Instructions

Digital clock

LUMEX 5, LUMEX 7, LUMEX 12

WESTERSTRAND URFABRIK AB

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General

Digital clock for indoor application has 4 digits and colon displaying time.
The digits consist of 7 segments.

Example: 23:59

Digital clock for indoor application with second has 6 digits and colon displaying time.
The digits for the second consist of 7 segments.

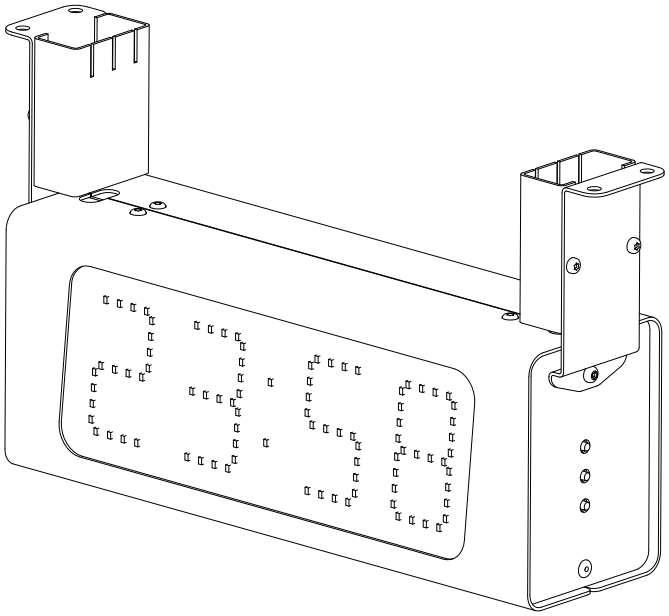
Example: 23:59:48

The Digital clock can be programmed for alternating time/temperature/date display in 0-25 sec intervals.
Temperature sensor is not included. It is an option.
The programming of time, Synchronisation and light intensity are made by push buttons, located at one side of the cover.
The digital clock can operate stand alone with a built in quartz crystal as time reference, as a slave clock to a master clock transmitting 24 V polarised 1/1 minute impulses or synchronised by TC, DCF.
If the DLS-function is set, the clock is changing, summer and winter time, the last Sunday in March and the last Sunday in October automatically.
The clock has adjustable light intensity.
If power failure occurs the display is turned off. The internal clock continues to keep the correct time for 48 hours. After power failure the display is turned on and correct time is shown.
If not specified in order the clocks are preset from factory in impulse Synchronisation mode.

Installation wall mounted

- Unscrew 4 screws, 2 above and 2 under, remove the back plate from the casing and mount it on the wall.
- If operated by synchronisation, check the strapping according to the drawing page 7. Connect the cables according the schema page 6.
- Connect the power 230VAC, 50Hz. according the schema page 5. When the clock is permanently installed a readily accessible disconnect device shall be incorporated in the fixed wires (2-polar, 3mm contact gap).
- Assemble the front.
- Set the digital clock. See Programming.

Installation ceiling mounted



- Unscrew 2 screws under the service front.(The front when you have R,F,P buttons to the right.) Remove the front.
- Mount the 2 holder at the digital clock and mount it.
- If operated by synchronisation, check the strapping according to the drawing page 7. Connect the cables according the schema page 6.
- Connect the power 230VAC, 50Hz. according the schema page 5. When the clock is permanently installed a readily accessible disconnect device shall be incorporated in the fixed wires (2-polar, 3mm contact gap).
- Assemble the front and the cover for the holder.
- Set the digital clock. See Programming.

