CHAUVIN ARNOUX
ENERGY

Gridwatch

Monitoring of electrical substations

Build your low-voltage electrical network sustainably

- Comprehensive and scalable
- Rapid deployment and operation
- Compatible with all systems

Measure up

GridWatch: Low-voltage infrastructure monitoring solution

A tailor-made solution
based on the integration of the Ulys MCM multi-channel meter

PREVENT
AGEING
AND DAMAGE TO
THE TRANSFORMER
AND STRUCTURES

Optimisation of planning
and reduction of maintenance costs

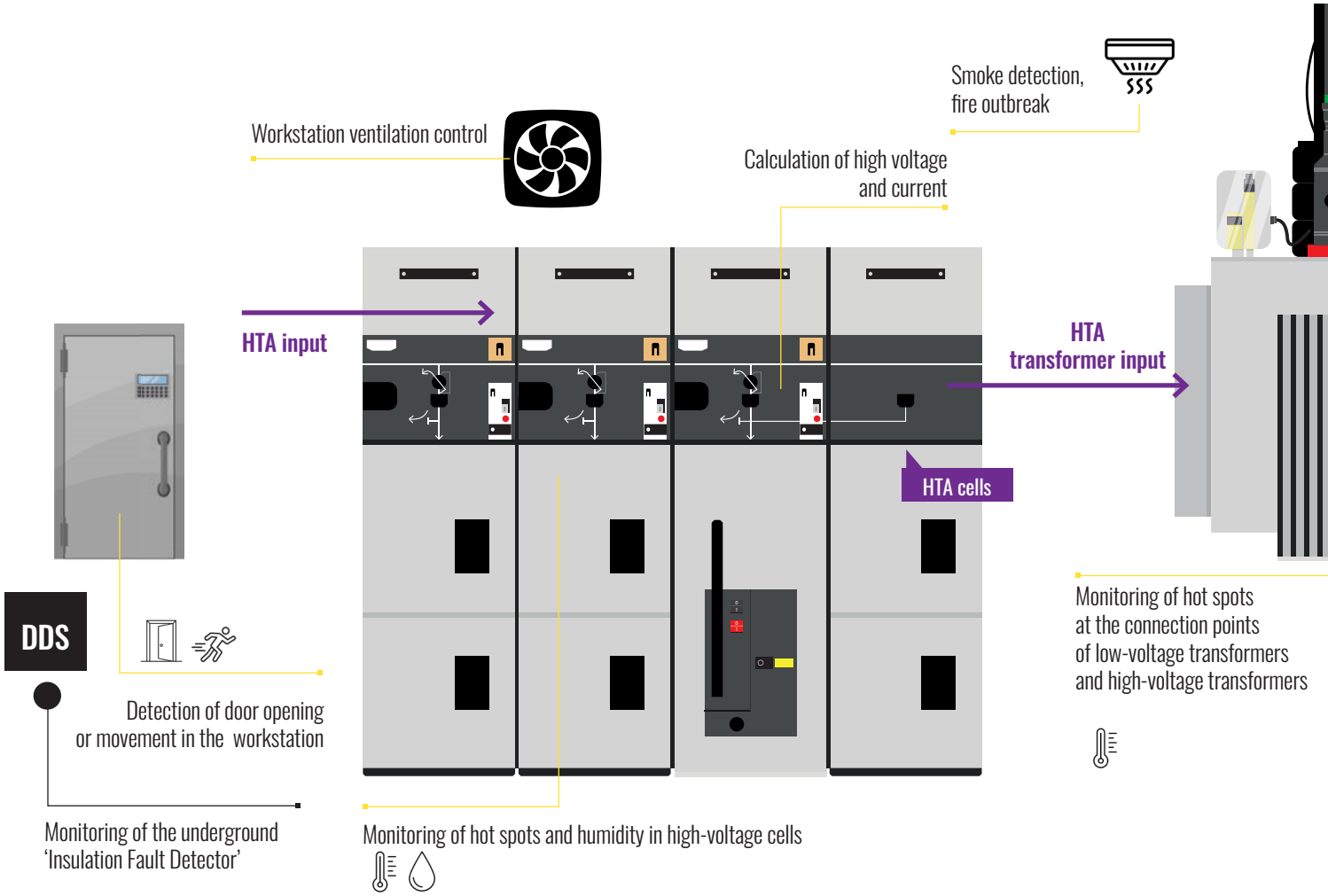
TRACKING AND ECURING
ENERGY
FLOWS

Reduction of technical
and non-technical losses

OPTIMISING
STRUCTURES
AND NEWS
CONNEXIONS

Assessment of available
reserve or actual overload of
feeders or transformers

W
Measu
voltage




Software
Gridwatch dashboard
4G 3G
e-mail
FTP
CSV
TXT
Modbus
TCP RTU
MQTT
CHAUVIN ARNOUX
GRIDWATCH
C200
R116TR1
DDS
W
Gridwatch measurement box
rement of transformer currents,
es and LV power ratings
W
Calculation of load factor
and transformer imbalance
W
Measurement of currents
and power for the 3 phases
and neutral (optional)
of each LV output
General departure
LV transformer
High-voltage/low-voltage
power transformer
Low voltage distribution
