



DIRIS[®] A

PMD multifunction measurement units
for managing your electrical networks



your energy
our expertise



socomec
Innovative Power Solutions

Monitor your networks to optimise availability and consumption

Growing increasingly important for industrial and service sectors is the performance of electrical networks which are now under constant scrutiny. Proper management of electrical networks will improve their reliability and efficiency, increasing continuity of service and reducing costs. The need for constant, qualitative monitoring requires a high-performance, tried and tested measuring system, which is adapted to your specific business requirements.



Reduce costs

All industrial or service sector activities are faced with the need to minimise operating and maintenance costs. In this kind of approach, the measurement system is a key component, enabling energy quality to be monitored.

Reduce production losses

The measurement system is at the heart of any solution designed to prevent electrical incidents, or even production downtime, which often generate significant financial losses or material wastage.

Improve the efficiency of the installation

Combined with energy management software, the measurement system is a key factor in identifying malfunctions within the installation, which can then lead to improved energy efficiency.

DIRIS[®] A

A comprehensive range of solutions for efficient management of your electrical networks



A range of formats, increased capacities, software to make it more user-friendly, and, finally, tailored guidance from a specialist...

There are a wealth of reasons to choose our innovative measurement units for your energy management solutions.

Socomec, your best asset







Socomec is an industrial group specialising in the availability, control and safety of low voltage electrical energy which meets the requirements of the industry and the service sector. As a recognised expert in energy efficiency, Socomec is the only contact you need, offering everything from technical analysis to the implementation of a perfectly adapted solution.

For over 20 years, thousands of users, installers and integrators have trusted the innovative DIRIS and COUNTIS measurement solutions.



APPLI 540A

The **benefits** of the **DIRIS A** range

For DIN rail		Embeddable				
						
DIRIS A10 DIRIS A14		DIRIS A17	DIRIS A20	DIRIS A40/41	DIRIS A60	DIRIS A80
						Differential current monitoring
Functions		Network monitoring Performance Monitoring Device (PMD) Standard IEC 61557-12				Events analysis Standard EN 50160
Dimensions						
Modular		72 x 72	96 x 96			
Applications						
Service sector	industry and infrastructures with sub-billing (MID)	Service sector, motor output	Infrastructures, data centre, industry			Healthcare buildings, infrastructures, data centre, industry

■ Performance

The accuracy class of the measurement units is essential in reducing energy consumption. DIRIS measurement units can measure and display over two hundred parameters with a very high-level of accuracy.

■ Compliant with IEC 61557-12

A highly stringent requirement, IEC 61557-12 is specifically designed to regulate measuring and monitoring devices (PMD).

Adherence to this standard is the guarantee of a high level of quality and performance.

■ Events analysis

DIRIS A60 and A80 analyse the energy quality via a detailed breakdown of harmonics and identification of troughs, outages, overvoltages and overcurrents on the electrical network. Their method of measuring the electrical network voltage are compliant with the requirements of standard EN 50160. Using an event log and an interpretation of the curves, the Analysis software allows quality-based data to be analysed and exported, alongside differential current monitoring (DIRIS A80).

■ Differential current monitoring

In addition to ensuring smart energy management for electrical installations, the DIRIS A80 includes an RCM (Residual Current Monitoring) differential current monitoring function.

This function is used to control the energy quality whilst preventing any unwanted installation downtime.

■ Bi-directional MID meter

For your sub-billing requirements, choose the Socomec multifunction meters with MID certification.

Upgradeability



DIRIS A units can be adapted to the varying needs of multi-function measurement applications: **plug-in optional modules** allow additional functions to be added at any time.

Webserver

The Ethernet communication modules integrate the embedded **Webserver function**, which allows products to be operated remotely without any specific software.

Ease of use

Equipped with a large backlit screen, DIRIS A units display a number of indications, whilst remaining easy to view. The direct access keys (four to six depending on the model) enable optimum use of the available functions. DIRIS A units are easy to install: the Easy Config software can be used to quickly and easily create, edit and save configurations.

Also available

A wide range of current transformers from 5 to 5000 A for use with your Socomec energy meters.



Complement

VERTELIS SUITE: the perfect companion to drive reductions in your energy consumption

Energy and facility managers of commercial and industrial sites, Do you want:

- to understand your site, buildings & processes?
- to reduce your energy consumption, costs & carbon emissions?
- to drive a legislation compliance process?
- to monitor, allocate and sub-bill energy costs?
- to implement a corporate green communication?

VERTELIS SUITE software is the key tool to implement an organisational energy policy within your company. The software allows you to reduce your energy bills by up to 30%.



Real-time display of all the electrical values (example screenshot available via the embedded web server function).

Socomec services

The experts at Socomec are on hand to assist you throughout your entire energy performance process.

