

Selection Guide - UL/CSA Power Monitoring



POWER
MONITORING

Ed. 4

When **energy** matters



When **energy** matters

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Innovative Power Solutions



Metering, monitoring & power quality

Finding the right power meter! p 4

Multi-point Power Metering & Monitoring DIRIS Digiware AC & DC p 8

Single-point Power Metering & Monitoring DIRIS A & B p 18

Single-point Energy Metering WattNode p 24

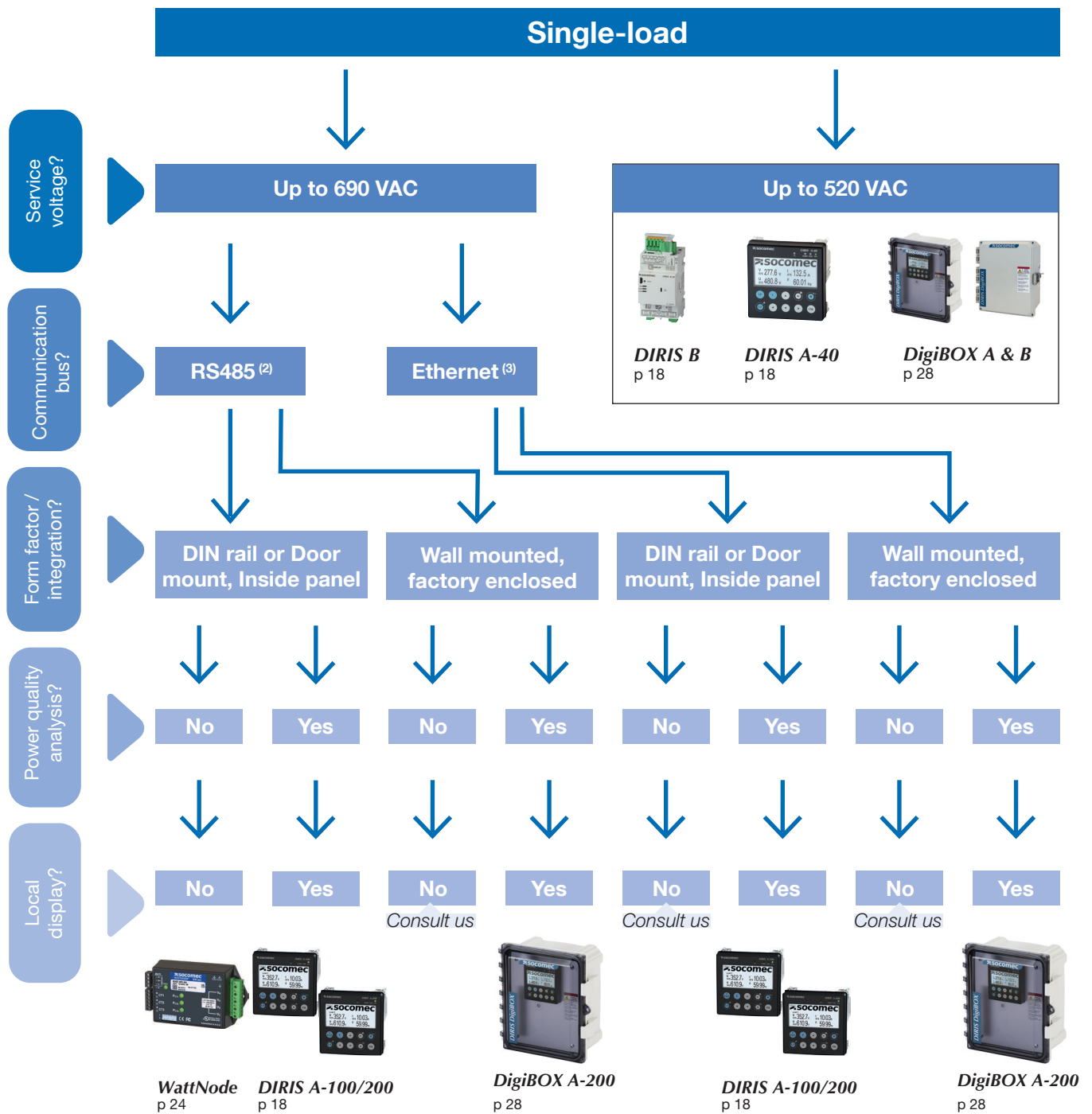
Enclosed Power Metering & Monitoring DIRIS DigiBOX A, B & M p 28

Enclosed multi-point sub-meter DIRIS MCM p 32

Socomec offers a wide range of power meters serving a variety of applications and market segments.

Power meters are available in different shapes, form factors and functionality levels to address each application's requirements. This is why selecting the right power meter typically requires details about your application and the expected integration.

The below flowchart aims at simplifying the selection process, guiding you towards the right solution through basic questions, but many additional questions can be asked to make this selection even more accurate:



(1) Single-load defined as one three-phase or two-phase or single-phase load

(2) Compatible protocols: Modbus RTU

(3) Compatible protocols: Modbus TCP, BACnet IP

Typical questions

Where is the meter going to be installed?

Does the meter need to communicate measurements to a 3rd party system?
What is the preferred communication protocol?

Do you need a local display?

How many circuits need to be monitored?
Are all circuits under the same voltage source?

What measurement dataset or functionality are needed?

Is a web interface needed to visualize measurements?

