COUNTIS® E

Energy Measurement
for your installations



socomec
Innovative Power Solutions

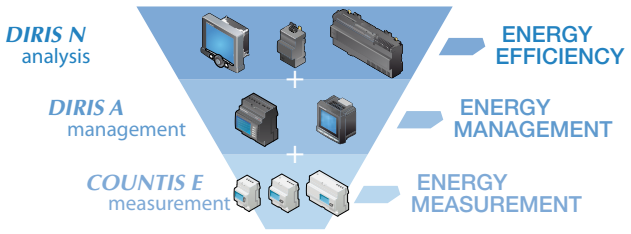
A comprehensive range for measuring your energy efficiency



GAMME-115 A GB

The new ***DIRIS & COUNTIS*** solutions are tailored to the requirements of industrial or tertiary environments: energy metering, quality monitoring and analysis of electrical networks.

Compliant with the new standard IEC 61557-12 specifically for multi-measurement devices (PMD), they guarantee the operator use of a product designed and tested in accordance with the functional requirements of its application, ensuring a high performance level.



DIRIS 792 B GB

The ***DIRIS***® system: the reference

Measurement is the key link in managing an energy efficiency project.

With ***DIRIS***, SOCOMEC has developed the most advanced multifunction measurement range on the market, dedicated to improving your energy performance.

For over 20 years, thousands of users, installers or integrators have trusted ***DIRIS*** innovative solutions for:

- energy metering and management
- electrical facility monitoring
- power quality analysis.

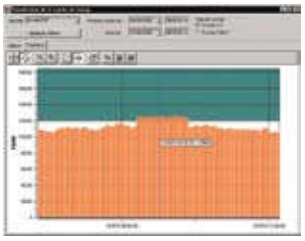
Follow the leader and run with the pioneers, by opting for the ***DIRIS*** solution.

For further information: **www.socomec.com**

Software

Control Vision

Designed to communicate with all the installation's products, including and reading ***COUNTIS Ci***, it offers the option of viewing all the measured data, and reading the energy consumption of a production line or process. The energy may be electrical or multi-fluid (water, gas, fuel oil, etc.)



DIRIS 514 A

Load graph

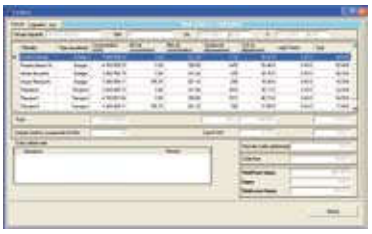


DIRIS 508 A

General meter reading

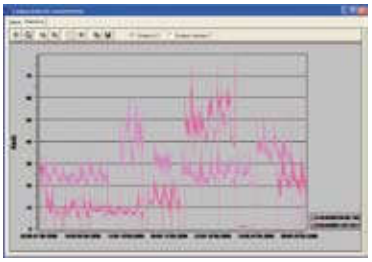
Billing Application

This application operates with Control Vision, and enables electrical energy to be managed according to a billing system. It offers the option of fine tuning the consumption and also enables electrical energy consumption to be distributed according to company criteria per production line, per department, etc.).



DIRIS 724 A

Bill



DIRIS 725 A

Load curve comparison

Multi-fluid (electricity, water, compressed air, fossil fuels)

Used in an energy-efficient programme, this software enables the management of the energy consumption of an industrial site or building. Depending on the automatic consumption readings on each energy meter (electricity, water, air, gas, etc.), it provides each user with a consumption report for a machine, production line, lighting circuit or commercial area.

Socomec will assign a team of specialists to help you tailor the best solution.

COUNTIS® E
MADE TO MEASURE

A complete range of energy meters



MID EN 50470 certified

MID EN 50470 (B+D module) certification available for specific ***COUNTIS E*** version
This certification is essential in billing applications where invoicing of consumed energy is required.