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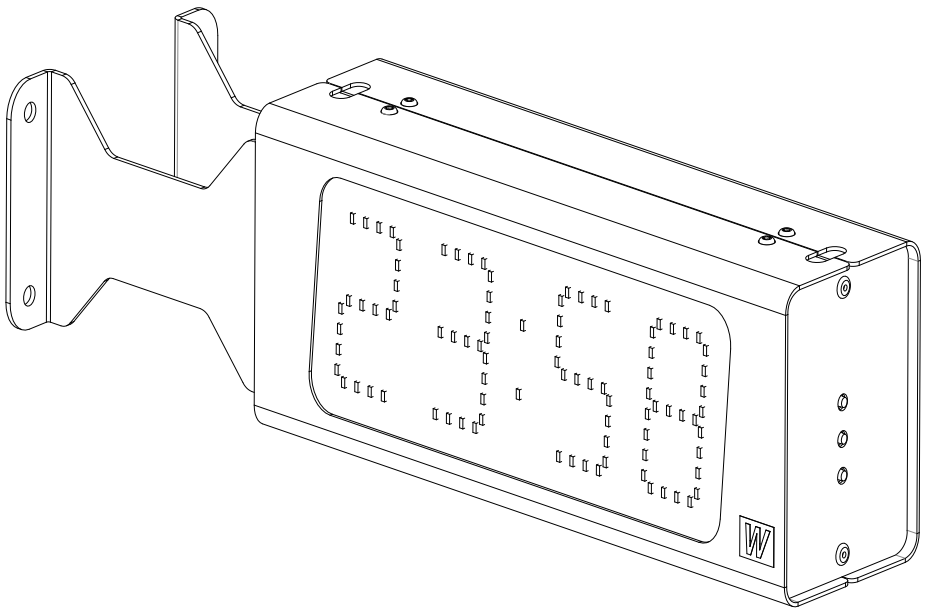
Installation wall mounted



- Unscrew 2 screws under the service front. (The front when you have R,F,P buttons to the right.) Remove the front.
- Mount the digital clock.
- If operated by synchronisation, check the strapping according to the drawing page 7. Connect the cables according the schema page 6.
- Connect the power 230VAC, 50Hz. according the schema page5. When the clock is permanently installed a readily accessible disconnect device shall be incorporated in the fixed wires (2-polar, 3mm contact gap).
- Assemble the front and the cover for the holder.
- Set the digital clock. See Programming.

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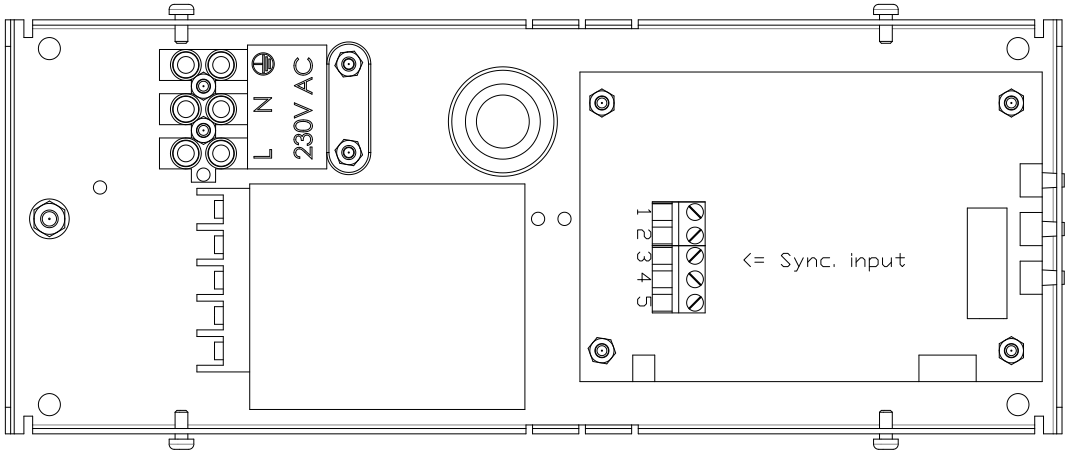
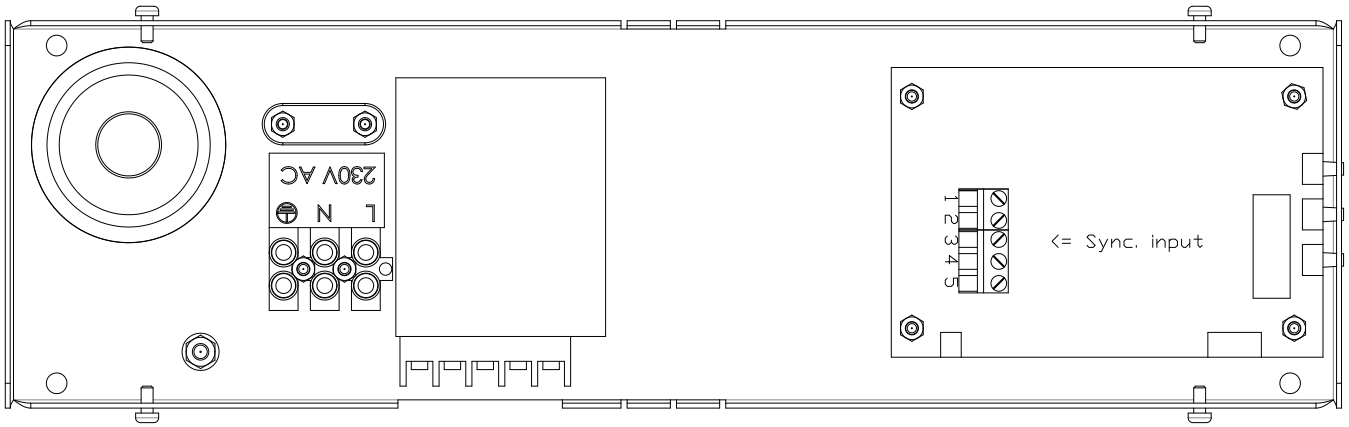
Connection

