Selection guide

AC measurement and monitoring system

DIRIS Digiware AC

Build your own AC measurement system

System interface, displays and gateways (24 VDC)

DIRIS Digiware D
display

or

DIRIS Digiware M
gateway

or

DIRIS Digiware C
RS485 interface

+

Voltage acquisition module

DIRIS Digiware U

+

Current measurement module with built-in sensors

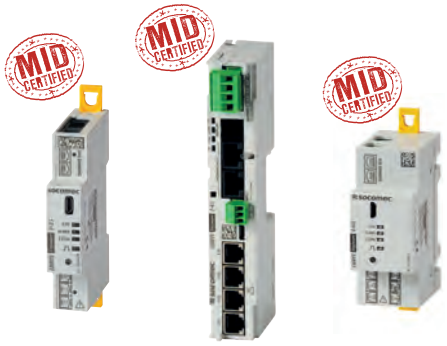
DIRIS Digiware S

DIRIS Digiware BCM
21 circuits

DIRIS Digiware BCM
18 circuits

+

Current acquisition modules



DIRIS Digiware I-3x
3 inputs

DIRIS Digiware I-4x
4 inputs

DIRIS Digiware I-6x
6 inputs

+

Current sensors

TE
Solid

TR/iTR
Split-core

TF
Flexible

+

Digital and analogue input/ output modules

DIRIS Digiware IO

Find the best DIRIS Digiware configuration

The Socomec Meter Selector is your digital assistant, helping you find the best DIRIS Digiware configuration for your power monitoring projects, and all in just a few clicks!

1. **Fill in** information regarding your project.
2. **Download** the system diagram and bill of material.
3. **All** your projects are archived in your personal account.

socomec Innovative Power Solutions

Control and power supply interface

Application	Centralisation and display of data				Data centralisation	Repeater
						
DIRIS Digiware	***D-50*** p. 343	***D-70*** p. 343	***M-50*** p. 353	***M-70*** p. 353	***C-31*** p. 351	***C-32*** p. 351
Function						
Centralising measurement points	•	•	•	•	•	
High-resolution LCD display (configuration, selection and viewing of circuits)	•	•				
Repeater						•
Power supply						
24 VDC	•	•	•	•	•	•
Communication						
RS485 Modbus	Input/Output	Input/Output	Input/Output	Input/Output	Output	
Digiware bus	•	•	•	•	•	•
Bluetooth	•	•	•	•		
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		

Voltage acquisition module

Application	Metering	Analysis
		
DIRIS Digiware U	***U-10*** p. 361	***U-30*** p. 361
Multi-measurement		
U12, U23, U31, V1, V2, V3, f	•	•
U system, V system,		•
Ph/N unbalance		•
Ph/Ph unbalance		•
Quality analysis		
THDv1, THDv2, THDv3, THDu12, THDu23, THDu31		•
Crest factor V1, V2, V3, U12, U23, U31		•
Individual harmonics U & V (up to 63rd)		•
Voltage dips, interruptions and overvoltages (EN 50160)		•
Alarms		
Thresholds and combinations		•
Trends		
Average values		•
Format		
Width/number of modules	18 mm / 1	18 mm / 1

Selection guide

AC measurement and monitoring system

DIRIS Digiware AC

Current acquisition modules

Application	Metering			Analysis		Monitoring	Analysis	Metering			
											
DIRIS Digiware Iac	***I-30*** *p. 369*	***I-30MID*** *p. 369*	***I-31*** *p. 369*	***I-35*** *p. 369*	***I-35MID*** *p. 369*	***I-43*** *p. 369*	***I-45*** *p. 369*	***I-60*** *p. 369*	***I-60MID*** *p. 369*	***I-61*** *p. 369*	***I-61MID*** *p. 369*
Number of current inputs											
	3	3	3	3	3	4	4	6	6	6	6
Metering											
±kWh, ±kVArh, kVAh	•	•	•	•	•	•	•	•	•	•	•
Load curves			•	•	•		•			•	•
Multi-tariff			•	•	•		•			•	•
MID		•			•				•		•
Multi-measurement											
I1, I2, I3, In, ΣP, ΣQ, ΣS, ΣPF	•	•	•	•	•	•	•	•	•	•	•
P, Q, S, PF per phase			•	•	•	•	•			•	•
Predictive power				•	•		•				
Current unbalance (Inba, Idir, Iinv, Ihom, Inb)				•	•		•				
Phi, cos Phi, tan Phi				•	•		•				
Quality											
THDi1, THDi2, THDi3, THDin				•	•	•	•				
Individual harmonics I (up to 63rd)				•	•		•				
Crest factors I1, I2, I3, In				•	•						
Overcurrents				•	•		•				
Alarms											
Thresholds and combinations			○	•	•		•			○	○
Inputs/outputs						2/2	2/2				
Trends											
Average values				•	•		•				
Format											
Width/number of modules	18 mm / 1	18 mm / 1	18 mm / 1	18 mm / 1	18 mm / 1	27 mm / 1.5	27 mm / 1.5	36 mm / 2	36 mm / 2	36 mm / 2	36 mm / 2

