DIRIS A-30/A-41/A-60

ETHERNET®

EN Operating instructions

socomec

Innovative Power Solutions

Contents

PRELIMINARY OPERATIONS 4
GENERAL INFORMATION 4
INSTALLATION 5
CONNECTION 5
VISUAL DIAGNOSTIC 6
PROGRAMMING 7
ETHERNET CONFIGURATION ON DIRIS A-30/A-41/A-60 7
IP ADDRESS 8
MASK 11
GATEWAY 11
DHCP 12
ENVIRONMENTAL CONDITIONS AND TYPE OF TEST 13
INTERFACE SPECIFICATIONS: SUPPLY 13
RS485 13
ETHERNET 13
COMMUNICATION 14
COMMUNICATION TABLE 14

PRELIMINARY OPERATIONS

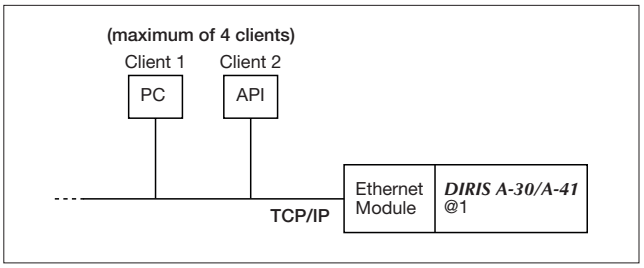
For personnel and product safety please read the contents of these operating instructions carefully before connecting.
Check the following points as soon as you receive the ***DIRIS A-30/A-41/A-60*** package:
• the packing is in good condition,
• the product has not been damaged during transit,
• the product reference number conforms to your order,
• the package contains the product and the operating instructions.

GENERAL INFORMATION

Functions

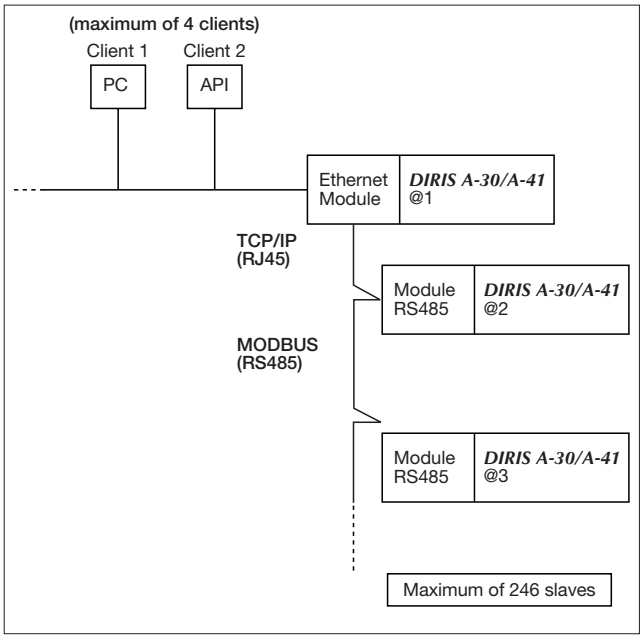
The optional Ethernet module is linked to the ***DIRIS A-30/A-41/A-60*** (ref. 48250402, 48250403, 48250404, 48250405, 48250406) and enables connections to be made to a 10BaseT or 100BaseT type network. It also enables the ***DIRIS*** measurement units to be used and monitored from a PC or an API.

The module is available in 2 versions:
• **ETHERNET MODULE – Ref. 48250203:**
> Link to an RJ45 connection.
> MODBUS TCP or MODBUS RTU Protocol with TCP.



• **ETHERNET MODULE WITH MODBUS RTU GATEWAY – Ref. 48250204:**
> MODBUS master gateway with RS485 3-point link with TCP.
> MODBUS TCP and MODBUS RTU protocols.

The gateway in this version enables the module to be used as a master gateway for a Jbus/Modbus network on RS485 with a maximum of 246 slaves. To do this, a Jbus/Modbus address other than 255 needs to be configured.



