

DIRIS A-10

Multifunction power meter - DIN-rail mounted
Works with 5A secondary current transformers



DIRIS A-10

Function

The **DIRIS A-10** is a DIN-rail mounted power meter.

Advantages

Easy to use

Backlit LCD display with 5 hotkeys for direct access to measurement and configuration menus.

Built-in temperature sensor

It allows variations in temperature to be detected.

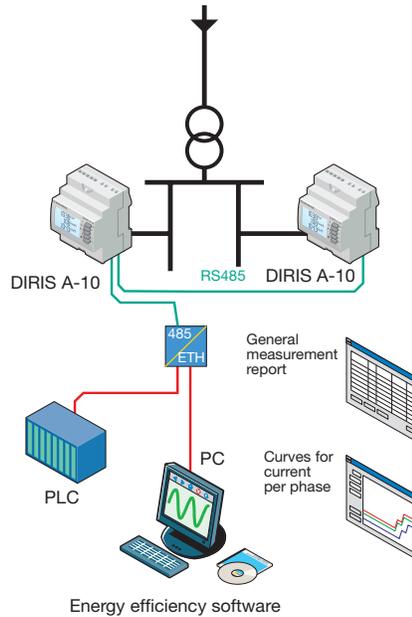
Compliant with ANSI C12.20 and IEC 61557-12

ANSI C12.20 and IEC 61557-12 are high-level standards for power metering & monitoring devices. Compliance with these standards ensures equipment performance and reliability in terms of accuracy, as well as mechanical, EMC, temperature etc.

Bi-Directional Metering

DIRIS A-10 can measure the flow of electricity in both directions (import / export).

Principle diagram



The solution for

- > Industry
- > Infrastructures
- > Building



Strong points

- > Easy to use
- > Integrated temperature sensor
- > Detects wiring errors
- > Compliant with ANSI C12.20 and IEC 61557-12

Conformity to standards

- > UL 61010-1
CSA-C22.2 No. 61010-1
Guide PICQ
File E257746



- > ANSI C12.20



- > IEC 61557-12

- > CEC compliant



Functions

Multi-measurement

- Currents
 - instantaneous: I1, I2, I3, In
 - maximum average: I1, I2, I3, In
- Voltages & frequency
 - instantaneous: V1, V2, V3, U12, U23, U31, F
- Power
 - instantaneous: 3P, ΣP, 3Q, ΣQ, 3S, ΣS
 - maximum average: ΣP, ΣQ, ΣS
- Power factors
 - instantaneous: 3PF, ΣPF

Metering

- Active energy: +/- kWh
- Reactive energy: +/- kVarh
- Hour Meter: ⌚

Harmonic analysis

- Total harmonic distortion (level 51)
 - Currents: thd I1, thd I2, thd I3
 - Phase-to-neutral voltage: thd V1, thd V2, thd V3
 - Phase-to-phase voltage: thd U12, thd U23, thd U31

Dual tariff function

Selection of one out of 2 billing tariffs

Events

Alarms on all electrical values

Communications

RS485 with MODBUS protocol

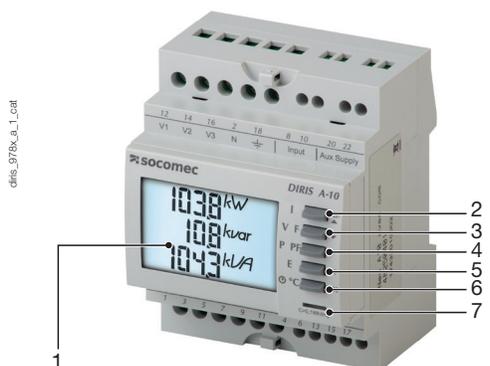
Input

- Tariff selection
- Remote device status

Output

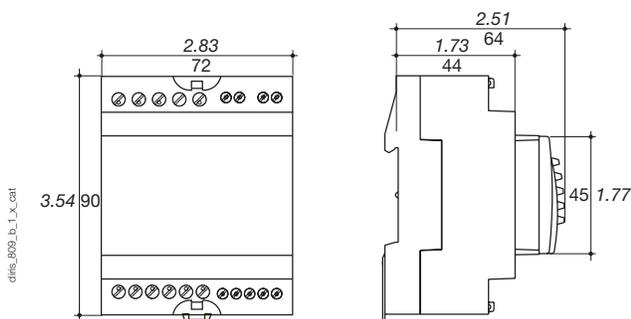
- Remote command of device
- Alarm report
- Pulse report