Multi-load ⁽⁴⁾



Up to 690 VAC



RS485 ⁽²⁾ + Ethernet



DIN rail or Door mount, Inside panel



Wall mounted, factory enclosed



No



DIRIS Digiware
p 8



Yes



DIRIS Digiware
p 8



No



DIRIS MCM
p 28



Yes

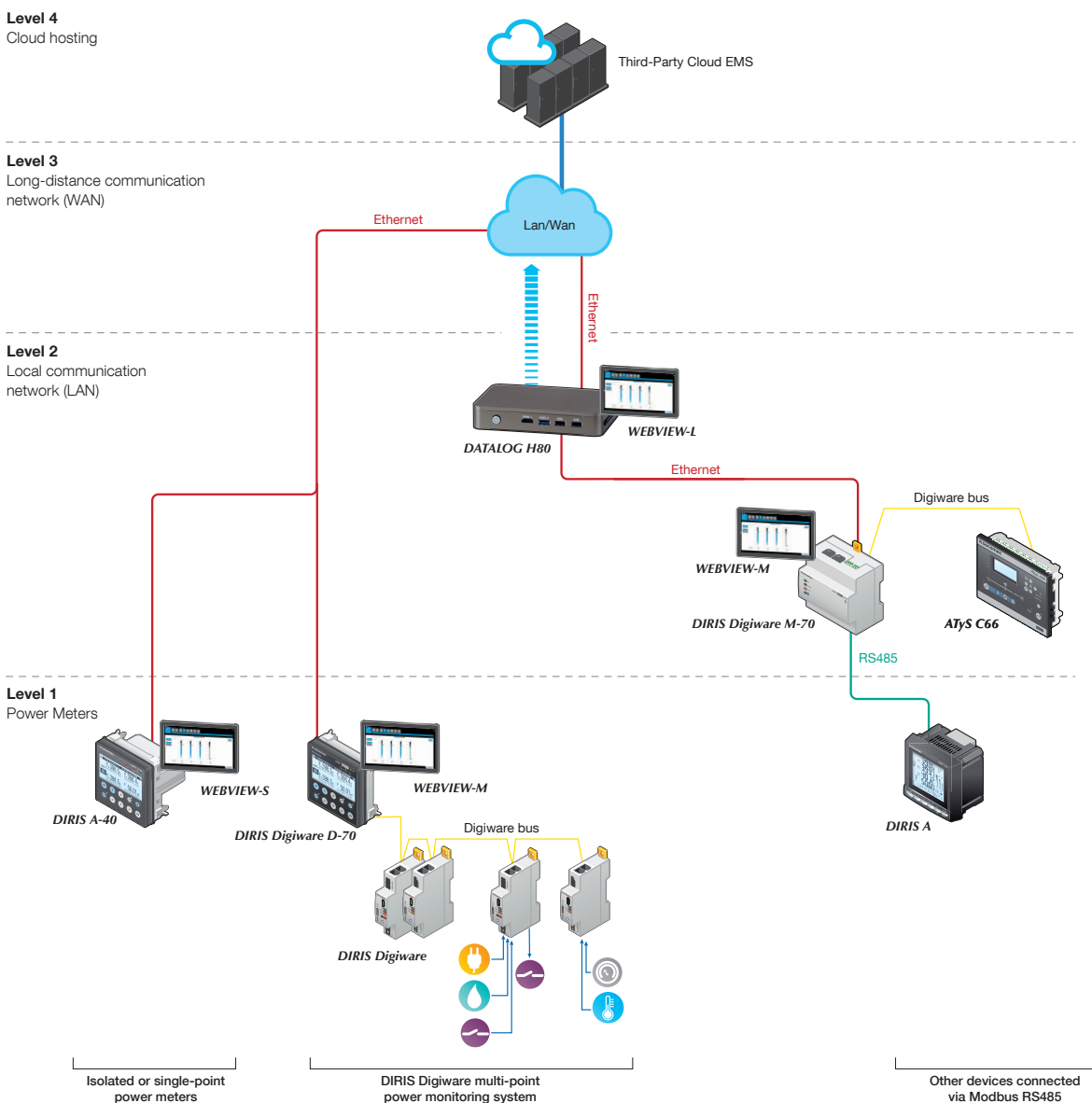


DIRIS MCM
p 28

⁽⁴⁾ Multi-load defined as multiple three-phase or two-phase or single-phase loads sharing the same voltage source

Power Monitoring Architecture

Example



Expert Services

Our service engineers are an essential part of our team, and they are dedicated to ensuring your power monitoring system provides accurate and reliable measurements to your EPMS software or SCADA system.

Our services include:

- > Site audits to verify the proper wiring of your system
- > Personnel training on how to configure, operate and maintain power monitoring equipment and associated software
- > Remote and on-site commissioning to ensure that your system is up and running quickly, with peace of mind.

For further information, please contact your nearest SOCOMEC branch.



References

1/2 day remote commissioning	Remote commissioning including installation verification, programming and communication testing	923 010 0027
1/2 day on-site commissioning	On-site commissioning including installation verification, programming and communication testing	923 010 0004

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC



Flexible

A modular concept allowing you to customize your own system to monitor any number of circuits within switchboards, panelboards, motor control centers etc



Versatile

More than just energy metering, the system monitors power quality, breaker status & trips, collects pulses from gas/water meters and reads analog 0/4-20 mA signals.



Web interface

Access real time and historical measurements remotely thanks to a free built-in web interface on all Ethernet based power meters.



Multi-circuit

Monitor up to 64 three-phase circuits in one system. With shared communication, power supply, and voltage module, installation time costs and space are significantly reduced.



PreciSense technology

Unrivalled class 0.5 system accuracy (including current sensors), exceeding revenue grade requirements and ensuring reliable measurements under all conditions.



Selection Guide

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC

Choose your communication interface

1



DIRIS Digiware D display

or



DIRIS Digiware M gateway

or



DIRIS Digiware C-31 interface

Choose your voltage acquisition module

2



DIRIS Digiware Uac
AC voltage module

NEW



DIRIS Digiware Udc
DC voltage module

Choose your current acquisition module

3



DIRIS Digiware S
AC current module with (3)
integrated current sensors



DIRIS Digiware BCM
AC current module with (21)
integrated current sensors



DIRIS Digiware Iac
AC current module

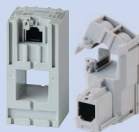


DIRIS Digiware Idc
DC current module

Choose your AC current sensors

For **DIRIS DIGIWARE Iac** current modules

4



RJ12 technology
Solid-core, split-core, flexible Rogowski



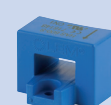
RJ12 cables

or

4

Choose your DC current sensors

For **DIRIS DIGIWARE Idc** current modules



DC current sensors



RJ12 cables

Choose your optional input/output module

5



DIRIS Digiware IO-10
4 digital inputs / 2 digital outputs



DIRIS Digiware IO-20
2 analog inputs

Digiware Bus cables

6



To interconnect Digiware
D/M/C/U/I/S/BCM/IO

Create your project

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1 Communication interface

DIRIS Digiware	Centralization and display of data				Data centralization	Repeater
						
	M-50	M-70	D-50	D-70	C-31	C-32
Main function						
Centralization of measurements	•	•	•	•	•	-
LCD High-resolution display	-	-	•	•	-	-
Bus Repeater	-	-	-	-	-	•
Power supply						
24 VDC	•	•	•	•	•	•
Communication						
Digiware bus	•	•	•	•	•	•
RS485	Modbus RTU Slave / Master	Modbus RTU Slave / Master	Modbus RTU Slave / Master	Modbus RTU Slave / Master	Modbus RTU Slave	-
Ethernet	Modbus TCP BACnet IP SNMP	Modbus TCP BACnet IP SNMP	Modbus TCP BACnet IP SNMP	Modbus TCP BACnet IP SNMP	-	-
Embedded web server	WEB-CONFIG	WEBVIEW-M	WEB-CONFIG	WEBVIEW-M	-	-
Reference	4829 0221	4829 0222	4829 0204	4829 0203	4829 0101	4829 0103

Accessories

Power supply & repeater		Reference
P15	Power supply 100-240 VAC / 24 VDC 15 W	4829 0120
P30	Power supply 100-240 VAC / 24 VDC 20 W	4729 0603

2 AC voltage acquisition module

DIRIS Digiware			 new
DIRIS Digiware U	U-10	U-30	U-100
Electrical			
Voltage Measurement	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 600 VAC L/N 90 - 690 VAC L-L
Multi-measurement			
U12, U23, U31, V1, V2, V3, f	•	•	•
U system, V system		•	•
Unbalance U, V		•	•
Power Quality			
THD U, V		•	•
Individual Harmonics U, V (up to 63rd)		•	•
PQ Events (sags, swells, interruptions)		•	•
Waveform capture			
Alarms			
Measurement Threshold		•	•
System alarms	•	•	•
History			
Average Values		•	•
Reference	4829 0105	4829 0102	4829 0108

