



The 4010x and 4200x series of digital clocks provide a precise and elegant display of time using red, green, yellow/amber, blue or white LED display characters with an unrivalled flexibility of operation in the most demanding timekeeping and stopwatch applications.

Synchronisation of the 4010N & 4200N series products is primarily via NTP/SNTP from a remote timeserver located on the customers TCP/IP Ethernet network. 4010NE & 4200NE units can also be configured for synchronisation via GPS when used with our 488HS4 or 488HS4-GLONASS receiver. There are also many possible secondary synchronisation options available when clocks are ordered with the appropriate factory fit options.



4010x.100



4010x.12



4200x.170



4200x.220

Model No.	Case Size	Character height	Viewing distance	LED Colour Options
4010x.02	Front bezel: 144 x 72 x 3mm Case body: 132 x 58 x 147mm	20 & 14mm	7m (20 ft)	.R, .G, .SR
4010x.05	305 x 90 x 58mm	50 & 30mm	20m (60ft)	.R, .G, .Y, .B, .W
4010x.057	390 x 90 x 58mm	57mm	25m (75ft)	.R, .G, .Y, .B, .W
4010x.100	670 x 180 x 58mm	100mm	50m (150ft)	.R, .G, .Y, .B
4010x.12	670 x 180 x 58mm	120 & 100mm	50m (150ft)	.R, .G, .W, .UR, .UY
4010x.170	990 x 260 x 66mm	170mm	80m (250ft)	.R, .G, .W, .UR, .UY
4010x.220	1070 x 320 x 66mm	220 & 170mm	100m (300ft)	.R, .G, .W, .UR, .UY
4200x.05	240 x 90 x 58mm	50mm	25m (75ft)	.R, .G, .Y, .B, .W
4200x.057	305 x 90 x 58mm	57mm	25m (75ft)	.R, .G, .Y, .B, .W
4200x.100	480 x 180 x 58mm	100mm	50m (150ft)	.R, .G, .Y, .B
4200x.120	480 x 180 x 58mm	120mm	50m (150ft)	.R, .G, .W, .UR, .UY
4200x.170	730 x 260 x 66mm	170mm	80m (250ft)	.R, .G, .W, .UR, .UY
4200x.220	810 x 320 x 66mm	220mm	100m (300ft)	.R, .G, .W, .UR, .UY

Key Features

Automatic synchronisation with remote NTP network timeservers across a TCP/IP Ethernet network (4010N/NE or 4200N/NE units).

High visibility LED display with both automatic and manual brightness adjustment.

Time display in 4 digits (4200x) or 6 digits (4010x) with multiple time and date display formats.

Seven different display sizes offering a wide range of viewing distances between 7m (21') -> 100m (300')

'Set Once' world time zone configuration allowing digital clock to support all international time zones.

Wireless IR remote control for configuration and multifunction stopwatch operation.

High quality aluminium case with black, silver or RAL painted finish.

Remote configuration, management and software update across the Ethernet TCP/IP network using Wharton cMon software (4010N/NE or 4200N/NE units).

10/100 Base-T Ethernet interface (4010N/NE or 4200N/NE units).

Battery backup for maintaining timekeeping during periods of disconnection.

PoE (Power over Ethernet) Midspan and Endspan support, 100-240V 50-60Hz AC mains and 24V DC power options available.

Operational Features

High visibility 4 digit (4200x - hours and minutes) or 6 digit (4010x - hours, minutes and seconds) LED display.

Seven different display sizes offering viewing distances from 30cm (12") -> 100m (300ft).

User selectable 12 or 24 hour time display. Colons provide AM/PM indication in 12 hour mode.

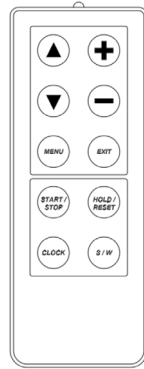
Automatic and 7 manual brightness settings.

Alternating time and date display with US, European and ISO date formats. User specified hold time for both time and date.

Multifunction Stopwatch operation with wireless RC100 infrared remote control.

10/100 Base-T Ethernet Interface (4010N/NE and 4200N/NE units).

Fully automatic NTP configuration support when used with DHCP server supporting option 42.



RC100

Additional Features For 4010E, 4010NE, 4200E and 4200NE

Time synchronisation possible via GPS or GLONASS satellites (requires the appropriate receiver), w482, 48x0 or MOBALine.

Control of standard stopwatch operation 'start/stop' and 'hold/ reset' operation using customer supplied external switches or voltage free contact closures.

Alternating time and temperature display in °C and °F when used with optional 406 temperature sensor. User specified hold time for both time and temperature.

