



DIRIS G-30, G-40, G-50 & G-60 Gateways

EN



[www.socomec.com/
en/diris-g](http://www.socomec.com/en/diris-g)



- 1. DOCUMENTATION** 3
- 2. DANGER AND WARNING** 4
 - 2.1. Risk of electrocution, burns or explosion 4
 - 2.2. Risk of damaging the unit 4
 - 2.3. Liability 4
- 3. PRELIMINARY OPERATIONS** 5
- 4. INTRODUCTION** 6
 - 4.1. DIRIS G presentation 6
 - 4.1.1. Range 6
 - 4.1.2. Functions 7
 - 4.1.3. Dimensions 7
 - 4.2. Optional modules presentation 8
 - 4.2.1. Range 8
 - 4.2.2. Dimensions 8
- 5. ASSEMBLY** 9
 - 5.1. Recommendations and safety 9
 - 5.2. Fitting the battery 9
 - 5.3. DIRIS G mounting 9
 - 5.3.1. DIN-rail mounting 9
 - 5.3.2. Plate mounting 10
 - 5.4. Optional modules mounting 10
 - 5.4.1. Monting an optional module on the gateway 10
 - 5.4.2. Mounting an optional module on an optional module 10
- 6. CONNECTION** 11
 - 6.1. DIRIS G connection 11
 - 6.2. Optional modules connection 13
- 7. STATUS AND AUTO-ADDRESSING LEDS** 14
 - 7.1. Status LEDs 14
 - 7.2. Auto-addressing 15
- 8. COMMUNICATION** 16
 - 8.1. General information 16
 - 8.2. RS485 rules 17
 - 8.3. Radio-frequency (RF) rules 18
 - 8.3.1. Setting up 18
 - 8.3.2. EC Declaration of Conformity 19
 - 8.4. Multi-gateway communication 19
 - 8.5. Communication tables 19
- 9. CONFIGURATION** 20
 - 9.1. Configuration using Easy Config 20
 - 9.1.1. Connection modes 20
 - 9.1.2. Time setting 21
- 10. CHARACTERISTICS** 22
 - 10.1. DIRIS G characteristics 22
 - 10.1.1. Mechanical characteristics 22
 - 10.1.2. Electrical characteristics 22
 - 10.1.3. Input characteristics 22
 - 10.1.4. Communication specifications 22
 - 10.1.5. Memory characteristics 23
 - 10.1.6. Environmental specifications 23
 - 10.1.7. Electromagnetic compatibility 23
 - 10.1.8. Safety 24
 - 10.1.9. Service life 24
 - 10.2. DIRIS O optional modules characteristics 24

1. DOCUMENTATION

All documentation concerning the DIRIS G-30, G-40, G-50 and G-60 gateways is available at the SOCOMEC website at the following address:

www.socomec.com/en/diris-g





2. DANGER AND WARNING

The term "unit" used in the following paragraphs encompasses all of the DIRIS G-30, G-40, G-50 and G-60 gateways.

The assembly, use, servicing and maintenance of this equipment must only be carried out by trained, qualified professionals.

SOCOMEK shall not be held responsible for failure to comply with the instructions in this manual.



2.1. Risk of electrocution, burns or explosion

	Caution: risk of electric shock	Ref. ISO 7000-0434B (2004-01)
	Caution: Refer to the accompanying documentation each time this symbol is shown	Ref. ISO 7000-0434B (2004-01)

- The assembly and servicing of this unit must only be carried out by qualified personnel with thorough knowledge of how to assemble, commission and operate the unit, who have completed the appropriate training. He or she should have read and understood the various safety measures and warnings stated in the instructions.
- Before carrying out any work on the unit, switch off the power supply to the unit.
- Always use an appropriate voltage detection device to confirm the absence of voltage.
- Replace all devices, doors, and covers before turning on power to this equipment.
- Always power the device with the correct rated voltage.
- Install the unit following the recommended installation instructions and in a suitable electrical cabinet.
- The device contains a lithium battery. Replace the battery with a battery of the same type.

Failure to take these precautions could cause death or serious injuries.

2.2. Risk of damaging the unit

	Caution: risk of electric shock	Ref. ISO 7000-0434B (2004-01)
	Caution: Refer to the accompanying documentation each time this symbol is shown	Ref. ISO 7000-0434B (2004-01)

To ensure that the unit operates correctly, make sure that:

- the unit is correctly installed.
- the auxiliary power supply tension indicated on the product is observed: 110V - 230 VAC ($\pm 15\%$).
- the network frequency indicated on the product is observed: 50 or 60 Hz.

Failure to respect these precautions could cause damage to the unit.

2.3. Liability

- Assembly, connection and use must be carried out in accordance with the installation standards currently in force.
- The unit must be installed in accordance with the rules given in this manual.
- Failure to observe the rules for installing this unit may compromise the product's intrinsic protection.
- The unit must be positioned within an installation which complies with the standards currently in force.

3. PRELIMINARY OPERATIONS

To ensure the safety of personnel and the unit, please carefully read the contents of these user manual before installation.

Check the following points as soon as you receive the package containing the unit:

- The packaging is in good condition,
- The unit has not been damaged during transportation,
- The product reference number conforms to your order,
- The packaging includes the unit fitted with removable terminal blocks and a Quick start guide.





4. INTRODUCTION

4.1. DIRIS G presentation

The DIRIS G-30, G-40, G-50 and G-60 are communication gateways with a modular format which act as an interface between products (PMD*, meters, etc.) equipped with an RS485 communication bus using the Modbus protocol, DIRIS B-30 using radio communication (DIRIS G-40 and G-60 only) and the Ethernet network. On the Ethernet network, the gateways use the Modbus TCP protocol to enable data to be exchange and centralised between the meters, the PMDs and monitoring software. In addition, the WEBVIEW web server embedded in the gateways can be used for monitoring of electrical values in real-time (Power Monitoring version) and reporting of energy data (Power & Energy Monitoring version).

*PMD: Performance Measuring and monitoring Device in accordance with IEC 61557-12.

4.1.1. Range

				
Gateway	DIRIS G-30	DIRIS G-40	DIRIS G-50	DIRIS G-60
RS485 communication	•	•	•	•
RF communication		•		•
WEBVIEW Webservice Power Monitoring <i>Monitoring: real-time measurements and alarms.</i>	•	•		
WebServer WEBVIEW Power & Energy Monitoring <i>Monitoring: real-time measurements and alarms.</i> <i>Visualisation: measurement and consumption datalogger.</i>			•	•
	Ref. 4829 0300	Ref. 4829 0301	Ref. 4829 0302	Ref. 4829 0303