Monitoring of
transformer surface
temperature
Low voltage fuse detection
Low voltage distribution
Monitoring of transformer
surface temperature
Flood detection
- water level at the station

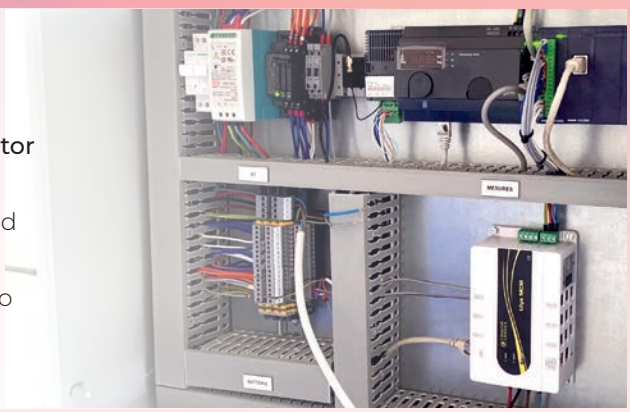
Strengths

Comprehensive and scalable

GridWatch includes all the sensors needed to monitor critical points in the HV/LV substation.

Available in different versions, it adapts to the size and budget available for **optimal deployment.**

GridWatch will gradually be equipped with sensors to instrument the transformer and the substation's LV electrical outputs.



Rapid deployment

To reduce downtime during system commissioning, **GridWatch has been designed for quick installation and deployment:** current sensors that open and connect with a single click, pre-wired environmental measurement sensors, pre-configured wireless hotspot sensors, etc.

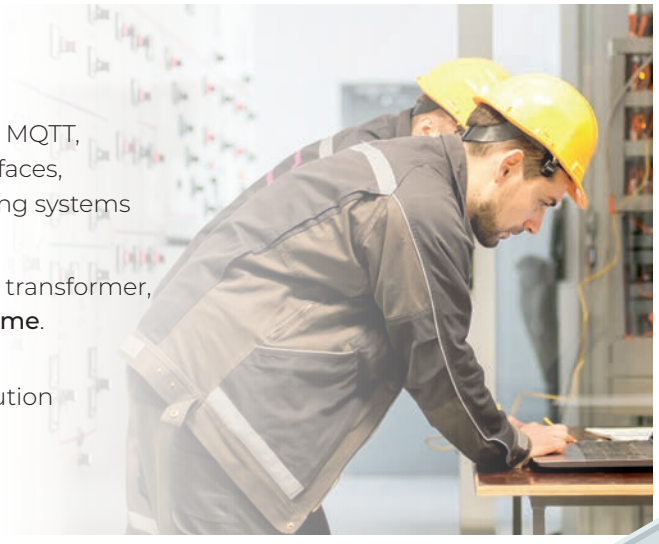
Compatible with all systems

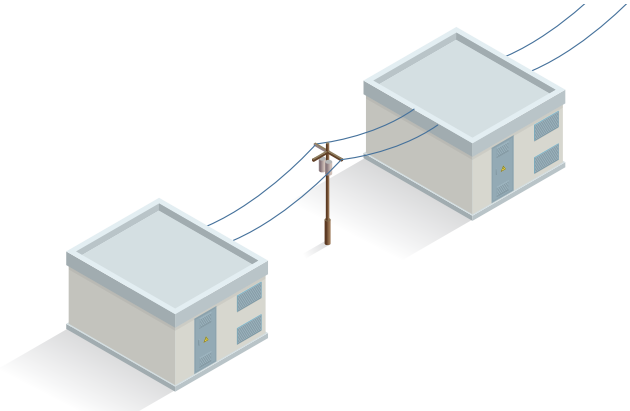
With multiple communication protocols (Modbus, MQTT, FTP, etc.) on WAN (3G/4G, Ethernet) and LAN interfaces, GridWatch is compatible with numerous monitoring systems (SCADA, supervisors, web applications, etc.).

