

- Digits:** .56-Inch High, Super-Bright Red LED Digits - visible up to 25 feet away.
- Function:** Measures elapsed time in minutes, seconds, tenths of seconds, and hundredth of seconds (MM.SS.TH) from 00.00.00 to 99.59.99.
- Inputs:** Start, Stop, and Reset controls operate from switches, relays, dry contacts, photo-electrics, transistors, or logic gates. Control cable is provided.
- Controls:** Front panel Reset push-button resets the elapsed time to zero.
- Accuracy:** .003%, +/- 1 digit. 0 to 50 degrees C
- Enclosure:** Black, high strength ABS plastic enclosure. Shelf mount or panel mount. Measures 5"W x 5"H x 5"D.
- Power:** 120 VAC, 60 Hz (less than 2 VA) - Six foot power cord is included.

TWO YEAR WARRANTY



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PENDANT CONTROLS

Handheld Pendant Controls for Elapsed Timers, Counters, and Production Monitors.

Two Models Available:

2171-1 Provides Two Momentary Push Button Switches.

2171-2 Provides One Momentary, and One Latching Push Button Switch.

High Impact Plastic Enclosure

Ten - Foot, Strain Relieved Cable

Durable, Comfortable handheld Control



The 2171-1 provides handheld push button control for Start/Stop and Reset control of AE and CC Series Elapsed Timer Displays. It can also be used for Count and Reset functions on AE Series Event Counters and Production Monitors.

The 2171-2 includes a momentary push button and a latching push button. It is ideal for handheld, push button control of the STD Series Precision Timers and the AE Series Run Time Accumulators.



Black ABS Plastic Enclosure measures 5.5"L x 2.5"W x 1.2"D. Tapered and conformed for handheld applications.

Both models have a strain relieved, 10 foot cable with pigtail lead wires. The cable can be extended up to 100 feet from the Display. For extension cable, use Belden 8443 (ATS P/N 1380-8443) or equivalent.

Custom labels available.

Be sure to check your local codes for all wiring requirements.



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LINE FREQUENCY MONITORS

AE SERIES OPTION 200F



***Display AC Power Line Frequency
from 45 Hz to 65 Hz with 0.01 Hz Resolution.***

Large, 4-Digit Super-Bright, LED Displays

***Available with 1", 2.3", 4", 8", and 12" high digits.
Visible from 5 feet to 500 feet away.***

Power: 120 VAC, 50/60 Hz. Optional 12 VAC, 50/60 Hz.

Wiring: Pigtail lead wiring. Optional Power cords and power modules.

Mounting: Standard wall mounting brackets included. Rack mount, hub mount, ceiling mount, and flush mount versions are available.

Signal: Samples incoming power, no other inputs required.
The number of readings averaged is adjustable from 1 to 128.

Display: Display updates range from 32 times per second to once every two seconds, depending on the number of readings averaged.



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COUNTERS

AE SERIES - OPTION 230



COUNT EVENTS DISPLAY PRODUCTION COUNT FROM 5 FEET TO 500 FEET AWAY...

AVAILABLE FOR ALL 1, 2, 3, 4, 5, AND 6 DIGIT AE SERIES DISPLAYS.

EASILY CONNECTS TO A VARIETY OF INPUT DEVICES INCLUDING:
PUSH BUTTON SWITCHES, PHOTO-ELECTRICS, LIMIT SWITCHES, AND PLC'S.
ISOLATED INPUTS FOR COUNT AND RESET ALLOW FOR LONG WIRE HOOKUP.

ADAPTS TO ALL TYPES OF SIGNALS SUCH AS:

DRY CONTACTS, TTL, 6V to 120V DC PULSES, OR 12V to 120V AC SIGNALS.

RETAINS COUNT ON POWER OUTAGES,

PROVIDES 12 TO 15 VDC OUTPUT TO POWER SENSORS.

SELECTABLE LEADING ZERO BLANKING.

OPTIONAL MASTER / DRIVER OUTPUT FOR MULTIPLE DISPLAY SYSTEMS

AE SERIES DISPLAYS ARE AVAILABLE WITH 1", 2.3", 4", 8", AND 12" HIGH DIGITS.