Selection guide

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC

3 AC current modules with integrated current sensors

	S-130	S-135	BCM-2119	BCM-2119VM	BCM-2125	BCM-2125VM
<i>DIRIS Digiware</i>						
Format						
Number of integrated sensors	3	3	21	21	21	21
Maximum current for integrated sensors	63 A	63 A	80 A	80 A	120 A	120 A
Number of external RJ12 sensor inputs (allows to connect TE, TR/ITR, TF sensors)	-	-	3	3	3	3
Breaker pitch / center spacing	18 mm	18 mm	19 mm	19 mm	25 mm	25 mm
Metering						
± kWh, ± kvarh, kVAh	•	•	•	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA), PF	•	•	•	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	-	•	•	•	•	•
Predictive Power	-	•	•	•	•	•
Load curves / demand profiles	-	•	•	•	•	•
Peak Demand	-	•	•	•	•	•
Multi-tariff (max 8)	•	•	•	•	•	•
Multi-measurement						
I1, I2, I3, In	•	•	•	•	•	•
I system	-	•	•	•	•	•
Current unbalance (Inba, Idir, linv, Ihom, Inb)	-	•	•	•	•	•
Phi, cos Phi, tan Phi	•	•	•	•	•	•
Power Quality						
THD I1, I2, I3, In, Isys	-	•	•	•	•	•
Individual harmonics I (up to 63rd)	-	•	•	•	•	•
Crest Factor I1, I2, I3, In	-	•	•	•	•	•
K-Factor	-	•	•	•	•	•
Ground leakage current monitoring	-	-	•	•	•	•
Alarms						
Overcurrents	-	•	•	•	•	•
Measurement thresholds	-	•	•	•	•	•
System alarms	•	•	•	•	•	•
Protective device	•	•	-	•	-	•
History						
Average values		•	•	•	•	•
Reference	4829 0160	4829 0161	4829 0167	4829 0168	4829 0169	4829 0170

Accessories

Description	Reference
DIN rail mounting clip for Digiware S (QTY 10)*	4829 0195

*Not included with the purchase of the DIRIS Digiware S. Must be purchased separately

3 AC current acquisition modules

	I-30	I-31	I-35	I-43	I-45	I-60	I-61
DIRIS Digiware							
General							
Number of current inputs	3	3	3	4	4	6	6
Inputs / Outputs							
Digital inputs / outputs	-	-	-	2 / 2	2 / 2	-	-
Metering							
± kWh, ± kvarh, kVAh	•	•	•	•	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA), PF	•	•	•	•	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	-	•	•	•	•	-	•
Predictive Power	-	-	•	-	•	-	-
Load curves / demand profiles	-	•	•	-	•	-	•
Peak Demand	-	-	•	•	•	-	-
Multi-tariff	-	-	8	-	8	-	-
Multi-measurement							
I1, I2, I3, In	•	•	•	•	•	•	•
I system	-	-	•	-	•	-	-
Current unbalance (Inba, Idir, linv, lhom, Inb)	-	-	•	-	•	-	-
Phi, cos Phi, tan Phi	-	-	•	-	•	-	-
Power Quality							
THD I1, I2, I3, In	-	•	•	•	•	-	•
Individual harmonics I (up to 63rd)	-	-	•	-	•	-	-
Crest Factor I1, I2, I3, In	-	-	•	-	•	-	-
K-Factor	-	-	•	-	•	-	-
Alarms							
Overcurrents	-	-	•	-	•	-	-
Measurement thresholds	-	Power / Energies	•	-	•	-	Power / Energies
System alarms	•	•	•	•	•	•	•
Protective device	• with ITR sensors	• with ITR sensors	• with ITR sensors	• with ITR sensors	• with ITR sensors	• with ITR sensors	• with ITR sensors
Logical (digital input status)	-	-	-	•	•	-	-
History							
Average values	-	-	•	-	•	-	-
Reference	4829 0110	4829 0111	4829 0130	4829 0129	4829 0131	4829 0112	4829 0113

Selection guide

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC

4 RJ12 AC current sensors

Suitable for new installations
match the pitch of protective
devices

Solid-core current sensors							
							
	TE-18	TE-25	TE-35	TE-45	TE-55	TE-90	
Nominal current In (A)	5 ... 20	25 ... 63	40 ... 160	63 ... 250	160 ... 630	400 ... 1000	600 ... 2000
Real range covered (A)	0.1 ... 24	0.5 ... 75.6	0.8 ... 192	1.26 ... 300	3.2 ... 756	8 ... 1200	12 ... 2400
Window (in/mm)	Ø 0.33 / 8.4	Ø 0.33 / 8.4	0.53 x 0.53 13.5 x 13.5	0.82 x 0.82 21 x 21	1.22 x 1.22 31 x 31	1.61 x 1.61 41 x 41	2.52 x 2.52 64 x 64
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0500	4829 0501	4829 0502	4829 0503	4829 0504	4829 0505	4829 0506

Suitable for existing installations

Split-core current sensors				
				
	TR/iTR-10	TR/iTR-14	TR/iTR-21	TR/iTR-32
Nominal current In (A)	25 ... 63	40 ... 160	63 ... 250	160 ... 600
Real range covered (A)	0.5 ... 75	0.8 ... 192	1.26 ... 300	3.2 ... 720
Window (in/mm)	Ø 0.39 / 10	Ø 0.55 / 14	Ø 0.83 / 21	Ø 1.26 / 32
Connection	RJ12	RJ12	RJ12	RJ12
Reference	4829 0555 / 4829 0655	4829 0556 / 4829 0656	4829 0557 / 4829 0657	4829 0558 / 4829 0658

Suitable for existing installations
with space constraints or
with high currents

Flexible current sensors						
						
	TF-40	TF-80	TF-120	TF-200	TF-300	TF-600
Nominal current In (A)	100...400	150...600	400...2000	600...4000	1600...6000	1600...6000
Real range covered (A)	2...480	3...720	8...2400	12...4800	32...7200	32...7200
Window (in/mm)	Ø 1.57 / 40	Ø 3.15 / 80	Ø 4.72 / 120	Ø 7.87 / 200	Ø 11.81 / 300	Ø 23.62 / 600
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0573	4829 0574	4829 0575	4829 0576	4829 0577	4829 0578

TF sensors come with a 2m / 6.5 ft RJ12 lead which can be extended via use of female/female RJ12 connector (ref. 4829 0670).

4 RJ12 cables for TE / TR / iTR / TF AC current sensors

RJ12 connection cables	Cable length (ft/m)									
	0.32/0.1	0.64/0.2	0.96/0.3	1.64/0.5	3.3/1	6.5/2	9.84/3	16.4/5	23/7	32.8/10
Number of cables	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
1	-	-	-	-	-	-	-	4829 0602	-	4829 0603
3	-	4829 0581	4829 0582	4829 0595	4829 0583	4829 0584	4829 0606	4829 0607	4829 0608	4829 0609
4	-	-	-	-	4829 0588	4829 0589	-	-	-	-
6	-	-	-	4829 0597	4829 0593	4829 0594	-	-	-	-

Accessories

Description	Reference
RJ12 female/female connector (QTY 3)	4829 0670
1A / 5A CT Adaptor with RJ12 output	4829 0599

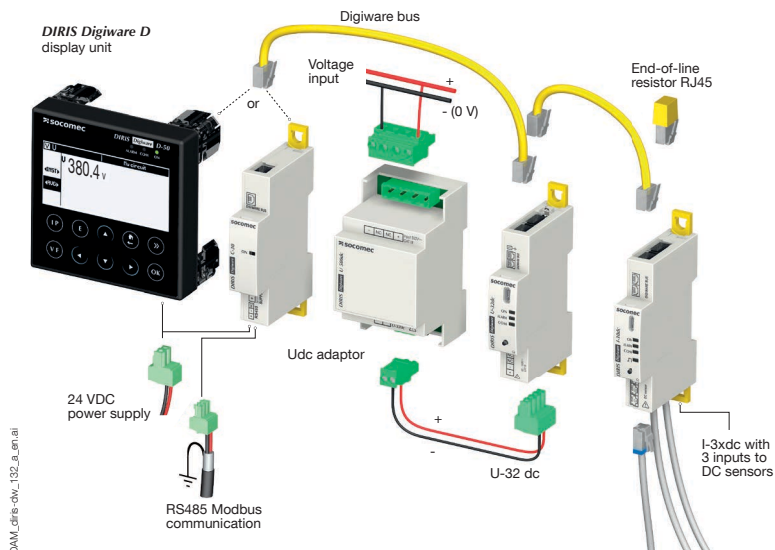
2 DC voltage acquisition module

	U-31dc	U-32dc
<i>DIRIS Digiware</i>		
Voltage measurement range		
Nominal range	24 ... 48 VDC	60 ... 150 VDC
Min-Max range	19.2 ... 60 VDC	48 ... 180 VDC
Multi-measurement		
DC voltage (V DC)	•	•
Power Quality		
V ripple (voltage ripple)	-	•
V _{rms}	-	•
Alarms		
Measurement thresholds	-	•
History		
Average values	-	•
Reference	4829 0150	4829 0151