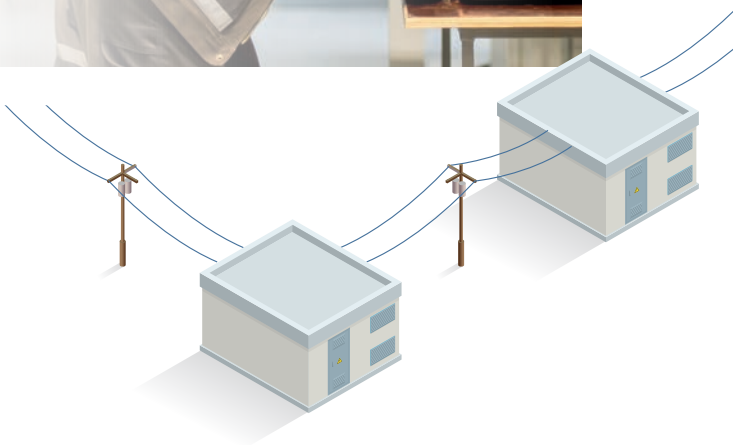
Measurements, alarms and sensor statuses on the transformer, LV panel and substation cell are available in **real time**.

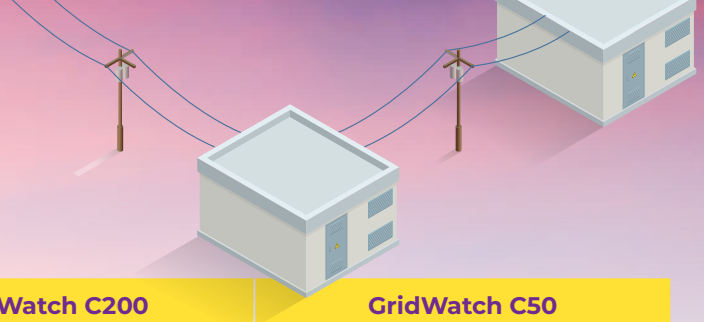
Alarms are sent by email, MQTT, etc.

GridWatch Dashboard is the turnkey software solution for monitoring a fleet of Gridwatch cabinets.









Description of the offer

	GridWatch C200 Measurement - Control - Command	GridWatch C50 Measurement - Control
Measurement and analysis of substation structure behaviour		
Transformer: Electrical measurement and metering at the secondary level of the main transformer HTA/BT	• 3P+N voltage measurement on input terminal block • Quick-install Rogowski-type current sensor (diameter 200 mm) (phases + neutral) • Measured quantities: V, U, I, F, P, Q, S, PF, Ea, Eq, Es • Calculated high voltage quantities: U, I	
Low voltage electrical outlets: Electrical measurement and metering on each outlet and per phase.	• Compact, quick-installation TC current sensors (up to 8 outputs) • Compact Rogowski-type current sensors (70 mm diameter) quick installation (up to 8 outputs) • Measured quantities: V, U, I, F, P, Q, S, PF, Ea, Eq, Es	
Measurement of temperatures at hot spots at the connection points of the LV transformer (Qty: 4) and HTA (Qty: 3)	Yes (7 wireless sensors)	no
Measurement of the surface temperature of the transformer	yes (Wired temperature sensor)	
Measurement of the ambient temperature in the HS9 substation	Yes (wired temperature sensor)	no
Measurement of the ambient temperature in the HS9 substation	Digital inputs/outputs	no
Ability to interface with other components of the electrical substation	Analogue inputs and digital inputs and outputs available	-
Communication and data management		
Communication mode	WAN interface (3G/4G and RJ-45 port) LAN interface (RJ-45 port)	
Data visualisation	Pages web embarquées (HTTP) et GridWatch Dashboard	GridWatch Dashboard
Alarm management and data logging Data logging	Yes (journal, e-mail, FTP, etc.) and via GridWatch Dashboard solution	via GridWatch Dashboard solution
Protocols in simultaneous use	• Modbus TCP: Access to all electrical and physical parameters in real time (1 sec) • MQTT: Publisher mode for alarms • MQTT: Publisher mode for measurements • Push FTP: File transfer to FTP server (alarms and recordings) • SMTP: Email • NTP: Date/time synchronisation	MQTT: Publisher mode for measurements
Remote administration (updates, configuration, fleet management)	yes	yes
General characteristics		
Remote local data display screen	yes (option)	yes (option)
Dimensions	600x400x250 mm	310x260xl 70 mm
Operating temperature	-10°C to +55°C	
Installation	Wall or floor mounting	Wall mounting
Compliant	IEC 61439-1 / IEC 61439-5	
Battery operation in the event of a power cut	yes	no
Three-phase surge protection (external installation)	option	
Supervision application		
GRIDWATCH Dashboard (multi-product, multi-user)	yes	

Request a quote to equip your electrical substation monitoring projects!

