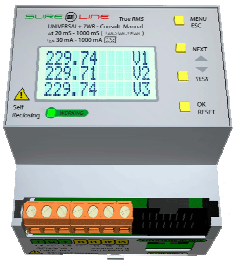
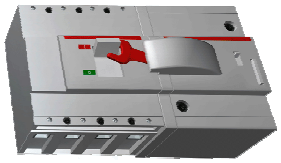
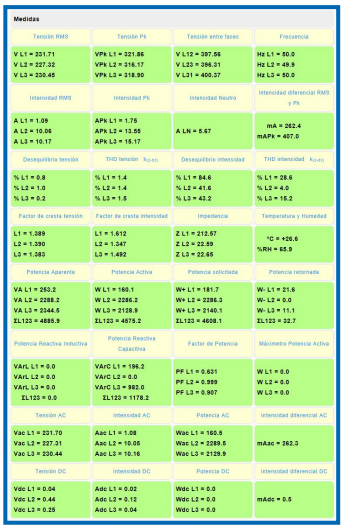
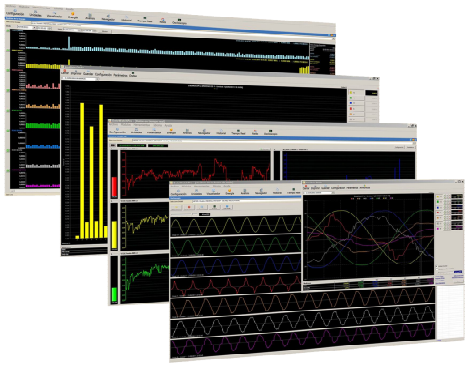
UNIVERSAL+ 7WR M2 electrical protection unit with automatic reclosures, mains analysis, cutting-edge instrumentation, logging, input-output automation and control. Display, programming and control via WebServer over Internet/Intranet directly with Web browser + Modbus TCP/IP.





250A Icu 50kA

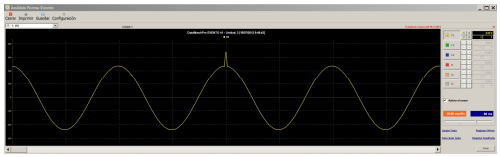




M2: MCB from10 to125A, 2 and 4-pole, Icu 50kA
M2: Moulded case circuit-breaker from 80 to 250A-2000A, 4-pole

