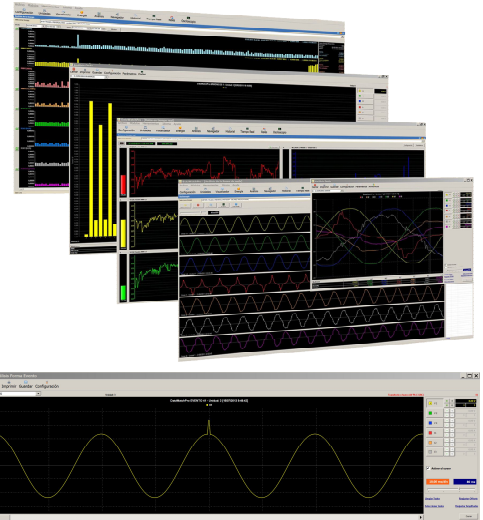


UNIVERSAL+ 7WR MINI M4 unit with electrical alarms with 10-output (relays) action, mains analysis, cutting-edge instrumentation, logging, input-output automation and control. Display, programming and control via WebServer over Internet/Intranet directly with Web browser + Modbus TCP/IP.



Medidas			
Tensión RMS	Tensión Pk	Tensión entre fases	Frecuencias
V L1 = 231.71 V L2 = 227.32 V L3 = 230.45	VpL1 = 321.86 VpL2 = 316.17 VpL3 = 318.30	V L12 = 397.95 V L31 = 396.31 V L21 = 400.37	Hz L1 = 50.0 Hz L2 = 49.9 Hz L3 = 50.0
Intensidad RMS	Intensidad Pk	Intensidad Neutra	Intensidad offset/neutral Pk (%)
A L1 = 1.08 A L2 = 10.06 A L3 = 10.17	ApL1 = 1.76 ApL2 = 13.65 ApL3 = 15.17	A LN = 5.67	MA = 282.4 MAPk = 407.8
Desbalance de tensión	THD tension	Desbalance de intensidad	THD intensidad
% L1 = 0.8 % L2 = 1.0 % L3 = 0.2	% L1 = 1.4 % L2 = 1.4 % L3 = 1.5	% L1 = 84.6 % L2 = 41.5 % L3 = 40.2	% L1 = 28.6 % L2 = 4.0 % L3 = 19.2
Factor de corrección tensión	Factor de corrección intensidad	Intensidad	Temperatura y humedad
L1 = 1.280 L2 = 1.280 L3 = 1.285	L1 = 1.012 L2 = 1.047 L3 = 1.492	Z L1 = 212.97 Z L2 = 22.59 Z L3 = 22.65	TC = 426.6 RH% = 58.9
Potencia Activa	Potencia Activa Capacitiva	Potencia reactiva	Potencia reactiva Inductiva
VA L1 = 252.2 VA L2 = 2288.2 VA L3 = 2046.9 ΣL123 = 4885.9	W L1 = 160.1 W L2 = 2286.2 W L3 = 2128.9 ΣL123 = 4075.2	W L1 = 181.7 W L2 = 2286.3 W L3 = 2180.1 ΣL123 = 4658.1	W L1 = 21.6 W L2 = 0.2 W L3 = 11.1 ΣL123 = 32.7
Potencia Reactiva Inductiva	Potencia Reactiva Capacitiva	Factor de Potencia	Máxima Potencia Activa
VARL1 = 0.0 VARL2 = 0.0 VARL3 = 0.0 ΣL123 = 0.0	VARC L1 = 196.2 VARC L2 = 0.0 VARC L3 = 882.0 ΣL123 = 1178.2	PF L1 = 0.831 PF L2 = 0.999 PF L3 = 0.997	W L1 = 0.0 W L2 = 0.0 W L3 = 0.0
Tensión AC	Intensidad AC	Potencia AC	Intensidad diferencial AC
Vac L1 = 231.70 Vac L2 = 227.31 Vac L3 = 230.44	Aac L1 = 1.08 Aac L2 = 10.06 Aac L3 = 10.16	Wac L1 = 160.5 Wac L2 = 2289.9 Wac L3 = 2129.8	WΔAC = 282.3
Tensión DC	Intensidad DC	Potencia DC	Intensidad diferencial DC
Vdc L1 = 0.04 Vdc L2 = 0.44 Vdc L3 = 0.25	Adc L1 = 0.02 Adc L2 = 0.12 Adc L3 = 0.04	Wdc L1 = 0.0 Wdc L2 = 0.0 Wdc L3 = 0.0	WΔDC = 0.0