TWO YEAR WARRANTY



**APPLIED
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DESCRIPTION

Option 230 provides a low speed (up to 25 HZ) counter input for the AE Series of Process Indicator Displays. They are available in 1, 2, 3, 4, 5, and 6 digit versions with digit sizes ranging from 1inch high to 12 inches high. Standard signal types for COUNT and RESET include: Dry Contacts from limit switches, proximity detectors, or relays; DC Voltage Signals from PLC's, TTL Outputs (NPN or PNP) from instruments and detectors; and AC Voltage Signals from PLC's or other control equipment. The opto-isolated inputs allow the controls to be up to 1000 feet away from the display.

Other features include: Leading Zero Blanking, Sensor Power Output, and Custom Configurations.

For multiple display systems, the Master/Driver Option (348) can be added. This option allows you to connect up to 40 remote displays to the AE Series Process Indicator for displaying the same variable in many locations.

SPECIFICATIONS

INPUTS:	THE COUNT AND RESET INPUTS ARE OPTO-ISOLATED FOR LONG WIRE HOOKUPS. THEY CAN BE SET UP FOR A VARIETY OF SIGNAL TYPES.
COUNT INPUT:	DRY CONTACT, DC VOLTAGE FROM 6 VDC TO 120 VDC, OR AC VOLTAGE FROM 12 VAC TO 120 VAC (SPECIFY WITH ORDER). DURATION MUST BE GREATER THAN 20 MSEC.
RESET INPUT:	DRY CONTACT, DC VOLTAGE FROM 6 VDC TO 120 VDC, OR AC VOLTAGE FROM 12 VAC TO 120 VAC (SPECIFY WITH ORDER). DURATION MUST BE GREATER THAN 20 MSEC. RESET OVERRIDES THE COUNT INPUT.
COUNT SPEED:	UP TO 25 HZ WITH A DC SIGNAL OF A DURATION GREATER THAN 20 MSEC. UP TO 5 HZ WITH AN AC SIGNAL OF A DURATION GREATER THAN 20 MSEC.
BATTERY:	RECHARGEABLE NI-CAD BATTERY BACK-UP RETAINS COUNT DURING POWER OUTAGES.
LEADING ZERO: BLANKING	SWITCH SELECTABLE ON PCB ASSEMBLY.
OUTPUT:	12 TO 15 VDC, 100 MA OUTPUT FOR SENSOR POWER.

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "230" to the end of the model number indicates the counter input option is installed.

SPECIFY	INPUT SIGNAL:	_____	RESET SIGNAL:	_____
	COUNT SPEED:	_____	LEADING ZERO BLANKING:	YES NO

FOR ASSISTANCE CALL 800-444-7161

10ths and 100ths of SECONDS

OPTION 267

OPTION 267 - PROVIDES TENTHS AND HUNDREDTHS OF SECONDS FOR AE SERIES COUNT UP ELAPSED TIMERS



AE Series Displays with Option 267 are used for counting up elapsed time in hundredths of seconds. They are available with digit heights of 1", 2.3", 4", 8", or 12", and in 2, 3, 4, 5, and 6 digit versions. Displays are factory configured in various combinations to display minutes, seconds, tenths of seconds, and hundredths of seconds (MM:SS.TH), depending on the number of digits. For example a 3-digit version could be configured to display seconds and tenths of seconds (SS.T), or seconds, tenths and hundredths of seconds (S.TH).

Standard models have pigtail lead wires for power and signal. All AE Series Displays require local power. Two controls are required. Connect your dry contact controls (push button switches, limit switches, etc.) to the Start/Stop, and Reset pigtail wires. Controls can be located up to 100 feet away. In most applications 22 gauge wire is adequate for the signal inputs. Optional built-in controls and external control panels are available.

Operation is similar to a stop watch. The Reset button sets the display to all zeroes. Pressing the Start/Stop button starts the elapsed time count. Pressing it again, stops the count and holds the display. Pressing it again resumes the count up. The display will count up to the maximum count, roll over to zero, and continue to count if not stopped or reset.

Option 267 can also be added to any of the AE Series Multi-Function Clock/Timer Displays. In this case the standard presettable count up elapsed timer is replaced with the Option 267 elapsed timer.

For information on the AE Series Clock/Timers and Displays refer to the specific product brochures. For details on operation, refer to the specific product manuals.



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MASTER / REMOTE SYSTEMS

AE SERIES OPTIONS 348 & 349



***SHOW THE SAME TIME, DATA or PROCESS VARIABLE ON
MULTIPLE DISPLAYS THROUGHOUT YOUR FACILITY.***

VISIBLE FROM 5 FEET TO 500 FEET AWAY...

