

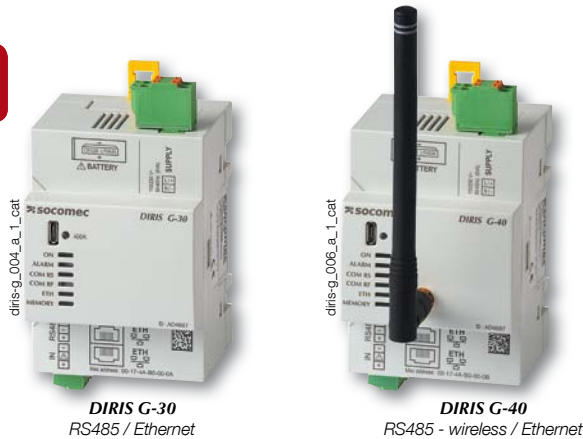


# DIRIS G

Wireless and cabled RS485 to Ethernet communication gateways

Communication gateways

new



### The solution for

- > Industry
- > Building
- > Infrastructure
- > Local authority



### Strong points

- > WEBVIEW embedded web server
- > Plug & Play
- > Scalable

### Function

With **DIRIS G** communication gateways, all information from metering and measurement devices communicating wirelessly or via the RS485 bus are centralised in a single device and then made available on the Ethernet network via Modbus TCP.

The gateway has an embedded WEBVIEW web server, allowing real time monitoring of electrical values and analysis of consumption data. The user can be alerted of any alarms via email.

### Advantages

#### WEBVIEW embedded web server<sup>(1)</sup>

DIRIS G gateways include an embedded web server. Two versions are available:

- Power Monitoring:
  - real time measurements and alarms
- Power & Energy Monitoring:
  - real time measurements and alarms,
  - Historical of measurements and analysis of consumptions.
- DIRIS D-90 touch-screen tablet can be fitted on the panel door to display WEBVIEW data.

(1) See page 182.

#### Plug & Play

Connected metering and measurement devices are automatically addressed and detected by the DIRIS G gateway.

DIRIS G gateways provide:

- Automatic clock synchronisation (SNTP).
- Synchronisation of connected devices.
- Warning messages in case of alarms (e-mail SMTP).
- Automatic recording and storage of measurements and consumption data.

#### Scalable

Several optional modules are available:

- Digital inputs/outputs
- Analogue inputs/outputs
- Temperature inputs

### Selection guide

	Gateway	DIRIS G-30	DIRIS G-40	DIRIS G-50	DIRIS G-60
Communication	RS485 Modbus	•	•	•	•
	Radio frequency Communication (wireless)		•		•
WEBVIEW embedded web server	Power Monitoring	•	•	•	•
	Power & Energy Monitoring			•	•

### Functionalities

#### DIRIS G-30 / DIRIS G-50

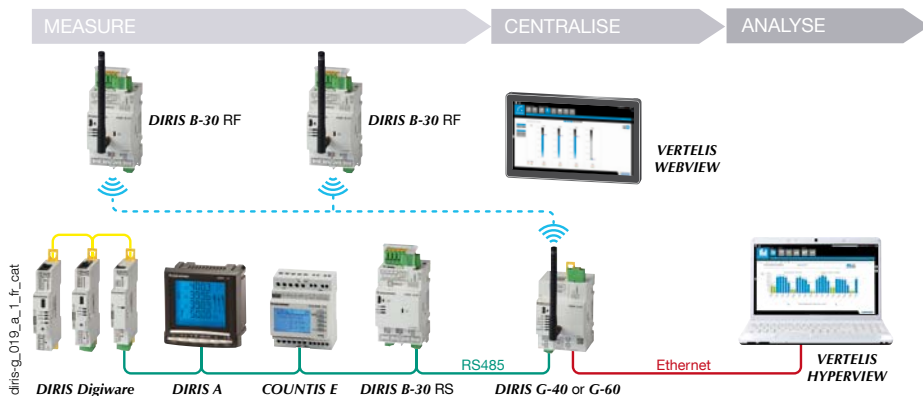
- RS485 and Ethernet ports (2 ports with integrated switch)
- Automatic addressing and detection of connected devices.
- Historical of measurements: max 1 year
- Internal clock (SMTP synchronisation)
- Sending of alarm by email (SMTP)
- WEBVIEW embedded web server
- Power Monitoring

#### DIRIS G-40 / DIRIS G-60

- Same functions as DIRIS G-30/G-50
- Wireless connection
- WEBVIEW embedded web server
- Power Monitoring