DC voltage adaptors ⁽¹⁾

	U500dc	U1000dc	U1500dc
<i>DIRIS Digiware Udc</i>			
Max. voltage range	200 - 600 VDC	400 - 1200 VDC	1200 - 1650 VDC
Udc module association	U-32dc	U-32dc	U-32dc
Reference	4829 0153	4829 0154	4829 0155

1. U500dc, U1000dc and U1500dc modules can only be associated to the DIRIS Digiware U-32dc module.



Selection guide

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC

3 DC current acquisition module

DIRIS Digiware	I-30dc	I-35dc
		
General		
Number of RJ12 DC sensor inputs	3	3
Metering		
± kWh	•	•
P (± kW)	•	•
Load curves / demand profile	-	•
Peak Demand	-	•
Multi-measurement		
DC current (I DC)	•	•
Power Quality		
I ripple (current ripple)	-	•
I rms	-	•
Alarms		
Measurement thresholds	-	•
History		
Average values	-	•
Reference	4829 0156	4829 0157

4

DC current sensors

	DC Solid-core current sensors				
					
Primary (A)	50	100	200	300	400
Secondary	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V
Window size (in / mm)	0.80 x 0.41 20.4 x 10.4	0.80 x 0.41 20.4 x 10.4	0.80 x 0.41 20.4 x 10.4	0.80 x 0.41 20.4 x 10.4	0.80 x 0.41 20.4 x 10.4
Accuracy	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%
Reference	4829 0700	4829 0701	4829 0702	4829 0703	4829 0704

	DC Solid-core current sensors (continued)		
			
Primary (A)	850	1000	1500
Secondary	± 4 V	± 4 V	± 4 V
Window size (in / mm)	2.52 x 0.83 64 x 21	2.52 x 0.83 64 x 21	2.52 x 0.83 64 x 21
Accuracy	≤ 1%	≤ 1%	≤ 1%
Reference	4829 0707	4829 0708	4829 0709

	DC Split-core current sensors									
										
Primary (A)	50	100	200	300	400	500	800	1000	1500	2000
Secondary	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V	± 4 V
Window size (in / mm)	Ø 0.83 / 21	Ø 0.83 / 21	Ø 0.83 / 21	Ø 0.83 / 21	Ø 0.83 / 21	Ø 0.83 / 21	4.09 x 1.57 104 x 40	4.09 x 1.57 104 x 40	4.09 x 1.57 104 x 40	4.09 x 1.57 104 x 40
Accuracy	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%	≤ 1%
Reference	4829 0750	4829 0751	4829 0752	4829 0753	4829 0754	4829 0755	4829 0756	4829 0757	4829 0758	4829 0759

4

RJ12 cables for DC current sensors

RJ12 connection cables	Cable length (ft/m)				
	0.96/0.3	1.64/0.5	3.3/1	6.5/2	16.4/5
Number of cables	Reference	Reference	Reference	Reference	Reference
1	-	-	-	-	4829 0786
3	4829 0782	4829 0783	4829 0784	4829 0785	-

Selection guide

Multi-point Power Metering & Monitoring

DIRIS Digiware AC & DC

5 Input / output modules

DIRIS Digiware	IO-10	IO-20
		
Inputs / outputs		
Number of digital inputs/outputs	4/2	-
Number of analog inputs	-	2 / 0
Alarms		
Measurement thresholds	•	•
Logical (digital input status)	•	-
History		
Average values	-	•
Demand profiles (pulse meter)	•	-
Reference	4829 0140	4829 0145

5 Digiware Bus cables

Digiware Bus Cables 	Length	Reference
	0.33 ft / 0.10 m	4829 0181
	0.66 ft / 0.20 m	4829 0188
	1.64 ft / 0.06 m	4829 0182
	3.28 ft / 1 m	4829 0183
	6.56 ft / 2 m	4829 0184
	9.84 ft / 3 m	4829 0190
	16.4 ft / 5 m	4829 0186
	32.8 ft / 10 m	4829 0187

Additional accessories for DIRIS Digiware system

Description	Reference
6.5-ft USB Cable for configuration of DIRIS Digiware system - USB A to Micro & USB C cable	4829 0051
Spare Digiware Bus terminating resistor (already provided with DIRIS Digiware D, M and C-31)	4829 0180

When **energy** matters



Single-point Power Metering & Monitoring

DIRIS A & B



RJ12 current sensors

The easiest, fastest way to connect current sensors thanks to a unique RJ12 concept. The mV output signal means no shorting blocks are needed!



Multi-protocol

RS485 or Ethernet, with Modbus RTU, Modbus TCP and BACnet IP protocols to ensure compatibility with your BMS.



PreciSense technology

Unrivalled class 0.5 system accuracy (including current sensors), exceeding revenue grade requirements and ensuring reliable measurements under all conditions



Web interface

Access real time and historical measurements remotely thanks to a free built-in web interface on all Ethernet based power meters.



Cyber security

Industry leading cyber security features to guarantee the confidentiality, integrity and availability of data.