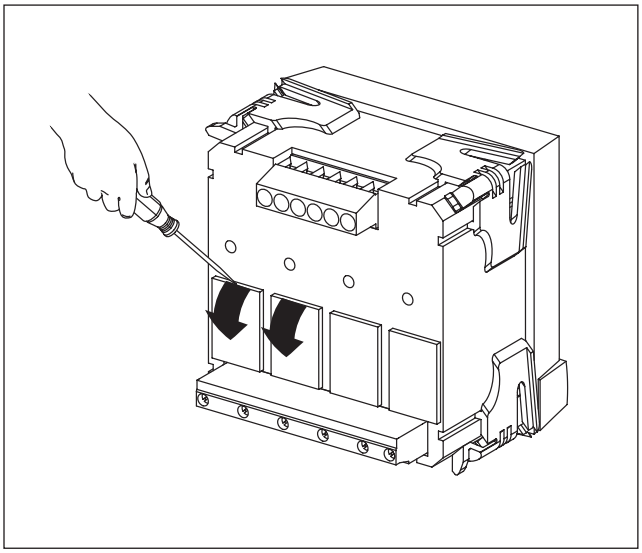
INSTALLATION

CONNECTION

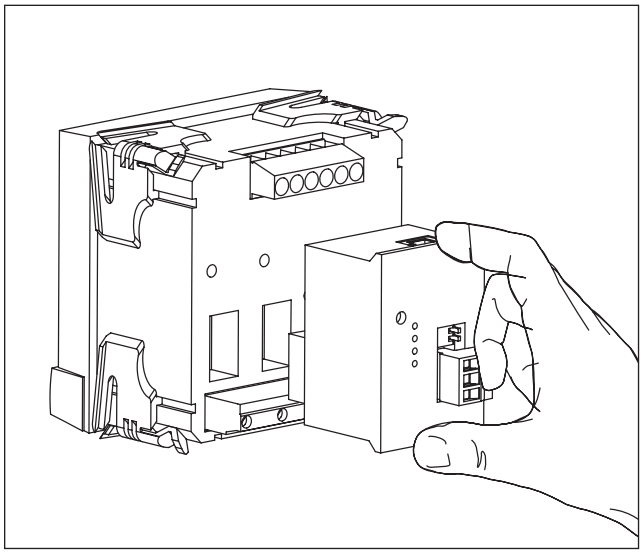
The module is fitted onto the back of the ***DIRIS A-30/A-41/A-60*** in one of the 4 positions provided.

The *DIRIS A-30/A-41/A-60* must be switched off

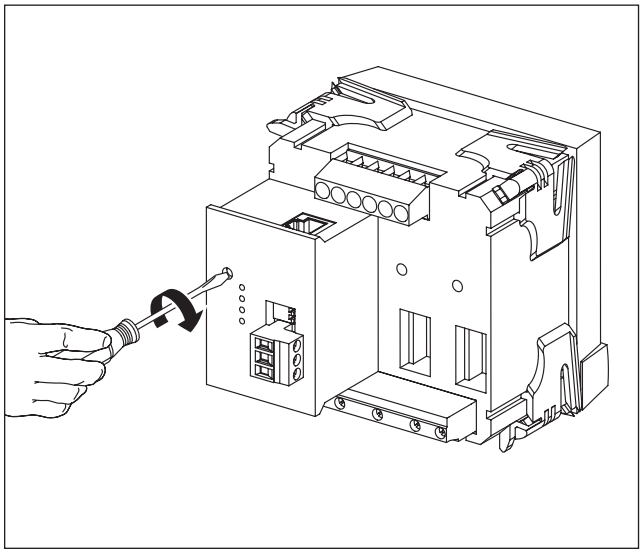
1



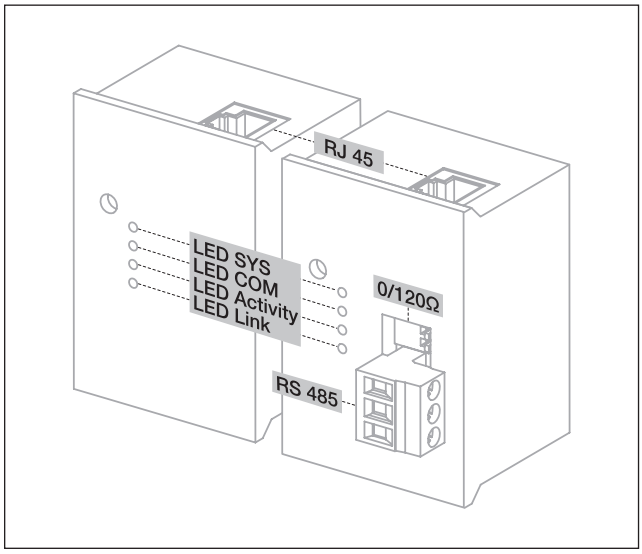
2 Fix the module in one of the four positions.