The connections are made on the inside of the back plate (see below.)

LUMEX 5



LUMEX 5/S, LUMEX 7, LUMEX 7/S, LUMEX 12, LUMEX 12/S



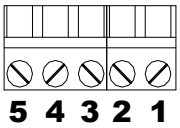
Connection Synchronisation wire

TC/MIN-imp 3,4

DCF 2-line 3 ï V+, 5 ï GND

DCF 3-line 3 ï V+,4- DCF, 5 ï GND

Sync. input



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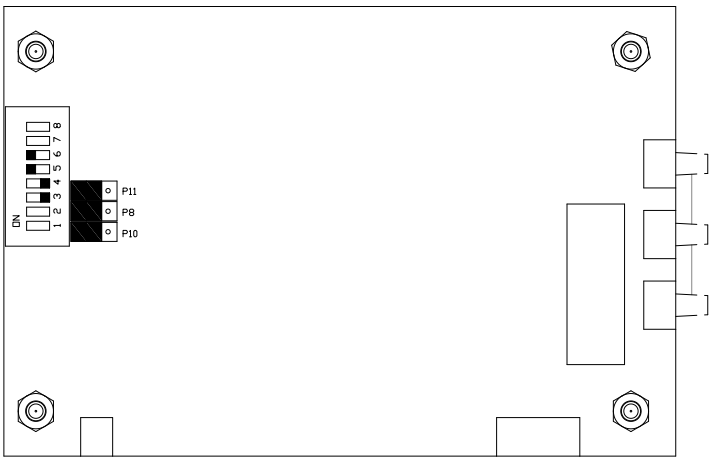
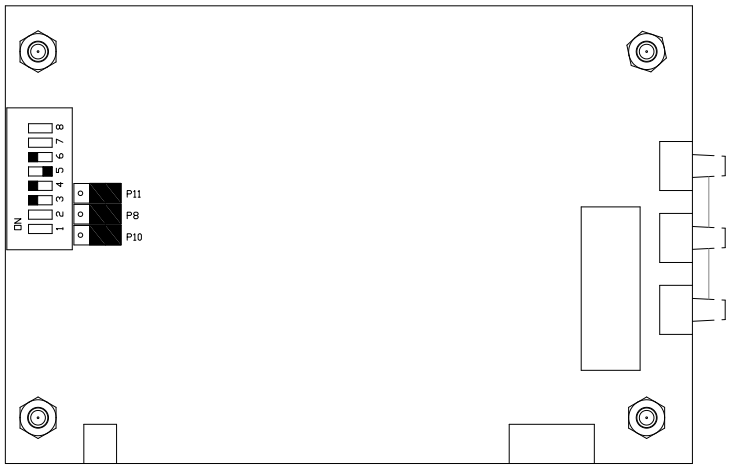
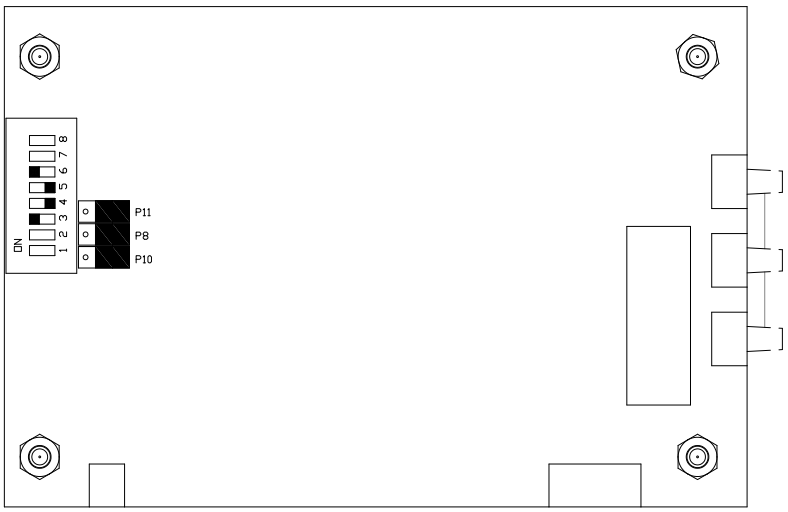
Strapping/DIP switch setting for TC / MIN-impulse (default)