Selection Guide

Single-point Power Metering & Monitoring

DIRIS A & B

Choose your Power Meter

1



DIRIS B-10 / B-30
300 VAC L-N max



DIRIS A-40
300 VAC L-N max



DIRIS A-100/A-200
RJ12 models
600 VAC L-N max



DIRIS A-100/A-200
333 mV models
600 VAC L-N max

2



RJ12 TE, TR/iTR, TF
Solid-core, split-core,
flexible Rogowski



RJ12 TE, TR/iTR, TF
Solid-core, split-core,
flexible Rogowski



RJ12 TE, TR/iTR, TF
Solid-core, split-core,
flexible Rogowski



TR-W & ACTL
333 mV split-core

1. Identical current sensors required for a three-phase load

Choose your zero sequence CT for ground leakage monitoring

3

-

-



-

Create your project

www.meter-selector.com



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DIGITAL TOOL AVAILABLE

Selection guide

Single-point Power Metering & Monitoring

DIRIS A & B

1 Single-point Power Monitoring Devices

DIRIS	B-10	B-30	A-40	A-40	A-40	A-100	A-100	A-200	A-200
									
Current sensor technology	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	333 mV	RJ12	333 mV
General									
Format	DIN Rail	DIN Rail	Door mount	Door mount	Door mount	Door mount	Door mount	Door mount	Door mount
Number of current sensor inputs	4	4	3	3	3	4	4	4	4
Available enclosed	-	•	-	•	-	-	-	•	-
Electrical									
Power supply	110 - 240 VAC	110 - 240 VAC	110 - 277 VAC	110 - 277 VAC	110 - 277 VAC	115 - 600 VAC	115 - 600 VAC	115 - 600 VAC	115 - 600 VAC
Voltage measurement	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 300 VAC L-N 87 - 520 VAC L-L	50 - 600 VAC L-N 90 - 690 VAC L-L	50 - 600 VAC L-N 90 - 690 VAC L-L	50 - 600 VAC L-N 90 - 690 VAC L-L	50 - 600 VAC L-N 90 - 690 VAC L-L
Communication									
RS485 Modbus RTU	•	•	•	•	•	•	•	•	•
Ethernet (Modbus TCP, BACnet IP)	-	-	-	•	-	-	-	•	•
Profibus DPV1	-	-	-	-	•	-	-	-	-
WEBVIEW web interface	-	-	-	•	-	-	-	•	•
Digital Input / Output	2 / o*	2 / o*	3 / 2	3 / 2	3 / 2	3 / 1	3 / 1	3 / 1	3 / 1
Analog Input / Output	o / o*	o / o*	- / -	- / -	- / -	- / -	- / -	- / -	- / -
Energy metering									
± kWh, ± kvarh, kVAh	•	•	•	•	•	•	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA), PF	•	•	•	•	•	•	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	-	•	•	•	•	•	•	•	•
Predictive Power	-	•	•	•	•	•	•	•	•
Load curves / demand profiles	-	•	•	•	•	•	•	•	•
Peak Demand	-	•	•	•	•	•	•	•	•
Multi-tariff	8	8	8	8	8	4 (with Time of Use)	4 (with Time of Use)	4 (with Time of Use)	4 (with Time of Use)
Multi-measurement									
U12, U23, U31, V1, V2, V3, f	•	•	•	•	•	•	•	•	•
U system, V system	•	•	•	•	•	•	•	•	•
I1, I2, I3, In, I system	•	•	•	•	•	•	•	•	•
Unbalance U, V, I	•	•	•	•	•	•	•	•	•
Phi, cos Phi, tan Phi	•	•	•	•	•	•	•	•	•
Power Quality									
THD U, V, I	•	•	•	•	•	•	•	•	•
Individual Harmonics U, V, I (up to 63rd)	-	•	•	•	•	-	-	•	•
Ground Leakage Monitoring	-	-	-	-	-	-	-	•	-
Crest Factor I1, I2, I3	-	•	•	•	•	•	•	•	•
K-Factor	-	•	•	•	•	•	•	•	•
PQ Events (sags, swells, interruptions, overcurrents)	-	•	•	•	•	•	•	•	•
Waveform capture	-	-	-	-	-	-	-	•	•
ITIC Curves	-	-	-	-	-	-	-	•	•
Alarms									
Measurement thresholds	-	•	•	•	•	•	•	•	•
System alarms	•	•	•	•	•	•	•	•	•
Protective device	•	•	•	•	•	•	•	•	•
Logical (digital input status)	-	•	•	•	•	•	•	•	•
History									
Average values	-	•	•	•	•	•	•	•	•
Reference	4829 0010	4829 0000	4825 0500	4825 0501	4825 0502	4825 0600	4825 0601	4825 0604	4825 0605

*Optional modules are available

Accessories

Description	Reference
6.5-ft USB Cable for configuration of DIRIS power meters - Type A to Micro & USB C cable	4829 0051
DIN-rail mounting accessory for DIRIS A-40 and A-100 / A-200	4825 0690

2 RJ12 AC current sensors

Suitable for new installations match the pitch of protective devices

	Solid-core current sensors						
							
Nominal current I_n (A)	5 ... 20	25 ... 63	40 ... 160	63 ... 250	160 ... 630	400 ... 1000	600 ... 2000
Real range covered (A)	0.1 ... 24	0.5 ... 75.6	0.8 ... 192	1.26 ... 300	3.2 ... 756	8 ... 1200	12 ... 2400
Window (in / mm)	Ø 0.33 / 8.4	Ø 0.33 / 8.4	0.53 x 0.53 21 x 21	0.82 x 0.82 13.5 x 13.5	1.22 x 1.22 31 x 31	1.61 x 1.61 41 x 41	2.52 x 2.52 64 x 64
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0500	4829 0501	4829 0502	4829 0503	4829 0504	4829 0505	4829 0506

Suitable for existing installations

	Split-core current sensors			
				
Nominal current I_n (A)	25 ... 63	40 ... 160	63 ... 250	160 ... 600
Real range covered (A)	0.5 ... 75	0.8 ... 192	1.26 ... 200	3.2 ... 720
Window (in / mm)	Ø 0.39 / 10	Ø 0.55 / 14	Ø 0.83 / 21	Ø 1.26 / 32
Connection	RJ12	RJ12	RJ12	RJ12
Reference	4829 0555 / 4829 0655	4829 0556 / 4829 0656	4829 0557 / 4829 0657	4829 0558 / 4829 0658

Suitable for existing installations with space constraints or with high currents

	Flexible Rogowski current sensors					
						
Nominal current I_n (A)	100...400	150...600	400...2000	600...4000	1600...6000	1600...6000
Real range covered (A)	2...480	3...720	8...2400	12...4800	32...7200	32...7200
Window (in / mm)	Ø 1.57 / 40	Ø 3.15 / 80	Ø 4.72 / 120	Ø 7.87 / 200	Ø 11.81 / 300	Ø 23.62 / 600
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0573	4829 0574	4829 0575	4829 0576	4829 0577	4829 0578

TF sensors come with a 2m / 6.5 ft RJ12 lead which can be extended via use of female/female RJ12 connector (ref. 4829 0670).

2 RJ12 cables for TE / TR / iTR / TF AC current sensors

RJ12 connection cables	Cable length (ft/m)									
	0.32/0.1	0.64/0.2	0.96/0.3	1.64/0.5	3.3/1	6.5/2	9.84/3	16.4/5	23/7	32.8/10
Number of cables	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
1	-	-	-	-	-	-	-	4829 0602	-	4829 0603
3	-	4829 0581	4829 0582	4829 0595	4829 0583	4829 0584	4829 0606	4829 0607	4829 0608	4829 0609
4	-	-	-	-	4829 0588	4829 0589	-	-	-	-
6	-	-	-	4829 0597	4829 0593	4829 0594	-	-	-	-

Accessories

Description	Reference
RJ12 female/female connector (QTY 3)	4829 0670
1A / 5A CT Adaptor with RJ12 output	4829 0599

Selection guide

Single-point Power Metering & Monitoring

DIRIS A & B

2 ACTL 333 mV split-core current sensors

Ideal for retrofit applications - high accuracy		Split-core 333 mV current sensors										
												
		ACTL-0750							ACTL-1250			
Primary (A)		5	20	50	100	150	200	250	250	300	400	600
Secondary		333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV
Lead length (ft / m)		8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4
Window size (in / mm)		Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45
Reference	0.75% accuracy	4873 0000	4873 0002	4873 0004	4873 0007	4873 0008	4873 0009	4873 000A	4873 100A	4873 100B	4873 100C	4873 100D
	0.5% accuracy	-	4873 0102	4873 0104	4873 0107	4873 0108	4873 0109	4873 010A	4873 110A	4873 110B	4873 110C	4873 110D
	0.2% accuracy	-	-	-	-	-	-	-	4873 130A	4873 130B	4873 130C	4873 130D

2 TR-W 333 mV split-core current sensors

Ideal for retrofit applications - compact space		Split-core 333 mV current sensors			
					
		TR-10W	TR-14W	TR-21W	TR-32W
Primary (A)		63	160	250	600
Secondary		333 mV	333 mV	333 mV	333 mV
Lead length (ft / m)		22 / 7	22 / 7	22 / 7	22 / 7
Window size (in / mm)		Ø 0.39 / 10	Ø 0.55 / 14	Ø 0.83 / 21	Ø 1.26 / 32
Reference		194S 5010	194S 5014	194S 5021	194S 5032

