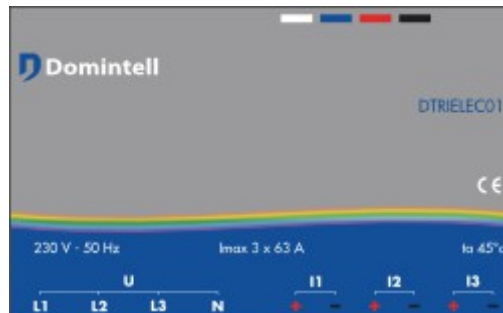


DTRIELEC01

About

The DTRIELEC01 measures the energy (Wh) on polyphase (up to three) electrical installation. The frequency, the RMS voltage and the RMS current are also measured.



Specifications

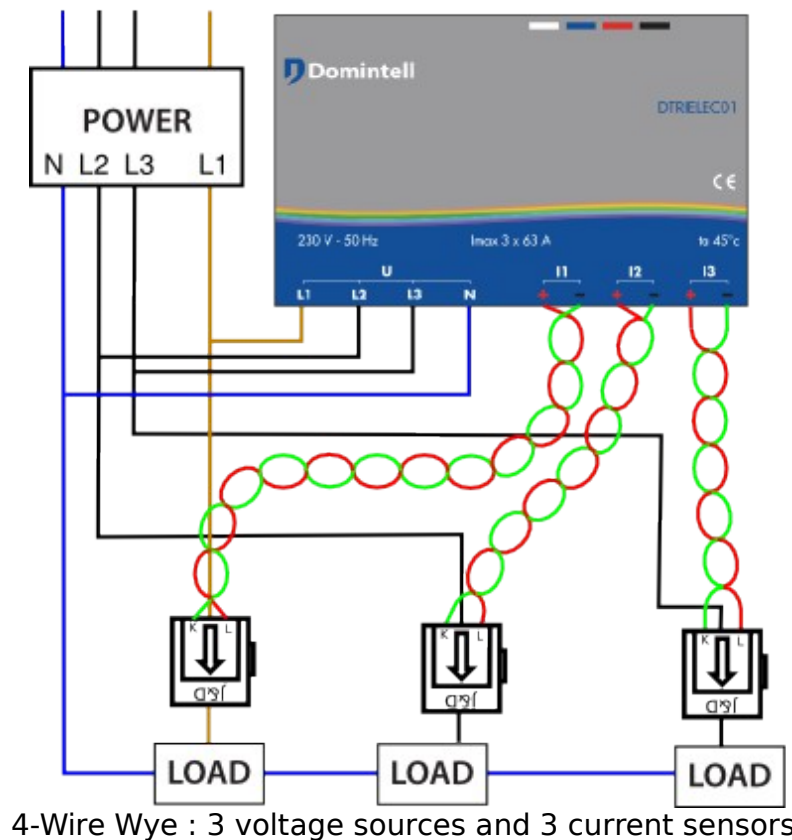
- Minimal version of Domintell2 software : **1.27.02**.
- Minimal version of module's firmware : **v5**.
- Several DTRIELEC01 can be connected on Domintell2 bus.
- Maximal RMS voltage : 389Vrms.
- Minimal RMS voltage : 80Vrms
- Maximal RMS current : 63Arms.
- Minimal RMS current : 200mArms.
- RMS current resolution : 1mA.
- Line frequency : 50Hz or 60Hz.
- Provided current clamp : JetDelectronics JC-10F (ratio 3000:1).
- Module's consumption : 40mA.