3



4 Follow indications when connecting the terminal. Switch on voltage supply.



VISUAL DIAGNOSTIC

> LED indicators

LED	Colour	Status	Description
SYS	-	NOT LIT	No internal electrical supply Firmware is re-initialising Hardware is faulty
	Yellow	LIT	Loading phase of the software, waiting to start
		FLASHING AT 1Hz	Error during the start-up phase
	Green	LIT	Operating system functioning
COM	Red	NOT LIT	No errors
		FLASHING	Not used
		LIT	Internal JBUS error
	Green	NOT LIT	See red LED
		FLASHING	JBUS external error
		LIT	No error, fully functional
Link	Green	NOT LIT	No connection to the Ethernet network
		LIT	Ethernet Network connected
Activity	Yellow	FLASHING	Sending/receiving Ethernet frames

PROGRAMMING

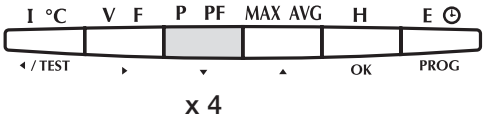
ETHERNET CONFIGURATION ON DIRIS A-30/A-41/A-60

This involves setting up the IP parameters for the *DIRIS* connected to the gateway

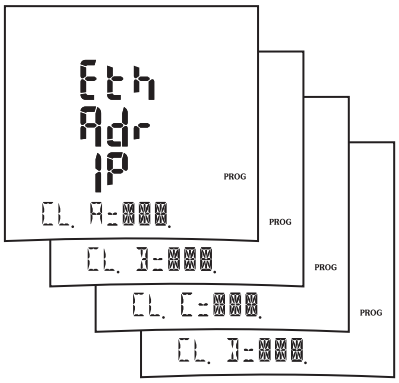
IP address (Rth Adr IP) :
[CLASS A].[CLASS B].[CLASS C].[CLASS D]
Subnet mask (Eth MASH) :
[CLASS A].[CLASS B].[CLASS C].[CLASS D]
Gateway (Eth GATE) :
[CLASS A].[CLASS B].[CLASS C].[CLASS D]
DHCP activation (Eth DHCP) : Yes/ No

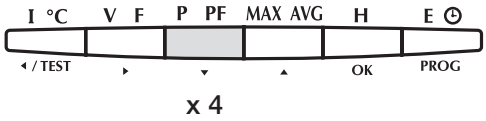
The factory setting is:

- **IP address:** 192.168.1.1
- **Subnet mask:** 255.255.255.0
- **Gateway:** 0.0.0.0
- **DHCP activation:** NO