Our services cover the following domains:

- study and definition,
- commissioning,
- maintenance,
- training.

Selection guide

Which application?



Which functions?

Application	Multifunction metering (PMD)		
			
	DIRIS A10	DIRIS A14	DIRIS A17

Multi-measurement

Currents, voltages (ph/ph and ph/n), active/reactive/apparent powers, power factor, frequency	•	•	•
4 th CT for neutral current measurement			
Voltage/current unbalance			
Currents, voltages, frequency (average values)	(max. average value for currents)	(max. average value for currents)	(max. average value for currents)
Max. power demand	•	•	•
Temperatures	internal		
Tangent phi		• cos phi	
Hour meter	•		
Memorisation of min/max instantaneous values		•	

Metering

MID: EN 50470 module B + D certification		•	
kWh (+/-), kvarh (+/-)	kWh (+), kvarh (+)	•	•
Logical input(s) for pulse meter(s)			1 as standard
Multi-tariff meters	•	•	
Pulse output(s)	1 as standard		1 as standard
Active energy accuracy / IEC 62053-21 class 1			•
Active energy accuracy / IEC 62053-22 class 0.5 s	•	•	
Active energy accuracy / IEC 62053-22 class 0.2 s			
Active energy (EN 50470)		class C	
Reactive energy accuracy / IEC 62053-23 class 2	•	•	•
Compatibility with IEC 61557-12	•	•	•

Power management

Load curves (period 5, 8, 10, 15, 20 and 30 minutes)		•	
Predictive power			

Power quality

THD voltages, currents and neutral currents	Row 51	row 63	row 31 (if option available)
Individual harmonics			
EN 50160			
Sag, swell and outages, overcurrent			
RMS 1/2 period curve backup for events			
Management of fault currents			

Plug-in modules

	<ul style="list-style-type: none"> • 1 logical input as standard • 1 logical output as standard • Modbus as standard for 1 reference 		
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DIRIS A10/A14/A17

Type	Reference
DIRIS A10	4825 0010
DIRIS A10 with RS485 MODBUS communication	4825 0011
DIRIS A14 MID	4825 0020
DIRIS A17 with pulse output	4825 0101
DIRIS A17 with RS485 MODBUS comm.	4825 0102
DIRIS A17 220 ... 277 VAC with RS485 MODBUS comm. + THD	4825 0103






DIRIS A20/A40

Type	Reference
DIRIS A20	4825 0200
1 pulse output module for DIRIS A20	4825 0080
MODBUS RS485 communication module for DIRIS A20	4825 0082
DIRIS A40	4825 0201
DIRIS A40 12 ... 48 VDC version	4825 1201

Which dimensions?

Which communication protocol?

Which options?

	Power monitoring (PMD)		Power monitoring & events analysis (PMD)	Power monitoring & residual current monitoring (PMD+RCM)
				
<i>DIRIS A20</i>	<i>DIRIS A40</i>	<i>DIRIS A41</i>	<i>DIRIS A60</i>	<i>DIRIS A80</i>
•	•	•	•	•
		•		•
(max. average value for currents)	•	•	•	•
•	•	•	•	•
	by temperature sensor PT100	by temperature sensor PT100	by temperature sensor PT100	
			•	•
•	•	•	•	•
	optional	optional	•	•
kWh (+), kvarh (+)	•	•	•	•
	up to 6 with optional module	up to 6 with optional module	up to 6 with optional module	
with optional module	up to 6 with optional module	up to 6 with optional module	up to 6 with optional module	
•	•	•	•	•
•	•	•	•	•
•	•	•	•	•
	optional	optional	•	•
	•	•	•	•
row 51	row 63	row 63	row 63	row 63
	row 63	row 63	row 63	row 63
			•	•
			•	•
			•	•
				•
<ul style="list-style-type: none"> • 1 logical output • Modbus RS485 communication • 3 In / 1 out + alarm 	<ul style="list-style-type: none"> • 2 pulse outputs • Modbus RS485 communication • PROFIBUS DP communication • Ethernet communication (available with Modbus gateway) • 2 analogue outputs • 2 inputs / 2 outputs • Memory • Temperature inputs 		<ul style="list-style-type: none"> • Memory fitted as standard • 2 pulse outputs • Modbus RS485 communication • Ethernet communication (available with Modbus gateway) • 2 analogue outputs • 2 inputs / 2 outputs • Temperature inputs 	<ul style="list-style-type: none"> • Modbus RS485 communication • Ethernet communication (available with Modbus gateway)

DIRIS A41/A60/A80

Type	Reference
DIRIS A41	4825 0202
DIRIS A41 12 ... 48 VDC version	4825 1202
DIRIS A60	4825 0207
DIRIS A80 with 2 outputs	4825 0213
DIRIS A80 with 1 input and 1 output	4825 0214