Strapping/DIP switch setting for DCF-radio (2 ï wire) computer board



Strapping/DIP switch setting for DCF-radio (3 ï wire) computer board



The DIP-switch on the computer board should be set as follows:

Dip 1: OFF Display format is HH:MM.
ON Display format is HH:MM:SS.

Dip 2: OFF always OFF

Dip 3: OFF TC/Min impulse-synchronisation. (default)
ON DCF synchronisation.

Dip 4: OFF TC/Min impulse or 3-wire DCF synchronisation. (default)
ON 2-wire DCF synchronisation.

Dip 5: OFF DCF synchronisation.
ON TC/Min impulse synchronisation.(default)

Dip 6: OFF ½ Min impulse synchronisation.
ON TC/Min impulse synchronisation or DCF synchronisation. (default)

Dip 7: OFF always OFF

Dip 8: OFF always OFF

Synchronisation

Stand-alone

If the clock does not have an external synchronisation, it operates Stand-alone.

Minute impulse

Make the strapping according to the drawing for strapping page 7.
Connect the minute impulse wire according to the schema page 6.
The clock can be set in synchronisation or slave mode.
Synchronisation mode:
Set the clock for synchronisation, mode InSy See programming page 11.
Set time and wait for next minute impulse. The clock will be synchronised
Slave mode:
Set the clock for slave, mode InSL See programming page 11.
Set time and wait for next minute impulse. The clock operates as a slave clock.

TC

Check the strapping according to the drawing for strapping page 7.
Connect the TC wire according to the schema page 6.
Set the clock for synchronisation, function DCF See programming page 11.
When a correct time message appears the clock sets the time.
The clock will blink colon when it is in sync and accepts transmitted code.

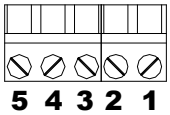
DCF

Check the strapping according to the drawing for strapping page 7.
Connect the DCF wire according to the schema page 6.
Set the clock for synchronisation, function DCF See programming page 11.
When a correct time message appears, the clock sets the time.
The clock will blink colon when it is in sync and accepts transmitted code.

Connection temperature sensor (this is an option).

Temperature sensor connection

1. Brown
2. Black
5. Screen



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Programming

The programming is made by push buttons (see below).