Local Synchronisation output, allowing the time synchronisation of up to 5 other 4010E, 4010NE, 4200E and 4200NE digital clocks using a simple cable pair (not available when using external stopwatch switches).

Factory Fit Options

The following options can be fitted to the 4000x digital clock at time of manufacture:

NEBU - Synchronisation from EBU / SMPTE LTC time code or NTP/SNTP via RJ45 10/100Base-T Ethernet port.

NIRIG - 1KHz Amplitude modulated IRIG-B / AFNOR signal or NTP/SNTP via RJ45 10/100Base-T Ethernet port.

N232 - RS232 level serial ASCII signal or NTP/SNTP via RJ45 10/100Base-T Ethernet port.

N485 - RS485 level serial ASCII signal or NTP/SNTP via RJ45 10/100Base-T Ethernet port.

NPROC - Network clock fitted with 6 process control inputs. Each input can be triggered by a voltage free contact closure.

Timing Accuracy

High Quality Quartz Crystal Oscillator

Unsynchronised: 0.1 sec/day @ 20-25°C

Synchronised to NTP/SNTP timeserver:

Typically synchronised within 1-10 milliseconds of master clock timebase depending on network delay and jitter. (NTP)

GPS/GLONASS synchronisation: ±1mS of UTC *1

*1 4000E & 4000NE only - When used with either a 488HS4 or 488HS4-GLONASS receiver.

Case Styles and Colours

The 4010x and 4200x series of digital clocks are available as standard with a wide range of mounting options to ensure ease of integration in all applications.

.S Surface Mounting case suitable for wall mounting.

.FP Flush mounting case for use in a panel with rear access. *1

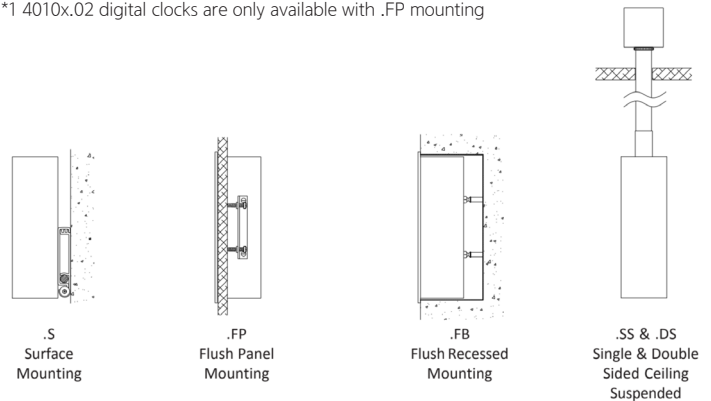
.FB Flush mounting case, supplied with back box for use in a solid wall.

.SS Single sided ceiling suspended case

.DS Double sided ceiling suspended case

Digital clocks are supplied as standard with cases finished in black or silver. Painted case finishes to any RAL paint colour available at extra cost.

*1 4010x.02 digital clocks are only available with .FP mounting



Power Supply

IEEE 802.3af-2003 Class 3 Midspan and Endspan support (.PoE order code) *1

Internal PSU 110-240V AC. 50/60Hz Units available with UK, European, US or Australian mains leads. (.UK, .EU, .US & .AU order codes)

DC power options: 24V & 48V DC power options available at extra cost. (Order code .24VDC & 48VDC) *2

Other power options available on request, please contact our sales team for more information.

Battery Backup: >1 Year. (The battery backup maintains the internal timekeeping during periods of mains failure).

*1 Not available on any 4010E or 4200E digital clocks, 4010N/NE.170, 4010N/NE.220, 4200N/NE.170 or 4200N/NE.220 digital clocks.

*2 Not available on 4200N/NE.05 digital clocks.

Environment

Operating temperature: 0-50°C

Relative Humidity: 0% to 95% (non-condensing.)

Altitude: 0 to 3,000m

MTBF: > 100,000 hours

Electromagnetic Compatibility, Safety and RoHS3 Directives

4010x and 4200x digital clocks, when used in accordance with our recommendations, comply with both the European Union Electromagnetic Compatibility (EMC) Directive 2014/30/EU, the European Community Low Voltage (LVD) Directive 2014/35/EU and the RoHS3 Directive 2015/863 and conform to the following standards:

EN 50121-4 : 2016+A1:2019
EN 61000-6-4 : 2019
EN 62368-1:2014+A11:2017

EN 61000-6-2 : 2019
EN 55032 : 2015+A11:2020
EN 55035: 2017+A11:2020

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Specification subject to change without notice