Selection guide

Measurement and monitoring system for DC electrical installations

DIRIS Digiware DC

Build your own DC system

Control and power supply interface (24 VDC)

DIRIS Digiware M
without display

or

DIRIS Digiware D-x
with display

or

DIRIS Digiware C
without display

+

DC voltage acquisition module

DIRIS Digiware Udc

+

DC voltage adaptors

DIRIS Digiware U500dc/U1000dc/U1500dc

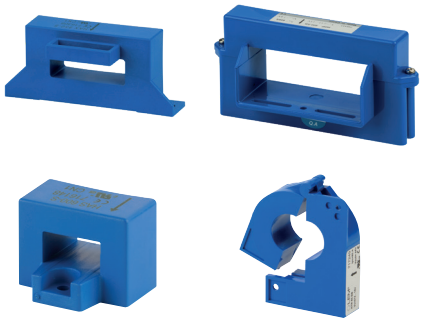
+

DC current acquisition modules

DIRIS Digiware Idc
3 inputs

+

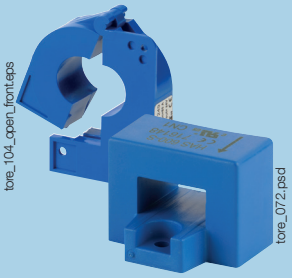
DC current sensors



Solid-core sensors
50 … 5000 A

Split-core sensors
50 … 2000 A

DC current sensors



DC current sensors measure the load currents of a DC electrical installation and transmit this information to DIRIS Digiware Idc modules via a quick RJ12 connection that is readily identifiable with a colour code.
The range comprises solid-core or split-core sensors, from 50 to 5000 A in various sizes, suitable for new or existing electrical installations.

- Easy connection to prevent wiring errors.
- Up to 3 sensors on each DIRIS Digiware Idc measurement module.

socomec
Innovative Power Solutions

Control and power supply interface

Application	Centralisation and display of data				Data centralisation	Repeater
						
DIRIS Digiware	**M-50** *p. 2*	**M-70** *p. 2*	**D-50** *p. 2*	**D-70** *p. 2*	**C-31** *p. 2*	**C-32** *p. 2*
Function						
Centralising measurement points	•	•	•	•	•	
High-resolution LCD display (configuration, selection and viewing of circuits)			•	•		
Repeater						•
Power supply						
24 VDC	•	•	•	•	•	•
Communication						
RS485 Modbus	Master/ Slave	Master/ Slave	Master/ Slave	Master/ Slave	Slave	
Digiware bus	•	•	•	•	•	•
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		

Configuration

EQUIPMENT CONSUMPTION	
Product	**Power delivered (W)**
Power supply	
P15 100-240 VAC / 24 VDC	15
P30 100-240 VAC / 24 VDC	20
Product	**Power consumed (W)**
Cables	
50-metre package	1.5
System interfaces	
DIRIS Digiware C-31	0.8
DIRIS Digiware D-50/D-70	2.5
DIRIS Digiware M-50/M-70	2.5
Voltage module	
DIRIS Digiware U-xx	0.72
DIRIS Digiware U-3xdc	0.6
Current modules	
DIRIS Digiware I-3x	0.52
DIRIS Digiware I-4x	1.125
DIRIS Digiware I-6x	0.7
DIRIS Digiware I-3xdc (+ 3 DC current sensors)	2
DIRIS Digiware S-xx	0.35
Input/output modules	
DIRIS Digiware IO-10/IO-20	0.5
Repeater	
DIRIS Digiware C-32	1.5
Residual current monitoring module	
DIRIS Digiware R-60	0.5

Calculation rules for the max. number of devices on the Digiware bus

The total power consumed by the equipment connected to the Digiware bus must not exceed the power delivered by 24 VDC.
The power supply must not exceed 20 W / 70 °C or 27 W / 40 °C.

Configuration with P15 power supply (ref: 4829 0120) delivering 15 W

For example, it is possible to use
- 1 DIRIS Digiware M-50 gateway (2.5 W)
- 1 DIRIS Digiware voltage module U-xx (0.72 W)
- 50 metres of cable (1.5 W)

and
- 29 DIRIS Digiware S-xx current modules (29x 0.35 = 10.15 W)
  ➪ **Total power = 14.87 W**

or
- 9 DIRIS Digiware I-4x current modules (9 x 1.125 = 10.125 W)
  ➪ **Total power = 14.845 W**.

Configuration with a 24 VDC power supply delivering a maximum of 20 W (P30 ref. 4729 0603)

For example, it is possible to use
- 1 DIRIS Digiware M-50 gateway (2.5 W)
- 1 DIRIS Digiware voltage module U-xx (0.72 W)
- 50 metres of cable (1.5 W)

and
- 29 DIRIS Digiware I-3x current modules (30 x 0.52 = 15.08 W)
  ➪ **Total power = 19.8 W**

or
- 14 DIRIS Digiware I-4x current modules (13 x 1.125 = 15.72 W)
  ➪ **Total power = 19.345 W**.

Selection guide

Measurement and monitoring system for DC electrical installations

DIRIS Digiware DC

DC voltage acquisition modules

Application	**DC voltage measurement**	
		
DIRIS Digiware Udc	**U-31dc** *p. 2*	**U-32dc** *p. 2*
Nominal voltage range	24 … 48 VDC	60 … 150 VDC
Measuring range (min-max)	19.2 … 60 VDC	48 … 180 VDC
Multi-measurement		
DC voltage (VDC)	•	•
Quality analysis		
V ripple (voltage ripple)	•	•
V_{rms}	•	•
Alarms		
On threshold	•	•
Trends		
Average values	•	•
Format		
Width/number of modules	18 mm / 1	

Application	**DC voltage adaptors**		
			
DIRIS Digiware Udc	**U500dc** *p. 2*	**U1000dc** *p. 2*	**U1500dc** *p. 2*
Max. voltage range	200 … 600 VDC	400 … 1200 VDC	1200 … 1650 VDC
Association			
U-32dc	•	•	•
Format			
Width/number of modules	54 mm/3		

socomec Innovative Power Solutions

DC current acquisition modules

Application	**Direct current (DC) measurement modules**	
		
DIRIS Digiware Idc	**I-30dc** *p. 2*	**I-35dc** *p. 2*
Number of current inputs		
	3	3
Metering		
±kWh	•	•
Load curves		•
Multi-measurement		
DC current (I DC)	•	•
DC power (P DC)	•	•
DC predictive power		•
Measurement of current quality		
I ripple (current ripple)		•
I rms		•
Alarms		
Thresholds and combinations		•
Trends		
Average values		•
Format		
Width/number of modules	18 mm / 1	

Input/output modules

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