

# DIRIS G

## RS485 to Ethernet communication gateways



**DIRIS G-30/G-50**  
RS485/Ethernet

cris-g\_004\_a\_1\_cat



Configuration  
with EasyConfig,  
see page 280.

### Function

With communication gateways **DIRIS G** all the information from meters and power monitors, communicating by 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.

<sup>(1)</sup> See page 278.

#### Plug & Play

- Connected metering and measurement devices are automatically addressed and detected by the DIRIS G gateway. These integrate the following:
  - Automatic time synchronization (SNTP) with battery recording
  - Synchronization 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-50
Communication	RS485 Modbus	•	•
	Ethernet	•	•
WEBVIEW embedded web server	Power Monitoring	•	•
	Power & Energy Monitoring		•

### The solution for

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



### Strong points

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

### Compliance with standards

- > UL 61010 guide PICQ file E257746
- > IEC 61010
- > ISO 14025



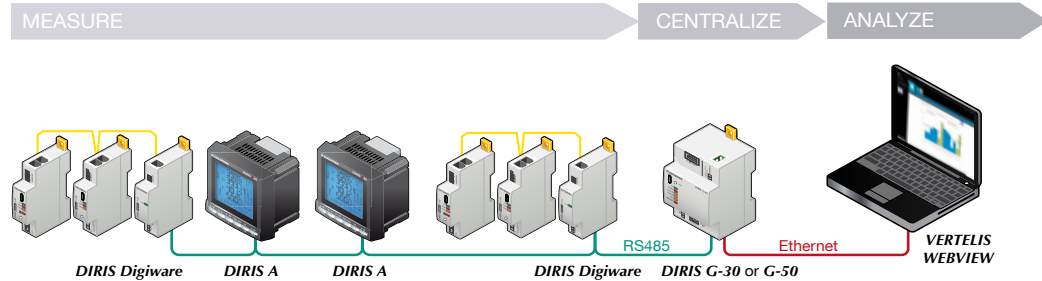
### Functions

#### 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 (DIRIS G-50 only)
- Internal clock (SNTP synchronization)
- Sending of alarm by email (SMTP)
- WEBVIEW embedded web server

## 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
- Version Power & Energy Monitoring: embedded in DIRIS G-50
- 32 devices max



(1) For further details see page 278.

## 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

For more information see "DIRIS O optional modules"



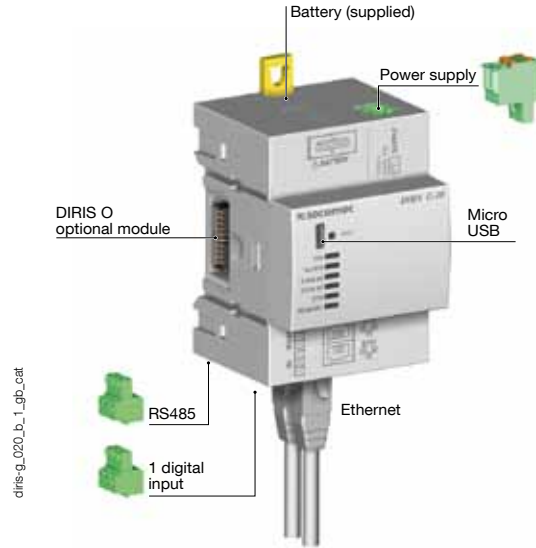
## Accessories

### USB configuration cable

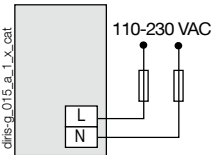
- Configuration of DIRIS G gateways can be achieved using EASY CONFIG software via Ethernet or direct USB connection.

Accessories Description	To be ordered in multiples of	Part number
Fuse holder Class CC to protect voltage inputs 3 pole	4	5705 0003
Class CC 0.5 A fuses	10	6CC0 5000

### DIRIS G terminals

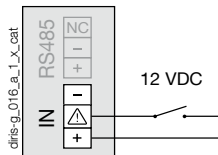


#### Power supply

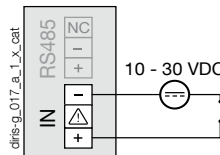


NC: not connected

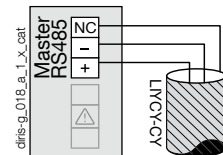
#### Input powered by the product



#### Input with external power supply



#### RS485

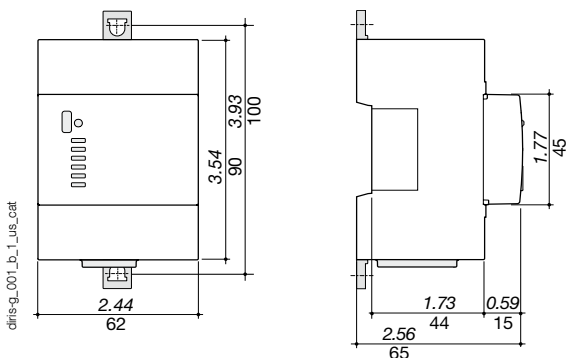


### Terminals of DIRIS O optional modules

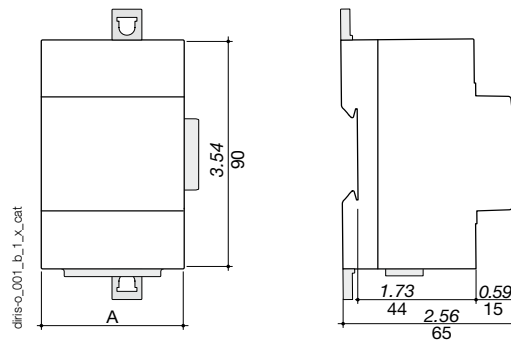
Optional modules are common to the DIRIS B-30 monitoring device.  
For a description of the terminals see page 270.

### Dimensions (in/mm)

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



#### DIRIS O optional modules



DIRIS O optional modules	A
DIRIS O-iod - DIRIS O-ioa - DIRIS O-it	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 = 6.7 oz / 190 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 polarization (12 VDC ±10%) or external (10-30 VDC ±10%)
Input function	Logic status, pulse meter or synchronization 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

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, SNMP, DHCP, FTP (G-50)
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 centralization
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 / +14 °F ... +158 °F
Storage temperature	-25 ... +85 °C / -13 °F ... +185 °F
Operating humidity	55 °C / 131 °F / 97% relative humidity

## References

DIRIS G gateways		Reference
DIRIS G-30	RS485 / Ethernet - WEBVIEW Power Monitoring	4829 <b>0300</b>
DIRIS G-50	RS485 / Ethernet - WEBVIEW Power & Energy Monitoring	4829 <b>0302</b>
DIRIS O optional modules		Reference
DIRIS O-iod	2 digital inputs / 2 digital outputs	4829 <b>0030</b>
DIRIS O-ioa	2x 4-20 mA analogue inputs / 2x 4-20 mA analogue outputs	4829 <b>0031</b>
DIRIS O-it	3 temperature inputs, PT100/PT1000	4829 <b>0032</b>
Accessories		To be ordered in multiples of
USB configuration cable		
Fuse circuit breakers to protect the auxiliary power supply (type RM) 1 pole + neutral		6
gG 10x38 0.5 A fuses		10
		Reference
		4829 <b>0050</b>
		5601 <b>0017</b>
		6012 <b>0000</b>