Ultra-immunised differential protection

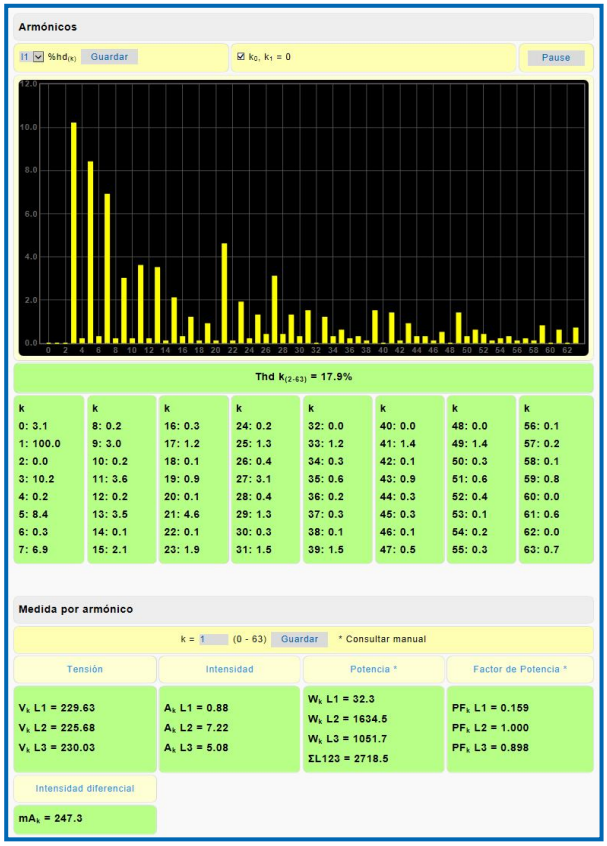
80A, 100A, 125A Icu 50kA

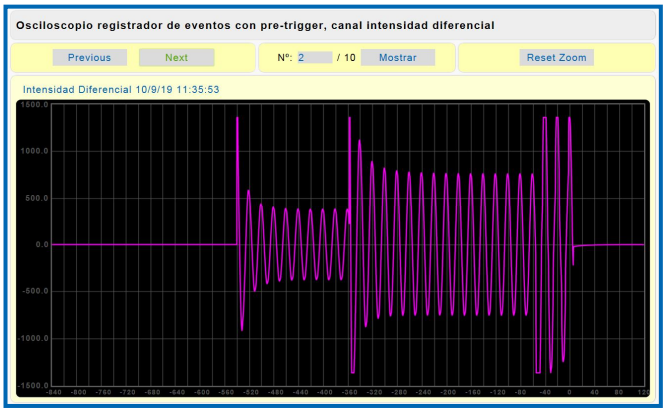


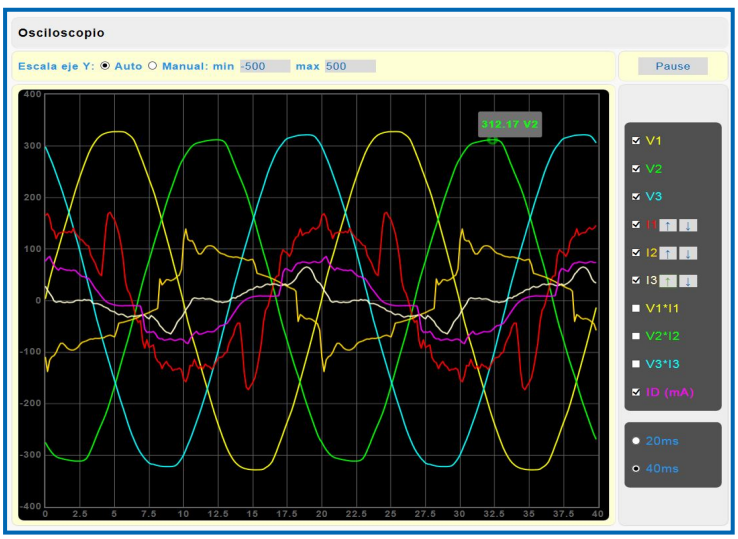
Other models
M1: MCB from 6 to 63A, 2 and 4-pole with automatic reclosure (Icu 10-15kA).
M5: SHUNT TRIP for external MCB, manual reclosure from 6 to 10000A, 2 and 4-pole. **M3:** External relay/contactor from 25 to 1250A, 2 and 4-pole with automatic reclosure.