Accessories

Description	Product Model Number	Reference
Wire coil 20 AWG twisted pair, 100 ft	CT-WIRE-100	4870 0000

3 RJ12 Δ IC Solid-core zero-sequence current transformers

Ideal for new installations								
	Δ IC Ø 8	Δ IC Ø 15	Δ IC Ø 30	Δ IC Ø 50	Δ IC Ø 80	Δ IC Ø 120	Δ IC Ø 200	Δ IC Ø 300
Secondary connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Window size (in / mm)	Ø 0.35 / 9	Ø 0.59 / 15	Ø 1.18 / 30	Ø 1.97 / 50	Ø 3.15 / 80	Ø 4.72 / 120	Ø 7.87 / 200	Ø 11.8 / 300
Measurement range	3 mA - 3A	3 mA - 3A	3 mA - 3A	3 mA - 3A	3 mA - 3A	3 mA - 3A	3 mA - 3A	3 mA - 3A
Accuracy	1%	3%	3%	3%	3%	3%	3%	3%
Voltage rating	600 Vac	720 Vac	720 Vac	720 Vac	720 Vac	720 Vac	720 Vac	720 Vac
Reference	4829 0520	4950 6015	4950 6030	4950 6050	4950 6080	4950 6120	4950 6200	4950 6300

Each Δ IC Ø 15-300 zero-sequence CT requires a T-10 RJ12 adaptor (ref. 4829 0620) to connect to the DIRIS A-200.

3 RJ12 Δ IP-R Split-core zero-sequence current transformers

			
	Δ IP Ø 50R	Δ IP Ø 80R	Δ IP Ø 120R
Secondary connection	RJ12	RJ12	RJ12
Window size (in / mm)	Ø 1.97 / 50	Ø 3.15 / 80	Ø 4.72 / 120
Measurement range	3 mA - 3A	3 mA - 3A	3 mA - 3A
Accuracy	3%	3%	3%
Voltage rating	720 Vac	720 Vac	720 Vac
Reference	4750 6051	4750 6081	4750 6121

Each Δ IP-R zero-sequence CT requires a T-10 RJ12 adaptor (ref. 4829 0620) to connect to the DIRIS A-200.

3 RJ12 cables for Δ IC and Δ IP-R zero-sequence current transformers

RJ12 connection cables	Cable length (ft / m)									
	0.32/0.1	0.64/0.2	0.96/0.3	1.64/0.5	3.3/1	6.5/2	9.84/3	16.4/5	23/7	32.8/10
Number of cables	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
1	-	-	-	-	-	-	-	4829 0602	-	4829 0603
3	-	4829 0581	4829 0582	4829 0595	4829 0583	4829 0584	4829 0606	4829 0607	4829 0608	4829 0609
4	-	-	-	-	4829 0588	4829 0589	-	-	-	-
6	-	-	-	4829 0597	4829 0593	4829 0594	-	-	-	-

Accessories

Description	Reference
T-10 RJ12 adaptor (necessary to connect to DIRIS A-200 power meter)	4829 0620
DIN Rail mounting accessory ⁽¹⁾	4950 0031
Mounting Bracket Ø30; Ø50; Ø80/120; Ø200; Ø300	4950 0001; 4950 0002; 4950 0003; 4950 0004; 4950 0005

(1) The DIN Rail mounting accessory is supplied with Δ IP-R, but not with Δ IC zero-sequence current transformers.

Single-point Energy Meter

WattNode



Revenue Grade Accuracy

Meets ANSI C12.1-2014 & ANSI C12.20-2015.

Class 0.5 accuracy (with Socomec ACTL CTs)



Universal Voltage

Compatible with any utility service from 100-600 VAC, single or three-phase load, wye or delta.



Low Voltage mV Sensors

No shunting blocks are needed.

Can safely be disconnected under load.



Diagnostic LEDs

Confirms correct status of voltage and CT connections for reliable power and energy measurements.



Compact Design

Small form factor allows for easy installation in tight electrical panels.

Selection Guide

Single-point Energy Meter

WattNode

1

Choose your Energy Meter



WattNode Wide-Range
Modbus



WattNode Wide-Range
BACnet



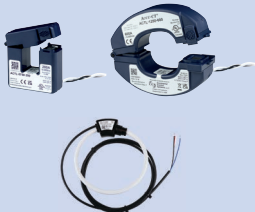
WattNode Meter
Module

2

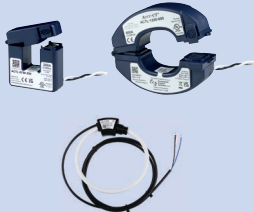
Choose your current sensors



ACTL & RCSL/RCLL
333 mV split-core &
rogowski



ACTL & RCSL/RCLL
333 mV split-core &
rogowski



ACTL & RCSL/RCLL
333 mV split-core &
rogowski

 **socomec**
Innovative Power Solutions

Selection Guide - UL/CSA Power Monitoring Solutions

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Selection guide

Single-point Energy Meter

WattNode

1

Single-point energy meters

WattNode	WattNode Wide Range Modbus	WattNode Wide Range BacNet	WattNode Meter Module
			
Current sensor technology	333 mV	333 mV	333 mV
Communication			
RS485 Modbus	•	-	•
BACnet MS/TP	-	•	-
*Pulse	-	-	-
General			
Format	Backmount	Backmount	DIN rail
Number of current sensor inputs	3	3	3
Available enclosed	•	•	•
Electrical Characteristics			
Power Supply	Line Powered	Line Powered	6-24 VDC or 12-24 VAC
Voltage Measurement	90-347 VAC L-N 120-600 VAC L-L	90-347 VAC L-N 120-600 VAC L-L	90-347 VAC L-N 120-600 VAC L-L
Electrical Measurement			
± kWh, ± kvarh, kVAh	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA), PF	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	•	•	•
Peak Demand	•	•	•
Multi-measurement			
U12, U23, U31, V1, V2, V3, f	•	•	•
U system, V system	•	•	•
I1, I2, I3, In, I system	•	•	•
Reference			
Product Model Number	WND-WR-MB	WND-WR-BN	WND-M1-MB
Reference	4871 0000	4871 0200	4871 0400

Accessories

Description	Product Model Number	Reference
WattNode DIN Rail Kit	Din-Rail Adaptor	4870 5000
DIN Rail 12 VDC power supply - 100-240 VAC input	HDR-15-12	4870 3000

2 ACTL 333 mV split-core current sensors

Ideal for retrofit applications - high accuracy		Split-core 333 mV current sensors										
												
		ACTL-0750							ACTL-1250			
Primary (A)		5	20	50	100	150	200	250	250	300	400	600
Secondary		333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV
Lead length (ft / m)		8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4
Window size (in / mm)		Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45
Reference	0.75% accuracy	4873 0000	4873 0002	4873 0004	4873 0007	4873 0008	4873 0009	4873 000A	4873 100A	4873 100B	4873 100C	4873 100D
	0.5% accuracy	-	4873 0102	4873 0104	4873 0107	4873 0108	4873 0109	4873 010A	4873 110A	4873 110B	4873 110C	4873 110D
	0.2% accuracy	-	-	-	-	-	-	-	4873 130A	4873 130B	4873 130C	4873 130D

Accessories

Description	Product Model Number	Reference
Wire coil 20 AWG twisted pair, 100 ft	CT-WIRE-100	4870 0000

2 333mV flexible sensors

Suitable for retrofit applications with space constraints		Rogowski 333 mV current sensors								
										