Accessories

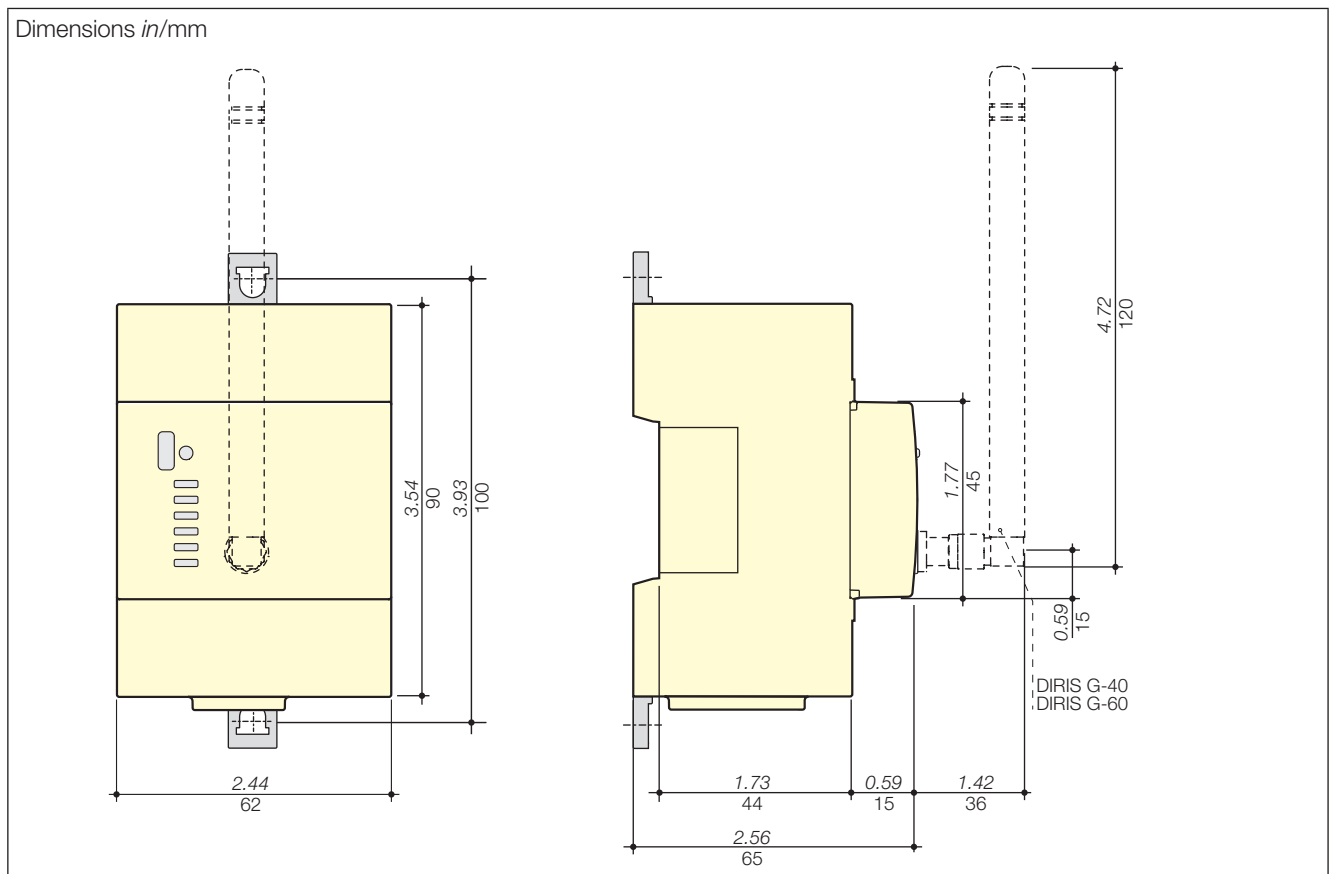
Remote antenna RF 868MHz Height: 210mm	Cable for remote antenna. SMA connector. Length: 3m	USB cable for configuration
Ref. 4854 0126	Ref. 4854 0127	Ref. 4829 0050

4.1.2. Functions

Depending on the reference, the DIRIS G-30, G-40, G-50 and G-60 perform a range of functions, including:

- Ethernet communication interface with the Modbus TCP protocol
- Access to data for products equipped with Modbus RTU communication over RS485
- Access to data for DIRIS B-30 equipped with wireless radio communication
- Auto-addressing mode for products
- Synchro input
- Input/output extension (logic, analogue, temperature) and RS485 communication modules
- Memory extension of connected PMD per model
 - Consumption logging (1 year with a period of 60 minutes)
 - Logging electric values (2 months with an integration period of 10 minutes)
 - Memorisation of 1000 timestamped alarms for overloads, events and input status changes
 - Memorisation of 1000 quality network events according to EN 50160
- Time updated by the SNTP (Network Time Protocol) server
- Sends mail via SMTP (Simple Mail Transfer Protocol)
- 2 Ethernet ports with integrated switch
- Embedded WEBVIEW web server for multi-product applications

4.1.3. Dimensions



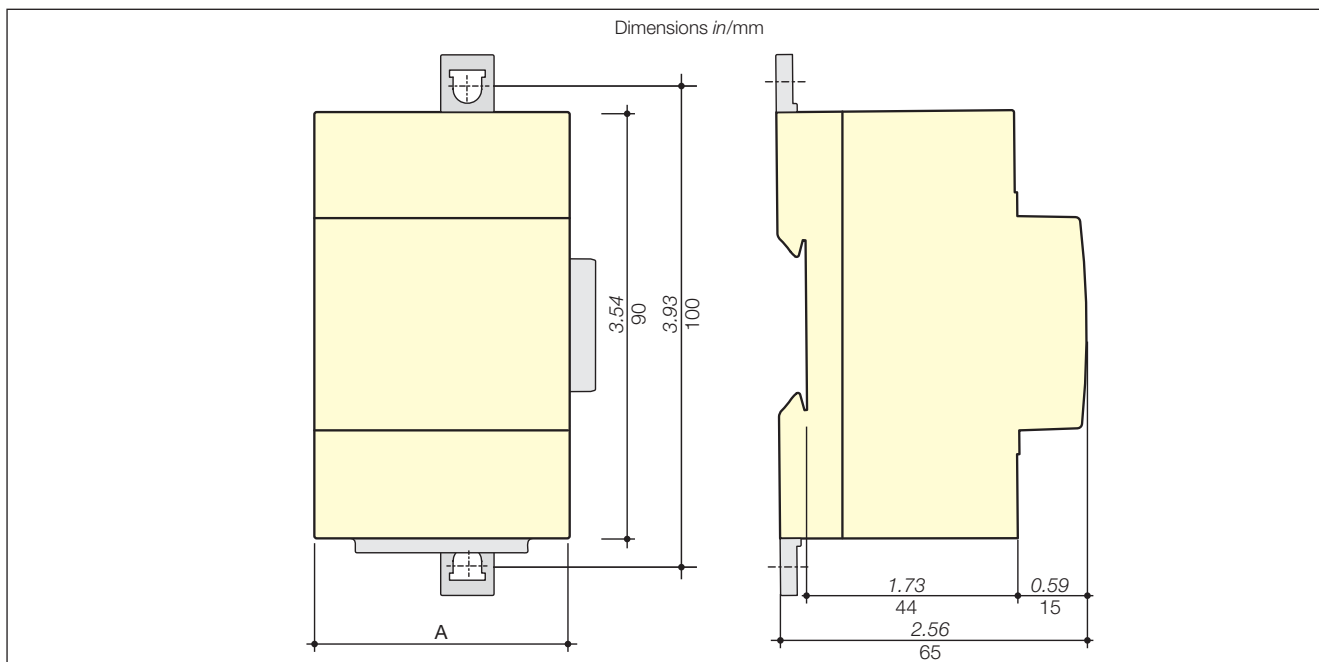
4.2. Optional modules presentation

The optional modules, which have a modular format, are fitted on the DIRIS G; they are used to extend its functionalities in terms of inputs/outputs and communication modes.

4.2.1. Range

		
DIRIS O-iod	DIRIS O-iaa	DIRIS O-it
2 digital inputs/outputs module	2 analogue inputs/outputs module	3 temperature inputs module
Ref. 4829 0030	Ref. 4829 0031	Ref. 4829 0032

4.2.2. Dimensions



	DIRIS O-iod	DIRIS O-iaa	DIRIS O-it
A	1.77in / 45mm		

5. ASSEMBLY

The following paragraphs describe the installation of the DIRIS G-30, G-40, G-50 and G-60 gateways and the optional modules.

5.1. Recommendations and safety

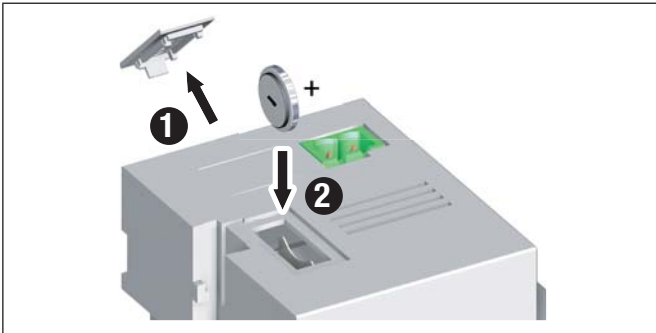
Refer to the safety instructions (section “2. Danger and warning”, page 4)

5.2. Fitting the battery

Environment: This product contains a 3V CR1220 lithium button battery. Because of the potential health and environmental effects of the substances used in batteries, do not dispose of them with household waste.

The battery is supplied in a separate bag.

To insert the battery, first power off the unit and wait for 1 minute before using a finger to slide off the cover on the top of the gateway. Insert the battery, observing the polarity. Close the cover.

