



CVMk2 ANALYSER



With the new **CVMk2** analyser, you will have a powerful, versatile system at your fingertips, particularly indicated for electrical control and analysis applications.

The **CVMk2** is an essential tool for exhaustive energy checks in order to reach maximum energy efficiency.

- Mounted on 96*96 mm, 144*144 mm or 4-inch diameter panels
- Up to harmonic 50 in voltage and current
- Maximums and minimums with date and time
- Class 0,2 or 0,5 according to type
- Measures more than 300 electrical parameters
- Current reading using external transformers .../5A
- Can be extended with expansion card
- Separate assembly for measuring module and display
- Option for measuring in Low and Medium voltage systems

Ethernet protocol

RS-485 or RS-232 physical interface

Modbus TCP

Modbus RTU



PARAMETERS

Power quality

- Detection of voltage events, with record of the event's intensity, duration and date like standard EN 6100-4-30
- Calculates THD via the fundamental or RMS
- Calculates THD according to even or odd harmonics
- Calculates ka and kd in voltage and intensity, asymmetry and imbalance
- Display of phasors
- Calculates Flicker: Pst and Wa
- Calculates k factor, essential for transformer maintenance
- Device class B según standard EN 6100-4-30

Energy

- Imported and exported
- Total meters, monthly and annual
- 9 rates programmable via contacts or time
- Energy discrimination by rates

Power Demand

- Calculation of the demand by P , S , I_1 , I_2 , I_3 and $I(III)$
- Record of the maximum Power demand by P , S , I_1 , I_2 , I_3 and $I(III)$, with date and time

COMMUNICATIONS

- RS485 Modbus by default
- Ethernet MODBUS/TCP via expansion card
- Can be fully integrated in PowerStudio SCADA
- Can be fully integrated in any SCADA on the market with MODBUS/RTU protocol

EXPANSION MODULES

- 8 voltage free digital inputs, 8 digital outputs via optocoupled transistor
- 8 analogue inputs 0...20 / 4...20 mA and 4 analogue outputs 0...20 / 4...20 mA
- 8 voltage free digital inputs, 4 digital outputs via relay - 1 changeover relay
- Ethernet Modbus/TCP + SD type memory expansion slot
- Memory expansion slot

	L1	L2	L3	III	Máx./Min.
General parameters					
Voltage (phf-ph y ph-n)	X	X	X	X	X
Current	X	X	X	X	X
Frequency	X	-	-	-	X
Active power	X	X	X	X	X
Inductive reactive power	X	X	X	X	X
Capacitive reactive power	X	X	X	X	X
Effective power	X	X	X	X	X
Active energy	-	-	-	X	-
Inductive reactive energy	-	-	-	X	-
Capacitive active energy	-	-	-	X	-
Effective energy	-	-	-	X	-
Cosine j	X	X	X	X	X
Power factor	X	X	X	X	X
Demand					
Calculation via P, S, I1, I2, I3 and /III	X	X	X	X	X
Other parameters					
Neutral current		X			X
Neutral-Earth voltage		X			X
Flicker (PST)	X	X	X		X

	L1	L2	L3	III	Máx./Min.
Quality					
Voltage THD	X	X	X	X	X
Current THD	X	X	X	X	X
Harmonic voltage decomposition, 50	X	X	X		-
Harmonic current decomposition, 50	X	X	X		-
Voltage wave shape	X	X	X		-
Current wave shape	X	X	X		-
Display of phasors and wave shapes	X	X	X		
Voltage imbalance	X	X	X		-
Voltage asymmetry	X	X	X		X
Current asymmetry	X	X	X		X
Current imbalance	X	X	X		X
Voltage quality events					
Overvoltage	X	X	X		-
Gaps	X	X	X		-
Interruptions	X	X	X		-

Class	Type	code
COMPACT EQUIPMENTS (measure module + Display)		
0,5	CVMk2-ITF-405	M54400
0,2	CVMk2-ITF-402	M54402
COMPACT EQUIPMENTS (measure module)		
0,5	M-CVMk2-ITF-405	M54410
0,2	M-CVMk2-ITF-402	M54412

FEATURES

Power supply circuit (*)	85...265 Vac / 95...300 Vac
Consumption	5 V·A (without display)
Frequency	50 / 60 Hz
Measuring circuit	
Rated voltage	300 V ac (phase-neutral)/ 520 V ac (phase-phase)
Frequency	45...65 Hz
Current circuit consumption	0,6 V·A
Rated current	$I_n \dots 15 A$
Permanent overload	$1,2 I_n$
Class	
Power energy	$\pm 0,5 \% (\pm 1 \text{ digits}) / \pm 0,2 \% (\pm 1 \text{ digits})$

*) Other power supplies and Measurements on request (please see price list)

Assembly features	
Connection	Pluggable board
Type of casing	Self extinguishing V0 plastic
Degree of protection (front) (side)	IP 54 IP 31
Dimensions	144 x 144 mm
Weight	0,6 kg
Environmental conditions	
Operating temperature	-10 ... +50 °C
Relative humidity	5 ... 95 % (without condensation)
Safety	Category III-300 V ac 520 V ac EN 61010. Electrical shock protection by double insulation class II
Standards	IEC 664, VDE 0110, IEC 801, UL 94, IEC 348, IEC 571-1, EN 61010-1, EN 50081-1, EN 50082-1 IEC 61000-4-30 Clase B

ACCESORIOS



converters
(see page M5.21)



PowerStudio Scada Software
(see M.9)



Current transformers
(see M.7)