



DIRIS[®] A

Multifunction measurement units for managing your electrical networks



GARO

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.

Adapt to integration constraints

To meet the requirements of existing installations, the RETROFIT Line products allow you to easily add measuring points within electrical enclosures which are very restricted in terms of space.

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.







SOCOMECC, your best asset

SOCOMECC 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, SOCOMECC 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.



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

For DIN rail	Embeddable				
					
DIRIS A10	new DIRIS A17	DIRIS A20	DIRIS A40/41	DIRIS A60	DIRIS A80
Functions	Network monitoring Performance Monitoring Device (PMD) - Standard IEC 61557-12				Differential current monitoring
					Events analysis Standard EN 50160
Dimensions					
Modular	72 x 72	96 x 96			
Applications					
Service sector	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.

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.

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

Product pack adapted for existing sites.



RETROFIT line

Webserver

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

Access is via your Internet browser, simply by entering the IP address of the DIRIS. The Webserver is used to view the status and measurements of all the products connected to the gateway (Ethernet module with gateway).

Also available

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



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

SOCOMEK 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.

Manage your energy costs




Thanks to the VERTELIS software, analysis and display of your energy data is optimised through detailed tables and graphics which are appropriate and easy to understand. For example, this allows you to display how your consumption is being optimised and the savings being made in the lobby of your headquarters ("totem function").



Selection guide

Which
functions?



Functions	Network monitoring Performance Monitoring Device (PMD) - Standard IEC 61557-12			
				
	DIRIS A10 modular	DIRIS A17 72 x 72	DIRIS A20 96 x 96	
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 currents)	(Max. average currents)	(Max. average currents)	
Max. power demand	•	•	•	
Temperatures	Internal			
Tangent phi				
Hour meter	•		•	
Memorisation of min/max instantaneous values				
IEC 61557-2	•	•	•	
Metering				
kWh (+/-), kvarh (+/-), kVAh	kWh (+), kvarh (+)	•	kWh (+), kvarh (+)	
Logical input(s) for pulse meter(s)		1 as standard		
Dual-tariff metering	•			
Pulse output(s)	1 as standard	1 as standard	1 with optional module	
Active energy accuracy - IEC 62053-21 class 1		•		
Active energy accuracy - IEC 62053-22 class 0.5 s	•		•	
Reactive energy accuracy - IEC 62053-23 class 2	•	•	•	
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 31 (for 1 reference)	Row 51	
Individual harmonics				
EN 50160				
Sag, swell and outages, overcurrent				
RMS 1/2 period event curve backup				

Options: plug-in modules



1 slot available on the DIRIS A80,
2 on the DIRIS A20, 3 on the DIRIS A41 and A60
and 4 on the DIRIS A40.

- MODBUS as standard for 1 reference.
- 1 logical input as standard
- 1 logical output as standard

- RS485 MODBUS Communication
- 1 logical output

* with optional module

DIRIS A10/A17

Type	Reference
DIRIS A10	4825 0010
DIRIS A10 with RS485 MODBUS communication	4825 0011
DIRIS A17 220 ... 277 VAC with pulse output	4825 0101
DIRIS A17 220 ... 277 VAC 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 110 ... 400 VAC and 120 ... 350 VDC	4825 0200
1 pulse output module for DIRIS A20	4825 0080
MODBUS RS485 communication module for DIRIS A20	4825 0082
DIRIS A40 110 ... 400 VAC and 120 ... 350 VDC	4825 0201
DIRIS A40 12 ... 48 VDC	4825 1201




Which
dimensions ?



Which
communication
protocol ?



Which
options ?

Network monitoring Performance Monitoring Device (PMD) - Standard IEC 61557-12		+ Events analysis (Standard EN 50160)		+ Differential current monitoring
				
DIRIS A40 96 x 96		DIRIS A41 96 x 96		DIRIS A60 96 x 96
•		•		•
•		•		•
•		•		•
•		•		•
By temperature sensor		By temperature sensor		•
•		•		•
Optional		Optional		•
•		•		•
•		•		•
Up to 6 with optional module		Up to 6 with optional module		•
Up to 6 with optional module		Up to 6 with optional module		•
•		•		•
•		•		•
Communication options		Communication options		•
•		•		•
Row 63		Row 63		Row 63
Row 63		Row 63		Row 63
		•		•
		•		•
		•		•
<ul style="list-style-type: none"> • RS485 MODBUS Communication • Profibus DP communication • Ethernet communication (available with MODBUS gateway) • 2 pulse outputs • 2 analogue outputs • 2 inputs / 2 outputs • Memory • Temperature inputs 		<ul style="list-style-type: none"> • RS485 MODBUS Communication • Ethernet communication (available with MODBUS gateway) • Memory as standard • 2 pulse outputs • 2 analogue outputs • 2 inputs / 2 outputs • Temperature inputs 		<ul style="list-style-type: none"> • RS485 MODBUS Communication • Ethernet communication (available with MODBUS gateway)

DIRIS A41/A60/A80

Type	Reference
DIRIS A41 110 ... 400 VAC and 120 ... 350 VDC	4825 0202
DIRIS A41 12 ... 48 VDC	4825 1202
DIRIS A60 110 ... 400 VAC and 120 ... 350 VDC	4825 0207
DIRIS A80 110 ... 400 VAC and 120 ... 350 VDC with 2 outputs	4825 0213
DIRIS A80 110 ... 400 VAC and 120 ... 350 VDC 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