***IDEAL FOR CLOCK SYSTEMS, TIMERS,
PROCESS INDICATORS, AND MESSAGE DISPLAYS.***

**MULTI-DROP UP TO 40 REMOTE DISPLAYS FROM ONE MASTER ON A SINGLE
THREE CONDUCTOR DATA CABLE UP TO 1000 FEET.**

**THE AE SERIES MASTER / DRIVER OUTPUT OPTION CAN BE INSTALLED IN ANY
AE SERIES DISPLAY INCLUDING: CLOCKS, ELAPSED TIMERS, 4-20 MA
PROCESS INDICATORS AND RS232 DISPLAYS. AE SERIES DISPLAYS WITH THE
REMOTE DISPLAY OPTION CAN THEN RECEIVE DATA FROM THE MASTER.**

THEY SIMPLY REPEAT WHAT IS SHOWN ON THE MASTER.

AVAILABLE FOR ALL 2, 3, 4, 5, AND 6 DIGIT AE SERIES DISPLAYS.

AE SERIES DISPLAYS ARE AVAILABLE WITH 1", 2.3", 4", 8", AND 12" HIGH DIGITS.

TWO YEAR WARRANTY



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DESCRIPTION

Options 348 and 349 provide a master / remote system for the AE Series Displays. The Master / Driver Output Option (348) can be installed in any of the AE Series Displays including: Multi-Function Clock/Timers, Elapsed Timers, Run Time Accumulators, 4-20 MA Process Indicators and RS232 Displays. The output provides synchronous, serial, clock and data pulses at a level of approximately 12 -15 VDC. Option 349 converts any AE Series Display into a Remote Display. AE Series Remote Displays receive the synchronous, serial data from the master and simply display the same data as shown on the master. Up to 40 Remote Displays can be connected to each Master on a single, three conductor data cable up to 1000 feet away.

APPLICATIONS:

- Clock Systems for schools, factories, hospitals and facilities.
- Monitor and display critical process variables in multiple locations.
- Count and Display Production quantities in multiple locations.
- Display process sequence numbers, maintenance call numbers or phone extension numbers in multiple locations.

SPECIFICATIONS

MASTER /DRIVER OUTPUT (348):

OUTPUT: THREE WIRE, SYNCHRONOUS SERIAL DATA. (CLOCK, DATA AND COMMON)
VOLTAGE LEVEL: 12 - 15 VDC PULSES. DRIVES UP TO 40 AE SERIES DISPLAYS WITH THE REMOTE DISPLAY OPTION INSTALLED.

BATTERY: RECHARGEABLE NI-CAD BATTERY BACK-UP KEEPS TIME AND DATA FOR THE AE SERIES MASTER DURING POWER OUTAGES. NOT REQUIRED FOR THE AE SERIES REMOTE DISPLAYS

REFER TO THE BROCHURE FOR THE SPECIFIC FUNCTION AND CONFIGURATION OF THE AE SERIES MASTER DISPLAY FOR ALL OTHER SPECIFICATIONS.

REMOTE DISPLAY (349):

INPUT: THREE WIRE SYNCHRONOUS SERIAL DATA, 12 -15 VDC (RECEIVE ONLY).

CLOCK - USES OPTO-ISOLATED INPUT K2+ (WH/GRN)
DATA - USES OPTO-ISOLATED INPUT K1+ (WH/BRN)
COMMON K1-, K2- (BLK/RED)

REFER TO THE BROCHURE FOR THE SPECIFIC CONFIGURATION OF THE AE SERIES REMOTE DISPLAY FOR ALL OTHER SPECIFICATIONS.