Front panel



1. Backlit LCD display.
2. Direct access key for currents (instant and maximum), current THD and test function.
3. Direct access key for voltages, frequency and voltage THD.
4. Direct access key for active, reactive and apparent power (instantaneous and max. values) and power factor.
5. Direct access key for energies.
6. Pushbutton for hour meter, temperature and programming menu access.
7. Metrological LED.

Dimensions (in/mm)



Type	Modular
Number of modules	4
Dimensions W x H x D	2.83 x 3.54 x 2.51 in / 72 x 90 x 64 mm
Case degree of protection	IP 30
Front degree of protection	IP 52
Display type	Backlit LCD display
Voltage and current connection cross-section	AWG 6 / 4 mm ²
Connection cross-section for AUX supply, input, output and comms.	AWG 10 / 2.5 mm ²
Weight	7.23 oz / 205 g (4825 0400) 7.58 oz / 215 g (4825 0401)

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Electrical characteristics

Current measurement (TRMS)	
Via CT primary	9 999 A
Via CT secondary	5 A
Measurement range	0 ... 11 kA
Input consumption	0.6 VA
Measurement updating period	1 s
Accuracy	0.2 %
Permanent overload	6 A
Intermittent overload	10 I _n for 1 s
Voltage measurements (TRMS)	
Direct measurement between phases	50 ... 500 VAC
Direct measurement between phase and neutral	28 ... 289 VAC
Input consumption	≤ 0.1 VA
Measurement updating period	1 s
Accuracy	0.2 %
Power measurement	
Measurement updating period	1 s
Accuracy	0.5 %
Power factor measurement	
Measurement updating period	1 s
Accuracy	0.5 %
Frequency measurement	
Measurement range	45 ... 65 Hz
Measurement updating period	1 s
Accuracy	0.1 %

Energy accuracy	
Active (according to IEC 62053-22)	Class 0.5 S
Reactive (according to IEC 62053-23)	Class 2
Auxiliary power supply	
Alternating voltage	110 ... 277 VAC
AC tolerance	± 15 %
Frequency	50 / 60 Hz
Consumption	< 3 VA
Digital output (pulses or on/off)	
Number	1
Type	20 / 30 VDC - 0.5 A - 10 VA
Max. number of operations	≤ 10 ⁸
Input (tariff)	
Number	1
Type	0 VAC: T1 / 200-277 VAC: T2
Communication	
Link	RS485
Type	2 ... 3 half duplex wires
Protocol	MODBUS RTU
MODBUS® speed	2400 ... 38400 bauds
Operating conditions	
Operating temperature	+14 °F ... +131 °F / - 10 ... + 55 °C
Storage temperature	-4 °F ... +158 °F / - 20 ... + 70 °C
Relative humidity	85 %

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References

DIRIS A power meters		Reference
DIRIS A-10	Pulse output only	4825 0400
DIRIS A-10	Pulse output + RS485 Modbus RTU communication	4825 0401

Accessories	Sold in multiples of	Reference
3-pole RM Class CC fuse holder to protect voltage inputs	4	5705 0003
2-pole RM Class CC fuse holder to protect power supply input	6	5701 0002

Commissioning		Reference
1/2 day remote commissioning	Remote commissioning including installation verification, programming and communication testing	9230100027
1/2 day on-site commissioning	On-site commissioning including installation verification, programming and communication testing	9230100004

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.