○ : *only for total power (P,Q,S).*

To comply with the MID directive, the DIRIS Digiware system must have a D-50/D-70 display.

Input/output modules

Application	Metering / monitoring / remote control	
		
DIRIS Digiware IO	***IO-10*** *p. 392*	***IO-20*** *p. 392*
Number of digital inputs/outputs	4/2	
Number of analogue inputs		2
Format		
Width/number of modules	18 mm/1	18 mm/1

socomec Innovative Power Solutions

Current acquisition module with built-in sensors

Application	**Metering**		**Analysis**	
				
DIRIS Digiware S	***S-130*** *p. 339*	***S-130MID*** *p. 339*	***S-135*** *p. 339*	***S-135MID*** *p. 339*
Number of current inputs	3	3	3	3
Basic current I_b	10 A	10 A	10 A	10 A
Maximum current I_{max}	63 A	63 A	63 A	63 A
Load type accepted	1P + N 2P / 2P + N 3P / 3P + N	1P + N 2P / 2P + N 3P / 3P + N	1P + N 2P / 2P + N 3P / 3P + N	1P + N 2P / 2P + N 3P / 3P + N
Metering				
±kWh, ±kVArh, kVAh	•	•	•	•
Multi-tariff (max 8)			•	•
Load curves			•	•
MID		•		•
Multi-measurement				
I1, I2, I3, In, ΣP, ΣQ, ΣS, ΣPF	•	•	•	•
P, Q, S, PF per phase			•	•
Predictive power			•	•
Current unbalance (Inba, Inb, Idir, Iinv, Ihom)			•	•
Phi, cos Phi, tan Phi			•	•
Quality				
THDi1, THDi2, THDi3, THDin			•	•
Individual harmonics I (up to 63rd)			•	•
Crest factors U, V, I			•	•
K factor			•	•
Overcurrents			•	•
Alarms				
Thresholds and combinations			•	•
Connection errors			•	•
Protection alarms	•	•	•	•
Trends				
Average values			•	•
Format				
Width	54 mm	54 mm	54 mm	54 mm

To comply with the MID directive, the DIRIS Digiware system must have a D-50/D-70 display.

Selection guide
AC measurement and monitoring system
DIRIS Digiware AC

Multi-circuit measurement modules with built-in sensors for power distribution units (PDU)

DIRIS Digiware BCM	**BCM-1818** *p. 340*	**BCM-1818VM** *p. 340*	**BCM-2119** *p. 340*	**BCM-2119VM** *p. 340*	**BCM-2125** *p. 340*	**BCM-2125VM** *p. 340*
						