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

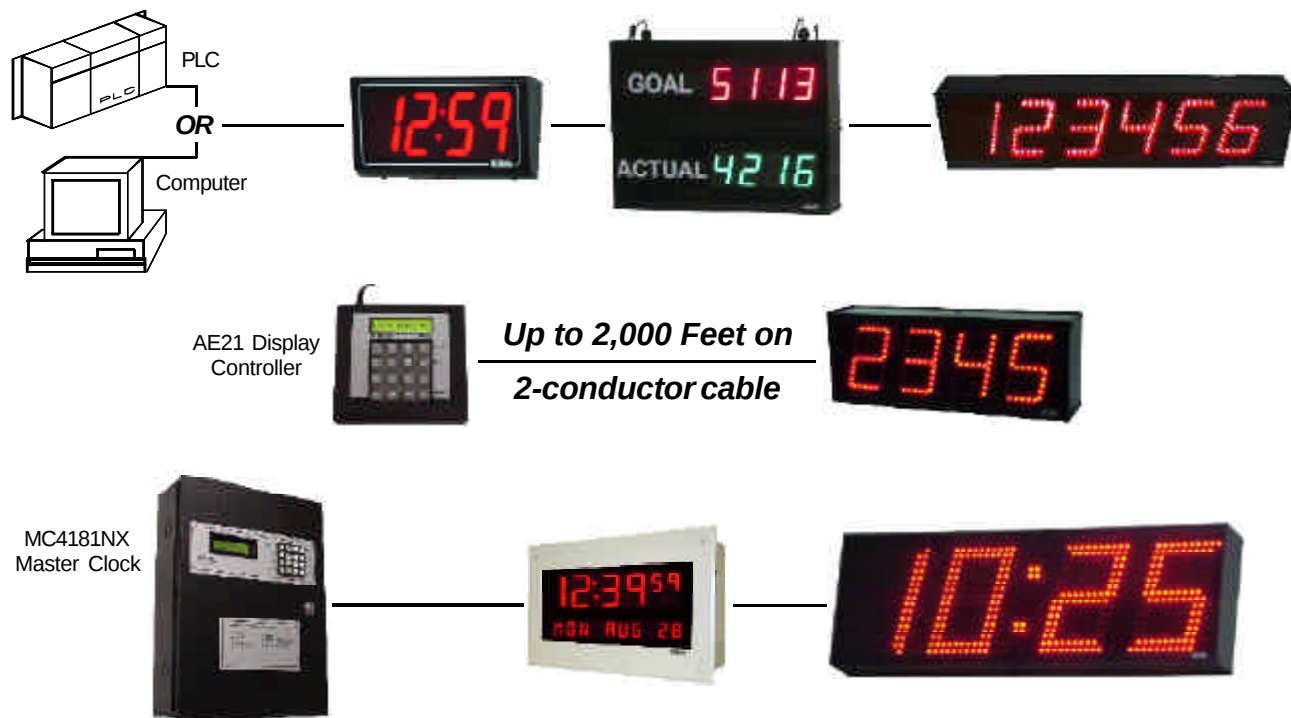
Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "348" to the end of the model number indicates the Master / Driver Output Option is installed. For example: An AE86-354-348 is an Eight Inch, Six Digit Display with the RS232 Input Option (354) and the Master Driver Output Option (348). Adding "349" to the end of a model number indicates the Remote Display Option is installed. No other functions are required with Option 349.

FOR ASSISTANCE CALL 800-444-7161

SERIAL INPUT

AE SERIES - OPTION 354

RS232 or RS485 SERIAL INPUT



***Send time or data to multiple displays throughout your facility.
Ideal for computer or master clock controlled clock systems, timers,
process indicators, and production monitors.***

Free Software available for Computer and Master Clock based systems

12 / 24 hour time, up / down elapsed time, ASCII, and number modes

Two wire system - easily connects to PLC's, Computers, Master clocks...

Connect up to 50 AE devices to a standard RS232 port

Keeps time and retains last data sent during power outages

AE-455DR6, Eight Channel RS232 Driver available - expand number of devices and distance

**Hundreds of possible configurations - Contact us regarding your application*

Available for all 2, 3, 4, 5, and 6 digit AE Series Displays

1", 2.3", 4", 8", and 12" High Digits available

TWO YEAR WARRANTY



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DESCRIPTION

Option 354 provides an Intelligent Serial Input for the AE Series Displays. This is not a standard RS232 input. However, up to 50 AE Series Devices with this option can be connected to a standard RS232 port, at distances up to 2,000 feet away. Signal drivers are available to provide systems with unlimited numbers of displays. This option allows AE Series Displays to communicate with host Computers, Master Clocks, Process Computers (PLC's), Multi-Media System Controllers, and AE21 Display Controllers. Applications include computer controlled master clock systems, production monitors, time to next show timers, process indicators, and message displays.

A simple 10 Byte message is required to send data or control information to the display. It provides addressing, mode selection, six characters of data, and display attributes. Free software is available for Computer and Master Clock based systems.

