

# DIRIS Digiware S

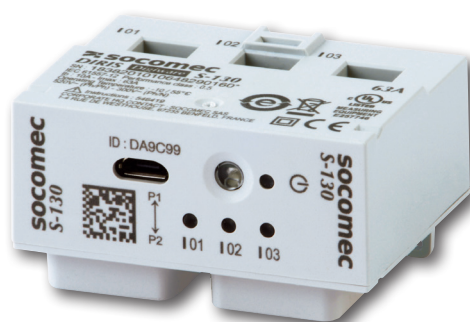
Current measurement module with built-in sensors

for 3 circuits

**new**



Configuration  
with Easy Config System.



diris-dw\_127.psd

DIRIS Digiware S

## The solution for

- > Data centres
- > Healthcare

## Strong points

- > Plug & Play
- > Multi-circuit
- > Compact
- > Accurate
- > MID certified and much more



RJ45 (Digiware Bus) cables are available.

## Integrated technologies



PreciSense



AutoCorrect



VirtualMonitor

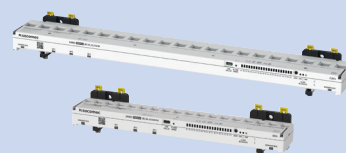
For further information, please visit our website [www.socomec.com](http://www.socomec.com)

## Conformity to standards

- > IEC 61557-12
- > - UL 61010 Guide FTRZ/PICQ File E257746
- > ANSI C12.20
- > EN 50470-1
- > EN 50470-3
- > Directive 2014/32/EU



## Also available



DIRIS Digiware BCM

In 18 or 21 circuit versions for monitoring power distribution units (PDUs).

## Function

DIRIS Digiware S current acquisition modules have 3 built-in current sensors for measuring electrical circuits up to 63 A.

Positioned directly on or under the protection devices, they work with the DIRIS Digiware U voltage measurement module to measure consumption, and monitor the electrical installation and power supply quality.

## Advantages

### Plug & Play

- Saves wiring time: current sensors are built in to the module.
- Quick RJ45 connection between modules.
- Positioning possible upstream or downstream of the protection device.

### Multi-circuit

Many S-modules can be used in a measuring system for measuring a large number of loads.

### Compact

- A measurement module offering the best compactness/performance ratio on the market.
- Matches the pitch of the protection device.

### Accurate

DIRIS Digiware S modules offer class 0.5 (IEC 61557-12) and class C (EN 50470) accuracy, enabling accurate measurements over a wide current range.

### MID certified and much more

The Digiware DIRIS S-130MID and S-135MID current modules comply with the MID directive, ensuring accurate and reliable metering. The "B+D module" certification means that an external laboratory has certified the design of the meter and its production process.

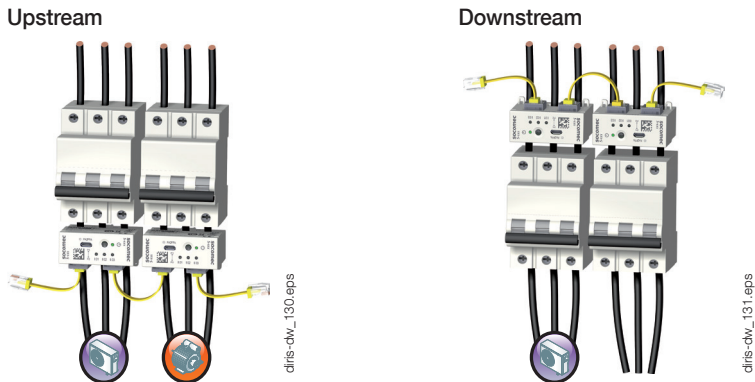
They are also equipped with innovative features that go beyond the usual practices found in the market:

- Innovative tamper-resistance systems: the MID modules have a smart alarm system that is more effective than the standard mechanical seals offered by MID meters.
- Built-in PreciSense Technology: MID modules have a Class C energy measurement accuracy, the most accurate class according to the MID directive. In addition, as with any DIRIS Digiware system, the PreciSense technology offers the best accuracy on the market across the entire overall chain.

## General characteristics

- 3 built-in current sensors.
- Measurement up to 63 A.
- Configurable as 3 single-phase circuits or 1 three-phase circuit.