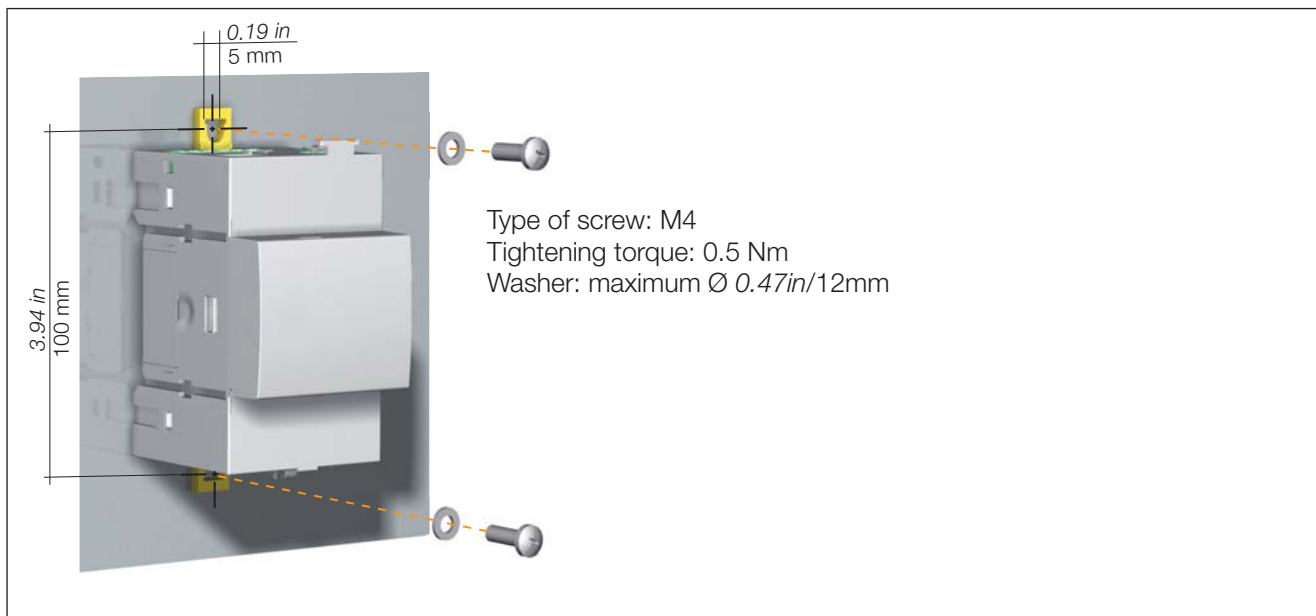


5.3. DIRIS G mounting

5.3.1. DIN-rail mounting

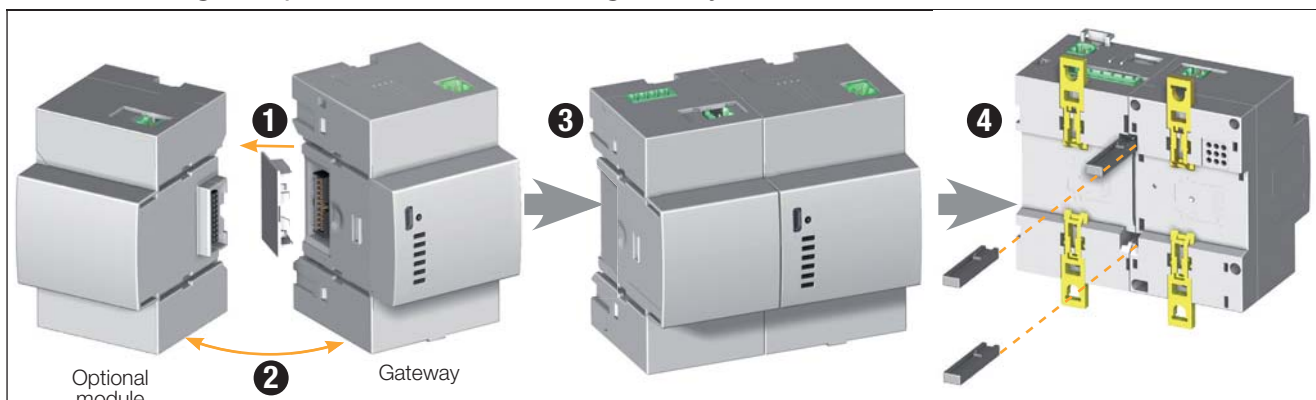
Assembly	Removal
<p>1.38in 35mm</p> <p>0.29 or 0.59 in/7.5 or 15 mm</p>	

5.3.2. Plate mounting

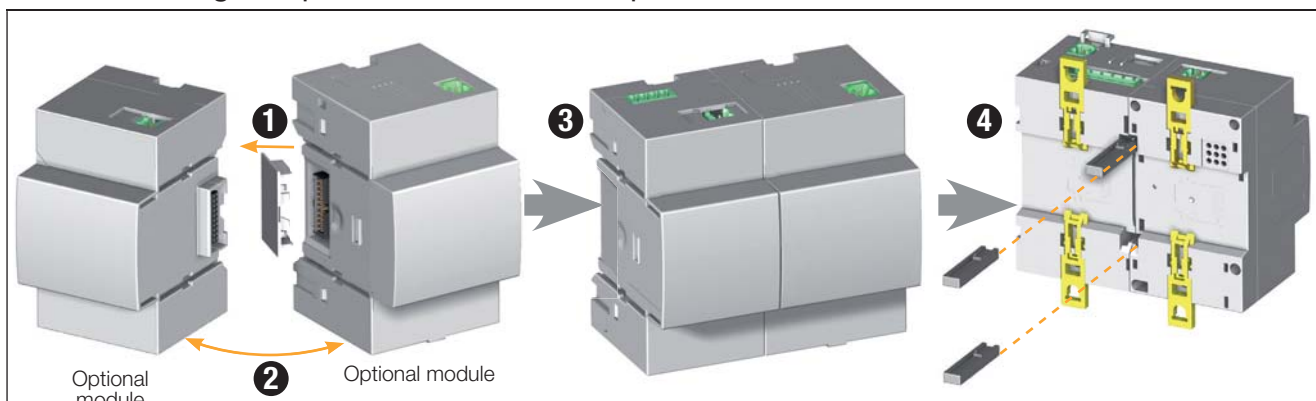


5.4. Optional modules mounting

5.4.1. Monting an optional module on the gateway



5.4.2. Mounting an optional module on an optional module

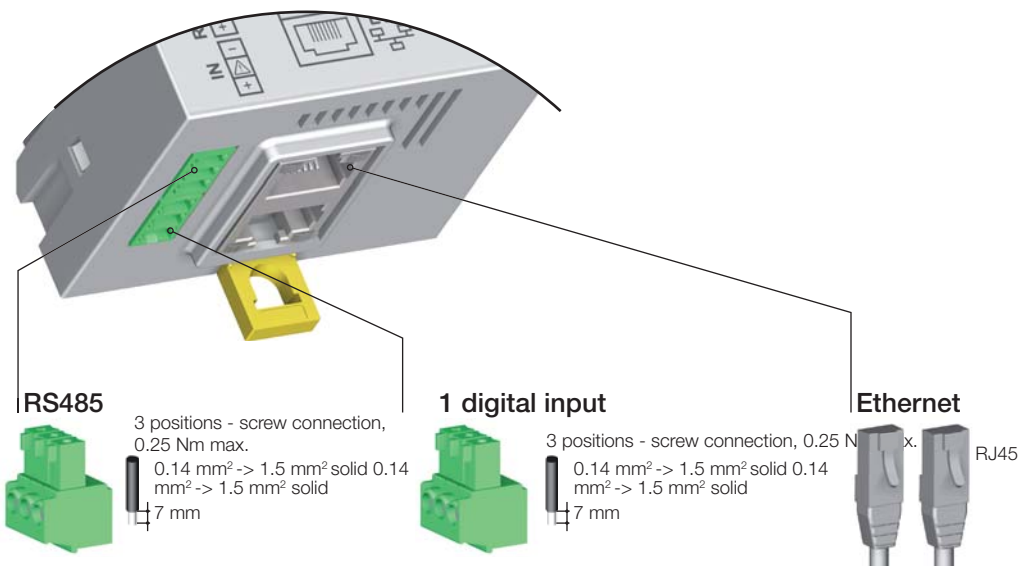
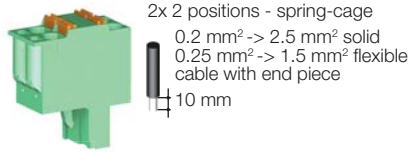
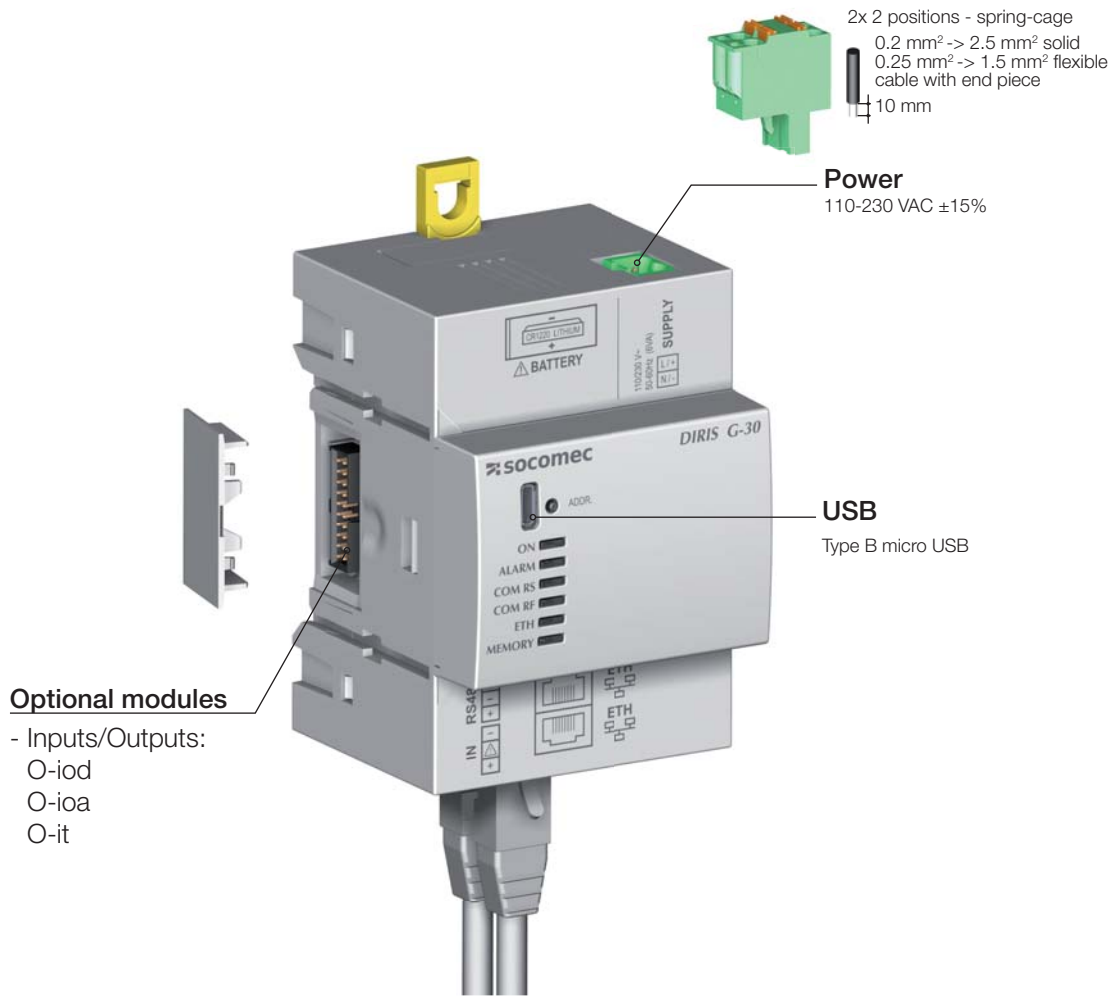