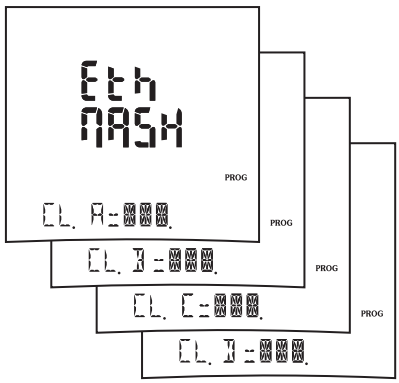


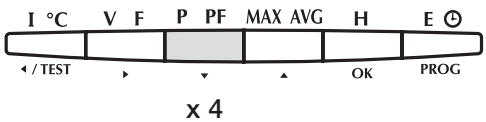
x 4



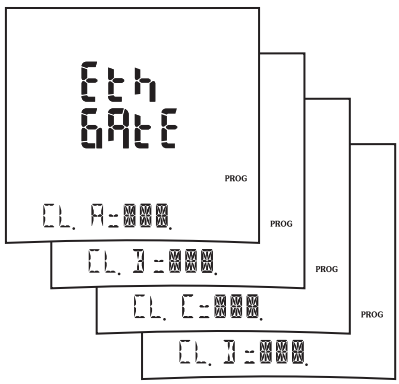


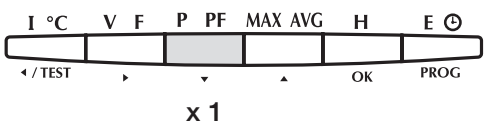
x 4



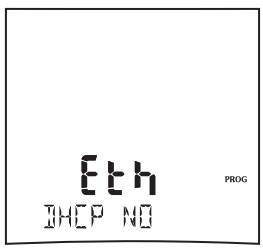


x 4





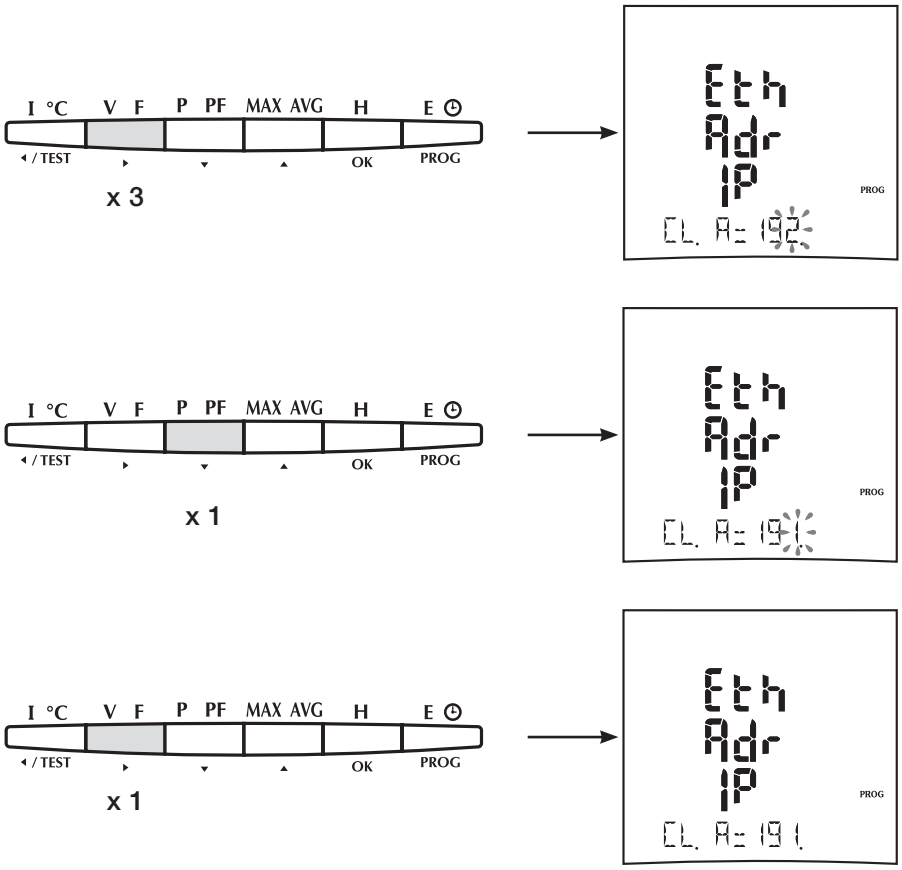
x 1



PROGRAMMING

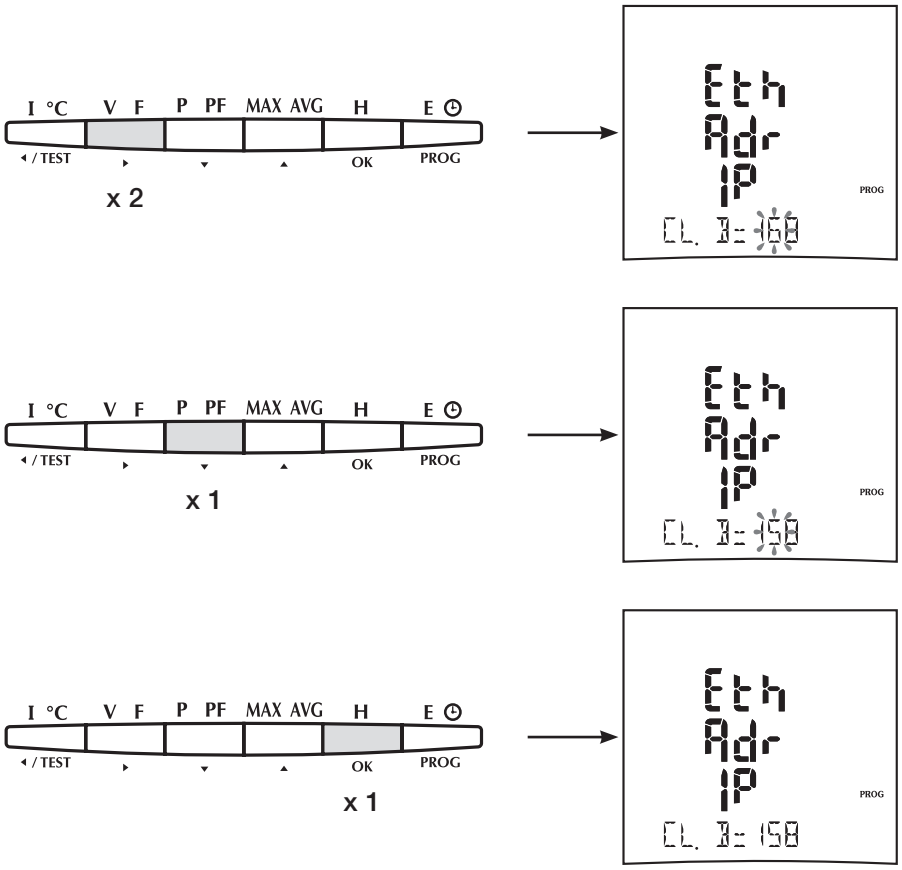
ADRESSE IP :