Limitations

- **Installation must have at least one DTSC02 or DTSC04 to log and display measures.**
- Logged data can only be displayed on DTSC02/DTSC04 screen.
- No links or conditions can be done for now.
- If voltage is below 80Vrms, current below 200mArms or real power below 50W, null data will be returned for all values.
- **Only provided current clamp can be used.**

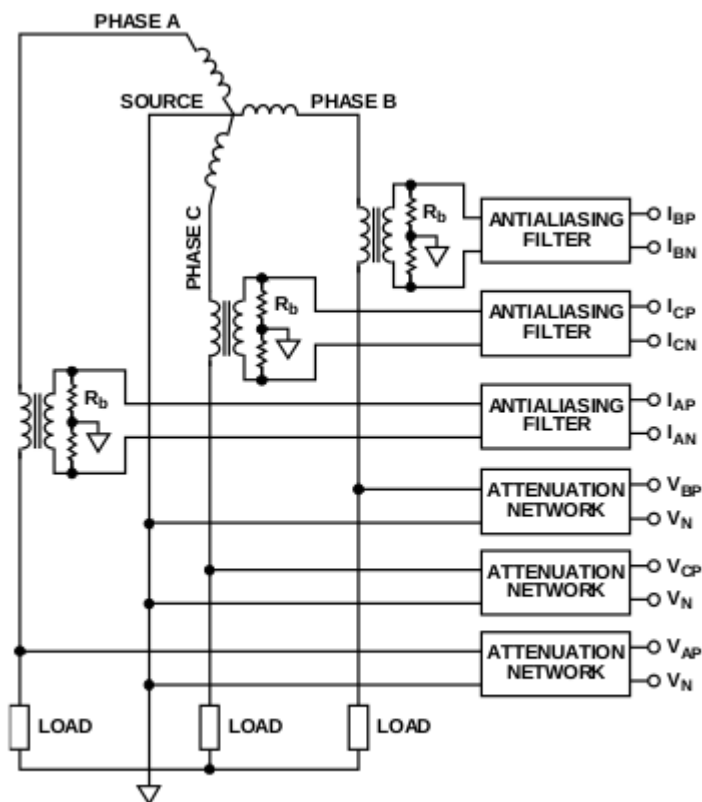
Wiring

- Phase for which power must be measured is directly connected to L and N connections of DTRIELEC01
- Place JC-10F current clamp on phase wire and connect **K** and **L** terminations to **-** and **+** connections on DTRIELEC01 using, if possible, STP (shielded twisted pair) with section from 0.34mm² to 1.5mm².
- **Electromagnetic fields can disturb current measurement. Do not tie wires of current sensors along high voltage wires or contactors.**
- **Take care of the arrow on current clamp that must point to the load.**
- **Be sure that clamp is completely closed otherwise measure will be invalid.**
- **You have to take care to the wiring of current clamp and associate them with their matching phase** otherwise the measured current will be negative or the real power will be invalid.



Possible wiring

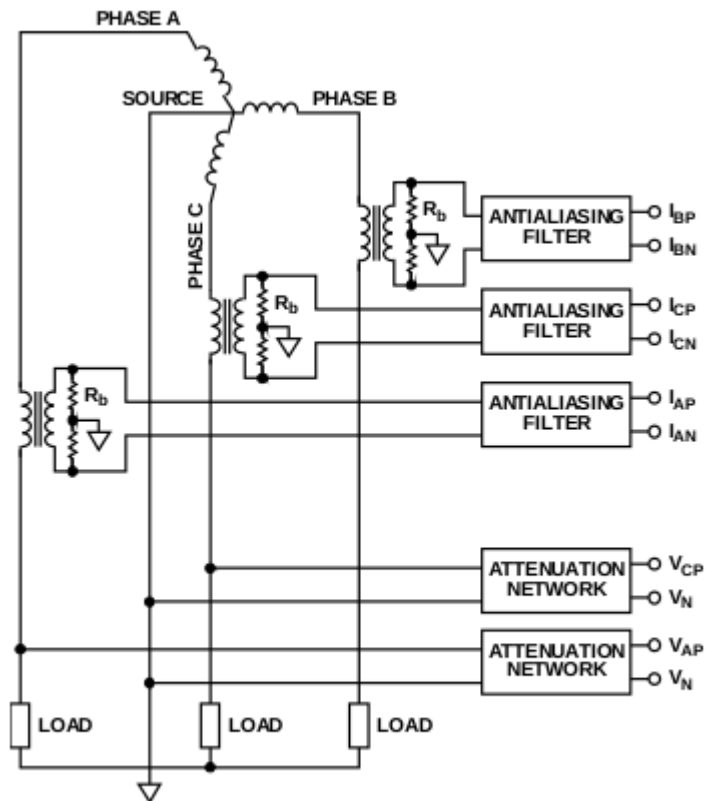
- 4-Wire Wye : 3 voltage sources and 3 current clamps [Star (3 voltage sensors)]