Direct connection 32, 63 and 100 A or via CT

The extensive ***COUNTIS E*** range contains products suited to all types of network.
This could be a 32 or 63 A single phase direct connection, a 63 A or 100 A three-phase connection or via a current transformer.

Communication

Some ***COUNTIS E*** have optional RS485 communication using Jbus/Modbus protocol. This makes it possible to remotely view all the data from the energy meters and centralise them on a remote monitoring system or BMS.
A pulse output is also available on certain products (unless they have RS485 communication).







The COUNTIS range

Selection guide








	AM10	E10	E11	E12	E20	E21	E30	E31	E32	E33	E40	E41	E42	E50	E53
Single phase network with direct connection	32 A	63 A	63 A	63 A											
Three-phase network with direct connection					63 A	63 A	10 0 A	100 A	100 A	100 A					
Three-phase network with connection to CT/5 A											6000 A	6000 A	6000 A	6000 A	6000 A
MID EN50470 certified B+D class B module				●					●				●		
RS485 JBUS/MODBUS communication										●					●
Pulse output	●	●	●	●	●	●	●	●	●		●	●	●	●	optional
NETWORK															
Self supplied	●	●	●	●	●	●	●	●	●	●	●	●	●		
Auxiliary power supply														110…400 VAC 120…350 VDC	110…400 VAC 120…350 VDC
ENERGY METERING															
Total/partial kWh (IEC 62053-21 class 1)	●/-	●/●	●/●	●/-	●/●	●/●	●/●	●/●	●/-	●/●	●/●	●/●	●/-	●/●	●/●
Total/partial kvarh											●/●	●/●	●/-	●/●	●/●
Multi-tariff			2	2		2		2	2	2		2	2		4 via RS485
EN50470-3 class B compliant		●	●	●	●	●	●	●	●	●	●	●	●		
Metrological LED	●	●	●	●	●	●	●	●	●	●	●	●	●		
IEC 62053-11 & IEC 62053-31		●	●	●	●	●	●	●	●	●	●	●	●		
IEC 61557-12		●	●	●	●	●	●	●	●	●	●	●	●	●	●
MEASUREMENTS															
Active power (ΣP)/ Reactive power (ΣQ)		●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/-	●/●	●/●	●/●	●/●	●/●
Multi-measurement (I, U, V, S, FP)														●	●
INSTALLATION															
Size (modules)	1	3	3	3	4	4	7	7	7	7	4	4	4	96 x 96	96 x 96
Protection against Phase/Neutral inversions					●	●	●	●	●	●	●	●	●		
Connection control		●	●	●	●	●	●	●	●	●	●	●	●	●	●
Sealable cover		optional	optional	●	optional	optional	optional	optional	●	optional	optional	optional	●		

References

> ***COUNTIS*** single-phase 32 A	
AM10	4850 **AM10**
> ***COUNTIS*** single-phase 63 A	
E10 Direct	4850 **3000**
E11 Direct - Dual Tariff	4850 **3001**
E12 Direct - Dual Tariff - MID	4850 **3002**
> ***COUNTIS*** three-phase 63 A	
E20 Direct	4850 **3003**
E21 Direct - Dual Tariff	4850 **3004**
> ***COUNTIS*** three-phase 100 A	
E30 Direct	4850 **3005**
E31 Direct - Dual Tariff	4850 **3006**
E32 Direct - Dual Tariff - MID	4850 **3007**
E33 Direct with JBUS/MODBUS communication via RS485	4850 **3012**
> ***COUNTIS*** three-phase CT/5 A	
E40 via CT	4850 **3008**
E41 via CT - Dual tariff	4850 **3009**
E42 Meter via CT - MID	4850 **3015**
> ***COUNTIS*** three-phase CT/5 A	
E50 Outputs (pulse output x 1)	4850 **3010**
E53 Modbus RS485 communication	4850 **3011**
> Sealable cover	
for Countis E1x	4850 **303U**
for Countis E2x	4850 **304U**
for Countis E3x	4850 **307U**
for Countis E4x	4850 **304U**