SPECIFICATIONS

INPUT:	TWO WIRE SYNCHRONOUS (RECEIVE ONLY) RS232 OR OPTIONAL RS485. 2400 BAUD, NO PARITY, 8 DATA BITS, 1 STOP BIT.																
CONTROL:	TEN BYTE MESSAGE:																
BYTE 0:	START CHARACTER - 11H																
BYTE 1:	ADDRESS BYTE - RANGE IS 0 TO 15 (OPTIONAL 0-255). ADDRESS 0 PROVIDES AN ALL CALL.																
BYTE 2:	MODE BYTE - RANGE IS 0 TO 255. SELECTS DISPLAY FUNCTION. USES BYTES 3 TO 8 AS INPUT DATA. SOME OF THE MODES INCLUDED: <table><tr><td>MODE 0</td><td>ASCII CHARACTER MODE.</td></tr><tr><td>MODE 1</td><td>NUMBER MODE.</td></tr><tr><td>MODE 2</td><td>GRAPHIC CHARACTER MODE.</td></tr><tr><td>MODE 3</td><td>12 HOUR TIME / TIMER MODE.</td></tr><tr><td>MODE 4</td><td>24 HOUR TIME / TIMER MODE.</td></tr><tr><td>MODE 5</td><td>COUNT DOWN TIMER MODE.</td></tr><tr><td>MODE 6</td><td>DISPLAYS SOFTWARE VERSION</td></tr><tr><td>MODE 7</td><td>DAYCOUNTER</td></tr></table>	MODE 0	ASCII CHARACTER MODE.	MODE 1	NUMBER MODE.	MODE 2	GRAPHIC CHARACTER MODE.	MODE 3	12 HOUR TIME / TIMER MODE.	MODE 4	24 HOUR TIME / TIMER MODE.	MODE 5	COUNT DOWN TIMER MODE.	MODE 6	DISPLAYS SOFTWARE VERSION	MODE 7	DAYCOUNTER
MODE 0	ASCII CHARACTER MODE.																
MODE 1	NUMBER MODE.																
MODE 2	GRAPHIC CHARACTER MODE.																
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MODE 4	24 HOUR TIME / TIMER MODE.																
MODE 5	COUNT DOWN TIMER MODE.																
MODE 6	DISPLAYS SOFTWARE VERSION																
MODE 7	DAYCOUNTER																
BYTES 3 TO 8:	SIX CHARACTER BYTES - DISPLAY DATA OR SETTINGS FOR THE MODE SELECTED IN BYTE 2.																
BYTE 9:	MISCELLANEOUS DIGIT BYTE - PROVIDES COLONS, AM/PM INDICATORS, AND OTHER DISPLAY ATTRIBUTES.																
BATTERY:	RECHARGEABLE NI-CAD BATTERY BACK-UP KEEPS TIME OR RETAINS THE LAST DATA SENT DURING POWER OUTAGES.																

ORDERING INFORMATION

Most AE Series Displays are configured to your specifications at the time of your order. Their modular design allows them to be constructed from Off-The-Shelf components and assemblies in quick order.

Choose the desired type, size, number of digits, and other requirements from the AE Series Large Display brochure. Adding "354" to the end of the model number indicates the RS232 Serial Input option is installed.

FOR ASSISTANCE CALL 800-444-7161

RELAY OUTPUT

AE OPTION 376

RELAY OUTPUT FOR AE SERIES DISPLAYS

Option 376 provides a relay output for some versions of the AE Series Large Displays.

AE Series Functions that use the Relay Output option are:

Count Up Elapsed Timers - The relay activates for two seconds when the elapsed time reaches the preset value.

Count Down Elapsed Timers - The relay activates for two seconds when the elapsed time reaches zero.

These time of day and elapsed timer functions are included in the standard Multi-Function Clock/Timers, Stand-alone Up counting or Down counting elapsed timers, and the clock/timer functions included with the RS232 Option 354.

Optional Configuration - The relay activates for two seconds when the time of day goes through Midnight.

Labeled, and color coded, pigtail lead wires for the relay contacts are provided at the back panel of most models. Others may have terminal block wiring. Refer to your specific model.

	<u>Color</u>	<u>TB Label</u>
Relay Common	WH/BLK	C
Relay Normally Open Contact	WH/BLU	NO
Relay Normally Closed Contact	WH/GRA	NC

Relay Contacts are rated for 5 Amps at 48VAC, or 30VDC.