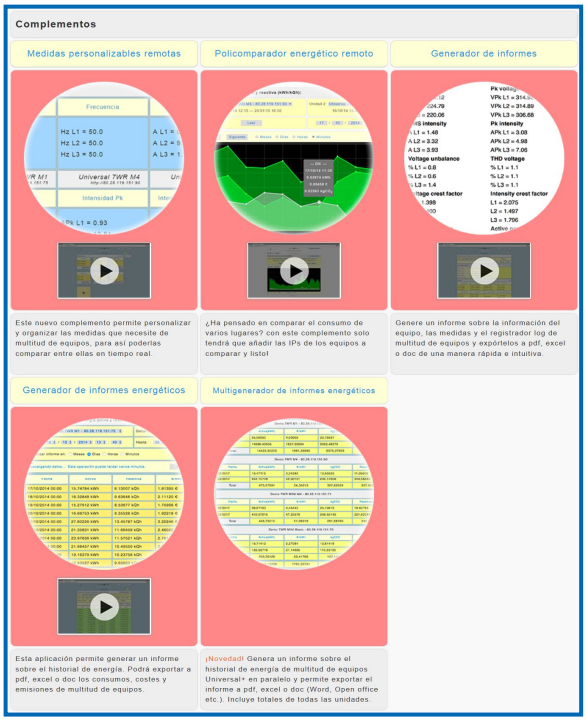
Electrical protections/alarms, programmable in both value and delay, with automatic reclosures programmable in number, time and reset	**Mains analysis, electrical RMS, Peak, AC and DC metering** Report generator for data stored in unit in EXCEL, PDF and DOC files
Differential intensity, RMS and Pk; **IΔn 30-1000mA; Δt fron 40ms to 1000ms**	Differential intensity, RMS, Pk, AC and DC
Differential intensity: Versions 10-300mA, 30-1000mA, 100-3000mA	RMS, Pk, AC and DC voltage L1, L2, L3 ; RMS voltage phases L1-2, L2-3, L3-1
Overvoltage: RMS and Pk L1, L2, L3 and low voltage RMS L1, L2, L3	RMS, Pk, AC and DC intensity L1, L2, L3 (measurement up to 10.000A)
Line over-intensity: RMS and Pk L1, L2, L3	Active power W RMS, AC and DC and apparent power L1, L2, L3, ∑L123
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, ∑L123
Voltage and Intensity THD (total harmonic distortion) L1, L2, L3 From harmonic 2 – 63, programmable by harmonic and harmonics range	Voltage and intensity THD L1, L2, L3 as from harmonic 2 – 63, programmable by harmonic and harmonics range
Power 1 W L1, L2, L3	Requested and returned power L1, L2, L3, ∑L123 and neuter intensity
Power 2 W L1, L2, L3 (Maximeter-integration programmable 10 secs. to 15 mins.)	Imported and exported ative and reactive energy counters L1, L2, L3, ∑L123
Voltage and intensity unbalance L1, L2, L3	Power factor, Line frequency and impedance L1, L2, L3
Over and low frequency L1, L2, L3	Voltage and intensity unbalance and crest factor L1, L2, L3
Built to allow reconnection of the new digital counters	Voltage %HD (harmonic distortion) L1, L2, L3 of harmonic k 0 to 63
Over and low tempreature + over and low humidity	Intensity %HD (harmonic distortion) L1, L2, L3 of harmonic k 0 to 63
Preventive cut-off upon AC power failure – insufficient power	Voltage and intensity L1, L2, L3, of harmonic k 0 to 63 (64 harmonics)
Remote input 1, Remote input 2. Programmable (ON/OFF and Reset reclosure)	Temperature, relative humidity + temperature, humidity of 6 remote sensors
Cutting-edge instrumentation for electrical parameters in mains analysis	
Oscilloscope event-logger with pre-trigger and autoscale, differential intensity channel. Built-in 600-event memory.	960ms-log with 840ms pre-trigger.. With horizontal zoom functions, and value and time measurement cursor . 4 alarms-trigger, programmable in value and delay. Chronological register per type of alarm., .
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., . 3 channels
7-channel oscilloscope, auto-refreshing (differential I, V1, V2, V3, I1, I2, I3)	with autoscale,, auto-refreshing, axis scaling, automatic or manual, 3 V*I mathematical channels- Includes instantaeous value measurement cursor in all channels. Continuously refreshed display (every 1.5 secs.).
Oscilloscope with auto-refreshing (differential I)	With autoscale, auto-refreshing, axis scaling, automatic or manual. - Includes instantaeous value measurement cursor . 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, Differential intensity ID
Graphic history (months, days, hours and minutes) of **active and reactive energy with costs and emissions**. Energy report generator permits unit-stored data to be exported to EXCEL, PDF and DOC files .	*Bar and line graphic display. Active Imported - exported and reactive energy. Includes measurement cursor.. , Active imported-exported energy consumption log as also reactive by months, days, hours and minute. Built-in 3-year memory.*
300-event graphic logger, 12 channels (46 measurements) with autoscale and variable refreshing (1-600 secs.) with temporary Max. Min. Avg measuring	*Current, máximum, temporary máximum, temporary mínimum, temporary mean values and value of difference between maximum and minimum values.*
Log	
Historic LOG, logs ON, OFF and alarm information Report generator for unit-stored data to EXCEL, PDF and DOC files	*Chronological register of alarms. OFF/ON and power failure / start-up* *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 MCB cut-off counters	*55 independent counters, counting from 0 to 65536*
Maximum and minimum measurement log	*45 independent logs*
Chronological log of most recent cut-off and 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 / monthlyl / 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 (The 230V versión units withstand overvoltages of 450V permanent and 1000V Pk)	
Very high-speed cut-off of the MCB	*Consult manual*
Real ,incremental, manual and automatic differential intensity test,+ autotest	*Automatic prior to reclosure. Real,, conclusive differential tester .*
Programming protected by security code, default configuration ex-factory, acoustic warnings, configurable in English or Spanish	
Standards: EN 60947-2 (annexe B):2018, UNE-EN 62053-22:2003 CLASE 0,5S, EN 62053-23:2003 CLASE 2, UNE 20-600-77, EN 50550:2011 (consult manual)	
Measurement precision version 0,2% and 0,4% (V, I). 3-year guarantee. Further information: consult instruction manual	