		RCSL				RCLL				
Primary (A)		200A	250A	600A	1000A	1000A	2000A	2000A	2000A	5000A
Accuracy		+/- 1%	+/- 1%	+/- 1%	+/- 1%	+/- 1%	+/- 1%	+/- 1%	+/- 1%	+/- 1%
Coil diameter (in / mm)		Ø 1.5 / 40	Ø 1.5 / 40	Ø 3.15 / 80	Ø 3.15 / 80	Ø 4.5 / 114	Ø 7.8 / 200	Ø 4.5 / 114	Ø 7.8 / 200	Ø 12 / 305
Product Model Number		RCSL-1.5-0200	RCSL-3.1-0250	RCSL-3.1-0600	RCSL-3.1-0250	RCLL-4.7-1000	RCLL-7.8-1000	RCLL-4.7-2000	RCLL-7.8-2000	RCLL-11.8-5000
Reference		4874 1009	4874 110A	4874 110D	4874 110F	4874 200F	4874 210F	4874 200K	4874 210K	4874 220P

A 12 VDC power supply (ref. 4870 3000) is required to power the RCSL/RCLL Rogowski sensor

Accessories

Product Model	Product Model Number	Reference
DIN Rail 12 VDC power supply - 100-240 VAC input (can power 6 RCSL/RCLL sensors)	HDR-15-12	4870 3000

Enclosed Power Metering & Monitoring

DIRIS DigiBOX A, B & M



Safe & Reliable

Factory pre-wired internally with fused voltage connections, assembled at our UL 508A panel shop.



PreciSense technology

Unrivaled class 0.5 system accuracy (including current sensors), exceeding revenue grade requirements and ensuring reliable measurements under all conditions.



RJ12 current sensors

The easiest, fastest way to connect current sensors thanks to a unique RJ12 concept. The mV output signal means no shorting blocks are needed!



Multi-protocol

RS485 or Ethernet, with Modbus RTU, Modbus TCP and BACnet IP protocols to ensure compatibility with your BMS.



Web interface

Access real time and historical measurements remotely thanks to a free built-in web interface on all Ethernet based power meters

Selection Guide

Enclosed Power Metering & Monitoring

DIRIS DigiBOX A, B & M

Choose your Enclosed Power Meter

1



DIRIS DigiBOX A
Single-point



DIRIS DigiBOX B
Single-point



DIRIS DigiBOX M
Multi-circuit, up to 24 sensor inputs

Choose your current sensors⁽¹⁾ and RJ12 connection cables

2



TE, TR/iTR, TF

Solid-core, split-core, flexible Rogowski



1. identical current sensors required for a three-phase load

Create your project
www.meter-selector.com



METER SELECTOR
DIGITAL TOOL AVAILABLE

Selection guide

Enclosed Power Metering & Monitoring

DIRIS DigiBOX A, B & M

1 Enclosed Power Meter

	DigiBOX B & A			DigiBOX M4		DigiBOX M8		DigiBOX M4 PRO		DigiBOX M8 PRO	
											
Metering technology	DIRIS B-30	DIRIS A-40	DIRIS A-200	DIRIS Digiware system		DIRIS Digiware system		DIRIS Digiware system		DIRIS Digiware system	
# of metering points (3P)	1	1	1	4		8		4		8	
# of current inputs	4	3	4	12		24		12		24	
Display	-	•	•	-	•	-	•	-	•	-	•
WEBVIEW web interface	-	•	•	-	-	-	-	-	•	-	•
Communication											
RS485 ⁽¹⁾	•	•	•	•	•	•	•	•	•	•	•
Ethernet ⁽²⁾	-	•	•	-	•	-	•	-	•	-	•
Enclosure											
Type	Polycarbonate	Polycarbonate	Polycarbonate	Steel	Steel	Steel	Steel	Steel	Steel	Steel	Steel
Rating	NEMA 4X	NEMA 4X	NEMA 4X	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R	NEMA 12/3R
Dimensions (H x W x D)	12 x 10 x 6 in	12 x 10 x 6 in	12 x 10 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in	12 x 12 x 6 in
Electrical Characteristics											
Voltage input	110-240 VAC	110-277 VAC	110-600 VAC	200-480 VAC	200-480 VAC	200-480 VAC	200-480 VAC	200-480 VAC	200-480 VAC	200-480 VAC	200-480 VAC
Energy metering											
± kWh, ± kvarh, kVAh	•	•	•	•	•	•	•	•	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA), PF	•	•	•	•	•	•	•	•	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	•	•	•	•	•	•	•	•	•	•	•
Multi-measurement											
Amps, Volts, Frequency	•	•	•	•	•	•	•	•	•	•	•
Unbalance U, V, I	•	•	•	-	-	-	-	•	•	•	•
Power Quality											
THD U, V, I	•	•	•	-	-	-	-	•	•	•	•
Individual Harmonics V, U, I (up to 63rd)	•	•	•	-	-	-	-	•	•	•	•
PQ Events (sags, swells, interruptions and overcurrents)	•	•	•	-	-	-	-	•	•	•	•
Waveform capture	-	-	•	-	-	-	-	-	-	-	-
ITIC Curves	-	-	•	-	-	-	-	-	-	-	-
Alarms											
Measurement thresholds	•	•	•	Power / Energies	Power / Energies	Power / Energies	Power / Energies	•	•	•	•
System alarms	•	•	•	•	•	•	•	•	•	•	•
Email notifications	-	•	•	-	-	-	-	-	•	-	•
Reference	USDBBB30ND0	USDBPA40ET	USDBPA200RJ	USDBB04ND0	USDBB04D50	USDBB08ND0	USDBB08D50	USDBP04ND0	USDBP04D70	USDBP08ND0	USDBP08D70

1. Supported RS485 protocol: Modbus RTU.

2. Supported Ethernet protocols: ModbusTCP/IP, BACnet IP

Accessories

Description	Reference
6.5-ft USB Cable for configuration of DIRIS power meters - USB A to Micro & USB C cable	4829 0051

2 RJ12 AC current sensors

Suitable for new installations match the pitch of protective devices

Solid-core current sensors							
							
	TE-18	TE-25	TE-35	TE-45	TE-55	TE-90	
Nominal current I_n (A)	5 ... 20	25 ... 63	40 ... 160	63 ... 250	160 ... 630	400 ... 1000	600 ... 2000
Real range covered (A)	0.1 ... 24	0.5 ... 75.6	0.8 ... 192	1.26 ... 300	3.2 ... 756	8 ... 1200	12 ... 2400
Window (in / mm)	Ø 0.33 / 8.4	Ø 0.33 / 8.4	0.53 x 0.53 / 21 x 21	0.82 x 0.82 / 13.5 x 13.5	1.22 x 1.22 / 31 x 31	1.61 x 1.61 / 41 x 41	2.52 x 2.52 / 64 x 64
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0500	4829 0501	4829 0502	4829 0503	4829 0504	4829 0505	4829 0506

Suitable for existing installations

Split-core current sensors				
				
	TR/iTR-10	TR/iTR-14	TR/iTR-21	TR/iTR-32
Nominal current I_n (A)	25 ... 63	40 ... 160	63 ... 250	160 ... 600
Real range covered (A)	0.5 ... 75	0.8 ... 192	1.26 ... 300	3.2 ... 720
Window (in / mm)	Ø 0.39 / 10	Ø 0.55 / 14	Ø 0.83 / 21	Ø 1.26 / 32
Connection	RJ12	RJ12	RJ12	RJ12
Reference	4829 0555 / 4829 0655	4829 0556 / 4829 0656	4829 0557 / 4829 0657	4829 0558 / 4829 0658

Suitable for existing installations with space constraints or with high currents

Flexible current sensors						
						
	TF-40	TF-80	TF-120	TF-200	TF-300	TF-600
Nominal current I_n (A)	100...400	150...600	400...2000	600...4000	1600...6000	1600...6000
Real range covered (A)	2...480	3...720	8...2400	12...4800	32...7200	32...7200
Window (in / mm)	Ø 1.57 / 40	Ø 3.15 / 80	Ø 4.72 / 120	Ø 7.87 / 200	Ø 11.81 / 300	Ø 23.62 / 600
Connection	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12
Reference	4829 0573	4829 0574	4829 0575	4829 0576	4829 0577	4829 0578

TF sensors come with a 2m / 6.5 ft RJ12 lead which can be extended via use of female/female RJ12 connector (ref. 4829 0670).

