



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 , $I1$, $I2$, $I3$ and $I(III)$
- Record of the maximum Power demand by P , S , $I1$, $I2$, $I3$ 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./Mín.
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./Mín.
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	$I_n \dots 1,5 A$
Permanent overload	$1,2 I_n$
Class	
Power energy	$\pm 0,5 \% (\pm 1 \text{ digits}) / \pm 0,2 \% (\pm 1 \text{ digits})$

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

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

ACCESORIOS



converters
(see page M5.21)



PowerStudio Scada Software
(see M.9)



Current transformers
(see M.7)