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



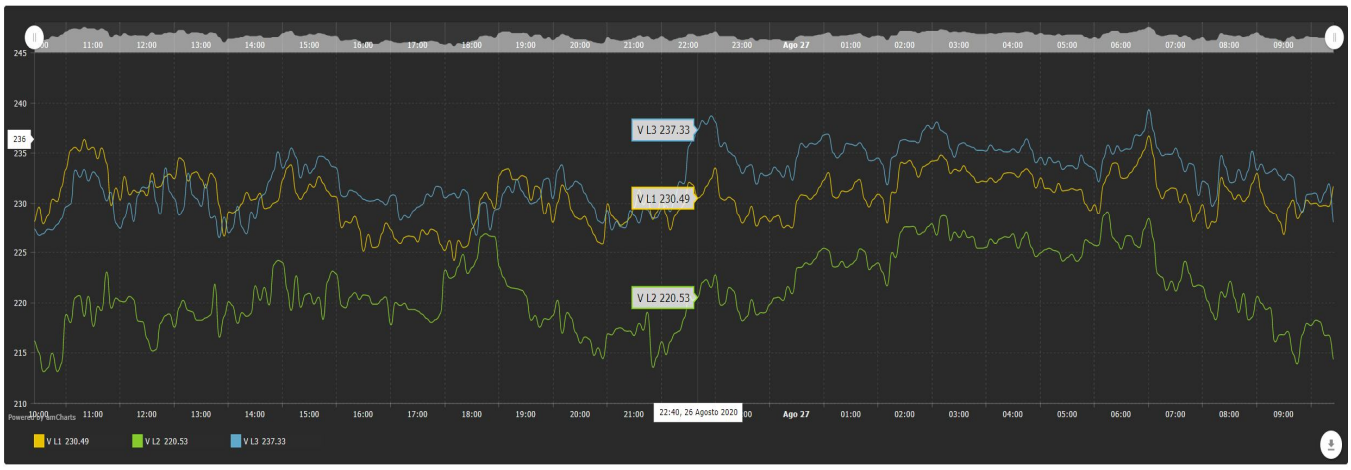


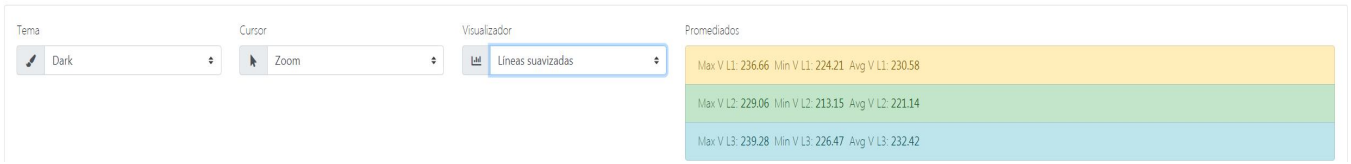


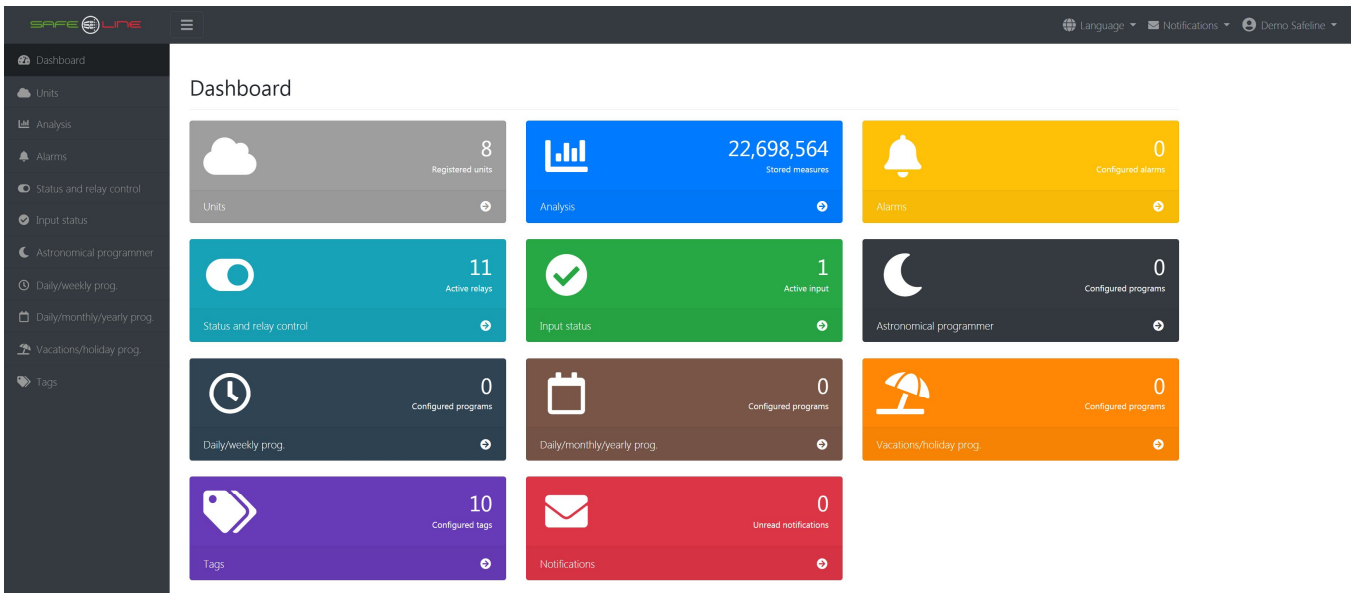


Software Safeline Web Service V1.1.0 (dedicated server)