## Functional diagram



The DIRIS Digiware S measurement module solves space constraints inside electrical panels, by being mountable upstream or downstream of the protection device.

| Application                                                                        | Current measurement module with built-in sensors                                   |                                                                                    |                                                                                      |                                                                                      |
|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------|
|                                                                                    | Metering                                                                           |                                                                                    | Analysis                                                                             |                                                                                      |
|                                                                                    |  |  |  |  |
| <b>DIRIS Digiware S</b>                                                            | <b>S-130</b>                                                                       | <b>S-130MID</b>                                                                    | <b>S-135</b>                                                                         | <b>S-135MID</b>                                                                      |
| 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<br>2P / 2P + N<br>3P / 3P + N                                               | 1P + N<br>2P / 2P + N<br>3P / 3P + N                                               | 1P + N<br>2P / 2P + N<br>3P / 3P + N                                                 | 1P + N<br>2P / 2P + N<br>3P / 3P + N                                                 |
| <b>Metering</b>                                                                    |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| $\pm kWh$ , $\pm kVAh$ , $kVAh$                                                    | •                                                                                  | •                                                                                  | •                                                                                    | •                                                                                    |
| Multi-tariff (max 8)                                                               |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Load curves                                                                        |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| MID                                                                                |                                                                                    | •                                                                                  |                                                                                      | •                                                                                    |
| <b>Multi-measurement</b>                                                           |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| $I_1$ , $I_2$ , $I_3$ , $I_n$ , $\Sigma P$ , $\Sigma Q$ , $\Sigma S$ , $\Sigma PF$ | •                                                                                  | •                                                                                  | •                                                                                    | •                                                                                    |
| P, Q, S, PF per phase                                                              |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Predictive power                                                                   |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Current unbalance ( $I_{nba}$ , $I_{nb}$ , $I_{dir}$ , $I_{linv}$ , $I_{hom}$ )    |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| $\Phi$ , $\cos \Phi$ , $\tan \Phi$                                                 |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| <b>Quality</b>                                                                     |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| THDi1, THDi2, THDi3, THDin                                                         |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Individual harmonics I (up to 63rd)                                                |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Crest factors U, V, I                                                              |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| K factor                                                                           |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Overcurrents                                                                       |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| <b>Alarms</b>                                                                      |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| Thresholds and combinations                                                        |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Connection errors                                                                  |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| Protection alarms                                                                  | •                                                                                  | •                                                                                  | •                                                                                    | •                                                                                    |
| <b>Trends</b>                                                                      |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| Average values                                                                     |                                                                                    |                                                                                    | •                                                                                    | •                                                                                    |
| <b>Format</b>                                                                      |                                                                                    |                                                                                    |                                                                                      |                                                                                      |
| Width                                                                              | 54 mm                                                                              | 54 mm                                                                              | 54 mm                                                                                | 54 mm                                                                                |

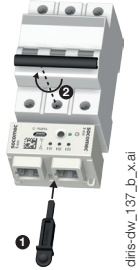
To comply with the MID directive, the DIRIS Digiware system must have a D-50/D-70 display.

# DIRIS Digiware S

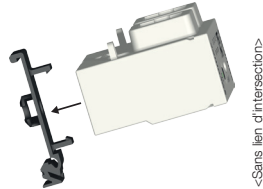
AC current measurement module  
for 3 circuits

## Mounting accessories

### Temporary circuit breaker mounting



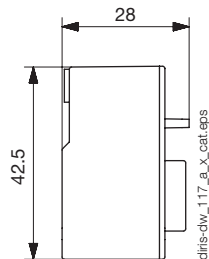
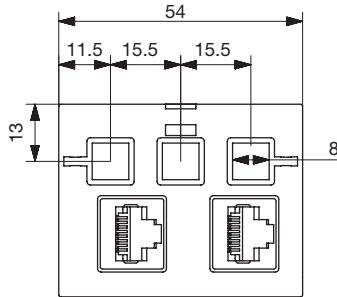
### DIN-rail and backplate mounting



### Use of cable ties



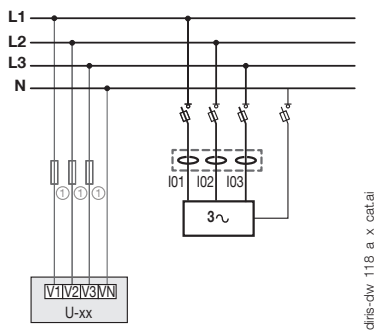
## Dimensions (mm)



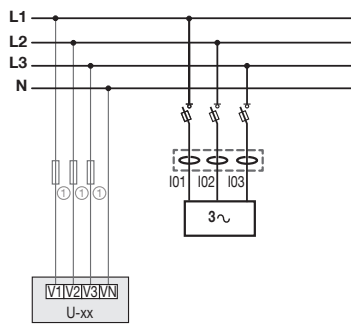
## Connections

Current is measured by inputs I01, I02 and I03 built in to the DIRIS Digiware S module.

