LARGE DIGITAL LED REAL TIME CLOCKS

ALTERNATING DATE and TEMPERATURE (programmable)

SETS THE INDUSTRY STANDARD FOR LARGE DIGITAL CLOCKS

INDOOR OR OUTDOOR USE

Hours Minutes or Hours Minutes and Seconds
Series Display – A host of standard features
Industrial, Commercial, Office & Public places

LARGE DIGITAL LED DISPLAY CLOCKS

GENERAL OVERVIEW

This series of Large Digital LED Display Clocks, sets the **INDUSTRY STANDARD,** with functionality,   robustness and elegance, for any location, be it Industrial, Commercial, Public places or Office.   A great deal of thoughtful engineering, presentation and software has gone into this series, which provides the customer with an exceptional product.

A host of features are in the software and all accessible via an IR Remote.   The LED Digital Clocks not only display current REAL TIME but are programmable for displaying DATE and ambient TEMPERATURE, with a built in sensor.

The LED Digital Clocks can be used as basic Manually adjustment Clocks or GPS (Satellite) controlled or as a Master Clock via an NTP network of other Slave Clocks

STANDARD FEATURES – LARGE DIGIT LED CLOCKS

- Clock, Date, Temperature display on programmable **independent** time periods
- Auto Brightness Control over 24 hours or Manual override (programmable)
- Remote Control (for programming all features)
- LAN connection for all LED Clocks
- GPS Satellite control + LAN connection (worldwide Time Zones, programmable)
- NTP internet time synchronisation
- Low Energy usage (ECO MODE) (programmable)
- 30 Alarm output options Daily or Weekly (programmable)
- Low Weight
- Low profile ONLY 45mm deep
- Temperature selection °C or °F (programmable)
- Temperature OFFSET standard (programmable)
- Robust all weatherproof case IP66 / NEMA 4X
- Easy clean
- 12 or 24 Hour time base (programmable)
- Standard Power input 95~265Vac (worldwide)

SERIES LED CLOCKS – TIME OPTIONS / TEMPERATURE SENSING RANGE

- HRS : MINS
- HRS : MINS : SECS
- Temperature Sensing range -50 ~ 99 °C / -58 ~ 210 °F (Air or Water)

SERIES APPLICATIONS ARE NUMEROUS (JUST SOME EXAMPLES)

- Factories, production areas, offices
- Receptions (Hotels, Airport Check in Desks, Offices etc.)
- Swimming Pools
- Sports Halls / Sport Centres
- Sports Grounds
- Hospitals / Doctors Surgery's
- Schools, Colleges etc.
- External on Buildings for public viewing and a ' LAND MARK ' promotion
- Supermarkets / Shopping Malls
- Stations, Airports, Distribution Depots etc.
- All public accessible facilites
- Advertising TOTEMS…..   THE LIST IS ENDLESS………

LARGE DIGITAL LED DISPLAY FUNCTIONS

The following functions are programmable within the Clock according to your preference and all the functions are independently programmable for the TIME they are displayed.

Example :

- **Real Time** – displays for 45 seconds
- **Date** – displays for 12 seconds
- **Temperature** – displays for 10 seconds

REAL TIME

Can be ordered in HRS : MINS or HRS : MINS : SECS and can be manually adjusted or GPS (Satellite) synchronised, which is accurate to +/- one millionth of a second per month. (**see TIME FORMAT below**)

DATE

The date is displayed by   DAY – MONTH – YEAR but with the IR Remote programmer this may be changed for example to MONTH – DAY – YEAR.   (**The options are explained in the IR Remote manual**)

TEMPERATURE

A sensor is required to be fitted for this option which we would fit in the factory. Two different sensors are available, one for AIR Temperature and the other for WATER Temperature. **Please consult our sales office**.   These are not PT100 (RTD) sensors.

LARGE DIGIT HEIGHTS AVAILABLE & VIEWING DISTANCES

The Clocks are available in digit heights of 2.3" (58mm) 4" (102mm) 6" (152mm) 8" (203mm) 10" (254mm) 12" (305mm) and 16" (406mm)

LED DISPLAY VIEWING DISTANCES

The viewing distances shown below are provided by the manufacturers of our LEDs and therefore given as a fair indication as to how far away a specific digit height can be read clearly.