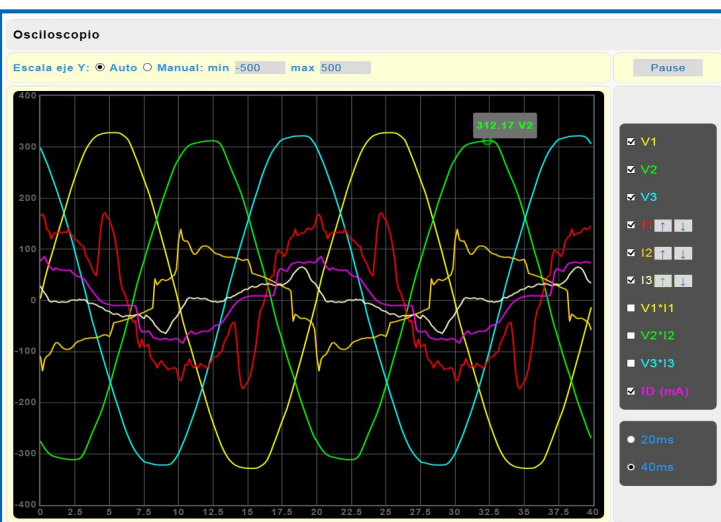
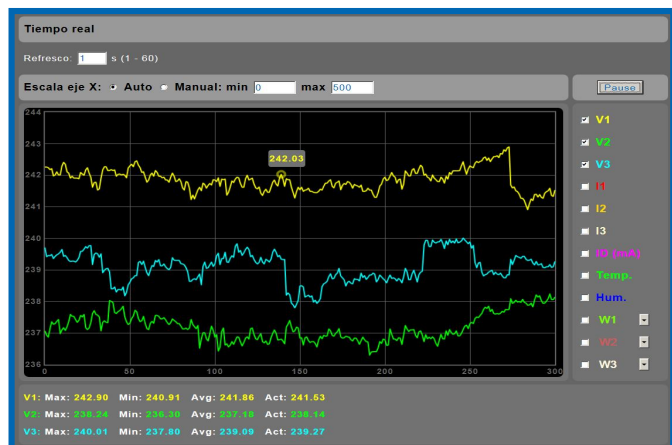
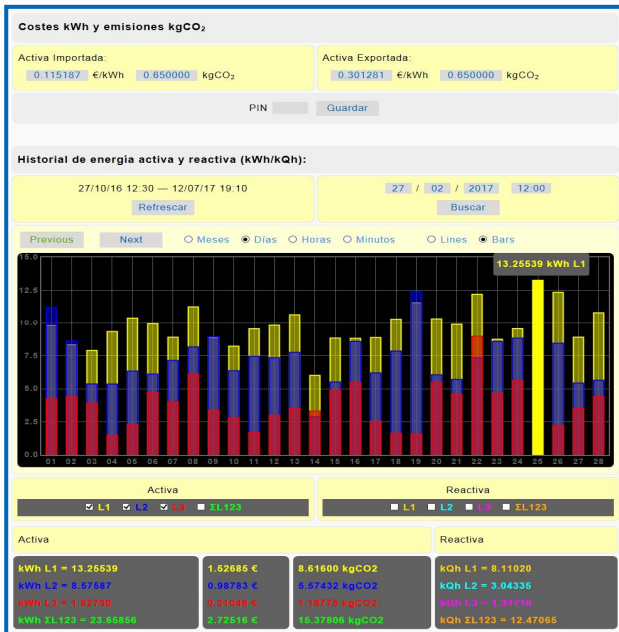
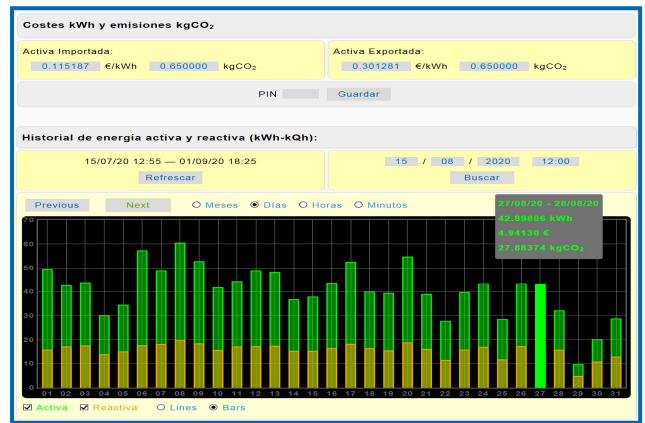
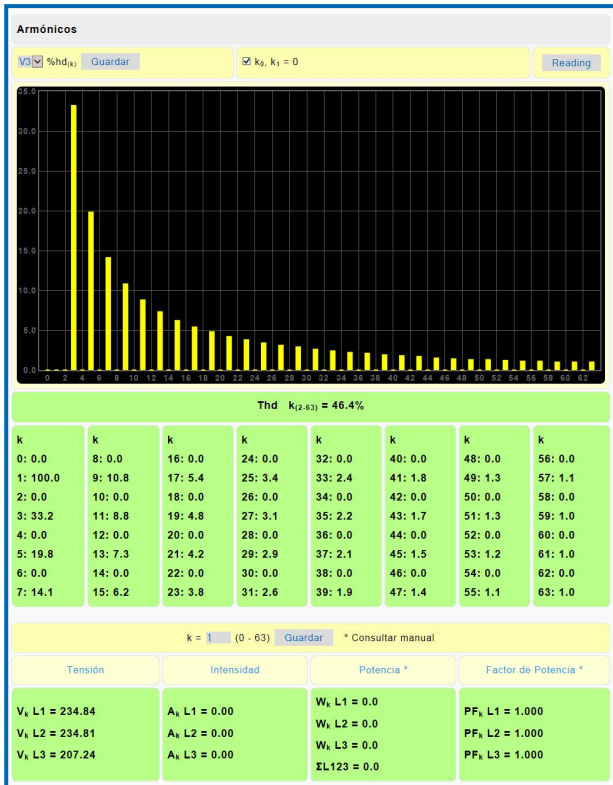