The following guidelines for installation must be observed:

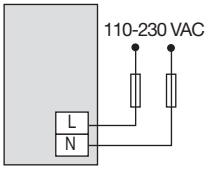
- A maximum of 4 optional modules can be installed on the gateway
- One single temperature module (DIRIS O-it) may be used.
- The gateway assembly with its optional modules must be installed on a DIN rail or base plate.

6. CONNECTION

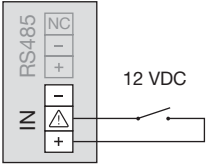
6.1. DIRIS G connection



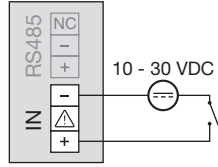
Power



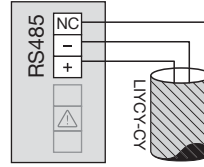
Input powered by the product



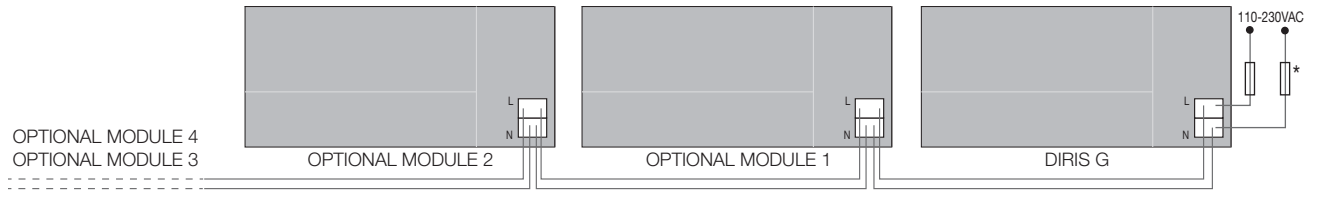
Input with external power supply



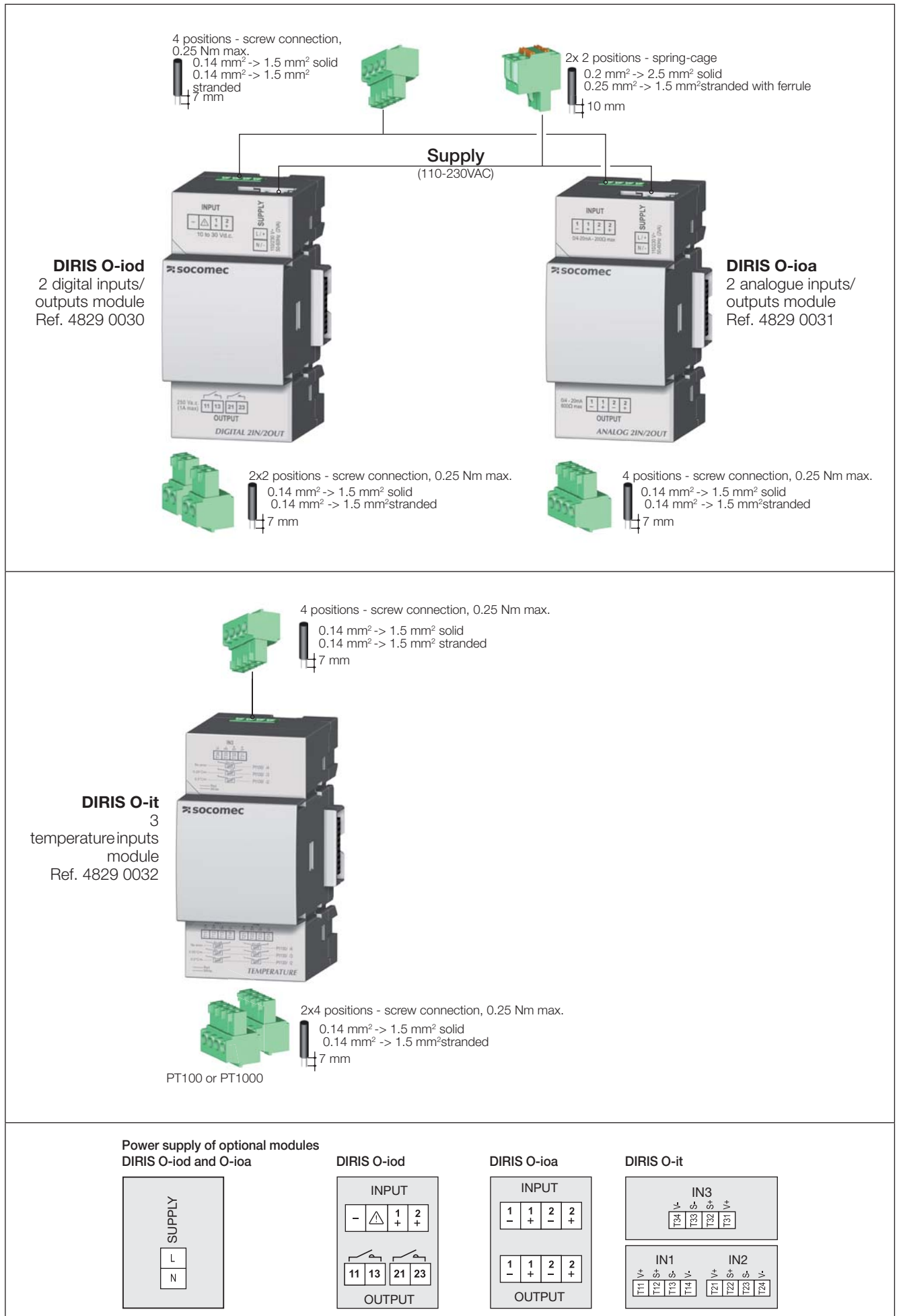
RS485



Power supply of optional modules



6.2. Optional modules connection

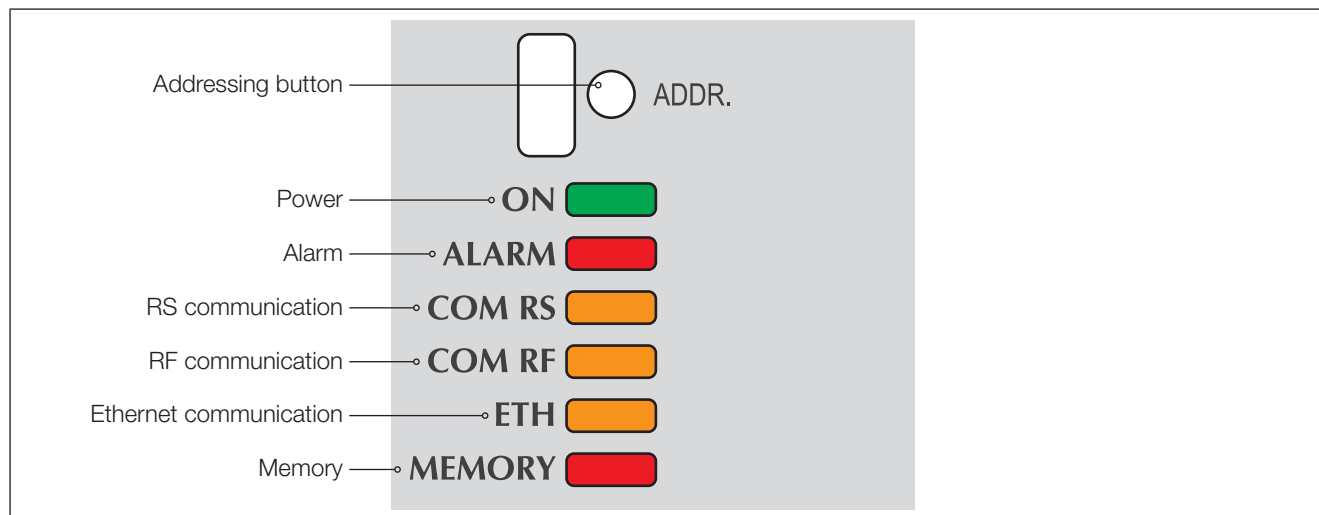


7. STATUS AND AUTO-ADDRESSING LEADS

7.1. Status LEDs

LEDs are used to view the status of the product.

The addressing button are used to automatically assign a Modbus® address from the gateway to all the products in its RS485 or RF network.



LED status	Fixed	Blinking	Pulse
ON	In operation	10 seconds - On request via a Modbus control to identify the device (remote screen, ...)	1 second to start-up
ALARM	An alarm (logic/analogue...) is active	-	1 second to start-up
