DIRIS Digiware Idc

Direct current measurement module

Configuration with Easy Config System.



DIRIS Digiware I-30dc/I-35dc

Function

DIRIS Digiware I-3xdc modules measure consumption and monitor the DC electrical installation. Several I modules can be used within the same system, enabling measurement of a large number of circuits. They are associated with DIRIS Digiware U-3xdc voltage measuring modules.

Current is measured using external sensors connected by RJ12-Molex cables, available in multiple lengths. The cables are colour coded (brown, orange, white) for easy identification. The DIRIS Digiware D display or the embedded Web server Webview can show electrical measurements from both DIRIS Digiware AC and DC systems simultaneously.

Advantages

Multi-circuit
- Measurement of up to 3 DC circuits per module.
- Multiple I-3xdc modules can be added. This enables measurement of a large number of DC loads simultaneously.

Flexible
- An offer adapted to metering and current quality analysis.
- A complete range of split-core and solid-core DC current sensors from 50 to 5000 A.

Plug & Play
- Quick RJ45 and RJ12-Molex connection.
- Easy to configure from DIRIS Digiware D interfaces or from the Easy Config software.

Compact
- One module to avoid space constraints inside electrical panels.

The solution for

> Data centre
> Telecommunication
> Renewable power
> Transportation



Strong points

> Multi-circuit
> Plug & Play
> Flexible
> Compact

RJ45 (Digiware Bus) cables are available.

Conformity to standards

> IEC 61557-12

> ISO 14025

> UL E257746

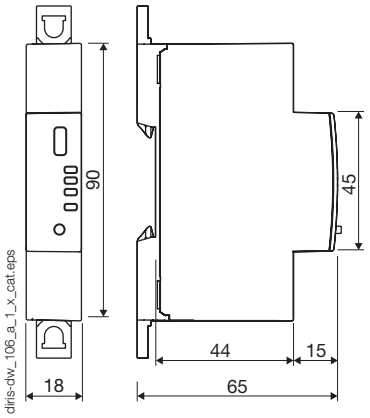
socomec Innovative Power Solutions

Application

	Direct current (DC) measurement modules	
		
DIRIS Digiware Idc	**I-30dc**	**I-35dc**
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	

Dimensions (mm)

DIRIS Digiware Idc

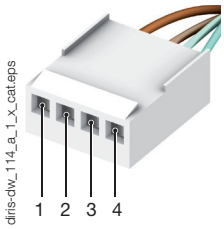


DIRIS Digiware Idc
Direct current measurement module

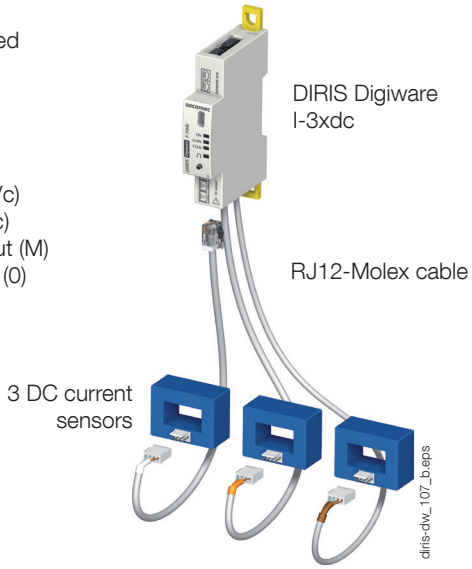
Connections

DC current is measured by external sensors connected to the DIRIS Digiware I-3xdc modules via RJ12-Molex cables enabling quick connection without wiring errors. This varied range of solid-core or split-core current sensors can be adapted to all types of new or existing installation. The DC current sensors have the following technical characteristics:

- Open-loop Hall effect sensors.
- Solid-core or split-core.
- Power supply voltage: ±15 V.
- Power supply current: ±25 mA depending on the sensor.
- Output voltage: ±4 V.
- 4-point male Molex terminal strip.
- Measurement range: 16 to 6000 A.
- Category III overvoltage.



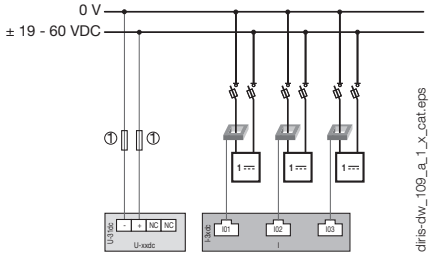
- PIN 1: + 15 V (+ Vc)
- PIN 2: - 15 V (- Vc)
- PIN 3: sensor input (M)
- PIN 4: 0 V sensor (0)



