



# DIRIS G

Wireless and cabled RS485 to Ethernet communication gateways

Communication interfaces



Configuration with EasyConfig, see page 618.

### The solution for

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



### Strong points

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

### Compliance with standards

- > IEC 61010



- > ISO 14025



- > UL



### Function

With communication gateways **DIRIS G** all the information from meters and power monitors, communicating by radio frequency or RS485, is centralized and made available on the Ethernet Modbus (TCP).

DIRIS G gateways can retrieve data from meters or Socomec remote measuring points via Ethernet.

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

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

- Power Monitoring:
  - Realtime measurements and alerts.
- Power & Energy Monitoring:
  - Realtime measurements and alerts.
  - Trends for selected parameters and energy consumption history and analysis.

#### Scalable

Several optional modules are available:

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

(1) see page 615.

#### Plug & Play

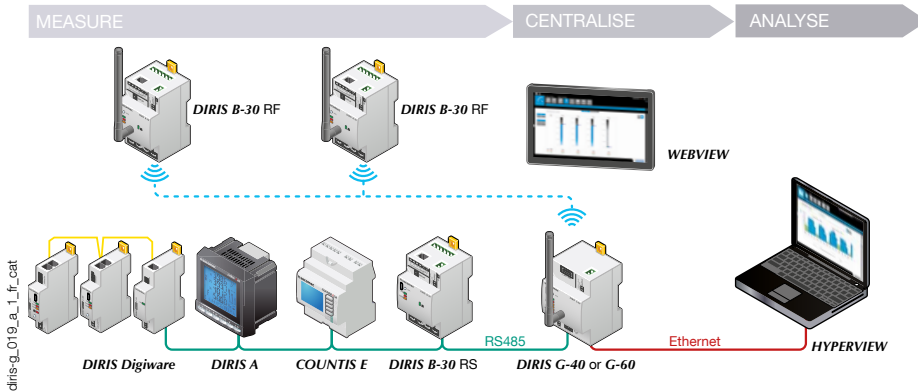
- Connected metering and measurement devices are automatically addressed and detected by the DIRIS G gateway. These integrate the following:
  - Automatic time synchronisation (SNTP) with battery recording
  - Synchronisation of connected devices
  - Warning messages in the event of an alert (e-mail SMTP)
  - Automatic recording and storage of measurements and consumption data
  - Automatic tariff changes (multi-tariff).
- Data exported automatically via FTP server.

### Selection guide

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

### Architecture

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



### Embedded web server

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

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



(1) For further details see page 615.

### DIRIS O optional modules

a maximum of 4 optional modules can be connected to a DIRIS G gateway in order to integrate controls/ commands.

DIRIS O-iod	2 digital inputs / 2 digital outputs
DIRIS O-ioa	2 analogue inputs / 2 analogue outputs
DIRIS O-it	3 temperature inputs
DIRIS O-m	Additional slave RS485 communication

For more information see "DIRIS O optional modules" page 517.



### Accessories

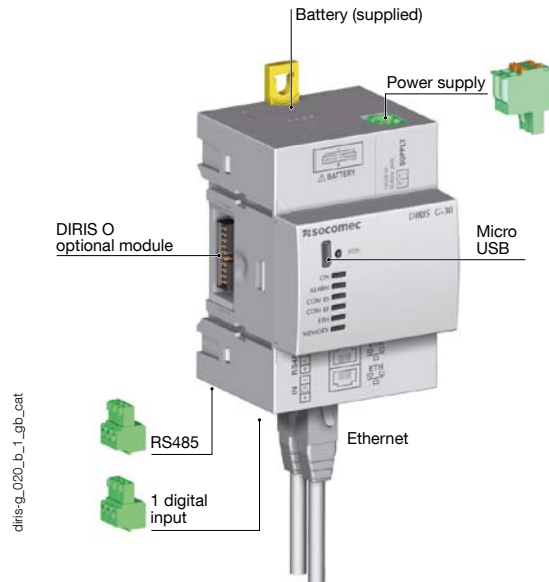
#### Remote radio antenna

- Allows the antenna to be mounted outside the enclosure to increase the transmission distance up to 300 m if there are no obstacles.