- 2.3" (58mm)   Clear viewing up to 15 meters / 50 feet
- 4.0" (102mm)   Clear viewing up to 35 meters / 115 feet
- 6.0" (160mm)   Clear viewing up to 55 meters / 180 feet
- 8.0" (203mm)   Clear viewing up to 75 meters / 246 feet
- 10.0" (254mm)   Clear viewing up to 95 meters / 311 feet
- 12.0" (305mm)   Clear viewing up to 115 meters / 377 feet
- 16.0" (405mm)   Clear viewing up to 155 meters / 508 feet

LARGE DIGIT CLOCK LED COLOUR OPTIONS

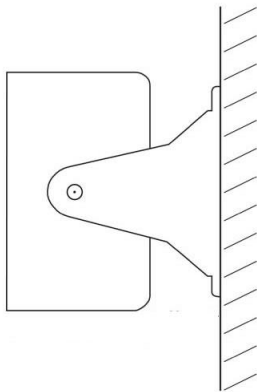🔴 standard RED, Options AMBER, GREEN, BLUE, WHITE, YELLOW

LARGE DIGIT LED DISPLAYS MOUNTING METHODS

There are five mounting methods available as described below –

- **Wall Mounting with side brackets**
- **Flush Wall Mounting**
- **Flush Panel Mounting**
- **Suspension Mounting**
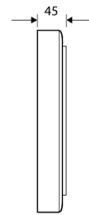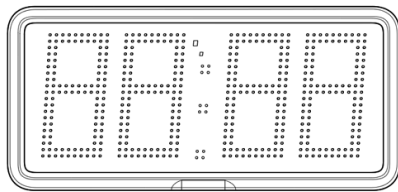- **Perpendicular Mounting**

WALL MOUNT WITH SIDE BRACKETS

WALL MOUNTING BRACKETS

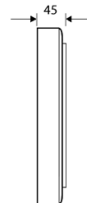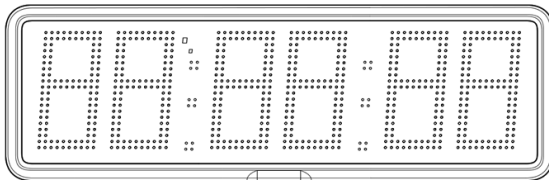All digit heights previously mentioned for Wall mounting will have SIDE BRACKETS as shown below.
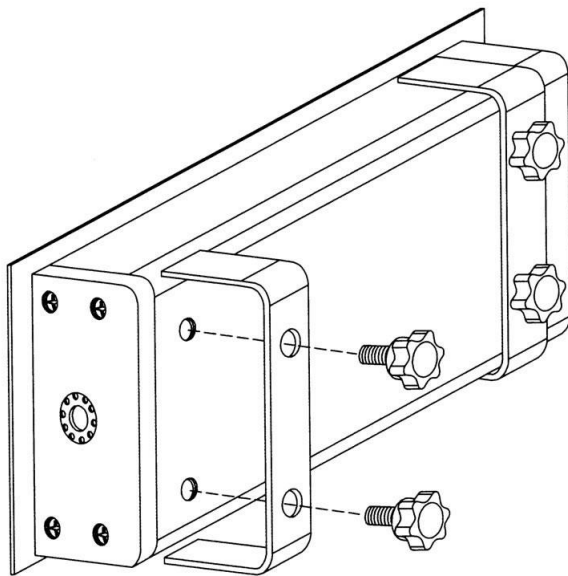
FLUSH WALL MOUNTING

Flush Wall Mounting cases are for only 4" (100mm) and 8" (200mm) digits as shown below.

eagle controls

FLUSH PANEL MOUNTING

This method is for 2.3" (58mm) and 4.0" (102mm) digit heights only as shown below HRS : MINS and HRS : MINS : SECS.   These cases fit into a required panel cut-out and are presented in a panel with a neat surrounding flush flange.   Two rear clamps are supplied to hold the case firmly against the panel as shown below.