### Architecture

Example of communication architecture with DIRIS G gateway and WEBVIEW embedded WEB server



### Tablet

#### D-90 Touch-screen tablet

- Door mounting
- Connected to Ethernet or Wi-Fi (via router)



### Embedded web server

#### WEBVIEW embedded web server<sup>(1)</sup>

- Power Monitoring version: embedded in DIRIS G-30 and G-40
- Power & Energy Monitoring version: embedded in DIRIS G-50 and G-60
- 32 devices max (RS485 and wireless indifferently)



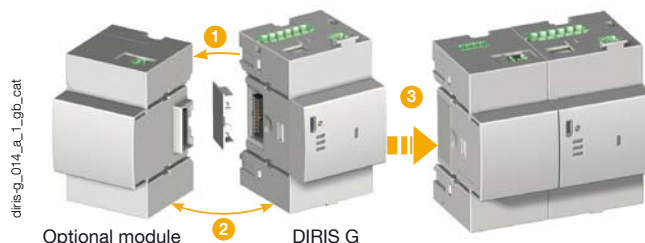
(1) For more details see page 182.

### Optional DIRIS O modules

Maximum 4 optional modules can be connected to a DIRIS G gateway to ensure control/command functions.

DIRIS O-iod	2 digital inputs / 2 digital outputs
DIRIS O-ioa	2 analogue inputs / 2 analogue outputs
DIRIS O-it	3 temperature inputs

For more information see DIRIS O optional modules page 29.



### Accessories

#### Remote radio antenna

- In some cases, this accessory enables the gateway antenna to be positioned out of the DIRIS G enclosure to optimise the operating range up to 300 m in free field.

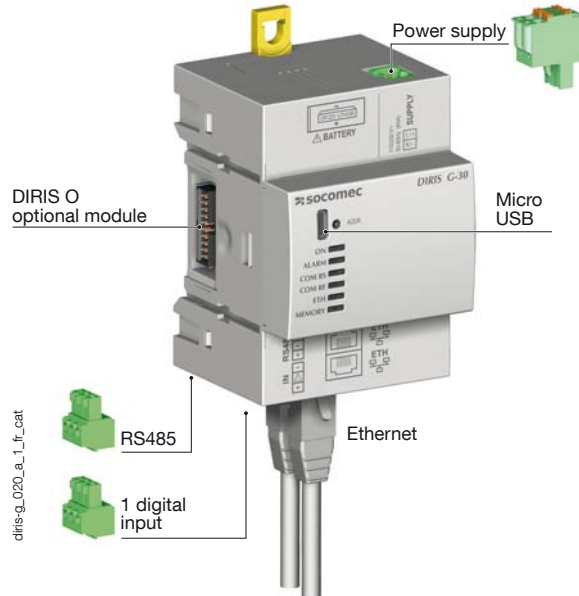
#### USB configuration cable

- Advanced configuration of DIRIS G gateways can be achieved using the EASY CONFIG software via Ethernet or direct USB connection.

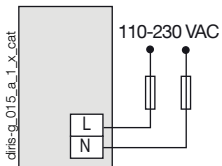
#### Wifi router

- The wifi router is connected to the gateway to allow wifi access to the WEBVIEW web server via the D-90 tablet.