Administration and control software via Internet/Intranet for multiple Sureline Universal+ 7WR 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





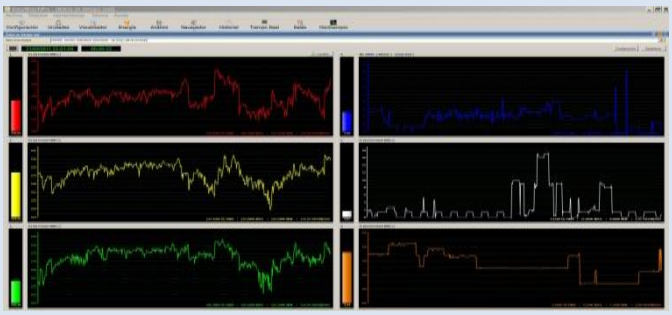


DataWatchPro included for all the UNIVERSAL+ 7WR M1, M2, M3, M5, M4, Rogowski M4 and 7WR MINI range

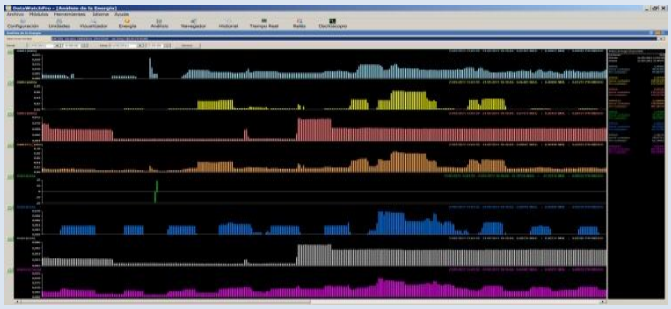
Professional software with database and graphic data analysis

- 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

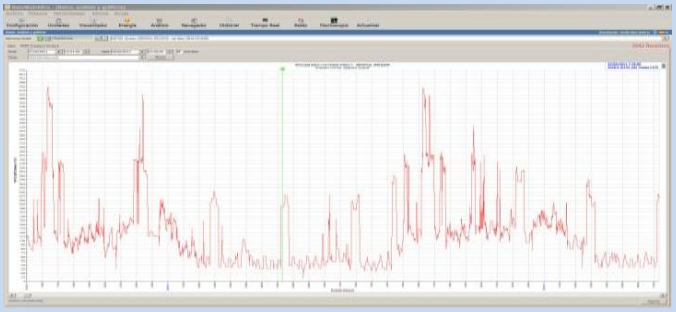
- Module: real time



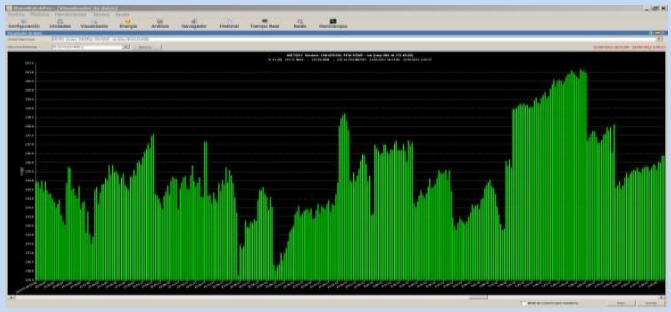
- Module: graphic energy analysis



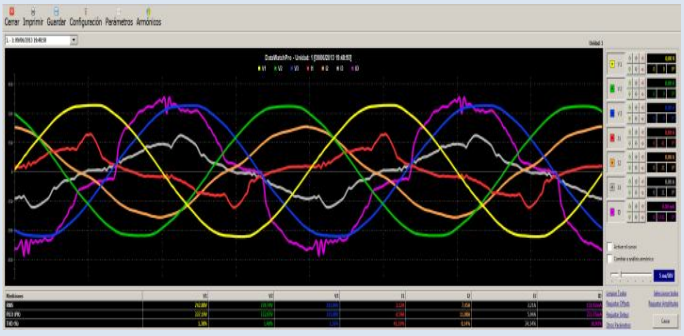
- Module: graphic plotter (graphic long period analysis)



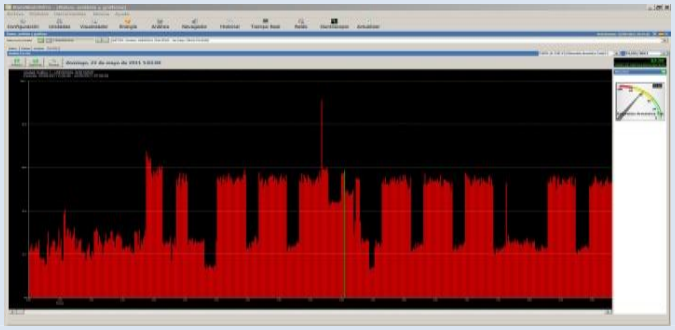
- Module: graphic display (rapid analysis)