PANEL MOUNTING CASE

SUSPENSION MOUNT

Normally used for Double Sided Clocks where the case is hung down on chains from a ceiling or beam for the display to be viewed from the ground by all workers in an area.


PERPENDICULAR MOUNTING

This method of mounting is usually used for Double Sided Clocks or single sided on a wall or post and usually in PUBLIC AREAS.

LARGE DIGIT LED – IR PROGRAMMER

All Clocks are supplied with their unique coded IR Programmer.   However where a number of Clocks are being used the programmer has a decoding procedure to all one programmer to communicate with the all the displays in the ' network '.   All programmable features as listed earlier are altered by the IR Remote.   It has a send and receive distance of 10 meters
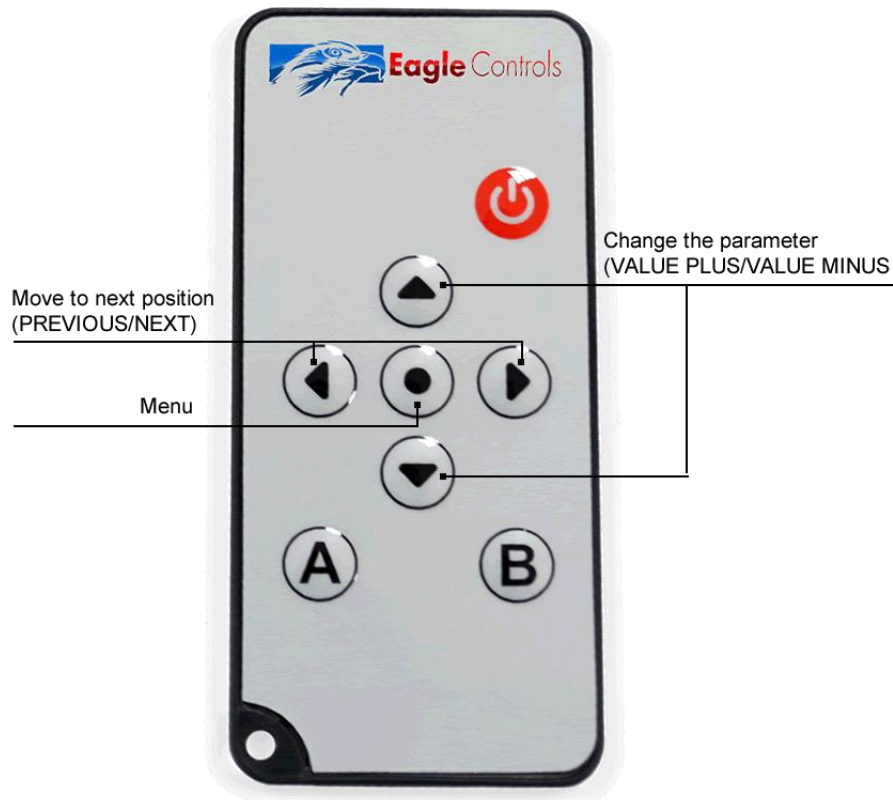
ALARM OUTPUT

There is a facility (terminal block) in the rear connection housing to wire a Relay output and the alarm output can be programmed to operate up to 30 times at various times in a 12 or 24 hour period.   The duration of the output can also be varied within a range of 1~59 seconds.   The alarm can also be programmed to operate on a continuous weekly basis.

LARGE DISPLAY – TIME OPERATION MODES

There are **three** modes of operation available,   which range from the basic to the advanced networking.

1. BASIC

This mode requires the user to enter manually the Real Time and manually adjust (with the IR Remote) for the seasonal changes (Summer and Winter).   Other features mentioned earlier are still accessible with the programmer,   but TIME is not automatically adjusted.