RS COM	In the addressing phase	In the scan phase	1 second to start-up and when a frame received is processed
COM RF	In the addressing phase	In the scan phase	1 second to start-up and when a frame received is processed
ETH	Initialisation problem	-	1 second to start-up and in Modbus TCP communication
MEMORY	Full or write problem	-	1 second to start-up and during a write to the memory

Note: The "ON" / "ALARM" / "RS COM" LEDs flash if an error within the product is detected.

7.2. Auto-addressing

Auto-addressing mode is used to automatically allocate addresses to products connected to the gateway. This mode is only compatible with DIRIS G-30 and Digiware type PMDs. The addresses will be allocated manually on the other PMD (DIRIS A) and meters (COUNTIS).

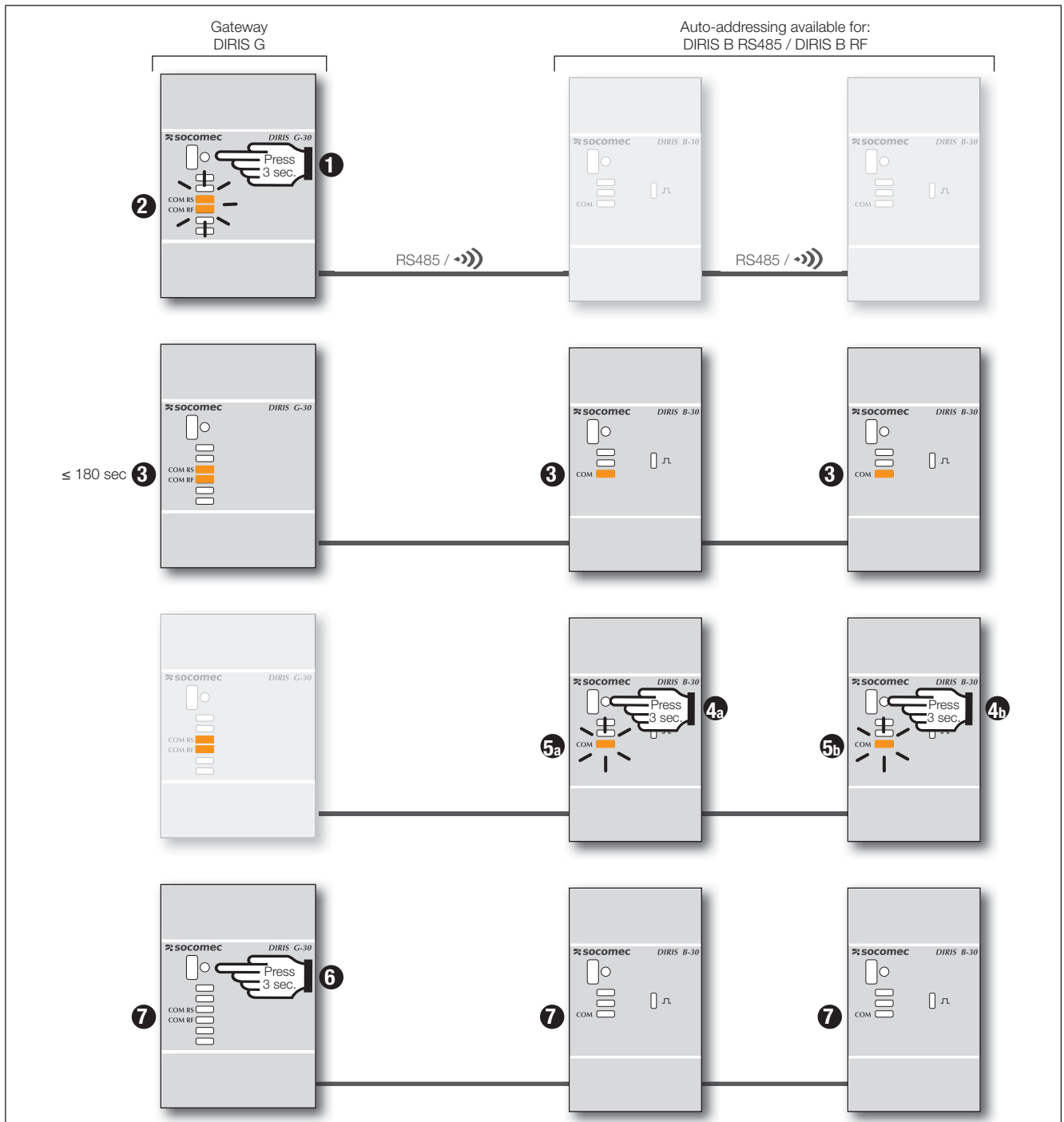
Three modes are available:

- Mode 1 - Auto-detection and automatic addressing
- Mode 2 - Auto-detection and choices of addresses
- Mode 3 - Auto-detection and choices of addresses based on the serial number

Mode 1 is without external equipment (see description below).

Modes 2 and 3 are carried out from a PC equipped with Easy Config. These 2 modes are described in the Easy Config manual.