MINI M4: 2 and 4-pole. Measurement from 50A up to 10.000A (standard XXXXA/5A transformer). From 50A/5A up to 10.000A/5A in 5A steps
Single-phase :1 module, 18mm; Three-phase: 2 modules, 36mm

Otros modelos
M4: 2, 3 and 4-pole. Measurement from 5A up to 10.000A (standard XXXXA/5A transformer). From 5A/5A up to 10.000A/5A in 5A steps.
Rogowski M4: Multi-range intensity, 3 and 4-pole. Scales: 250A, 500A, 1000A and 2000A. With one sole probe model (Rogowski flexible current transformer) multi-range.
MINI BASIC M4: Single-phase :1 module, 18mm; Three-phase: 2 modules, 36mm). Measurement up to 10.000A. **6LIN:** Mains analysis – 2-pole, 6 intensity lines or sectors.

Electrical alarms, programmable in value and delay, Acting upon 10 outputs (relays) + 4 remote outputs (relays)	Mains analysis, electrical RMS, Peak, AC and DC metering Report generator for data stored in unit in EXCEL, PDF and DOC files
Overvoltage RMS and Pk L1, L2, L3	RMS, Pk, AC and DC voltage L1, L2, L3 ; RMS voltage phases L1-2, L2-3, L3-1
Low voltage RMS L1, L2, L3	RMS, Pk, AC and DC intensity L1, L2, L3 and neuter intensity
Line over-intensity: RMS and Pk L1, L2, L3	Active power W RMS, AC and DC and apparent power L1, L2, L3, ΣL123
Neuter intensity: and Power factor L1, L2, L3	Active power L1, L2, L3, (Maximeter-integration programmable 10 secs. to 15
Phase sequence and phase failure L1, L2, L3	Reactive, inductive and capacitive power L1, L2, L3, ΣL123
Voltage THD (total harmonic distortion) L1, L2, L3. Harmonics 2-63	Voltage THD (total harmonic distortion) L1, L2, L3. Harmonics 2-63
Intensity THD (total harmonic distortion) L1, L2, L3 Harmonics 2-63	Intensity THD (total harmonic distortion) L1, L2, L3 Harmonics 2-63
Power 1 W L1, L2, L3	Voltage and intensity L1, L2, L3, from harmonic k 0 to 63 (64 harmpnics)
Power 2 W L1, L2, L3 (Maximeter-integration programmable 10 secs. to 15 mins.)	Requested and returned power L1, L2, L3, ΣL12e
Voltage unbalance L1, L2, L3	Imported and exported active energy counters L1, L2, L3, ΣL123
Intensity unbalance L1, L2, L3	Reactive energy counter L1, L2, L3, ΣL123
Over and low frequency L1, L2, L3	Line power factor L1, L2, L3
Over and low temperature	Line frequency and impedance L1, L2, L3
Over and low humidity	Voltage and intensity unbalance and crest factor L1, L2, L3
Remote input 1, Remote input 2. Programmable signal-action	Temperature, relative humidity
Cutting-edge instrumentation for electrical parameters in mains analysis	
6-channel oscilloscope event-logger with pre-trigger and autoscale, voltage and intensity channels (6 capture channels for each event: V1, V2, V3, I1, I2, I3). Built-in 600-event memory	Three modes of record length in 6 channels 160ms, 320ms and 640ms (pre-trigger 40ms, 80ms and 160ms) + three modes in 6 channels 20s, 40s and 80s (pre-trigger 5s, 10s and 20s). With horizontal zoom functions, and value and time measurement cursor .. 10 alarms-trigger programmable in value and delay, Chronological register per type of alarm.
6-channel oscilloscope , auto-refreshing (V1, V2, V3, I1, I2, I3)	with autoscale, auto-refreshing, axis scaling, automatic or manual, 3 V/I mathematical channels- Includes instantaneous value measurement cursor in all channels. Continuously refreshed display (every 1.5 secs.).
64-harmonic spectrum analysis , 7 channels with auto-refreshment (distortion range in % and value V – A. + THD). Display auto-refreshed every 1.5 secs.)	Voltage V1, Intensity I1, Voltage V2, Intensity I2 Voltage V3, Intensity I3,
Graphic history of mean THD–HD–Var at 5-min intervals with built-in 14-month memory. Analysis for harmonic compensation and reactive power L1, L2, L3, ΣL1,2, 3 y (ΣL1,2, 3) /3.	Bar and line graphic display. Active Imported - exported and reactive energy. (L1, L2, L3 and ΣL1,2 y 3). Includes measurement cursor. Active imported-exported energy consumption log as also reactive by months, days, hours and minutes. (L1, L2, L3 y ΣL1,2 y 3) Built-in memory: three-phase... 1.5 years, single-phase...3 years
300-event graphic logger, 12 channels (46 measurements) with autoscale and variable refreshing (1-600 secs.) with temporary Max. Min. Avg measuring	Current, maximum, temporary maximum, temporary minimum, temporary mean values and value of difference between maximum and minimum values.
Log	
Historic LOG, logs ON, OFF and alarm information	Chronological register of alarms and power failure / start-up
Report generator for unit-stored data to EXCEL, PDF and DOC files	Year, month, day, hour and minute measurement value
Automatic data dispatch to a remote server via Internet/Intranet	Every 5 minutes to log all measurements and I/O in Safeline Web Service
Individual alarm counters	51 independent counters, counting from 0 to 65536
Maximum and minimum measurement log	44 independent logs
Chronological log of most recent alarm	Year, month, day, hour and minute measurement value
Automation and control of inputs-outputs (10 logic outputs [relays] and 10 logic inputs + 4 remote outputs [relays])	
Programmable enablement/disablement of 10 relays + 4 remote relays	For one or various alarms, reclosure block, internal time programmer., 8 timers
Manual enablement/disablement of outputs and monitoring of inputs	10 logic outputs (relays) and 10 logic inputs + 4 remote outputs (relays)
Weekly astronomical programmer	for each geographical location up to 160000 ("Safeline Web Service" administration software)
Thousand of time programmers (up to 16000)	daily / monthly/ yearly, vacations, holidays ("Safeline Web Service" administration software)
Programmable enablement/disablement of 10 relays (DataWatchPro software)	Programmable automation of relays with level alarms in time-frame for each unit
High safety	
Programming protected by security code, default configuration ex-factory, acoustic warnings, configurable in English or Spanish	
Standards: EN 6101-1:2011, UNE-EN 62053-23:2003 CLASS 2, UNE 20-600-77 (consult manual)	
Measurement precision 0,5% (V, I). 3-year guarantee Further information: consult instruction manual	