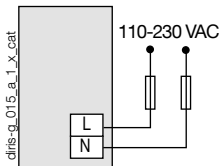
#### USB configuration cable

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

## DIRIS G terminals

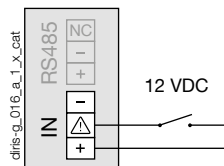


### Power supply

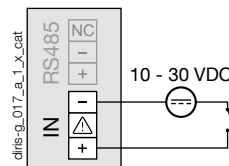


NC: not connected

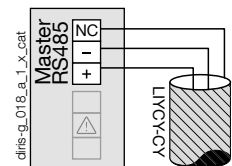
### Input powered by the product



### Input with external power supply



### RS485

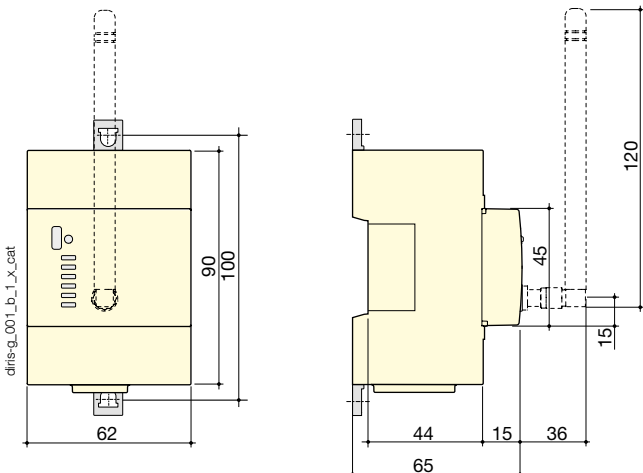


## Terminals of DIRIS O optional modules

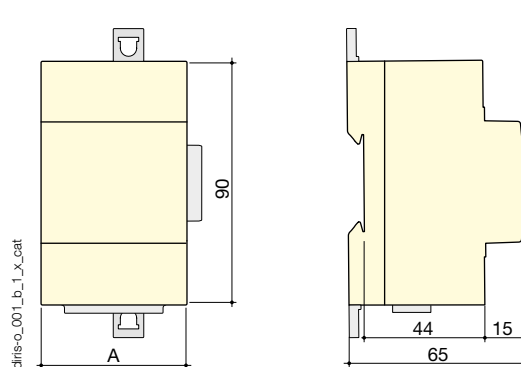
Optional modules are common to the DIRIS B-30 monitoring device.  
For a description of the terminals see page 518.

## Dimensions (mm)

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



### DIRIS O optional modules



#### DIRIS O optional modules

DIRIS O-iod - DIRIS O-ica - DIRIS O-it - DIRIS O-m

A

45 mm

## Specifications

Mechanical specifications	
Casing type	DIN-rail mounting module and base
Case degree of protection	IP20 / IK06
Front degree of protection	IP40 on the nose in modular assembly / IK08
Weight	DIRIS G-30, G-50 = 190 g DIRIS G-40, G-60 = 215 g
Electrical characteristics	
Power supply	
Alternative voltage	110-230 VAC ±15% (Ph/N or Ph/Ph) Cat III
Frequency	50/60 Hz
Power consumption	6 VA
Battery	CR 1220 3 V lithium button cell battery
Input	
Number	1
Type / Power supply	Optocoupler internal polarisation (12 VDC ±10%) or external (10-30 VDC ±10%)
Input function	Logic status, pulse meter or synchronisation pulse status
Communication specifications	
DIRIS G	
Link	RS485
Connection type	2 ... 3 half duplex wires
Protocol	Modbus RTU
Baudrate	2400 ... 115200 bauds
Function	Communication with PMDs and meters
DIRIS G-40 and DIRIS G-60	
Link	Radio-frequency (RF)
Frequency range	868 MHz (low frequency: 868.1 MHz and high: 869.5875 MHz)
Baudrate	38400 bauds
Function	Communication with DIRIS B-30 RF
Scope	300 m (open 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, FTP (G-50/G-60)
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	
Connection type	USB 2 (required installation of Easy Config)
Protocol	Modbus RTU on USB
Function	Configuration of the gateway, connected PMDs and meters
Connection	Type B micro USB connector
Memory characteristics	
Consumption history (memory extension for meters and measurement units)	1 year (1 hour period)
Electrical values	2 months (10 min period)
Number of events	Alarms 1000 Network quality according to EN 50160: 1000
Environmental specifications	
Ambient operating temperature	-10 ... +70°C
Storage temperature	-25 ... +85°C
Operating humidity	55°C / 97% HR

## References

DIRIS G gateways		Reference	
DIRIS G-30	RS485 / Ethernet - WEBVIEW Power Monitoring	4829 0300	
DIRIS G-40	RS485-RF / Ethernet - WEBVIEW Power Monitoring	4829 0301	
DIRIS G-50	RS485 / Ethernet - WEBVIEW Power & Energy Monitoring	4829 0302	
DIRIS G-60	RS485-RF / Ethernet - WEBVIEW Power & Energy Monitoring	4829 0303	
DIRIS O optional modules		Reference	
DIRIS O-iod	2 digital inputs / 2 digital outputs	4829 0030	
DIRIS O-ioa	2x 4-20 mA analogue inputs / 2x 4-20 mA analogue outputs	4829 0031	
DIRIS O-it	3 temperature inputs, PT100/PT1000	4829 0032	
DIRIS O-m	RS485 modbus slave communication	4829 0033	
Accessories		To be ordered in multiples of	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
Fuse circuit breakers to protect the auxiliary power supply (type RM) 1 pole + neutral		6	5601 0017
gG 10x38 0.5 A fuses		10	6012 0000