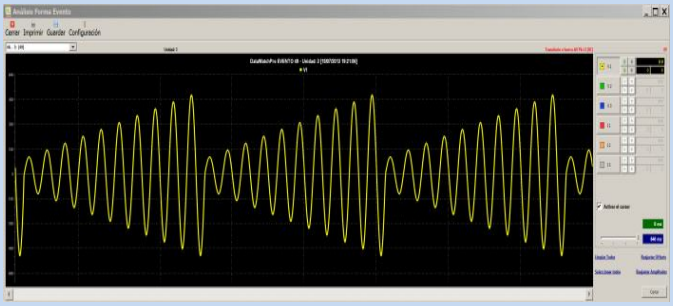
- Module: 7-channel oscilloscope. With autoscale and functions.



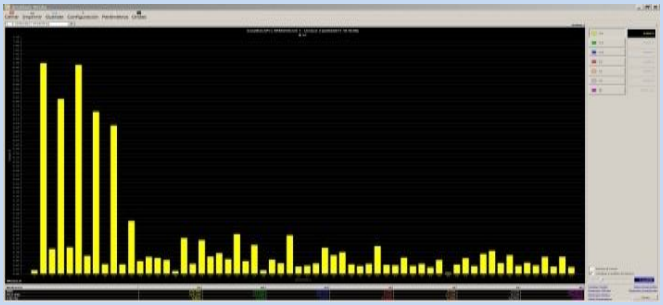
- Module: daily analysis



- 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 M2

MODELO UNIVERSAL+ 7WR - M2 - T - A30-1000mA - 500E - E - RI - B1

CONFIGURACION TRIFASICA 4 POLOS 10, 13, 16, 20, 25, 32, 40, 50, 63, 80, 100, 125A

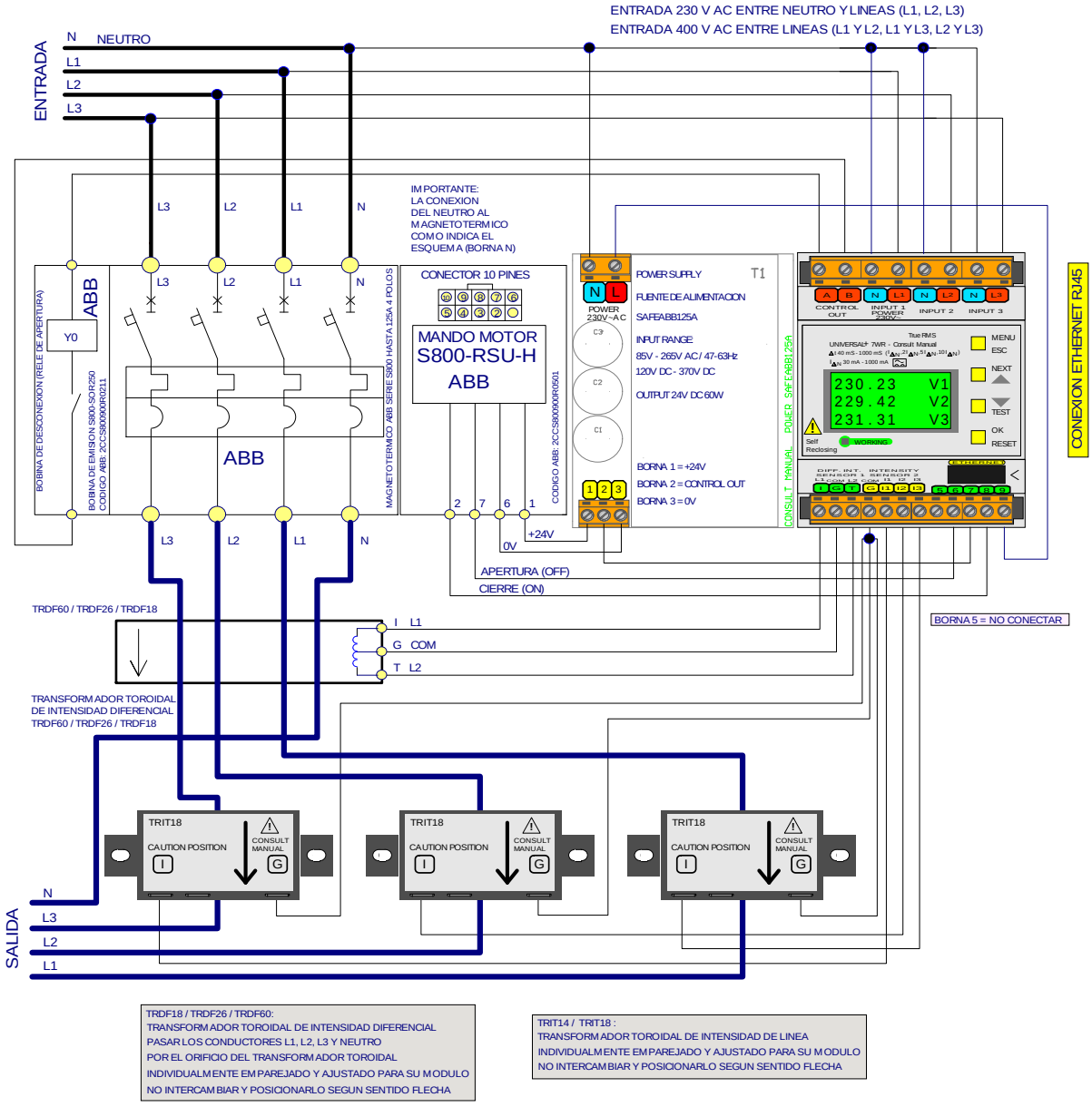
Versión transformador de intensidad de línea. Únicamente transformadores TRIT14 y TRIT18 (70A / 140A)