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OPTION 412

AE SERIES

AUTOMATIC RESET, AUTOMATIC RESTART, AND SINGLE INPUT RESET/RESTART CONTROLS FOR AE SERIES ELAPSED TIMERS

This option is available for all AE Series Multi-Function Clock/Timers, Elapsed Timers, and Run Time Accumulators with two, three, four, five and six digit configurations.

Multi-Function Clock/Timers and Elapsed Timers (Non-isolated momentary inputs)

Automatic Reset/Restart configuration: When the elapsed timer reaches its preset value on count up, or zero on count down, the timer will reset and start over.

Single Input Reset/Restart count up configuration: In count up mode, the preset value should be set at zero. Once powered on, the timer will continually count up until a contact is made which resets the timer to zero and restarts the count.

Single Input Reset/Restart count down configuration: In count down mode, the timer will continually count down from the preset value until a contact is made which resets the timer to the count down preset and restarts the count. The timer will be factory set to either stop when the count reaches zero, or reset/restart when the count reaches zero.

On AE Series models with built-in controls, the preset values and the Start and Reset functions can be controlled locally. On models that do not have the built-in controls, the preset values must be set at the factory. Models with Automatic Reset/Restart require a single dry contact closure to start the elapsed timer at the desired instant. Models with the Single Input Reset/Restart will begin counting when powered on and will reset/restart when a contact is made. Built-in controls are not available on two, three and five digits models.

Run Time Accumulators (Isolated, latched input)

Single Input Reset/Restart for AEXX-373 Run Time Accumulators: When the COUNT signal is applied, the timer will reset to zero and count up until the COUNT signal is removed. The timer will hold and display the elapsed time until the next COUNT signal is applied.

Refer to the specific product brochures and manuals for more details.



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PHONE: 318-797-7508

UP / DOWN COUNTERS

AE SERIES - OPTION 483



COUNT PRODUCTION, SUBTRACT REJECTS

VISIBLE FROM 5 FEET TO 500 FEET AWAY...

AVAILABLE FOR ALL 2, 3, 4, 5, AND 6 DIGIT AE SERIES DISPLAYS.

EASILY CONNECTS TO A VARIETY OF INPUT DEVICES INCLUDING:

PUSH BUTTON SWITCHES, PHOTO-ELECTRICS, LIMIT SWITCHES, AND PLC'S.

ISOLATED INPUTS - ALLOWS FOR LONG WIRE HOOKUP.

ADAPTS TO ALL TYPES OF SIGNALS SUCH AS:

DRY CONTACTS, TTL, 6V to 120V DC PULSES, OR 12V to 120V AC SIGNALS.

RETAINS COUNT ON POWER OUTAGES,

PROVIDES 12 TO 15 VDC OUTPUT TO POWER SENSORS.

SELECTABLE LEADING ZERO BLANKING.

OPTIONAL MASTER / DRIVER OUTPUT FOR MULTIPLE DISPLAY SYSTEMS

AE SERIES DISPLAYS ARE AVAILABLE WITH 1", 2.3", 4", 8", AND 12" HIGH DIGITS.

TWO YEAR WARRANTY



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DESCRIPTION

Option 483 provides two low speed (up to 25 HZ) counter inputs (UP and DOWN) for the AE Series of Process Indicator Displays. They are available in 2, 3, 4, 5, and 6 digit versions with digit sizes ranging from 1inch high to 12 inches high. Standard signal inputs include: Dry Contacts from limit switches, proximity detectors, or relays; DC Voltage Signals from PLC's, TTL Outputs (NPN or PNP) from instruments and detectors; and AC Voltage Signals from PLC's or other control equipment. The opto-isolated inputs allow the controls to be up to 1000 feet away from the display. RESET requires a dry contact. Other features include: Leading Zero Blanking, Sensor Power Output, and Custom Configurations.

For multiple display systems, the Master/Driver Option (348) can be added. This option allows you to connect up to 40 remote displays to the AE Series Process Indicator for displaying the same variable in many locations.