© Analog Devices

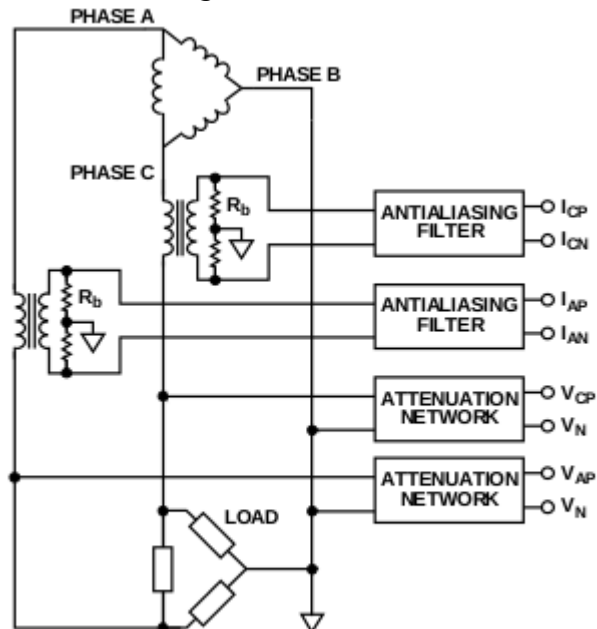
Figure 13. 4-Wire Wye with Three Voltage Sensors

- 4-Wire Wye : 2 voltage sources and 3 current sensors [Wye (2 voltage sensors)]



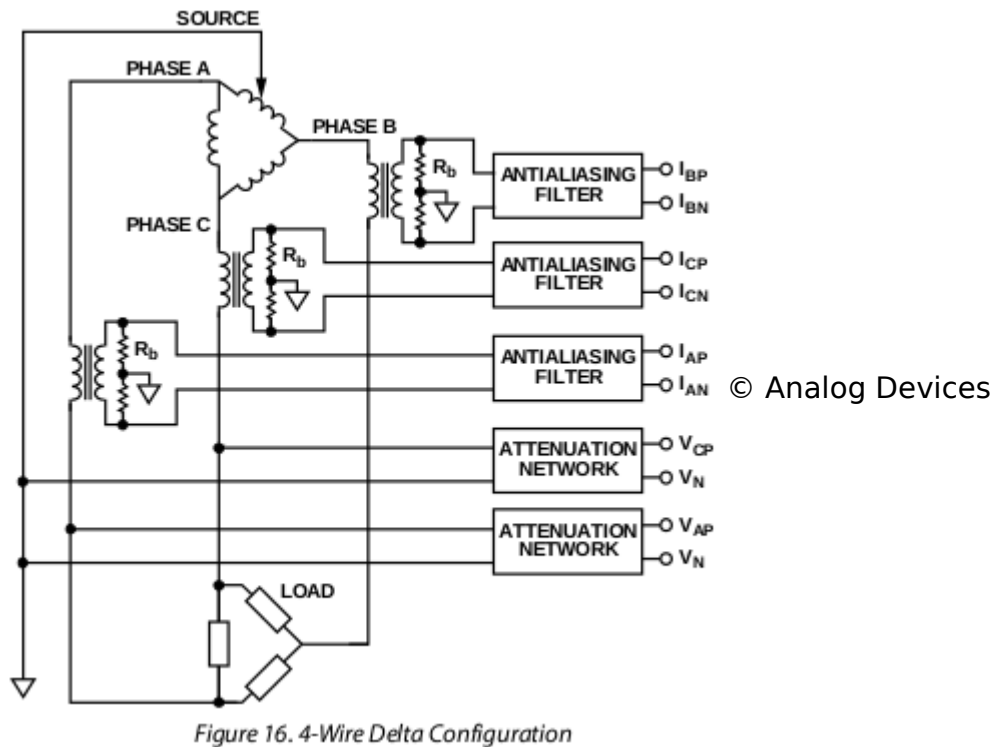
© Analog Devices

- 3-Wire Delta : 2 voltage sources and 2 current sensors [Delta (3 wires - 2 voltage sensors)] (common in Belgium)