Description of mode 1



Note: During the auto-addressing process, the RS485 line is reserved for allocating addresses and no other exchange of data is possible at this time

8. COMMUNICATION

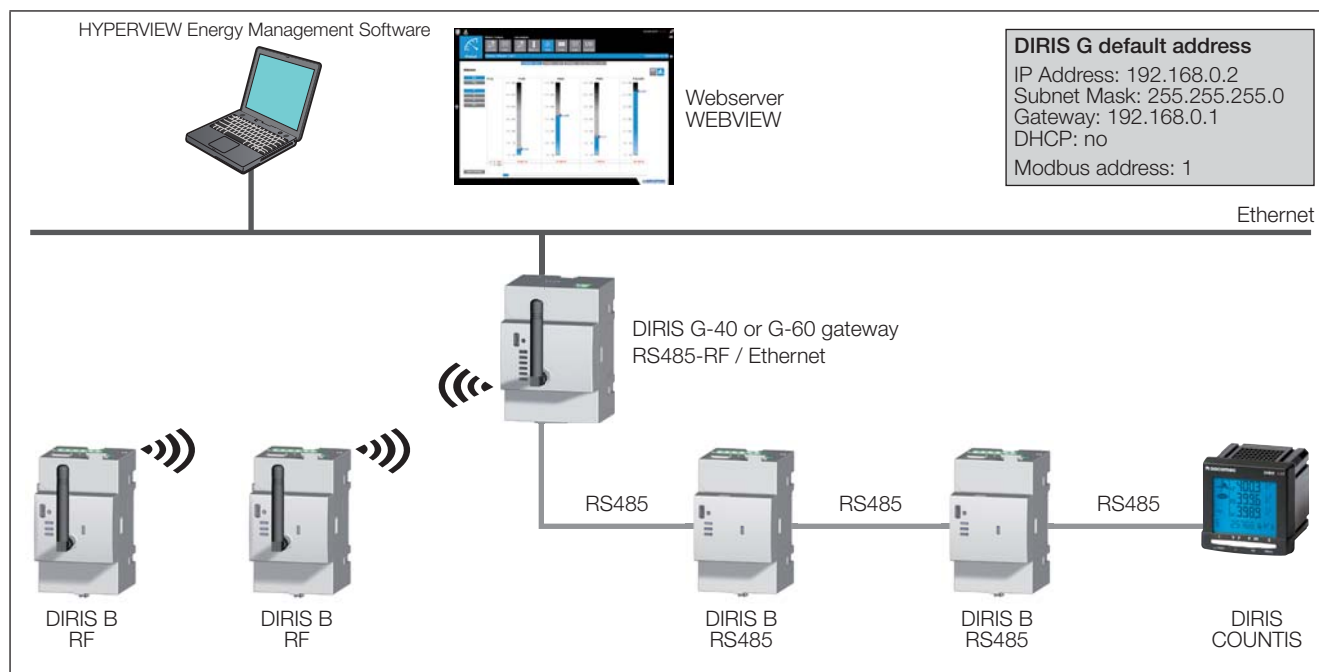
8.1. General information

Depending on its reference, the gateway communicates using RS485 or RS485/RF. With a RS485 link, the products are connected in series to the gateway (DIRIS G-30, G-40, G-50 and G-60). With a radio-frequency link, the DIRIS B-30 communicate with the gateway in the RS485/RF version (DIRIS G-40 and G-60).

The table below shows the communication modes available on each of the gateways.

	Gateway	DIRIS G-30	DIRIS G-40	DIRIS G-50	DIRIS G-60
Communication	RS485	•	•	•	•
	Radio-frequency		•		•
		Ref. 4829 0300	Ref. 4829 0301	Ref. 4829 0302	Ref. 4829 0303

Example of an installation integrating a DIRIS G-40 or G-60 gateway with DIRIS B-30 RF and RS485 multifunction meters:



The DIRIS G-30, G-40, G-50 & G-60 gateways communicate via the Modbus protocol with the products connected to them. The DIRIS B which integrate radio communication are seen as Modbus slaves.

The Modbus protocol requires a dialogue with a master/slave structure. The mode of communication is the RTU (Remote Terminal Unit).

The gateway integrates the following parameters:

- communication (speed, parity, data size, stop bit)
- configuration of the Modbus RTU link, such as Timeout and number of send attempts.

The gateway transmits the data collected using the Modbus TCP protocol via the Ethernet communication port. The default IP address is:

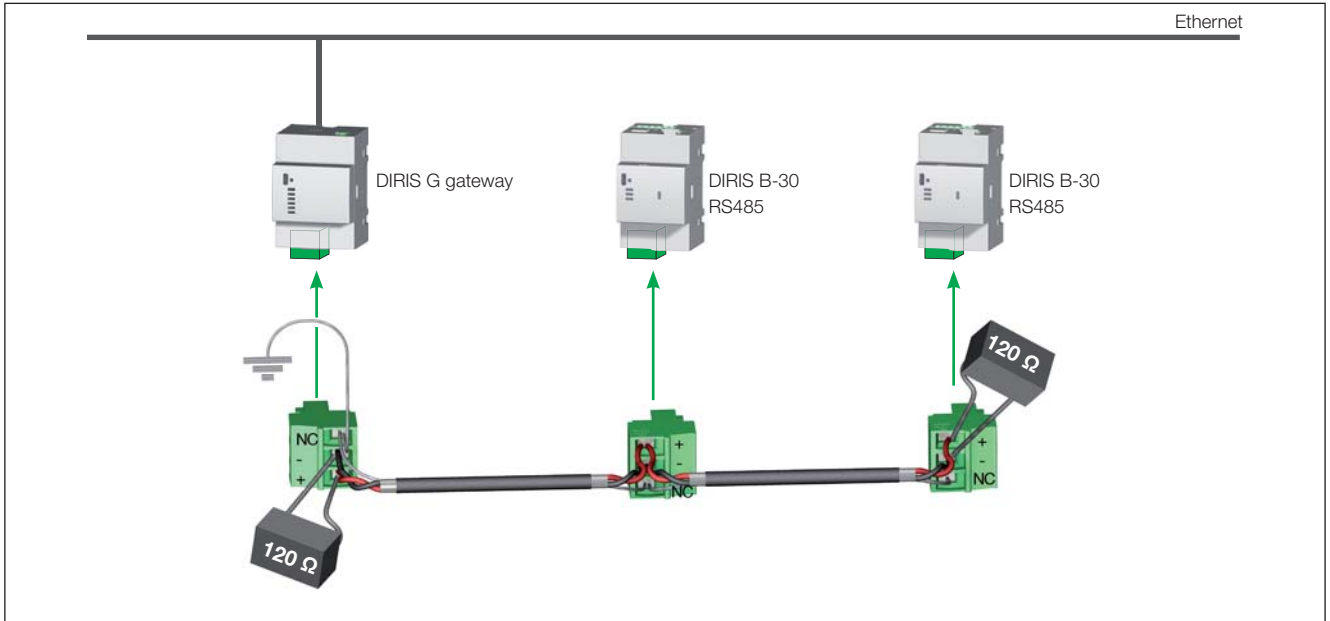
DIRIS G default address
IP Address: 192.168.0.2
Subnet Mask: 255.255.255.0
Gateway: 192.168.0.1
DHCP: no
Modbus address: 1

8.2. RS485 rules

RS485 communication is available on all the gateways. It takes place via an RS485 serial link (2- or 3-wire) in accordance with the Modbus RTU protocol. It is used to collect all the data coming from the connected products (meters, multifunction meters, etc.).

In a standard configuration, an RS485 link enables the interconnection of 32 products to a PC, a PLC or the gateway over a distance of 1200 metres.

Example of connecting an RS485 link with the gateway:



A LIYCY type connecting cable with a shielded twisted pair is required. In a disturbed environment or large network (in terms of length or number of products) the use of a type LIYCY-CY twisted pair with general shielding is recommended.

A 120-ohm resistor must be placed at both ends of the link.

A 120-ohm resistor is supplied with each DIRIS G gateway.

Comment: class B in radiated power is obtained using ferrites (ref. 4829 0048) with the following number of rounds:

- RS485: 1 round
- Ethernet: 2 rounds
- Power: 1 round

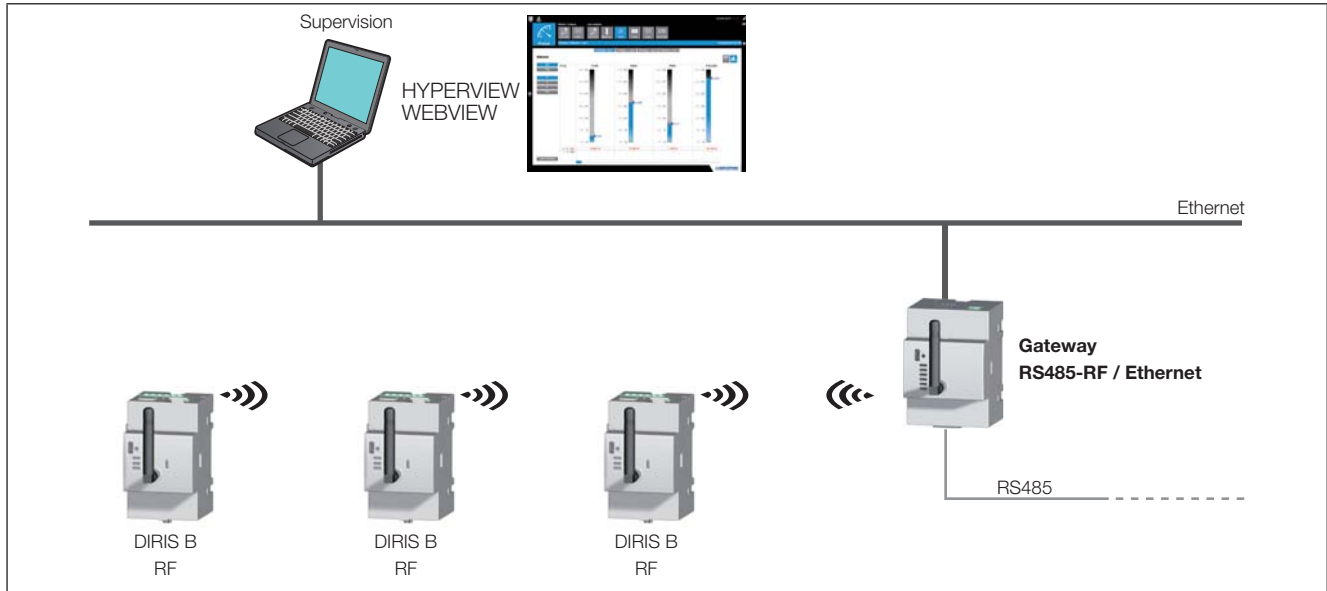
8.3. Radio-frequency (RF) rules

Wireless radio-frequency communication on the 868 MHz bandwidth is available on the DIRIS G-40 and G-60 gateways for communicating with the DIRIS B-30 in RF version (ref. 4829 0002).

These gateways collect data from the wireless DIRIS B-30 and also from the DIRIS B-30 or other products (COUNTIS, DIRIS...) with a RS485 link. This data can then be transferred to a PC via an Ethernet link with Modbus TCP protocol.

The DIRIS B-30 RF are particularly useful for using loads located in isolated, remote areas, without the need to set up a cabled communication link.

Example of an installation integrating DIRIS B-30 RF with a DIRIS G-40 or G-60 gateway:



8.3.1. Setting up

Only use antennae recommended by SOCOMEC.

The wireless gateway communicates over a distance of 300 metres in open-field conditions.

The permitted occupancy rate depends on the frequency used. The frequency is selected using the Easy Config configuration tool.

The table below describes the permitted occupancy rate based on the selected frequency and the resulting maximum number of DIRIS B-30 which can be connected.

Channel no.	Frequency (MHz)	Permitted occupancy rate	Maximum number of DIRIS B-30 connected
420	868.1000	1%	16
436	868.3000	1%	16
452	868.5000	1%	16
472	868.7500	0,10%	3
488	868.9500	0,10%	3
504	869.1500	0,10%	3
534*	869.5250	10%	32
539	869.5875	10%	32

According to EN300 220: radiated radio and REC7003 emissions: use of the RF 868 MHz bandwidth.

*Default channel.

Note: in order to observe a frequency spacing of 200 kHz, channels 534 and 539 cannot be used at the same time.

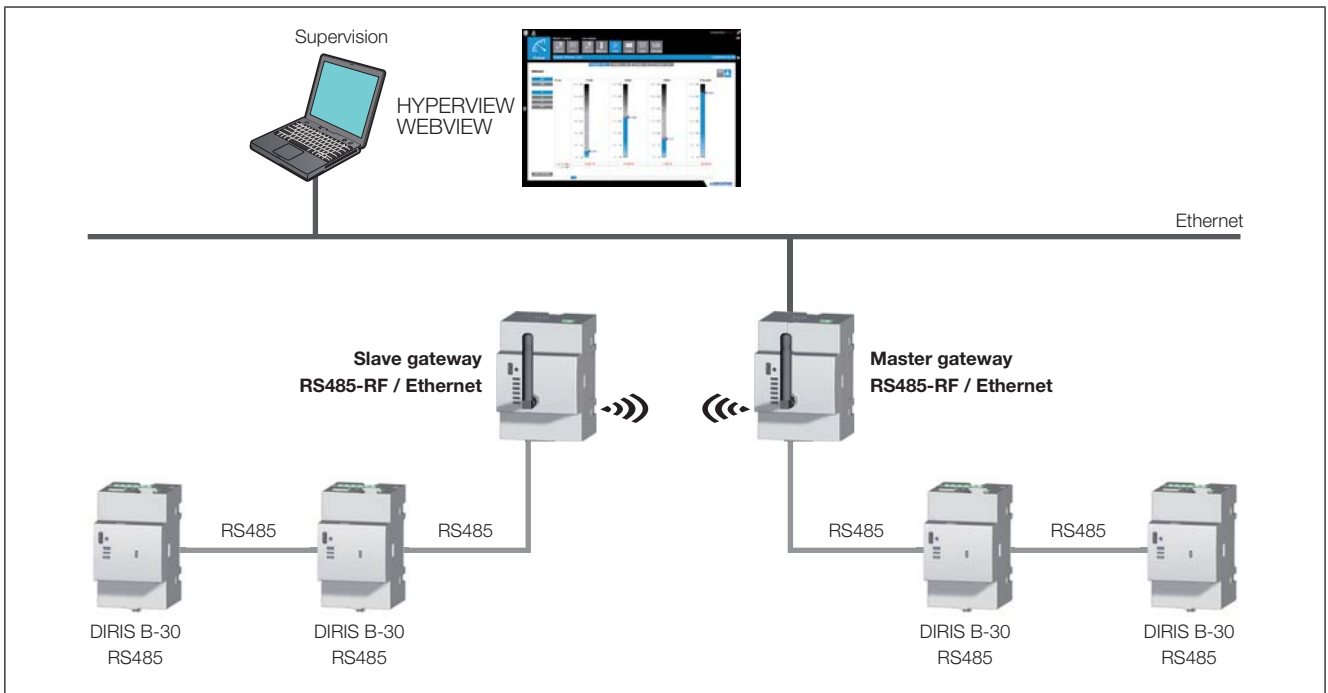
8.3.2. EC Declaration of Conformity

The EC Declaration of Conformity for the DIRIS G is available here:
www.socomec.com/en/diris-g



8.4. Multi-gateway communication

In this configuration, a slave RF gateway communicates with the master RF gateway.



8.5. Communication tables

The communication tables and the associated explanations are available on the documentation page for the DIRIS G-30, G-40, G-50 and G-60 on the website SOCOMECC at the following address:

www.socomec.com/en/diris-g



9. CONFIGURATION

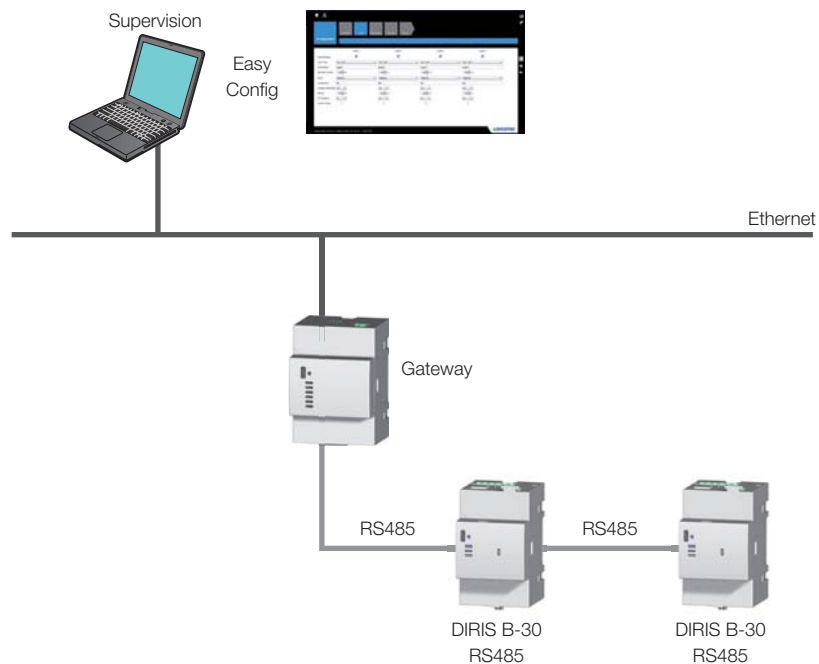
The gateway is configured via the Easy Config configuration software using Ethernet or USB. Easy Config must be installed before using the USB connection.

The Easy Config software is also used to configure the SOCOMEC products via Ethernet or USB via the gateway without having to individually connect to each of the products.