Display directly with Web browser via Internet/Intranet, with no need for software



Complementos

Medidas personalizables remotas

Esta nueva complemento permite personalizar y organizar las medidas que necesite de multitud de equipos, para así poderlas comparar entre ellas en tiempo real.

Policomparador energético remoto

¿Ha pensado en comparar el consumo de varios lugares? con este complemento solo tendrá que añadir las IPs de los equipos a comparar y listo!

Generador de informes

Genere un informe sobre la información del equipo, las medidas y el registrador log de multitud de equipos y exportelos a pdf, excel o doc de una manera rápida e intuitiva.

Generador de informes energéticos

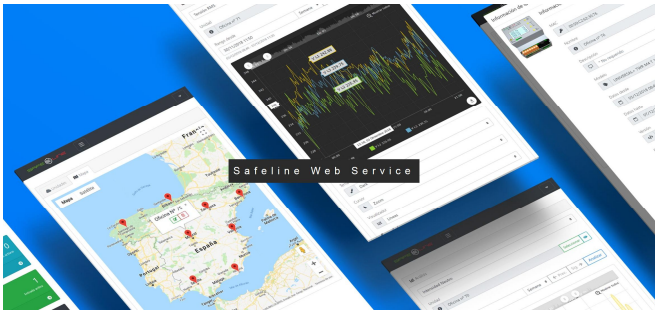
Esta aplicación permite generar un informe sobre el historial de energía. Podrá exportar a pdf, excel o doc los consumos, costes y emisiones de multitud de equipos.

Multigenerador de informes energéticos

¡Novedad! Genere un informe sobre el historial de energía de multitud de equipos Universal* en paralelo y permite exportar el informe a pdf, excel o doc (Word, Open office etc.). Incluye totales de todas las unidades.

Software Safeline Web Service V1.1.0 (dedicated server)

- Administration and control software via Internet/Intranet for multiple Sureline Universal+ TWR units
- Storage of measurement and I/O status data sent by the units
- Unit register and geographical location management from map via Google Maps
- Weekly astronomical programmer for each geographical location (output relays) assignable to groups of units
- Thousands of independent hourly programmers (assignable to groups of units):
 - Daily / weekly
 - Daily / monthly / yearly
 - Daily / monthly/ yearly (vacations and holidays)
- Output relay management and logical input management
- Graphical analysis of measurements
- Management of measurement alarms and logical input for each unit, with notifications via e-mail
- Unit management by labels. Attribute search engine.
- Auto-register of units in the server
- Administration capacity: 16000 Sureline units. Configurable in English or Spanish



Tema	Cursor	Visualizador	Promediados
Dark	Zoom	Líneas suavizadas	Max V L1: 236.66 Min V L1: 224.21 Avg V L1: 230.58
			Max V L2: 229.06 Min V L2: 213.15 Avg V L2: 221.14
			Max V L3: 239.28 Min V L3: 226.47 Avg V L3: 232.42

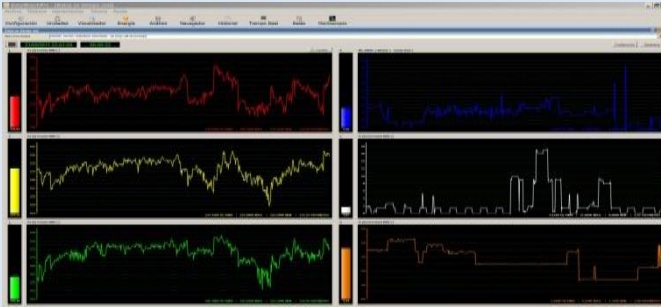
A screenshot of the Safeline Web Service dashboard. The dashboard features a dark sidebar with navigation options: Dashboard, Units, Analysis, Alarms, Status and relay control, Input status, Astronomical programmer, Daily/weekly prog., Daily/monthly/yearly prog., Vacations/holiday prog., and Tags. The main content area displays a grid of widgets: Units (8 Registered units), Analysis (22,698,564 Stored measures), Alarms (0 Configured alarms), Status and relay control (11 Active relays), Input status (1 Active input), Astronomical programmer (0 Configured programs), Daily/weekly prog. (0 Configured programs), Daily/monthly/yearly prog. (0 Configured programs), Vacations/holiday prog. (0 Configured programs), Tags (10 Configured tags), and Notifications (0 Unread notifications). The top right corner shows language, notifications, and demo options.