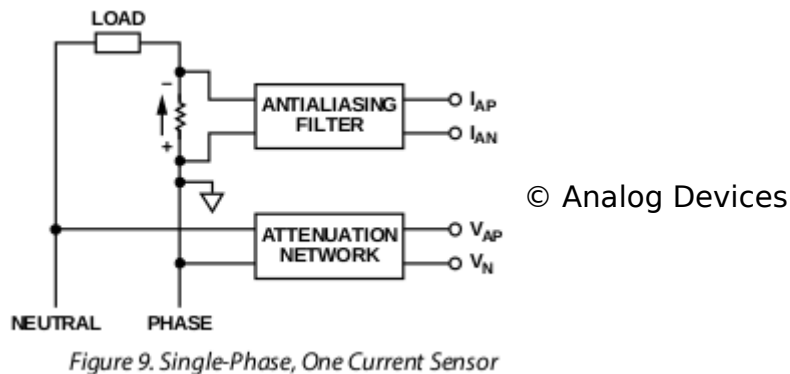


© Analog Devices

- 4-Wire Delta : 2 voltage sources and 3 current sensors [Delta (2 voltage sensors)]



- Single phase : 1, 2 or 3 independent single phase sources



- Polyphase inputs can be used as three independent single phase inputs **only** if the neutral is common to all single phase sources.
- When mode [1 single phase] is selected, Input L1 and I1 must be used.
- When mode [2 single phases] is selected, Input L1, L2, I1 and I2 must be used.
- If L2 or L3 inputs are not used, they must be linked/connected with L1 input.

Configuration in software

- After a network scan, the DTRIELEC01 will appear in Sensor section in the middle column.
- By editing module properties, you will be able to select Power Line frequency (50Hz or 60Hz) and if module is correctly wired (on Domintell2 bus and power side), you will see live measures. If the succession of voltage is incorrect, a message will be displayed instead of absolute value.
- If you choose to display DTRIELEC input on DTSC02/DTSC04 screen (default behaviour), you will be able to display graphic of logged data.



Module DTRIELEC01

Card settings

Name: DTRIELEC01

Type: DTRIELEC01

Version: 4

Address: 1

Frequency: 50Hz

Wiring: Star (3 voltage sensors)

Inputs

	Reading values		
	U	I	P
Name: Triphasé A	239 V	9,02 A	2.15 Kw
Name: Triphasé B	237 V	40,35 A	9.56 Kw
Name: Triphasé C	233 V	8,79 A	2.04 Kw