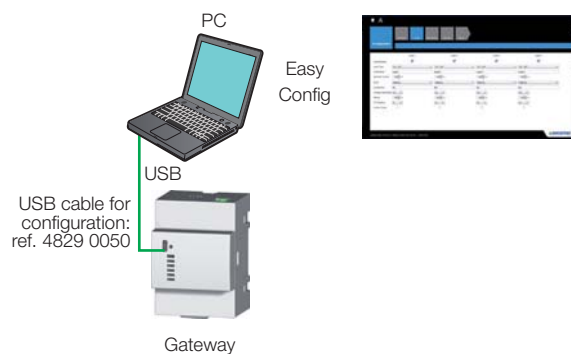
9.1. Configuration using Easy Config

9.1.1. Connection modes

Configuration using Easy Config (Ethernet)



Configuration using Easy Config directly (USB)



9.1.2. Time setting

From Easy Config, time setting is achieved from an SNTP server or manually. The time may be displayed on connected products automatically based on a configurable update schedule.

The screenshot displays the 'EASY CONFIG TOOL V2.2' interface for configuring time settings on a DIRIS G-30/G-40/G-50/G-60 device. The interface is organized into several sections:

- SNTP server settings:** Includes 'Activation' (Yes), 'SNTP server IP address' (0.0.0.0), and 'SNTP Server Port' (123).
- Slave Time Diffusion:** Includes 'Automatic slaves time update' (Yes), 'Gateway time update frequency' (60 s), and 'Slaves time update frequency' (30 s).
- Slaves Information Diffusion:** Includes 'Slaves load curve synchronisation method' (Disabled), 'Slaves load curve integration time' (15 Min), 'Slaves historical values synchronisation method' (Disabled), and 'Slaves historical values integration time' (60 Min).
- Date/Time:** Includes 'Time Zone' (UTC).

At the bottom of the configuration area, there are two options for sending the date/time to the device:

- Automatic:** Sync from PC Date/Time
- Manual:** 5/15/2014 3:04:28 PM Send

The interface also shows a 'Send Date/Time to device' button and a 'Profile Level : Super User' indicator.



So that all connected products display the same time, use the DIRIS G gateway or the multipoint DIRIS Digiware D-50 screen for synchronisation. Do not use the synchronisation function on a monopoint DIRIS D-30 screen as part of a multiproduct configuration.

10. CHARACTERISTICS

10.1. DIRIS G characteristics

10.1.1. Mechanical characteristics

Casing type	DIN-rail mounting module and base
Casing protection index	IP20 / IK06
Index of protection of front side	IP40 on the nose in modular assembly / IK08
Weight	DIRIS G-30, G-50 = 190 g DIRIS G-40, G-60 = 215 g

10.1.2. Electrical characteristics

Power supply	
Alternative voltage	110-230 VAC $\pm 15\%$ (Ph/N or Ph/Ph) Cat III
Frequency	50/60 Hz
Consumption	6VA
Battery	CR 1220 3 V lithium button cell battery
Connection	Removable spring-cage terminal block, 2x 2 positions, 0.5 ... 2.5 mm ² solid cable or 0.25 ... 1.5 mm ² stranded cable with end piece

10.1.3. Input characteristics

Input	
Number	1
Type / Power supply	Optocoupler internal (12VDC $\pm 10\%$) or external (10-30VDC $\pm 10\%$) polarisation
Input function	Logic status, pulse meter or synchronization pulse status
Connection	Removable screw terminal block, 2 positions, stranded or solid 0.14 ... 1.5 mm ² cable

10.1.4. Communication specifications

DIRIS G	
Connection	RS485
Connection type	2 ... 3 half duplex wires
Protocol	Modbus RTU
Data rate	2400 ... 115200 bauds
Function	Communication with PMDs and meters
Connection	Removable screw terminal block, 2 positions, stranded or solid 0.14 ... 1.5 mm ² cable
DIRIS G-40 and DIRIS G-60	
Connection	Radio-frequency (RF)
Frequency range	868 MHz (low frequency: 868.1 MHz and high: 869.5875 MHz)
Speed	38400 bauds
Function	Communication with DIRIS B-30 RF
Range	300m in free field
Ethernet	

Connection	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
Clock	Internal
SNTP Protocol	Allows updating of the gateway from an NTP server. The gateway updates the connected PMD.
SMTP Protocol	Allows alarm email to be sent from the gateway
Function	Configuration of the gateway, PMDs and connected meters Access to the WEBVIEW web server, centralization of data for a supervisor
Connection	RJ45 connector - Straight-through or crossover cable
USB	
Connection type	USB 2 (required installation of Easy Config)
Protocol	Modbus RTU on USB
Function	Configuration of the gateway, PMDs and connected meters
Connection	Type B micro USB connector

10.1.5. 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

10.1.6. Environmental specifications

Ambient service temperature	-10 ... +70°C (IEC 60068-2-1/IEC 60068-2-2)
Storage temperature	-25 ... +85°C (IEC 60068-2-1/IEC 60068-2-2)
Operating humidity	55°C / 97% RH (IEC 60068-2-30)
Operating altitude	< 2000 m
Vibration	1G of 10Hz to 100Hz
Rated impulse voltage	IEC 60947-1 V. IMP : 6.4kV
PEP ecopassport - ISO 14025	DIRIS G: SOCO-2014-02-v1-fr, SOCO-2014-02-v1-en

10.1.7. Electromagnetic compatibility

Immunity to electrostatic discharges	IEC 61000-4-2 LEVEL III
Immunity to radiated radio-frequency fields	IEC 61000-4-3 LEVEL III
Immunity to electrical fast transients/bursts	IEC 61000-4-4 LEVEL IV
Immunity to impulse waves	IEC 61000-4-5 LEVEL IV
Immunity to conducted disturbances	IEC 61000-4-6 LEVEL III
Immunity to power frequency magnetic fields	IEC 61000-4-8 400A/m LEVEL IVt
Conducted emissions	CISPR 11 Group1 - CLASS B
Radiated emissions	CISPR11 Gr :1 - CLASS B (with external ferrites - ref. 4829 0048)
Immunity to voltage dips and short interruptions	IEC 61000-4-11 LEVEL III

10.1.8. Safety

Safety	Compliance with Low Voltage Directive 2006/95/EC of 12th December 2006 (EN 61010-1:2010)
Insulation	Installation category III (300VAC Ph/N), degree of pollution 2

10.1.9. Service life

MTTF (mean time to failure)	> 100 years
-----------------------------	-------------

10.2. DIRIS O optional modules characteristics

Mechanical characteristics	
Casing type	Modular for DIN rail mounting
Power supply⁽¹⁾	
Alternative voltage	110-230 VAC \pm 15 %
Frequency	50/60 Hz
Connection	Removable spring-cage terminal block, 2x 2 positions, 0.5 ... 2.5 mm ² solid cable or 0.25 ... 1.5 mm ² stranded cable with end piece
<i>(1) No power supply to DIRIS O-it.</i>	
DIRIS O-iod - 2 digital inputs/2 digital outputs	
Number of inputs	2 per optional module - 4 optional modules max.
Type	Optocoupler internal (12VDC \pm 10%) or external (10-30VDC \pm 10%) polarisation
Function	Logic status or pulse meter
Input connection	Removable screw terminal block, 4 positions, stranded or solid 0.14 ... 1.5 mm ² cable
Number of outputs	2 per optional module - 4 optional modules max.
Type	Relay / 230V \pm 15 % - 1A
Function	Configurable alarm (current, power,...) on threshold overruns or remote controlled status
Output connections	2 removable screw terminal blocks, 2 x 2 positions, stranded or solid 0.14 ... 1.5 mm ² cable
DIRIS O-ioa - 2 analogue inputs/2 analogue outputs	
Number of inputs	2 per optional module - 4 optional modules max.
Type	4-20 mA
Function	Connection of analogue sensors (pressure, humidity, temperature, etc.)
Input connections	Removable screw terminal block, 4 positions, stranded or solid 0.14 ... 1.5 mm ² cable
Number of outputs	2 per optional module - 4 optional modules max.
Type	4-20 mA
Function	Transmission of an image of the measurements (power, currents, etc.) to automated machines.
Output connection	Removable screw terminal block, stranded or solid 0.14 ... 1.5 mm ² cable
DIRIS O-it - 3 temperature inputs	
Number of inputs	3 external inputs + 1 ambient measurement Max 1 optional module
Dynamic	-20 °C to 150 °C
Type	PT100 or PT1000
Function of inputs 1, 2 and 3	Temperature measurement.
Connection	3 removable screw terminal blocks, 4 x 2 positions, stranded or solid 0.14 ... 1.5 mm ² cable



542 872 B - EN - 11/14