DataWatchPro included for all the UNIVERSAL+ 7WR M1, M2, M3, M5, M4, Rogowski M4 and 7WR MINI range

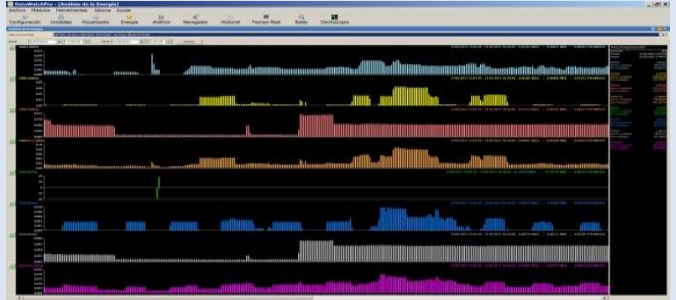
Professional software with database and graphic data analysis

- Multi-thread communication with a multitude of remote units via Internet/Intranet (reading and command)
- 200-parameter chronological logger in database for each unit.
- Independent notifications via e-mail of 249 programmable alarms for each unit
- Programmable automation/tele-control of relays with level alarms in time frame for each unit
- Module: numerical data analysis
- Module: graphic data analysis
- Module: history analysis
- Configurable in English or Spanish

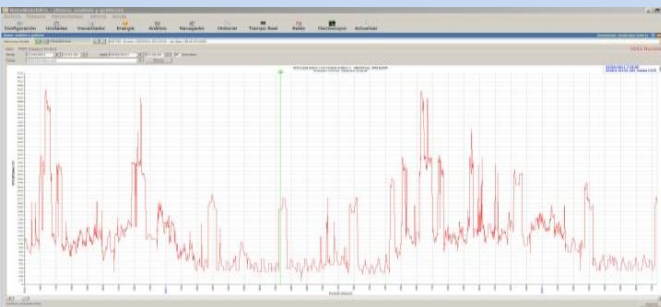
• Module: real time



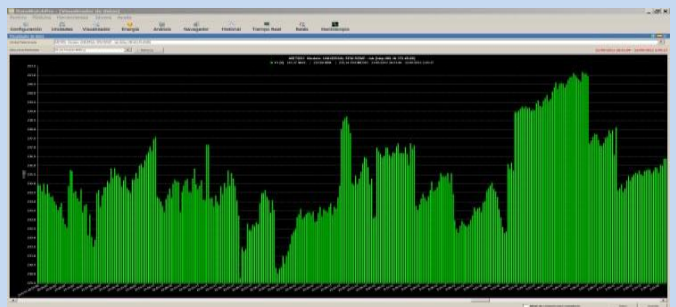
• Module: graphic energy analysis



• Module: graphic plotter (graphic long period analysis)



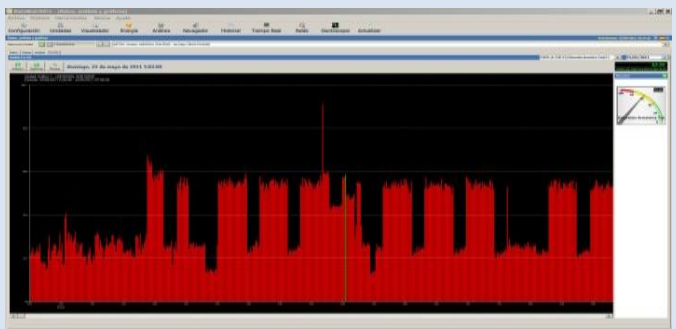
• Module: graphic display (rapid analysis)



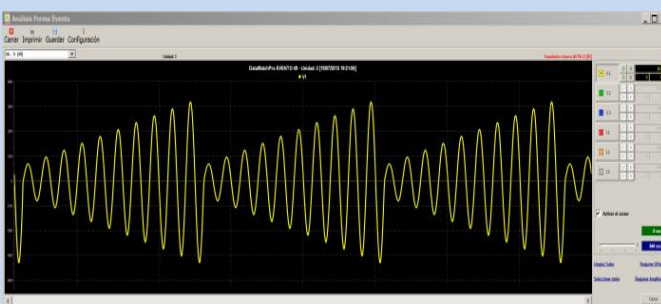
• Module: 7-channel oscilloscope. With autoscale and functions.