VERSION INTENSIDAD DIFERENCIAL TIPO A

PARA MAGNETOTERMICO ABB SERIE S800 HASTA 125A 4 POLOS

CON MANDO A MOTOR S800-RSU-H. CODIGO ABB: 2CCS800900R0501 Y BOBINA DE EMISION S800-SOR250. CODIGO ABB: 2CCS800900R0211

CONSULTAR CARACTERISTICAS E INSTRUCIONES DEL FABRICANTE ABB ESPECIFICA AL PRODUCTO
MANDO MOTOR S800-RSU-H, MAGNETOTERMICO SERIE S800 Y BOBINA DE EMISION S800-SOR250



TRDF18 / TRDF26 / TRDF60:
TRANSFORMADOR TOROIDAL DE INTENSIDAD DIFERENCIAL
PASAR LOS CONDUCTORES L1, L2, L3 Y NEUTRO
POR EL ORIFICIO DEL TRANSFORMADOR TOROIDAL
INDIVIDUALMENTE EMPAREJADO Y AJUSTADO PARA SU MODULO
NO INTERCAMBIAR Y POSICIONARLO SEGUN SENTIDO FLECHA

TRIT14 / TRIT18 :
TRANSFORMADOR TOROIDAL DE INTENSIDAD DE LINEA
INDIVIDUALMENTE EMPAREJADO Y AJUSTADO PARA SU MODULO
NO INTERCAMBIAR Y POSICIONARLO SEGUN SENTIDO FLECHA

ATENCION MANDO MOTOR REARMADOR EXTERNO TIPO "B1"