2. GPS TIME SYNCHRONISATION (ATOMIC CLOCK DERIVED)

This is probably the most popular ' FIT and FORGET ' mode, whereby the Clock is supplied (as an order option) with a Wall mounting or Antenna mounting GPS receiver module and takes its correct time from Satellite signals.   It is extremely accurate to within +/- one millionth of a second per month and determined on the basis of Atomic Standards.

It automatically switches the Clock from Daylight Saving Time (Winter) to Standard Time (Summer) and vice versa, in any Time Zone in the world,   where such time changes are made.

The standard GPS receiver module lead length is 10 m / 32 ft but can be extended (at extra cost) to 50 m / 164 ft.

Advantages of GPS : –

- Provides highly accurate Real Time
- Does not require any manual adjustment
- Does not require any connection to the Internet
- Operates GLOBALLY
- Signal reception is inbuilt in the receiver
- Single or a multiple of Clocks can linked to create a LAN network, using just ONE GPS receiver **(see below)**

GPS / LAN Synchronisation

This use of GPS is ideal for installing a number of Clocks into a building which are positioned in different locations but MUST HAVE **co-ordinated Time displayed at all times.**

This is a LAN system (Local Area Network) where **ANY ONE** CLOCK is the MASTER and all the other clocks in the LAN are called ' SLAVES '

The MASTER Clock is a GPS controlled Clock with one receiver.

It receives its correct time from the Satellite signal and then through the network switch or switches (depending on how many clocks are in the network) it transmits the Time to all the SLAVES,   so they all receive the GPS correct time.

This method can be applied to as little as 2 Clocks or many Clocks.

Addionally Temperature may also be displayed on a LAN, but usually Temperature may differ from one location to another.
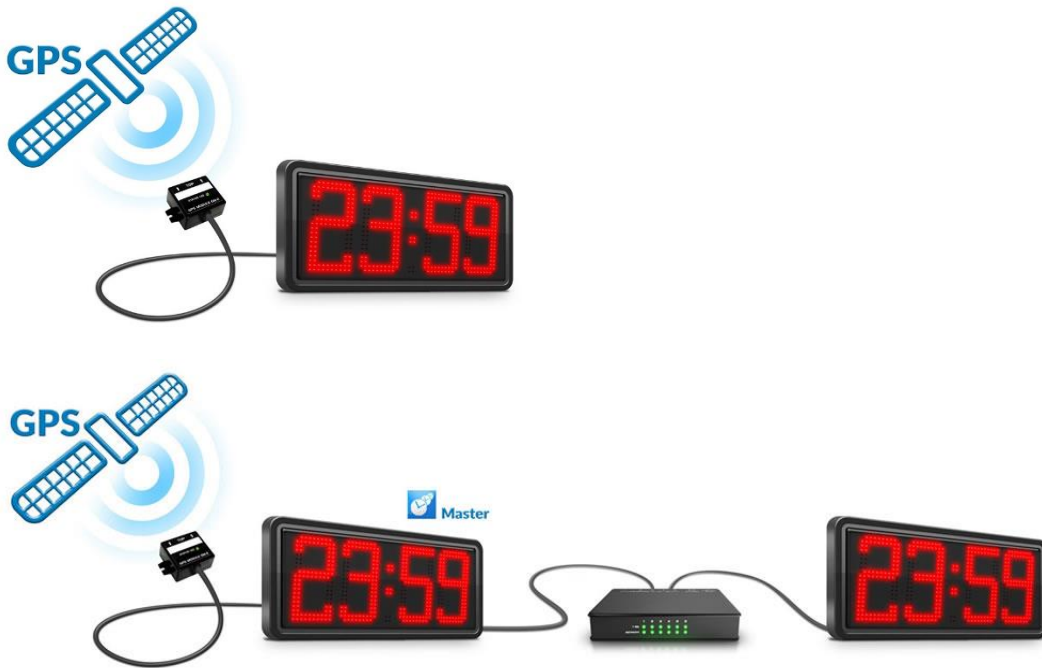
3. NTP SYNCHRONISATION (ATOMIC CLOCK DERIVED)

NTP means (Network Time Protocol) which is a communication protocol supporting precise, stable and safe synchronisation of Clocks with any time server through the computer network UCT, which means (Universal Co-ordinated Time).   It can support the synchronisation of a large number of devices in nationally different locations through the internet.