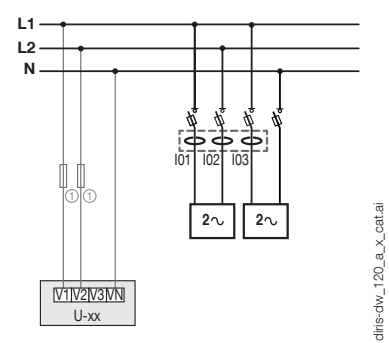
### 3P+N - 3CT



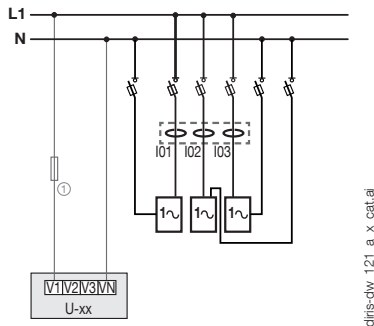
### 3P - 3CT



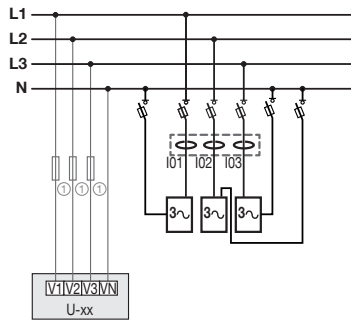
### 2P+N - 2CT & 2P+N - 1CT



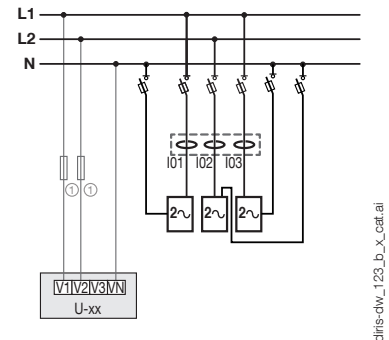
### 1P+N - 1CT (3x)



### 3P+N - 1CT (3x)



### 2P+N - 1CT (3x)



DIRIS Digiware S 3~ Load

Fuses: 0.5 A gG/BS 88 2 A gG/0.5 A class CC

## Technical characteristics

### Measurement characteristics

| Current measurement              |                                               |
|----------------------------------|-----------------------------------------------|
| Number of current inputs         | 3                                             |
| Associated current sensors       | Integrated in the product                     |
| Basic current I <sub>b</sub>     | 10 A                                          |
| Maximum current I <sub>max</sub> | 63 A                                          |
| Current measurement accuracy     | Class 0.5                                     |
| Energy measurement               |                                               |
| Active energy accuracy           | Class 0.5 (IEC 61557-12) / Class C (EN 50470) |
| Reactive energy accuracy         | Class 1 IEC 61557-12                          |

### Mechanical characteristics

|                                |                                             |
|--------------------------------|---------------------------------------------|
| Case type                      | Modular for DIN-rail and backplate mounting |
| Case Ingress Protection rating | IP20 / IK08                                 |
| Weight                         | 63 g                                        |
| Module power consumption       | 0.35 VA                                     |

### Communication characteristics

| Digiware Bus |                                                                         |
|--------------|-------------------------------------------------------------------------|
| Function     | Connection between DIRIS Digiware S, U, I modules and system interfaces |
| Cable type   | Specific Socomec cable with RJ45 connections                            |
| USB          |                                                                         |
| Protocol     | MODBUS RTU over USB                                                     |
| Function     | Configuration of DIRIS Digiware modules                                 |
| Location     | On each DIRIS Digiware module                                           |
| Connection   | Type B micro USB connector                                              |

### Environmental characteristics

|                               |                |
|-------------------------------|----------------|
| Ambient operating temperature | -10 ... +55 °C |
| Storage temperature           | -25 ... +70 °C |
| Operating humidity            | 40 °C/95% RH   |
| Operating altitude            | < 2000 m       |

## References

| DIRIS Digiware S                           |                                              | Reference |
|--------------------------------------------|----------------------------------------------|-----------|
| S-130                                      | Metering - 3 integrated current inputs       | 4829 0160 |
| S-130MID                                   | Metering - 3 integrated current inputs + MID | 4829 0163 |
| S-135                                      | Analysis - 3 integrated current inputs       | 4829 0161 |
| S-135MID                                   | Analysis - 3 integrated current inputs + MID | 4829 0164 |
| Accessories                                |                                              | Reference |
| DIN-rail and backplate mounting clip (x10) |                                              | 4829 0195 |
| Circuit-breaker mounting accessory (x10)   |                                              | 4829 0196 |

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

| Digiware connection cables                                      |                              | Reference |
|-----------------------------------------------------------------|------------------------------|-----------|
| RJ45 cables for Digiware Bus                                    | Length 0.06 m <sup>(1)</sup> | 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 interfaces C and D) |                              | 4829 0180 |
| USB configuration cable                                         |                              | 4829 0050 |

(1) The 6 cm RJ45 cables can be used on 3-pole or 4-pole protection devices.

## Expert Services



### EXPERT SERVICES

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

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

Ideal for ISO 50001 sites (periodic verification):

- Measurement consistency check to 3%
- Measurement accuracy check to 0.2%

For further information, please talk to your Socomec contact.