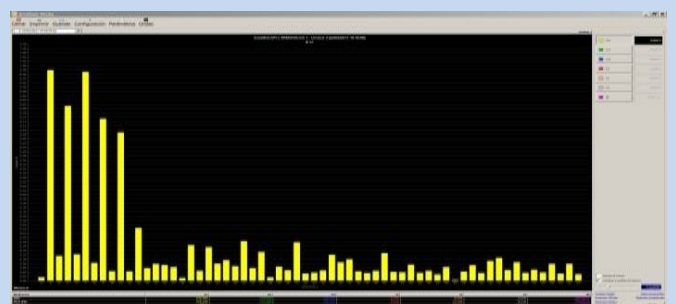
• Module: daily analysis



• Module: 6-channel oscilloscope event-logger in waveform with pre-trigger and autoscale



• Module: 7-channel harmonics spectrum with autoscale (63 harmonics, range in % and value V - A).



Wiring diagrams

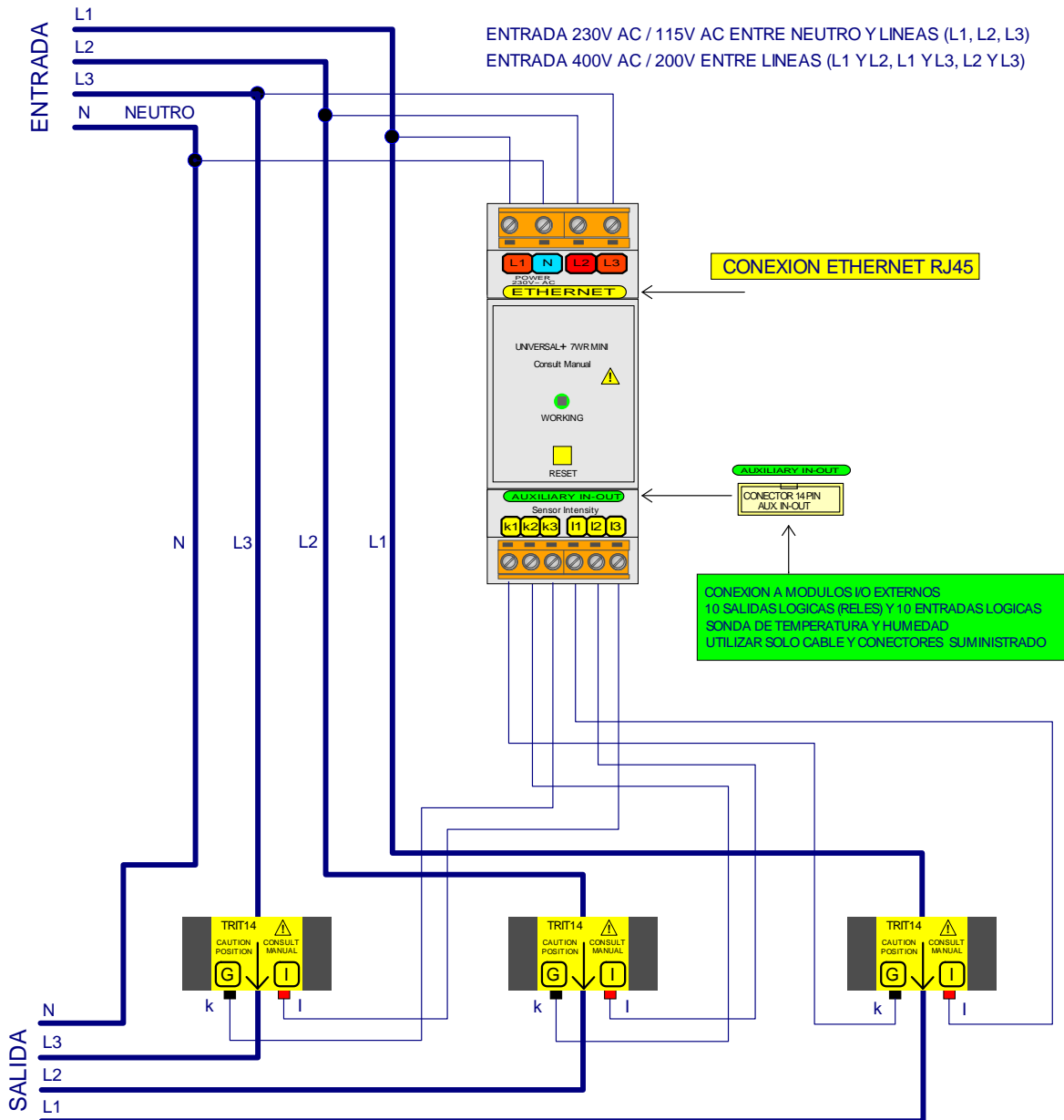
UNIDAD UNIVERSAL+ 7WR MINI MANDO 4

MODELO UNIVERSAL+ 7WR MINI-M4-T-500E -E

CONFIGURACION TRIFASICA 4 POLOS 70A, 140A y 280A.