SPECIFICATIONS

Maximum Count:	The range is from -99999 to 999999 for a six-digit version, and from -99 to 999 for a three-digit version. A (-) sign appears to the left of the count when the count goes negative.
Count rate:	Up to 25 pulses per second.
Count Inputs:	Both the Add and Subtract Signal Inputs can handle DC pulses ranging from 12V to 120V in amplitude. However, the pulse width must be greater than 20 milliseconds. The Count Inputs can be jumpered for dry contact closure input. See the wiring diagram at the back of this manual. AC Count Inputs are optional (12V to 120V AC pulses at a maximum rate of 5 pulses per second.
Reset Signal:	Dry contact closure, only.
Output:	A 12-15 VDC (50 MA max.) output is provided to power small sensors.
Digits:	1, 2,3, 4, 8 and 12 Inch High, Seven Segment Digits are available. Models include 2, 3, 4, 5 ad 6 digit versions.
Power:	120 VAC – The power required varies with the size and number of digits. Optional power includes 50 HZ, 12 VAC, 24 VAC, 12 to 15 VDC and 220 VAC. Battery standby: Self-charging, Ni-Cad.
Enclosure:	Black anodized aluminum with .118" thick red acrylic lens. The back panel is .125" thick black, ABS plastic. The size varies with the size and number of digits. A 1210-0101 mounting bracket is provided for wall mounting to a single gang, double gang, or 4-inch box. Optional enclosures are available.
Wiring:	Clearly labeled, pigtail lead wires (#18 AWG) are provided. Optional terminal blocks, power cords, and connectors are available.
Options:	There are numerous options available for the AEXX-483 Series Up/Down – Counter/Totalizers. Some include (/ 2) Two Sided Version, (348) Master/Driver Output, and (PC8) Add 8 FT. Power Cord.

FOR ASSISTANCE CALL 800-444-7161

NEMA 4X / 12 DIGITAL CLOCKS

NEMA 4X and NEMA 12 Digital Clocks

Visible Up To 100 Feet



CC44S-N4X 4-Inch, Super Bright
Red dot LED digits.

NEMA 4X Stainless Steel Digital Clocks



CC2000-N4X 4-Inch, Super Bright
Red diffused LED digits.



CC44S-N12 4-Inch, Super Bright
Red dot LED digits.

NEMA 12 Painted Steel Digital Clocks



CC2000-N12 4-Inch, Super Bright
Red diffused LED digits.

*Displays Time of Day in Hours and Minutes - 12 or 24 Hour Format
Receives Time Updates from a Computer, Master Clock, or GPS System*

*Correction Schemes Include: ATS 10-Byte, BCD,
59th Minute, and Midnight/Noon*

*120 VAC Power - Power and Data Cables Included
24 VAC and other Low Voltage Versions Also Available*

All models measure 16"W x 8"H x 6"D

Numerous Mounting and Wiring Configurations Available

TWO YEAR WARRANTY



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INSTALLATION:

ATS NEMA 4X and NEMA 12 System Clocks can be surface mounted using the mounting hardware included. Holes are provided for mounting, only. Additional holes can be punched as required for power and signal wiring conduits. Use the proper NEMA rated conduit and hardware to maintain an overall NEMA rated system.

WIRING

Terminal Blocks are provided for all field wiring (see the wiring label inside on the back panel for detail). Open the hinged door to gain access to the clearly labeled terminal blocks.

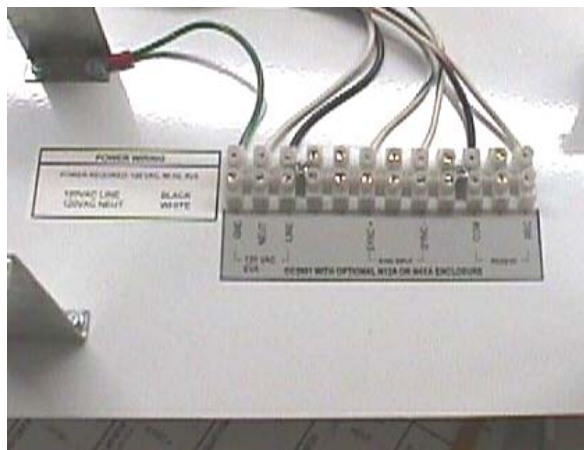
NEMA 4X Models

CC2001N4X	Power 120 VAC, 6VA
CC2002N4X	Power 24 VAC, 6VA,
CC44SN4X	Power 120 VAC, 6VA
CC44SN4X-24	Power 24VAC, 6VA

NEMA 12 Models

CC2001N12	Power 120 VAC, 6VA
CC2002N12	Power 24 VAC, 6VA,
CC44SN12	Power 120 VAC, 6VA
CC44SN12-24	Power 24VAC, 6VA

All 120 VAC and 24 VAC models have jumper selected 50/60 Hz or crystal timebases



SPECIFICATIONS:

Format:	12 or 24 Hour Format (Jumper or program selected). AM/ PM Indicator (upper left-hand corner of display)
Backup:	Capacitive Backup (no batteries required). Keeps time for up to one hour during power outages.
Accuracy:	Synchronous with the 50 or 60 HZ AC line. + / - 0.003% crystal during backup.
RS232 Input:	Serial Data, 10 Byte Message. Corrects Time - 12/24Hr, ASCII Messaging. Free AECOMM and PCMCSET Software available.
	12Hr Format: RS232 overrides and will display 12 or 24 Hr Format 24Hr Format: Jumper overrides will display 24Hr Format only
Sync Input:	Correction Pulse Voltage Range : 12V - 120V AC/DC (2 mA max at 120 VAC) 0 - 6 Second Duration: sets to 12:00 AM (0:00 when 24Hr Format) 7 - 10 Second Duration: sets to XX:58, XX = hour (Displays 12Hr Format Only) 11 - 17 Second Duration: sets to 5:58 (Displays 12Hr Format Only)
Enclosure:	NEMA 4X models have a hinged door, stainless steel enclosure (16"W x 8"H x 6"D). NEMA 12 models have a hinged door, painted steel enclosure (16"W x 8"H x 6"D).

ETHERNET INTERFACE

Optional Ethernet Interface

For ATS Master Clocks, Clocks, Timers, and Displays.

External Module

9200-0521
shown



— OR —

Built-In Connection

AE-OPT-521C
shown



AE-OPT-521

Uses the Lantronix XPort Module to Provide a Network Connection for ATS Digital Clocks, Timers, Master Clocks, and Large Displays

Easy Installation and Setup using Lantronix Device Installer and
ComPort Redirector for legacy software applications
For external module use ATS P/N 9200-0521

AE-OPT-521C

Provides an Automatic SNTP Connection for ATS Digital Clocks, Master Clocks, and Clock Systems

Acquires Coordinated Time and Date with Time Zone Offset
For external module use ATS P/N 9200-0521C

Other Configurations are Available

TWO YEAR WARRANTY



**APPLIED
TECHNICAL
SYSTEMS**

800-444-7161

BOX 5705 • SHREVEPORT, LOUISIANA • 71135

www.ats-usa.com

Fax: 318-797-4864

Phone: 318-797-7508

TWO YEAR WARRANTY

APPLIED TECHNICAL SYSTEMS WARRANTY POLICY

ATS warrants its products to be free of defects in material and workmanship for a period of 24 months from the date of purchase. ATS will repair or replace any product returned to its authorized factory service center within the warranty period so long as there is no evidence that the product has been abused, misused, damaged by lightning, overloads of any kind or water, or altered in any way.

Products returned for warranty must be returned with freight prepaid. ATS will pay normal freight charges to return the product to the customer. Special premium freight requested by the customer will be charged to the customer.

ATS disclaims any warranties expressed or implied, including merchantability and/or fitness for a particular purpose. In no event shall ATS be held liable for incidental or consequential damages.

SERVICE POLICY

It is recommended that all service for ATS Products be done by the factory or by a factory authorized service representative. ATS will provide ongoing service support in and out of warranty.

All product returns will require a Return Material Authorization number (RMA).

Call (800) 444-7161, or email sales@ats-usa.com to request an RMA.

Send your repairs to:

APPLIED TECHNICAL SYSTEMS
849 KING PLACE
SHREVEPORT, LA 71115



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FAX: 318-797-4864

www.ats-usa.com

phone: 318-797-7508

ATS RETURN POLICY

Return Policy

Your satisfaction is our top priority! If you are not completely satisfied with your purchase, you may return your order within 30 days of the purchase date. Contact customer service toll free at 800-444-7161.

Follow these easy steps for a quick return process:

1. Contact customer service at 800-444-7161 to receive your Return Material Authorization (RMA) number.
2. Place your RMA number on the return shipping label. We do not cover the return shipping costs, so feel free to ship it back in the most economical way.
3. All returns should be sent to: Applied Technical Systems
849 King Place
Shreveport, LA 71115

Once you have completed these steps, you are done! We'll take it from there. Our professional staff will process your return as quickly as possible.

*Please note that all returns are assumed to still be in new condition. Any return that is no longer in new condition is subject to a 15% restocking fee.

Authorized Distributor:

WESCHLER INSTRUMENTS

phone: 800-903-9870 440-378-6580

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www.weschler.com info@weschler.com



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