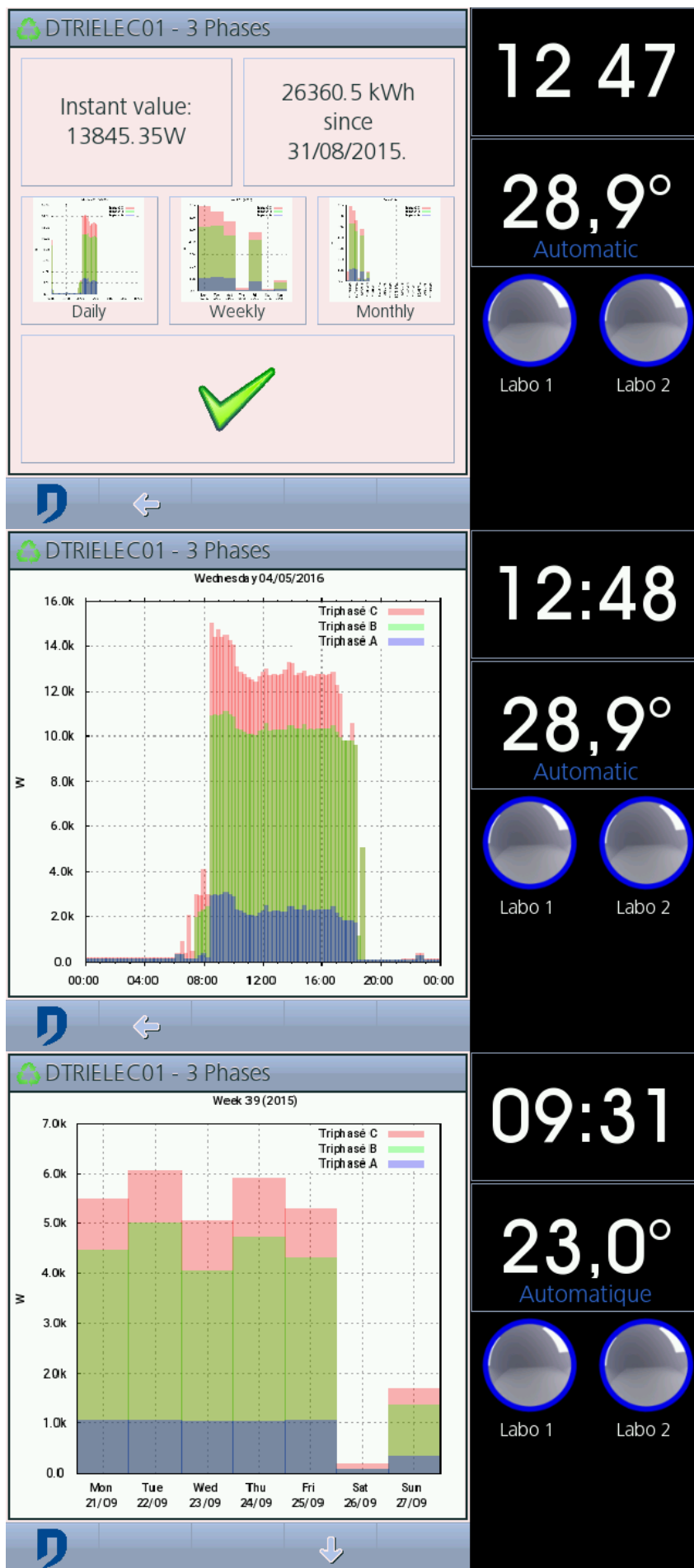
Consumption Since 31/8/15 - 164.75kWh Reset