B1 = MANDO A MOTOR S800-RSU-H. CODIGO ABB: 2CCS800900R0501

CONSULTAR MANUAL DE INSTRUCCIONES

UNIDAD UNIVERSAL+ 7WR M2

MODELO UNIVERSAL+ 7WR - M2 - T - A30-1000mA - 500E - E - RI - B

CONFIGURACION TRIFASICA 4 POLOS 80, 100, 125, 160, 250A

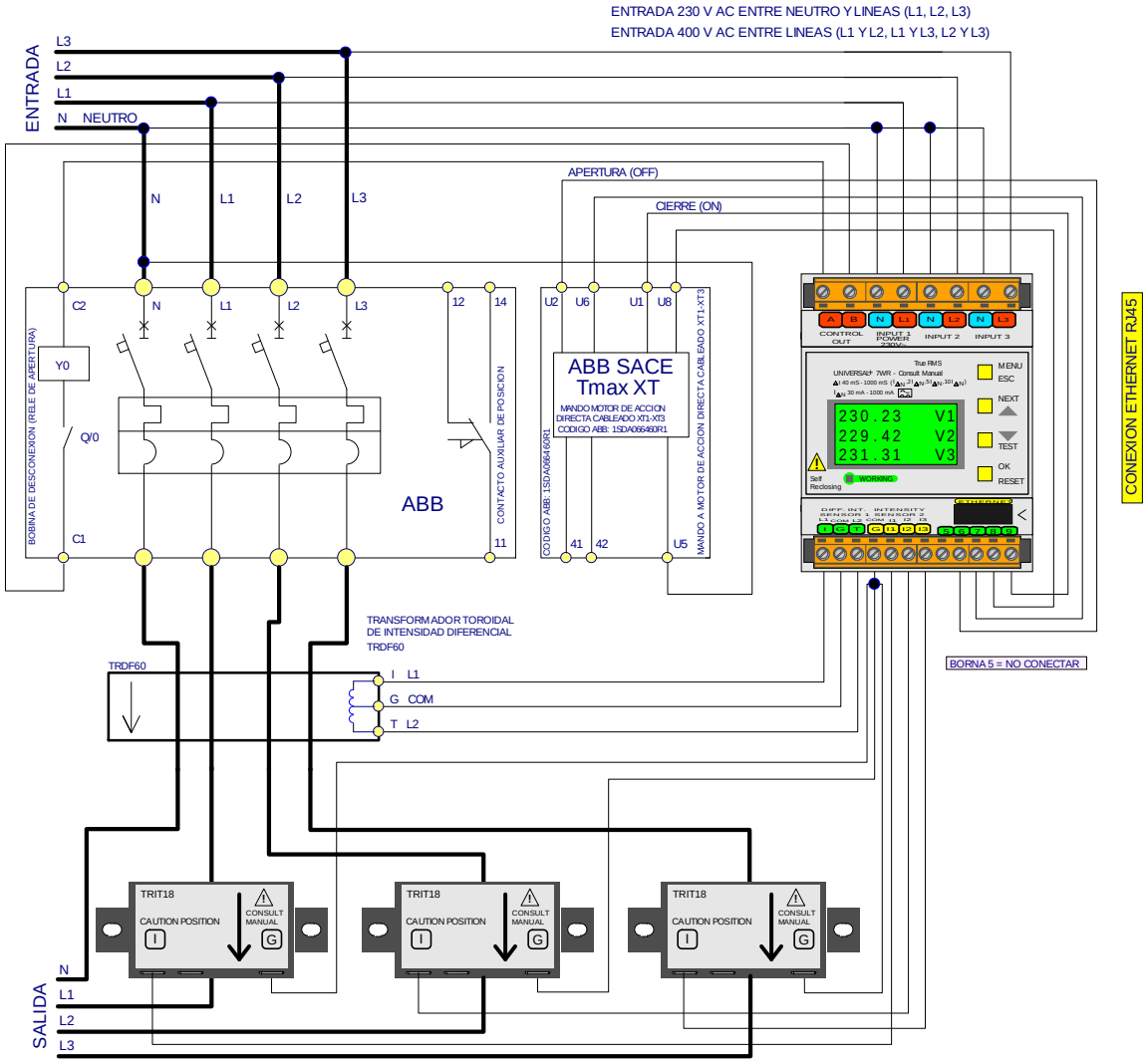
Versión transformador de intensidad de línea. Únicamente transformadores TRIT14, TRIT18 y TRIT26 (140A / 280A)

PARA MAGNETOTERMICO DE CAJA MOLDEADA HASTA 250A 4 POLOS
SERIE SACE Tmax XT DE ABB CONFIGURACION 4 POLOS 80, 100, 125, 160, 250A

CON MANDO A MOTOR DE ACCION DIRECTA CABLEADO XT1-XT3. CODIGO ABB: 1SDA066460R1

CONSULTAR CARACTERISTICAS E INSTRUCIONES DEL FABRICANTE ABB ESPECIFICA AL PRODUCTO
MANDO MOTOR/SOLENOIDE Y MAGNETOTERMICO DE CAJA MOLDEADA

VERSION INTENSIDAD
DIFERENCIAL TIPO A



TRDF60:
TRANSFORMADOR TOROIDAL DE INTENSIDAD DIFERENCIAL
PASAR LOS CONDUCTORES L1, L2, L3 Y NEUTRO
POR EL ORIFICIO DEL TRANSFORMADOR TOROIDAL
INDIVIDUALMENTE EMPAREJADO Y AJUSTADO PARA SU MODULO
NO INTERCAMBIAR Y POSICIONARLO SEGUN SENTIDO FLECHA

TRIT14 / TRIT18 / TRIT26:
TRANSFORMADOR TOROIDAL DE INTENSIDAD DE LINEA
INDIVIDUALMENTE EMPAREJADO Y AJUSTADO PARA SU MODULO
NO INTERCAMBIAR Y POSICIONARLO SEGUN SENTIDO FLECHA

ATENCION MOTOR / SOLENOIDE REARMADOR EXTERNO TIPO "B"

B = MANDO ABB A MOTOR DE ACCION DIRECTA CABLEADO XT1-XT3. CODIGO ABB: 1SDA066460R1

⚠ CONSULTAR MANUAL DE INSTRUCCIONES

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