This may be done from

- Your own local time server (Internet access is **NOT** required) or
- A public remote server like GMT / UCT   (Internet access **IS** required).   **You should consult an IT specialist before embarking on NTP installation**

Advantages of NTP

- Every Clock can be configured as a local NTP time server
- Provides precise time synchronisation with public NTP servers such as GMT / UCT
- Many Clocks can be synchronised from the same server
- Operation of up to 5 different time servers (1 primary and 4 alternatives, so if the primary server suffers failure it automatically switches to one of the alternatives 2, 3 or 4
- The NTP Time is carried out via the ETHERNET. The Ethernet circuitry is included in the circuitry of all our NTP Clocks

AUTOMATIC BRIGHTNESS CONTROL

All our Clocks have an inbuilt light sensor as standard which automatically adjusts the brightness of the display on a 24 hour basis always taking into account the position of the sun in relation to the clocks location (Indoors or Outdoors),   cloud cover and the shortening or lengthening of daylight hours between Summer and Winter times.

At night time this feature is particularly good as it prevents GLARE to onlookers or drivers.
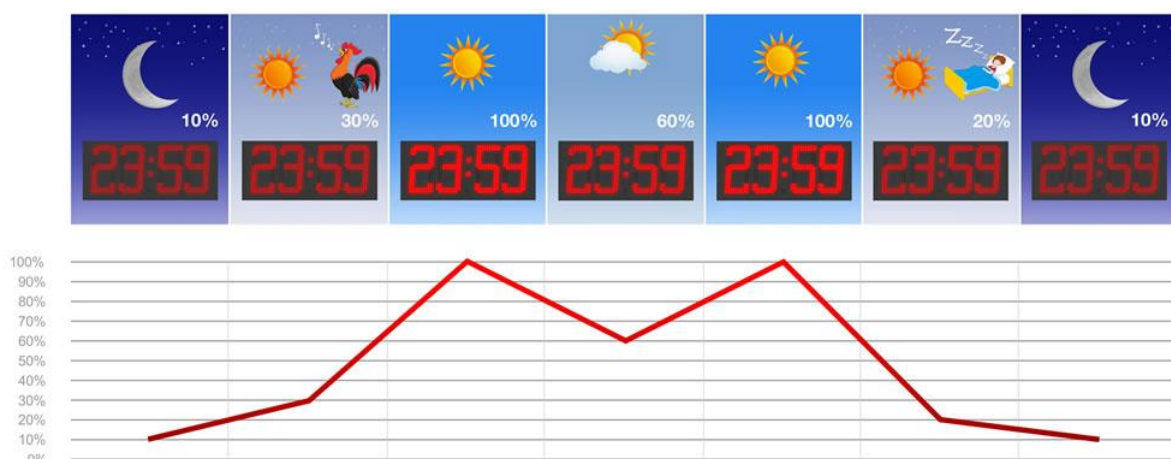
GENERAL SPECIFICATIONS OF LARGE DIGIT CLOCKS

Time Bases	Hrs : Mins, Hrs : Mins : Secs
Number of digits	4 or 6
Digits Heights	2.3", 4", 6", 8", 10", 12" 16"
Display Type	Segment DOT Led
Display Colours	**Red** (standard), **Amber**, **Blue**, **Green**, **White**, **Yellow**
Mounting	Wall with brackets, Wall Flush, Panel Flush, Suspension, Perpendicular
Environmental	IP54 / NEMA 13, IP66 / NEMA 4X
Installation	Indoor or Outdoor
Alarm outputs	3A Single or Dual SPCO
Power inputs	95~265Vac, 24Vdc or 12Vdc
Control Modes	Manual push button or IR Remote
Weight	Depends on case type, digit height and number of digits
Power Consumption	Depends on digit height and number of digits
Operating Environment	-25~45 °C / -13~113 °F
Case Material	Extruded Aluminium / Polycarbonate