Versión transformador de intensidad de línea. Únicamente transformadores TRIT14, TRIT18 y TRIT26

Versión alimentación 230V / 115V / POE (Power over Ethernet)



CONSULTAR MANUAL DE INSTRUCCIONES

UNIDAD UNIVERSAL+ 7WR MINI MANDO 4

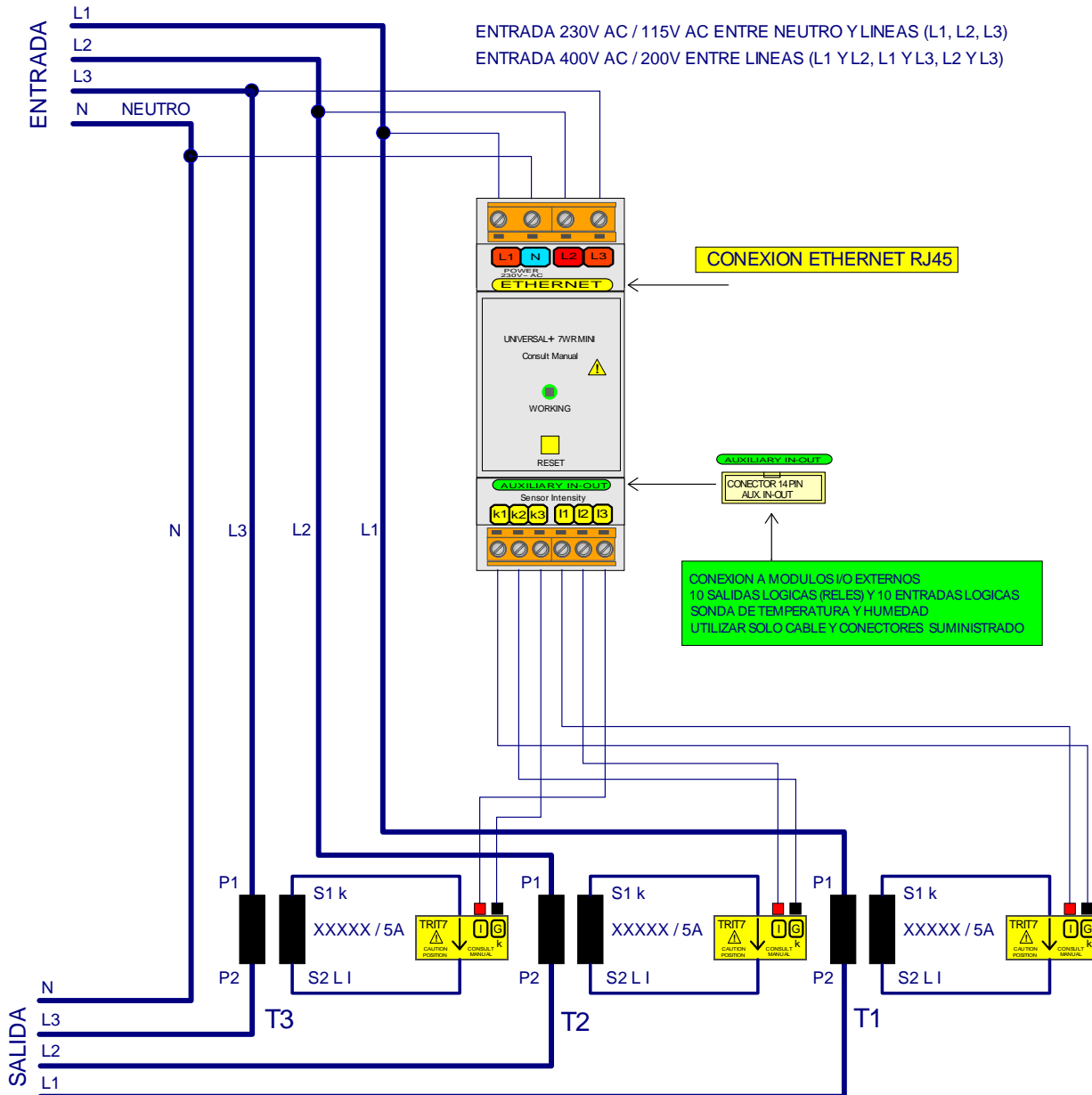
MODELO UNIVERSAL+ 7WR MINI - M4 - T - 500E - E - 50Hz - 230V - 5A

CONFIGURACION TRIFASICA 4 POLOS HASTA 10.000A.

Versión transformador de intensidad de línea. Únicamente transformador TRIT7

TRIT7 (5A para transformador estandar, desde 50A/5A hasta 10.000A/5A en pasos de 5A)

Versión alimentación 230V / 115V / POE (Power over Ethernet)



T1, T2 Y T3 TRANSFORMADOR TOROIDAL DE INTENSIDAD DE LINEA
PROGRAMAR LA RELACION DE INTENSIDAD DEL TRANSFORMADOR
XXXXX / 5A EN LA UNIDAD UNIVERSAL+ 7WR MINI

TRIT7:
TRANSFORMADOR TOROIDAL DE INTENSIDAD DE LINEA (5A)
INDIVIDUALMENTE EMPAREJADO Y AJUSTADO PARA SU MODULO
NO INTERCAMBIAR Y POSICIONARLO SEGUN SENTIDO FLECHA