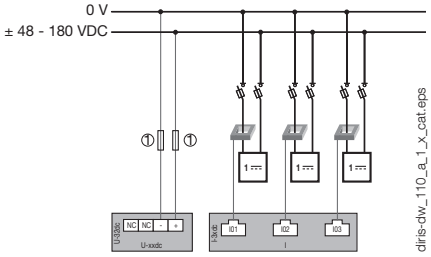
Networks and connection examples

Measurement of 3 DC loads

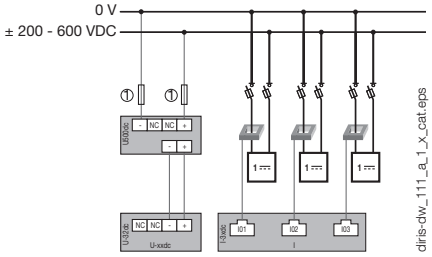
DIRIS Digiware U-31dc
Voltage (VDC): 19 - 60 V



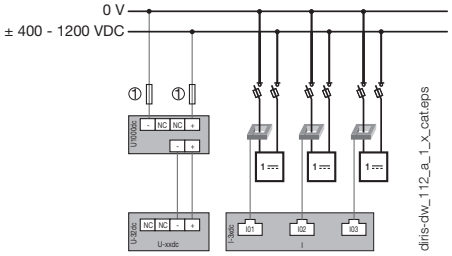
DIRIS Digiware U-32dc
Voltage (VDC): 48 - 180 V



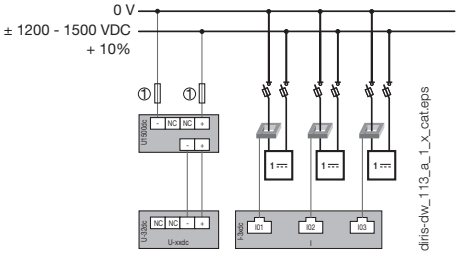
DIRIS Digiware U-32dc + adaptor U500dc
Voltage (VDC): 200 - 600 V



DIRIS Digiware U-32dc + adaptor U1000dc
Voltage (VDC): 400 - 1200 V



DIRIS Digiware U-32dc + adaptor U1500dc
Voltage (VDC):1200 - 1500 V (+10%)



1. Fuse: 2A gPV
DC current sensor
DC load

Connections

DC current measurement - DIRIS Digiware Idc	
Number of current inputs	3
Associated current sensors	Open-loop Hall effect
Current measurement accuracy	Class 0.5
Power and energy measurement accuracy	With U-31dc/U-32dc alone: class 1 With U-32dc + adaptor: class 2
Connection	Specific Socomec cable with RJ12-Molex connectors
Module power consumption	2 VA
Mechanical characteristics	
Case type	Modular for DIN-rail and backplate mounting
Case Ingress Protection rating	IP20 / IK06
Front panel Ingress Protection rating	IP40 front face in modular assembly / IK06
Weight	69 g
Environmental characteristics	
Ambient operating temperature	-10 … +70 °C
Storage temperature	-25 … +70 °C
Operating humidity	55 °C / 97% HR
Operating altitude	< 2000 m
Communication characteristics	
USB	
Protocol	Modbus RTU over USB
Function	Configuration of DIRIS Digiware U and I modules
Location	On each DIRIS Digiware U and I measurement module
Connection	Type B micro USB connector
Digiware bus	
Function	Connection between DIRIS Digiware modules
Cable type	Specific Socomec cable with RJ45 connections

References

DIRIS Digiware I-3xdc		Reference
I-30dc	Metering - 3 current inputs	4829 **0156**
I-35dc	Analysis - 3 current inputs	4829 **0157**
RJ12-Molex cables		
Number of cables	**Length of cables**	**Reference**
3	0.3 m	4829 **0782**
3	0.5 m	4829 **0783**
3	1 m	4829 **0784**
3	2 m	4829 **0785**
1	5 m	4829 **0786**
Digiware connection cables		**Reference**
RJ45 cables for Digiware Bus	Length 0.06 m	4829 **0189**
	Length 0.10 m	4829 **0181**
	Length 0.20 m	4829 **0188**
	Length 0.50 m	4829 **0182**
	Length 1 m	4829 **0183**
	Length 2 m	4829 **0184**
	Length 3 m	4829 **0190**
	Length 5 m	4829 **0186**
	Length 10 m	4829 **0187**
	50 m reel + 100 connectors	4829 **0185**
Termination for Digiware Bus (supplied with C-xx, D-x and M-xx)		4829 **0180**
USB configuration cable		4829 **0050**

Expert Services

EXPERT SERVICES

Socomec offers a wide range of services to continuously ensure a functional and accurate energy monitoring system:

- Device installation
- System audit
- Commissioning
- Training for your teams

Also, Ideal for ISO 50001 sites (periodic verification):

- Measurement consistency check to 3%

For further information, please talk to your Socomec contact.