

# C.A 8336

# C.A 8436

Power & Quality Analyser



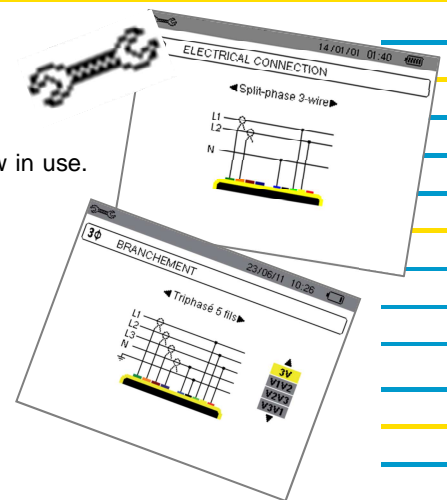
## For your diverse electrical installations

### Technical documentation QualistarPlus connections

Depending on the available power supply, the loads to be supplied and the necessary power levels, various sorts of set-ups have been developed and are now in use. These configurations are characterized by the number of phases and the presence or absence of neutral and earth conductors. The QualistarPlus models offer all the necessary measurement and calculation methods. It is up to users to select the electrical installation to which the instrument will be connected.

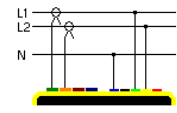
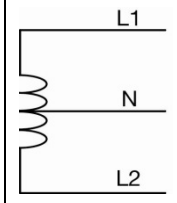
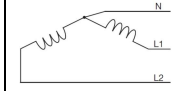
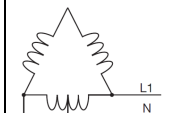
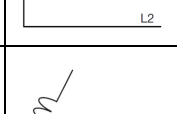
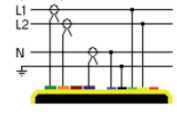
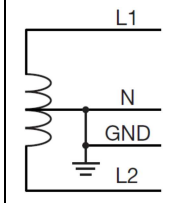
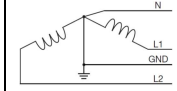
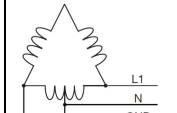
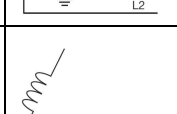
In the instrument's configuration menu, the connection menu, symbolized by  $3\Phi$ , defines the type of connection for the instrument according to the distribution system. A wide range of different electrical set-ups can be selected. Use the navigation keys ( $\leftarrow$ ,  $\blacktriangle$ ,  $\blacktriangledown$ ,  $\rightarrow$ ) to choose a type of connection.

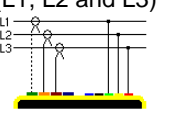
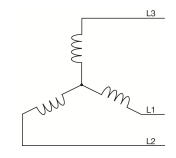
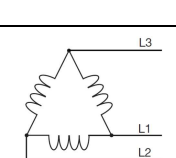
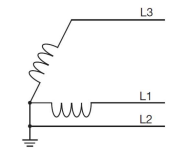
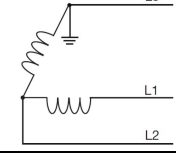
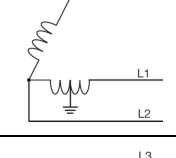
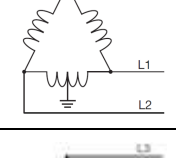
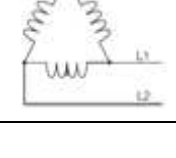
There are one or more network types corresponding to each distribution system. This means the instrument can be hooked up to all existing networks.



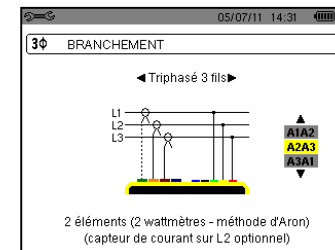
Distribution system	Network	Diagram
<b>Single-phase 2-wire</b> (L1 and N) 	Single-phase 2-wire network with neutral but without earth	
<b>Single-phase 3-wire</b> (L1, N and earth) 	Single-phase 2-wire network with neutral and earth	
<b>Split-phase 2-wire</b> (L1 and L2) 	Split-phase 2-wire network	
	3-phase 2-wire network in open star configuration	

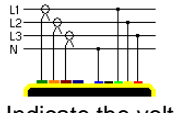
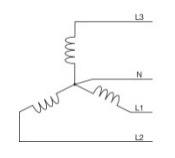
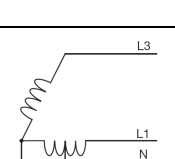
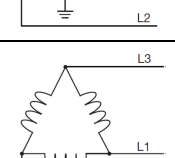
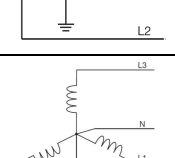
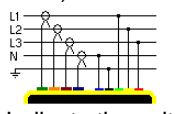
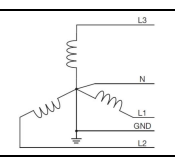
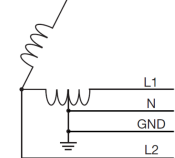
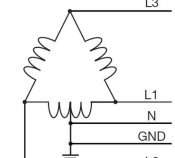
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Distribution system	Network	Diagram
<b>Split-phase 3-wire</b> (L1, L2 and N) 	Split-phase 3-wire network with neutral but no earth	
	Split-phase 3-wire network in open star configuration with neutral but no earth	
	Split-phase 3-wire network in "high leg" delta configuration with neutral but no earth	
	Split-phase 3-wire network in open "high leg" delta configuration with neutral but no earth	
<b>Split-phase 4-wire</b> (L1, L2, N and earth) 	Split-phase 4-wire network with neutral and earth	
	Split-phase 4-wire network in open star configuration with neutral and earth	
	3-phase 4-wire network in "high leg" delta configuration with neutral and earth	
	3-phase 4-wire network in open "high leg" delta configuration with neutral and earth	