Gridwatch Dashboard Software

The Gridwatch Dashboard web application displays, processes, monitors, alerts and formats measurement data collected by C50 and C200 boxes on HV/LV transformers and LV feeders. The data is periodically transmitted (every 10 seconds as standard) to an MQTT broker.

The main features of GRIDWATCH DASHBOARD are:

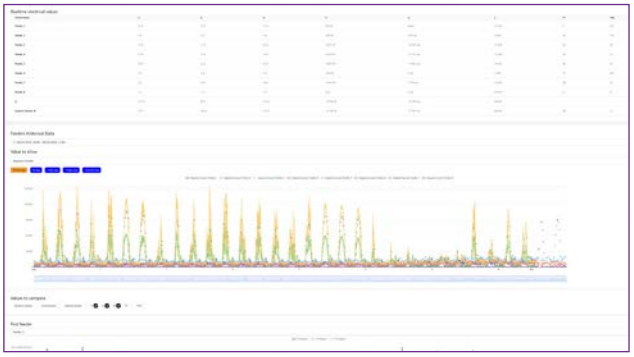
- **SUPERVISION**: Geolocate HV/LV transformers equipped with a GRIDWATCH box.
- **DASHBOARDS**: Display KPIs (Key Performance Indicators) for transformer monitoring (load rate, temperature, imbalance) and LV outputs.
- **MONITORING**: View real-time measurements taken on HV/LV transformers and LV feeders.
- **ANALYSIS**: Graphs showing the evolution of measurements over time (10-minute, hourly, daily, weekly and monthly averages).
- **ALARMS**: Set alarms for the parameters collected by the application, with targeted emails sent to the electrical network's operations and maintenance operators.

Page Station: DASHBOARDS, KPIs, MONITORING and ANALYSIS of HV/LV transformers

Immediately identify abnormal operating conditions of the HV/LV transformer using the KPI colour code.
The 'Real time data' table provides real-time information on changes in measurements.

- Display graphs over long periods of time showing average values for 10 minutes, hourly, daily, weekly and monthly periods.

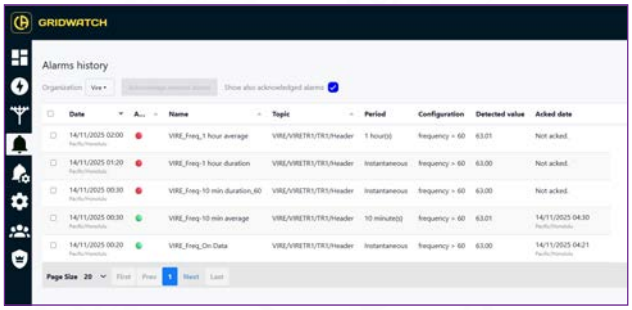
Feeders (LV departures)



View the electrical values measured on the LV feeders in real time.

- Identify the most heavily used feeders.
- Compare the loads per phase on the feeders to identify imbalances.

Alarms



Numerous alarm configuration modes for collected measurements.

- Quick programming mode for a fleet of several hundred C50 and C200 cabinets.
- Send targeted email messages when alarms are activated.

906 211 672 - Ed. 2 - 12/2025 - LCC/LB - Non-contractual document. Specifications to be confirmed when ordering.

INTERNATIONAL
Chauvin Arnoux Energy
16, rue Georges Besse
92182 ANTONY Cedex
Tél : +33 1 75 60 10 30
caenergy@chauvin-arnoux.com
www.chauvin-arnoux-energy.com

FRANCE
Chauvin Arnoux Energy
16, rue Georges Besse
92182 ANTONY Cedex
Tél : +33 1 75 60 10 30
caenergy@chauvin-arnoux.com
www.chauvin-arnoux-energy.com

SWITZERLAND
Chauvin Arnoux AG
Moosacherstrasse 15
8804 AU / ZH
Tél. : +41 44 727 75 55
info@chauvin-arnoux.ch
www.chauvin-arnoux.ch

Companies of
CHAUVIN ARNOUX GROUP