R (Return) Enter the base mode (display time)
F (Function) Next function / Accept displayed value
P (Program) Enter the displayed function / Increase displayed value.

programming time

Push [F] until display shows: | ti ne |

Push [P] display shows: | yy 95 | year.

Push [P] until desired year (00-99)
Accept with [F].

Display shows: | nn 1 | month.

Push [P] until desired month (1-12).
Accept with [F].

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Display shows: d d 1 day

Push [P] until desired date (1-31).
Accept with [F].

Display shows: hh 12 hour

Push [P] until desired hour (0-23). Accept with [F].

Display shows: nn 07 minute

Push [P] until desired minute (00-59). Push [F] for synchronisation and the clock starts

Display shows: ti ne

Push [R]. The Programming is finished.

Display shows: 12 : 07

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Setting light intensity

The light intensity for the digits can be adjusted in 8 levels.
An automatic dimmer function regulates the light intensity.

Push [F] until display shows: | di sp |

Push [P]

Display shows: | di 1 | . Light intensity 1 (weakest) - 8 (strongest)

Push [P] for desired light intensity. Accept with [F].

Display shows: | Sy nc |

Push [R] for entering base mode or push [F] for next function.

Setting synchronisation

Synchronisation for this model is minute impulse, TC, DCF (or stand alone).

Push [F] until display shows: | Sy nc |

Push [P] until desired synchronisation.

no sy	No synchronisation, stand alone
dcf	TC or DCF
InSy	Impulse synchronisation
InSL	Impulse slave

Push [R] for entering base mode or push [F] for next function.

Setting alternating time, Loop time

Push [F] until display shows: LooP

Push [P].

Display shows: L1 4 Alternating time for display time is 4 seconds.

Push [P] for desired alternating time (0-25). Accept with [F].

Display shows: L2 0 Alternating time for display temp. is 0 seconds.

Push [P] for desired alternating temperature (0-25). Accept with [F].

Display shows: L3 4 Alternating time for display date is 4 seconds.

Push [P] for desired alternating time (0-25). Accept with [F].

Push [R] for entering base mode or push [F] for next function.

Setting Correction value for the temperature sensors.

With this function the temperature sensors can be adjusted ± 9 ęC.

Push [F] until display shows: Corr

Push [P]:

Display shows: C1 0

Push [P] for desired correction value (± 9 ęC). Accept with [F].

Push [R] for entering base mode or push [F] for next function.

Setting DLS-function.

With this function the DLS can be activated.

Push [F] until display shows: dLS

Push [P].

Display shows: YES

Or: no

Push [P] for DLS or not.

Push [R] for entering base mode or push [F] for next function.

Setting12/24 h format.

With this function the format 12/24 hours display can be set.

Push [F] until display shows: Fo rn

Push [P].

Display shows: 12 12 hour format

Or: 24 24 hour format

Push [P] for desired format.

Push [R] for entering base mode or push [F] for next function.

Technical specification

Mains	100-240 VAC, 50/60 Hz
Maximum Connection Current: LUMEX 5, LUMEX 5/S, LUMEX 7, LUMEX 7/S LUMEX 12, LUMEX 12/S	 0.35A 0,7A
Temperature range	0ę - +40ę C
Size of digits HH:MM	120/70/50 mm, red, green, yellow SMD LED:s
Size of digits :SS	70/50/37 mm, red, green, yellow SMD LED:s
Synchronisation	Polarised 24V impulse 1/1, TC, DCF
Accuracy	± 0.1 sec/24 hour
Dimensions(WxHxL) LUMEX 5 LUMEX 5/S LUMEX 7 LUMEX 7/S LUMEX 12 LUMEX 12/S	 250x96x50mm 335x96x50mm 325x120x50mm 424x120x50mm 450x200x50mm 640x200x50mm
Running reserve	48 hour
Changing Summer/ Winter	Last Sunday in march, last Sunday in October.
Measure range temperature sensor	ï 30 ę - +60ę
Accuracy temperature sensor	± 1 ę C
Temperature measurement	Once per minute

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