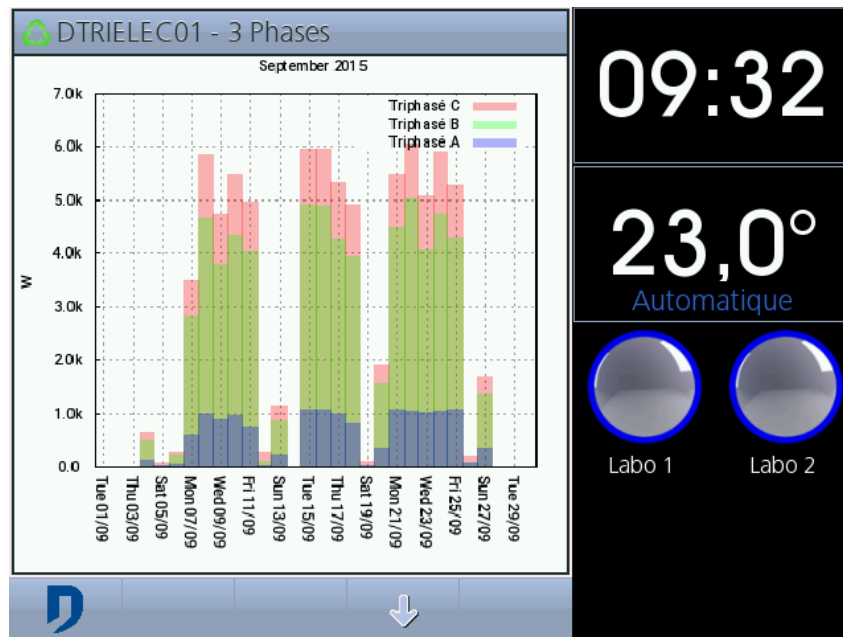
Cancel OK

DTSC02/04 Screenshots

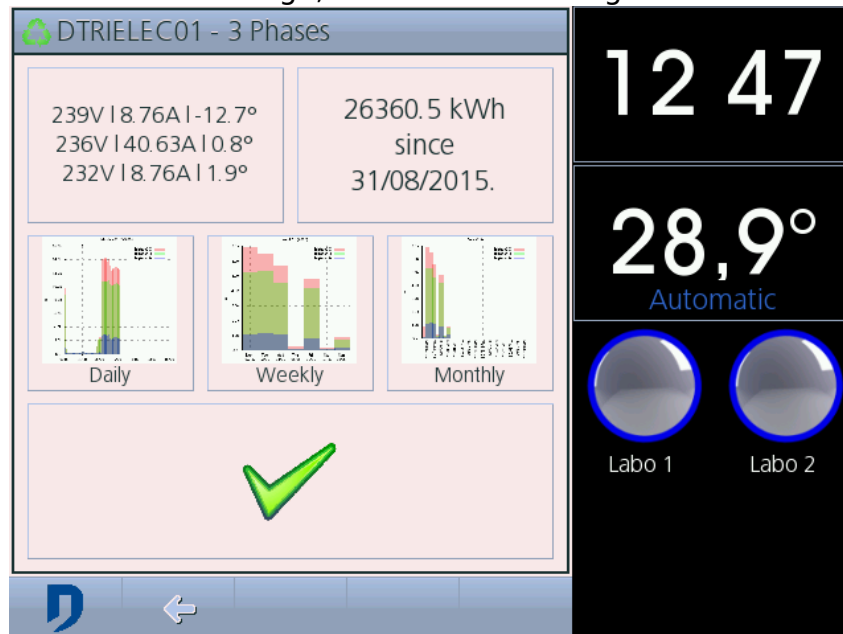
Here is some screenshots of DTSC02/DTSC04 display.



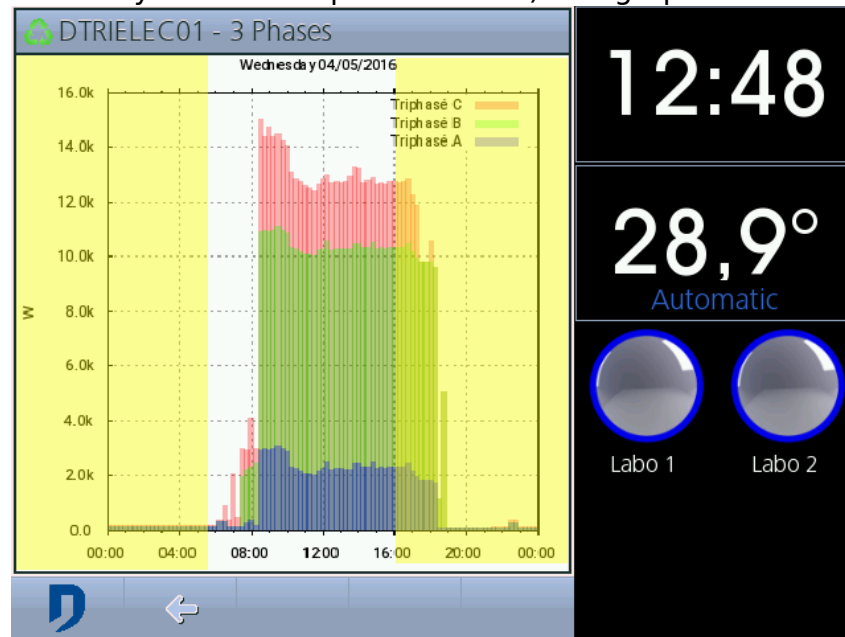




By pushing on "Instant value" frame, you will display detailed informations about measures : voltage, current and Phi angle.



It is also possible to navigate into history by pushing right and left border (zone highlighted in yellow in the picture below) of a graphic.



Download data from DTSC02/DTSC04.

All the logged data and graphics shown in main popup are available through FTP server of DTSC02/DTSC04 (type in address bar of a web browser : ftp://<ip_of_dtsc0x and look inside "data" and "png" directory)

If you have any question, you can contact your Domintell2 commercial contact or Domintell2 technical support at support@domintell.com.