Optional modules for DIRIS A40/A41/A60/A80

Type	Reference
Pulse output module	4825 0090
RS485 MODBUS communication module	4825 0092
RS485 PROFIBUS-DP communication module	4825 0205
Ethernet Module	4825 0203
Ethernet module with RS485 gateway	4825 0204
Temperature module	4825 0206
Analogue output module	4825 0093
Monitoring or control/command module	4825 0094
Memory module (DIRIS A40/A41)	4825 0097

Socomec worldwide

IN EUROPE

BELGIUM

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +32 2 340 02 30
Fax +32 2 346 28 99
info.be@socomec.com

FRANCE

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +33 1 45 14 63 00
Fax +33 1 48 67 31 12
dcm.ups.fr@socomec.com

GERMANY

Critical Power

Tel. +49 621 71 68 40
Fax +49 621 71 68 444
info.ups.de@socomec.com

Power Control & Safety / Energy Efficiency

Tel. +49 7243 65292 0
Fax +49 7243 65292 13
info.scp.de@socomec.com

ITALY

Critical Power

Tel. +39 02 98 242 942
Fax +39 02 98 240 723
info.ups.it@socomec.com

Power Control & Safety / Energy Efficiency

Tel. +39 02 98 49 821
Fax +39 02 98 24 33 10
info.scp.it@socomec.com

NETHERLANDS

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +31 30 760 0900
Fax +31 30 637 2166
info.nl@socomec.com

POLAND

Critical Power

Tel. +48 22 825 73 60
Fax. +48 22 825 73 70
info.ups.pl@socomec.com

Power Control & Safety / Energy Efficiency

Tel. +48 91 442 64 11
Fax +48 91 442 64 19
info.scp.pl@socomec.com

PORTUGAL

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +351 261 812 599
Fax +351 261 812 570
info.ups.pt@socomec.com

ROMANIA

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +40 21 319 36 88
Fax +40 21 319 36 89
info.ro@socomec.com

SERBIA

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +381 11 40 43 246
Fax +381 11 40 43 245
info.rs@socomec.com

SLOVENIA

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +386 1 5807 860
Fax +386 1 561 11 73
info.si@socomec.com

SPAIN

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +34 93 540 75 75
Fax +34 93 540 75 76
info.es@socomec.com

SWITZERLAND

Critical Power

Tel. +41 44 745 40 80
Fax +41 44 745 40 85
info@socomec.ch

TURKEY

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +90 216 540 71 20-21-22
Fax +90 216 540 71 27
info.tr@socomec.com

UNITED KINGDOM

Critical Power

Tel. +44 1285 863 300
Fax +44 1285 862 304
info.uk@socomec.com

Power Control & Safety / Energy Efficiency

Tel. +44 1462 440 033
Fax +44 1462 431 143
info.uk@socomec.com

IN ASIA PACIFIC

AUSTRALIA

Critical Power / Power Control & Safety

Tel. +61 2 9325 3900
Fax +61 2 9888 9544
info.ups.au@socomec.com

CHINA

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +86 21 52 98 95 55
Fax +86 21 62 28 34 68
info.cn@socomec.com

INDIA

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +91 44 39215400
Fax +91 44 39215450 & 51
info.in@socomec.com

SINGAPORE

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +65 6506 7600
Fax +65 64 58 7377
info.sg@socomec.com

THAILAND

Critical Power

Tel. +66 2 941 1644 7
Fax +66 2 941 1650
info.ups.th@socomec.com

IN MIDDLE EAST

UNITED ARAB EMIRATES

Critical Power / Power Control & Safety /
Energy Efficiency

Tel. +971 4 29 98 441
Fax +971 4 29 98 449
info.ae@socomec.com

IN AMERICA

USA, CANADA & MEXICO

Power Control & Safety / Energy Efficiency

Tel. +1 617 245 0447
Fax +1 617 245 0437
info.us@socomec.com

OTHER COUNTRIES

NORTH AFRICA

Algeria / Morocco / Tunisia
info.naf@socomec.com

AFRICA

Other countries

info.africa@socomec.com

SOUTH EUROPE

Cyprus / Greece / Israel / Malta
info.se@socomec.com

SOUTH AMERICA

Tel. +34 93 540 75 75
info.es@socomec.com

MORE DETAILS

www.socomec.com/worldwide

HEAD OFFICE

SOCOMECS GROUP

SAS SOCOMECS capital 10 686 000 €
R.C.S. Strasbourg B 548 500 149
B.P. 60010 - 1, rue de Westhouse
F-67235 Benfeld Cedex - FRANCE
Tel. +33 3 88 57 41 41
Fax +33 3 88 74 08 00
info.scp.isd@socomec.com

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www.socomec.com

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