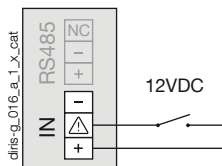
## DIRIS G terminals



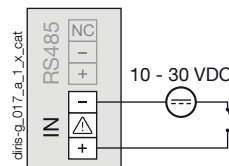
**Power supply**



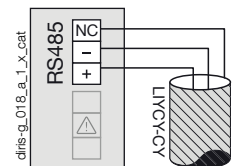
**Input supplied by the product**



**Input with external power supply**



**RS485**

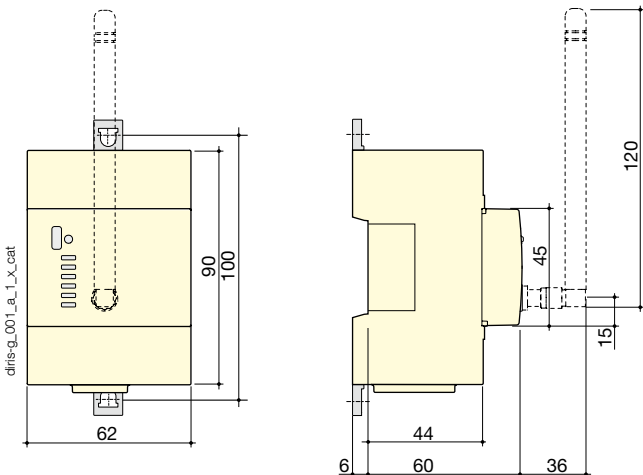


## Terminals of DIRIS O optional modules

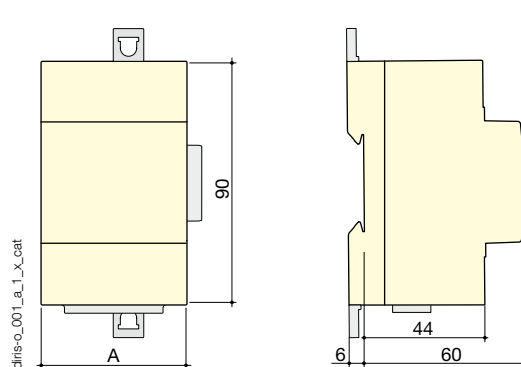
Optional modules are common to the DIRIS B-30 monitoring device.  
For terminal description, see page 30.

## Dimensions (mm)

**DIRIS G-30 / G-40 / G-50 / G-60**



**DIRIS O optional modules**



**DIRIS O optional modules**

DIRIS O-iod - DIRIS O-ioa - DIRIS O-it

**A**  
45 mm

## Technical characteristics

Mechanical characteristics	
Casing type	Modular for DIN-rail or back plate mounting
Case degree of protection	IP20 / IK06
Front degree of protection	IP40 (panel face with modular mounting) / IK08
Weight	DIRIS G-30, G-50 = 190g DIRIS G-40, G-60 = 215g
Electrical characteristics	
Power supply	
AC voltage	110-230VAC $\pm$ 15% (Ph/N or Ph/Ph) Cat III
Frequency	50/60 Hz
Consumption	6 VA
Battery	CR 1220 3 V lithium button cell battery
Input	
Number	1
Type / Power supply	Optocoupler internal (12VDC) or external (10-30VDC) polarisation
Input function	Logic status, pulse meter or synchronisation pulse status
Communication characteristics	
DIRIS G	
Link	RS485
Connection type	2 ... 3 half duplex wires
Protocol	Modbus RTU
Speed	2400 ... 115200 bauds
Function	Communication with PMDs and meters
DIRIS G-40 and DIRIS G-60	
Link	Radio frequency (wireless)
Frequency band	868 MHz (low frequency: 868.1 MHz and high frequency: 869.5875 MHz)
Speed	38400 bauds
Function	Communication with DIRIS B-30 RF
Scope	300 m (free field)
Ethernet	
Link	Ethernet 10/100 base-T, 2 RJ45 bases with integrated switch
Protocol	Modbus TCP (port 502), Modbus RTU over TCP (port 503), HTTP, SMTP, SNTP, DHCP
Clock	Internal
SNTP protocol	Gateway time updating from an NTP server. Connected PMDs time updating.
SMTP protocol	Sending of alarm emails from the gateway
Function	Configuration of the gateway, connected PMDs and meters Access to the WEBVIEW web server, data centralisation
USB	
Link	USB 2 (Easy Config software needed)
Memory capacity	
Historical of consumptions (memory capacity extension of meters and monitoring devices)	1 year
Alarms	1000 records
Quality network events as per EN 50160	1000 records
Environment characteristics	
Operating temperature	-10 ... +70 °C
Storage temperature	-25 ... +85 °C
Operating humidity	55 °C / 97% relative humidity

## References

DIRIS G gateways		Reference
DIRIS G-30	RS/Ethernet "Power Monitoring"	4829 0300
DIRIS G-40	RS-RF/Ethernet "Power Monitoring"	4829 0301
DIRIS G-50	RS/Ethernet "Power & Energy Monitoring"	4829 0302
DIRIS G-60	RS-RF/Ethernet "Power & Energy Monitoring"	4829 0303
DIRIS O optional modules		Reference
DIRIS O-iod	2 digital inputs / 2 digital outputs	4829 0030
DIRIS O-ioa	2 analogue inputs/2 analogue outputs, 4-20 mA	4829 0031
DIRIS O-it	3 temperature inputs PT 100 / PT 1000	4829 0032
Tablet		Reference
DIRIS D-90		4829 0210
Accessories		Reference
Wireless remote antenna, 868 MHz - 210 mm height		4854 0126
Cable for remote antenna - SMA connector - 3 meter length		4854 0127
USB configuration cable		4829 0050