Distribution system	Network	Diagram
<b>3-phase 3-wire</b> (L1, L2 and L3)  <p>Indicate the 2 current sensors which will be connected: A1 and A2, or A2 and A3, or A3 and A1.</p>	3-phase 3-wire network in delta configuration	
	3-phase 3-wire network in open delta configuration	
	3-phase 3-wire network in delta configuration with connection to earth between phases	
	3-phase 3-wire network in open delta configuration with connection to earth on the phase	
	3-phase 3-wire network in open "high leg" delta configuration	
	3-phase 3-wire network in "high leg" delta configuration	
	3-phase 3-wire network delta configuration	

Note: In the case of a three-phase network, it is not mandatory to connect all the terminals for voltages or currents. More particularly, on a 3-wire 3-phase installation (ARON), the measurement is performed with only 2 sensors for the current part. The third is optional.



Distribution system	Network	Diagram
<b>3-phase 4-wire</b> (L1, L2, L3 and N)  <p>Indicate the voltages to be connected: all 3 voltages (3V) or only 2 (V1 and V2, or V2 and V3, or V3 and V1).</p>	3-phase 4-wire network with neutral but no earth	
	3-phase 4-wire network in open "high leg" delta configuration with neutral but no earth	
	3-phase 4-wire network in "high leg" delta configuration with neutral but no earth	
	3-phase 4-wire network in "high leg" delta configuration with neutral but no earth	
<b>3-phase 5-wire</b> (L1, L2, L3, N and earth)  <p>Indicate the voltages to be connected: all 3 voltages (3V) or only 2 (V1 and V2, or V2 and V3, or V3 and V1).</p>	3-phase 5-wire network in star configuration with earth and neutral	
	3-phase 5-wire network in open "high leg" delta configuration with earth and neutral	
	3-phase 5-wire network in delta configuration with earth and neutral	

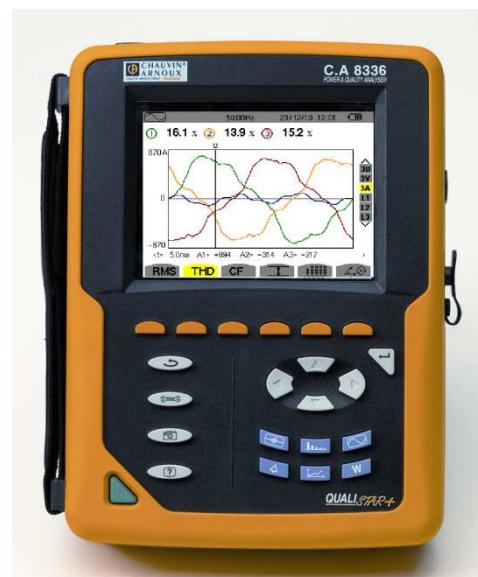
Note: It is not possible to select a new connection set-up if the instrument is recording, metering energy, searching for transients, indicating an alarm and/or acquiring an inrush current.

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The C.A 8336 QualistarPlus is synonymous with simplicity, high-performance, versatility and powerful analysis.

It offers all the necessary functions with specifications usually reserved for top-of-the-range laboratory instruments.

This instrument is ideal for engineers and technicians seeking all the functions of an electrical network analyser in a portable, battery-powered instrument.



- Real-time waveform display (4 voltages and 4 currents)
- Voltage measurements on all installations up to 1,000 V
- Recording all needed parameters for EN50160 report
- Possibility of ratios for measurements up to 500 kV and 50 kA.
- Half-period RMS voltages and currents
- Particularly intuitive use
- Automatic recognition of the different current-sensor types
- Use on all types of electrical installations
- Integration of all the DC components
- Measurement, calculation and display of harmonics up to the fiftieth order, along with their phase data
- Calculation of Total Harmonic Distortion (THD)
- Display of phasor diagram
- Measurement of total and per-phase VA, W and var power values (P, S, N, Q<sub>1</sub>, D).
- Measurement of total and per-phase VAh, Wh and varh energy values
- Calculation of energy values in oil-equivalent tonnes, BTUs, Joules, etc.
- Calculation of K and FHL factors
- Calculation of cos  $\phi$  displacement power factor (DPF) and the power factor (PF)
- Captures up to 210 transients each lasting several  $\mu$ seconds
- Calculation of PST and PLT flicker values
- Calculation of unbalance (current and voltage)
- Recording of inrush currents over periods of more than 10 minutes
- Electrical network monitoring with definition of alarms
- Back-up and recording of screenshots (image and data)
- Genuine multilingual online help
- Software for data retrieval and real-time communication with a PC.
- Recording and export on PC.



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