2 RJ12 cables for TE / TR / iTR / TF AC current sensors

RJ12 connection cables	Cable length (ft/m)									
	0.32/0.1	0.64/0.2	0.96/0.3	1.64/0.5	3.3/1	6.5/2	9.84/3	16.4/5	23/7	32.8/10
Number of cables	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference	Reference
1	-	-	-	-	-	-	-	4829 0602	-	4829 0603
3	-	4829 0581	4829 0582	4829 0595	4829 0583	4829 0584	4829 0606	4829 0607	4829 0608	4829 0609
4	-	-	-	-	4829 0588	4829 0589	-	-	-	-
6	-	-	-	4829 0597	4829 0593	4829 0594	-	-	-	-

Enclosed multi-point sub-metering

DIRIS MCM



Multi-circuit

Up to (16) three-phase meters in one small physical footprint, with (48) independent current sensor inputs.



mV current sensors

Split-core and Rogowski current sensors are mV based and can be connected safely under load, even with meter cover removed and voltage applied.



Safe

No circuitry or live parts accessible on the meter, allowing to safely operate it even with cover removed and voltage applied.



CT correct algorithm

Cutting-edge algorithm detects potential wiring or configuration errors and proposes the adequate software changes.



Optional wireless interface

Multi-drop Ethernet runs can be replaced with a secure local wireless network, significantly reducing installation and wiring costs.

Selection Guide

Enclosed multi-point sub-metering

DIRIS MCM

Choose your sub-meter and optional wireless interfaces

1



DIRIS MCM-16
Power meter, 16 CT inputs



DIRIS MCM-48
Power meter, 48 CT inputs



RF END-Node
Wireless transmitter



RF HUB-Node
Wireless receiver

2



TR-W
333 mV, compact



ACCU-CT SENSORS
333 mV, high accuracy



ROG
131 mV @1 kA, 2 wires

Selection guide

Enclosed multi-point sub-metering

DIRIS MCM

1 Enclosed multi-point sub-meter

						
DIRIS MCM	MCM-16-N-N	MCM-16-D-N	MCM-16-D-D	MCM-48-N-N	MCM-48-D-N	MCM-48-D-D
General						
Number of current sensor	16	16	16	48	48	48
Type of current sensors	333 mV 131 mV Rogowski	333 mV 131 mV Rogowski	333 mV 131 mV Rogowski	333 mV 131 mV Rogowski	333 mV 131 mV Rogowski	333 mV 131 mV Rogowski
Disconnect Switch			•			•
Display		•	•		•	•
Communication						
RS485	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU	Modbus RTU
Ethernet	Modbus TCP BACnet IP	Modbus TCP BACnet IP	Modbus TCP BACnet IP	Modbus TCP BACnet IP	Modbus TCP BACnet IP	Modbus TCP BACnet IP
Wireless	o	o	o	o	o	o
Electrical						
Number of voltage inputs	2	2	2	2	2	2
Energy metering						
±kWh, ±kvarh, kVAh	•	•	•	•	•	•
ΣP (kW), ΣQ (kvar), ΣS (kVA)	•	•	•	•	•	•
P (kW), Q (kvar), S (kVA), PF per phase	•	•	•	•	•	•
Demand & Peak Demand	•	•	•	•	•	•
Multi - measurement						
U12, U23, U31, V1, V2, V3, f	•	•	•	•	•	•
U system, V system	•	•	•	•	•	•
I1, I2, I3, In	•	•	•	•	•	•
I system	•	•	•	•	•	•
Power quality						
THD U, V, I	•	•	•	•	•	•
Reference	4827 16NN	4827 16DN	4827 16DD	4827 48NN	4827 48DN	4827 48DD

o - Wireless RF System optional

1 Wireless interfaces

RF wireless system	RF END-Node	RF HUB-Node
		
Communication		
RS485	Input Max. (16) Modbus slave devices	Output
Ethernet	-	Output
Wireless	Transmitter	Receiver Max. (8) RF END-Node per HUB-Node
Reference	4899 0800	4899 0801

2 ACTL 333 mV split-core current sensors

Ideal for retrofit applications - high accuracy		Split-core 333 mV current sensors										
												
		ACTL-0750							ACTL-1250			
Primary (A)		5	20	50	100	150	200	250	250	300	400	600
Secondary		333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV	333 mV
Lead length (ft / m)		8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4	8 / 2.4
Window size (in / mm)		Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 0.78 / 20	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45	Ø 1.77 / 45
Reference	0.75% accuracy	4873 0000	4873 0002	4873 0004	4873 0007	4873 0008	4873 0009	4873 000A	4873 100A	4873 100B	4873 100C	4873 100D
	0.5% accuracy	-	4873 0102	4873 0104	4873 0107	4873 0108	4873 0109	4873 010A	4873 110A	4873 110B	4873 110C	4873 110D
	0.2% accuracy	-	-	-	-	-	-	-	4873 130A	4873 130B	4873 130C	4873 130D

2 TR-W 333 mV split-core current sensors

Ideal for retrofit applications - compact space		Split-core 333 mV current sensors			
					
		TR-10W	TR-14W	TR-21W	TR-32W
Primary (A)		63	160	250	600
Secondary		333 mV	333 mV	333 mV	333 mV
Lead length (ft / m)		22 / 7	22 / 7	22 / 7	22 / 7
Window size (in / mm)		Ø 0.39 / 10	Ø 0.55 / 14	Ø 0.83 / 21	Ø 1.26 / 32
Accuracy		0.5%	0.5%	0.5%	0.5%
Reference		194S 5010	194S 5014	194S 5021	194S 5032

Accessories

Description	Product Model Number	Reference
Wire coil 20 AWG twisted pair, 100 ft	CT-WIRE-100	4870 0000

2 Rogowski 131 mV current sensors (only compatible with DIRIS MCM power meter)

Ideal for busbars or higher currents		Rogowski 131 mV current sensors			
					
		ROG-80	ROG-120	ROG-200	ROG-300
Output signal		131 mV / kA @ 60Hz	131 mV / kA @ 60Hz	131 mV / kA @ 60Hz	131 mV / kA @ 60Hz
Real range covered (A)		10 ... 4000	10 ... 4000	10 ... 4000	10 ... 4000
Lead length (ft / m)		22 / 7	22 / 7	22 / 7	22 / 7
Window size (in / mm)		Ø 3.15 / 80	Ø 4.7 / 120	Ø 7.8 / 200	Ø 11.8 / 300
Accuracy		0.5%	0.5%	0.5%	0.5%
Reference		194S 1080	194S 1120	194S 1200	194S 1300

Notes

Notes

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Production: SOCOMEC
Photography: Martin Bernhart et Studio Objectif
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