CONSULTAR MANUAL DE INSTRUCCIONES

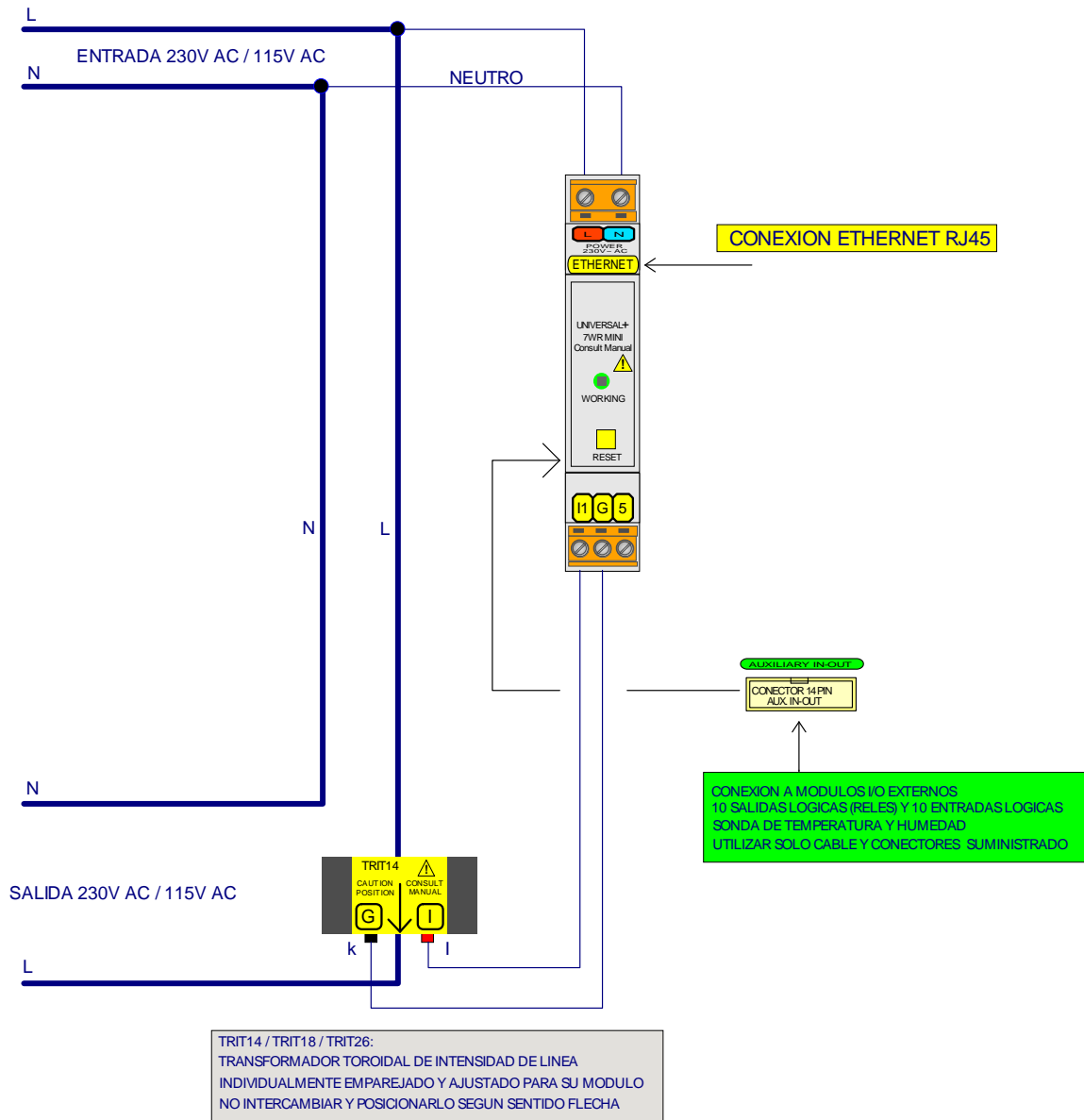
UNIDAD UNIVERSAL+ 7WR MINI MANDO 4

MODELO UNIVERSAL+ 7WR MINI-M4 - M - 500E - E

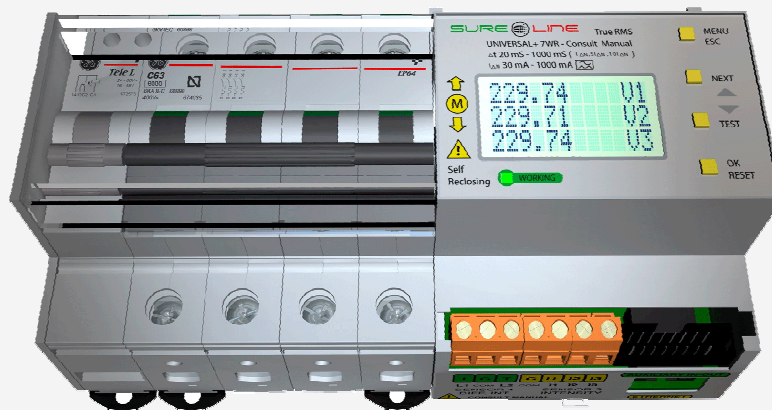
CONFIGURACION MONOFASICA 2 POLOS 70A y 140A.

Versión transformador de intensidad de línea. Únicamente transformadores TRIT14, TRIT18 y TRIT26

Versión alimentación 230V / 115V / POE (Power over Ethernet)



CONSULTAR MANUAL DE INSTRUCCIONES



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Made in EU