Number of current inputs	18 + 3x RJ12	18 + 3x RJ12	21 + 3x RJ12	21 + 3x RJ12	21 + 3x RJ12	21 + 3x RJ12
Nominal current / Maximum current Imax	32...63A/80A	32...63A/80A	32...63A/80A	32...63A/80A	40...100A/120A	40...100A/120A
Load type accepted	1P+N 2P 2P+N 3P 3P+N	1P+N 2P 2P+N 3P 3P+N	1P+N 2P 2P+N 3P 3P+N	1P+N 2P 2P+N 3P 3P+N	1P+N 2P 2P+N 3P 3P+N	1P+N 2P 2P+N 3P 3P+N
Metering						
±kWh, ±kVArh, kVAh	•	•	•	•	•	•
Multi-tariff (max. 8)	•	•	•	•	•	•
Load curves / Demand profiles	•	•	•	•	•	•
Multi-measurement						
I1, I2, I3, In, ∑P, ∑Q, ∑S, ∑PF	•	•	•	•	•	•
P, Q, S, FP per phase	•	•	•	•	•	•
Predictive power	•	•	•	•	•	•
Current unbalance (Inba, Idir, Iinv, Ihom, Inb)	•	•	•	•	•	•
Phi, cos Phi, tan Phi	•	•	•	•	•	•
Power quality						
THDi1, THDi2, THDi3, THDin, THD Isys	•	•	•	•	•	•
Individual harmonics I (up to 63rd)	•	•	•	•	•	•
Crest factor I1, I2, I3	•	•	•	•	•	•
Overcurrent	•	•	•	•	•	•
Alarms						
Thresholds	•	•	•	•	•	•
Load levels	•	•	•	•	•	•
System alarms	•	•	•	•	•	•
Protection alarms	•	•	•	•	•	•
Protection counters	•	•	•	•	•	•
Logical combination of alarms	•	•	•	•	•	•
Trends						
Average values	•	•	•	•	•	•
Advanced functions						
VirtualMonitor technology		•		•		•
AutoCorrect technology	•	•	•	•	•	•
Earth leakage monitoring	•	•	•	•	•	•
Format						
Pitch	18 mm	18 mm	19 mm	19 mm	25 mm	25 mm
Width	324 mm	324 mm	400 mm	400 mm	533.5 mm	533.5 mm

Current sensors

Suitable for new installations match the pitch of protection devices

	Solid-core current sensors						
							
	TE-18 *p. 382*		***TE-25*** *p. 382*	***TE-35*** *p. 382*	***TE-45*** *p. 382*	***TE-55*** *p. 382*	***TE-90*** *p. 382*
Nominal current I_n (A) 5 … 2000	5 … 20	25 … 63	40 … 160	63 … 250	160 … 630	400 … 1000	600 … 2000
Real range covered (A) 0.1 … 2400	0.1 … 24	0.5 … 75.6	0.8 … 192	1.26 … 300	3.2 … 756	8 … 1200	12 … 2400
Aperture (mm)	Ø 8.4	Ø 8.4	13.5 x 13.5	21 x 21	31 x 31	41 x 41	64 x 64
Dimensions (mm)	28 x 20 x 45	28 x 20 x 45	25 x 32.5 x 65	35 x 32.5 x 71	45 x 32.5 x 86	55 x 32.5 x 100	90 x 126 x 24.6
Connexion	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12

For currents above 1000 A, the 5A / RJ12 adaptor provides compatibility with CTs.

Suitable for existing installations

	Split-core current sensors			
				
	TR/iTR-10 *p. 385*	***TR/iTR-14*** *p. 385*	***TR/iTR-21*** *p. 385*	***TR/iTR-32*** *p. 385*
Nominal current I_n (A) 25 … 600	25 … 63	40 … 160	63 … 250	160 … 600
Real range covered (A) 0.5 … 720	0.5 ... 90	0.64 ... 120	1.26 ... 200	4 ... 720
Diameter (mm)	Ø 10	Ø 14	Ø 21	Ø 32
Dimensions (mm)	26 x 44 x 28	29 x 67 x 28	37 x 65 x 43	53 x 86 x 47
Connexion	RJ12	RJ12	RJ12	RJ12

For currents above 600 A, the 5A / RJ12 adaptor provides compatibility with CTs.

Suitable for existing installations restricted by strict integration constraints or with a high-intensity current

		Flexible current sensors				
						
	TF-40 *p. 341*	***TF-80*** *p. 341*	***TF-120*** *p. 341*	***TF-200*** *p. 341*	***TF-300*** *p. 341*	***TF-600*** *p. 341*
Nominal current I_n (A) 150 … 6000	140 … 400	150 … 600	400 ... 2000	600 … 4000	1600 … 6000	1600 … 6000
Real range covered (A) 3 … 7200	2 … 480	3 … 720	8 ... 2400	12 ... 4800	32 … 7200	32 … 7200
Diameter (mm)	Ø 40	Ø 80	Ø 120	Ø 200	Ø 300	Ø 600
Connexion	RJ12	RJ12	RJ12	RJ12	RJ12	RJ12