The COUNTIS range

Technical characteristics

	 *COUNTIS AM10*	 *COUNTIS E1X*	 *COUNTIS E2X*	 *COUNTIS E3X*	 *COUNTIS E4X*	 *COUNTIS E5X*
VOLTAGE INPUTS						
Type	single phase (Ph/N)	single phase (Ph/N)	three-phase (3 Ph; 3 Ph + N)	three-phase (3 Ph; 3 Ph + N)	three-phase (3 Ph; 3 Ph + N)	three-phase (3 Ph; 3 Ph + N)
Measurement range	184…276 VAC	184…276 VAC	184…480 VAC	184…480 VAC	184…480 VAC	86…520 VAC
Frequency	50 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz	50/60 Hz
CURRENT INPUTS						
Type	direct 32 A	direct 63 A	direct 63 A	direct 100 A	CT (6000 A)/5 A	CT (6000 A)/5 A
Permanent overload	40 A	63 A	63 A	100 A	6 A	6 A
Minimum measuring current	15 mA	40 mA	40 mA	80 mA	10 mA	5 mA
PULSE OUTPUT						
Number	1	1	1	1	1	1
Type	optocoupler	phototransistor	phototransistor	phototransistor	phototransistor	relay
Pulse weight	100 Wh	100 Wh	100 Wh	100 Wh	configurable	configurable (0.1, 1, 10, 100, 100 kWh)
Pulse length	100 ms	100 ms	100 ms	100 ms	configurable	configurable (100…900ms)
COMMUNICATION						
RS485				1	1	1
Protocol				JBUS/MODBUS	JBUS/MODBUS	JBUS/MODBUS
AUXILIARY POWER SUPPLY						
Type	self supllied	self supllied	self supllied	self supllied	self supllied	110…400 VAC 120…350 VDC

The concentrator: *COUNTIS Ci*

The ***COUNTIS Ci*** pulse concentrator allows recording and storing of pulses from the water, gas, compressed air or electricity meters.

All data, ie. total meters, monthly meters and load curves (12 days at 15 minutes power for 4 inputs) can be centralised via RS485 communication using JBUS MODBUS protocol.

Linked to the software, the ***COUNTIS Ci*** completes the metering range by adding multi-fluid metering and assignment.



COUNT 080 B

Associated current transformers

	Primary wound CT	Through cable CT		Through-bar or through-cable CT							Through-bar CT				Split-core CT			
	TRB 70	CTA 21	CTA 13-3P	CTB 17-20	CTB 28-30	CTB 32-40	CTB 44-50	CTB 44-63	CTB 85-100	CTB 100-125	TBA 60	TBA 100	TBA 103	TBA 127	TO 23	TO 58	TO 812	TO 816
H (mm)	88.5	65	90	65	70	88.5	101.5	108.5	187.5	187.5	132	170	150	175	106	152	198	246
W (mm)	71	45	105	49.5	49.9	71	86	96	172	172	88	129	99	100	93	125	155	195
D (mm)	45	30	65.2	50	68	58	58	58	52	52	78	78	55	55	58	58	58	79
cable d (mm)		21	13.5	17.5	28	32	44	44	85	100	31	55.5	41	38	20	50	80	80
bar x 1 (mm)				20x5	30x10	40x10	50x12	63x10			60x30	100x30	100x35	128x38	20x30	50x80	80x120	80x160
bar x 2 (mm)							40x10	40x10	100x10	120x10								
bar x 3 (mm)									80x10									
																		
Primary (A)	5 … 40	5 … 300	50 … 160	60 … 400	50 … 600	50 … 1000	100 … 1250	200 … 1500	750 … 3000	1000 … 4000	200 … 2000	600 … 4000	400 … 2000	400 … 4000	100 … 400	250 … 1000	250 … 1500	1000 … 5000
Secondary (A)	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5	5

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