> **For example: Programming the address 191.158.1.7**
> **CLASS A = 191**



ADRESSE IP :

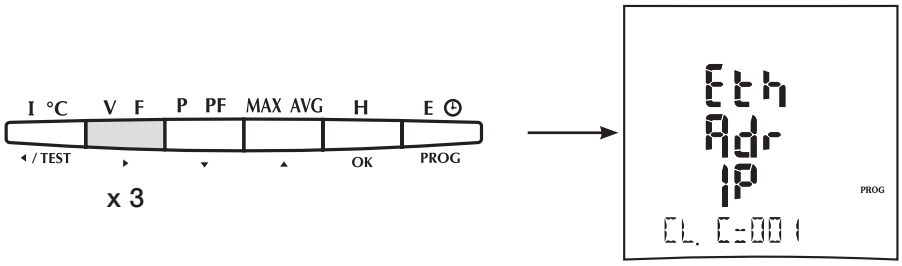
> **For example: Programming the address 191.158.1.7**
CLASS D = 158



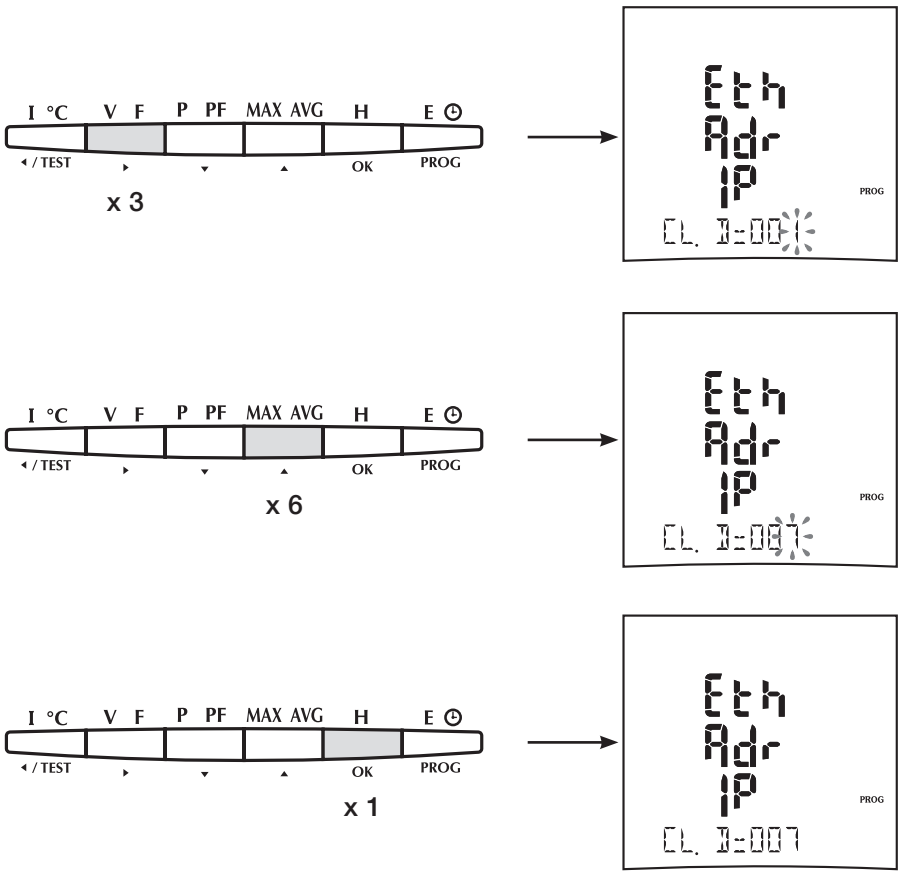
PROGRAMMING

ADRESSE IP :

> For example: Programming the address 191.158.1.7
CLASS C = 1

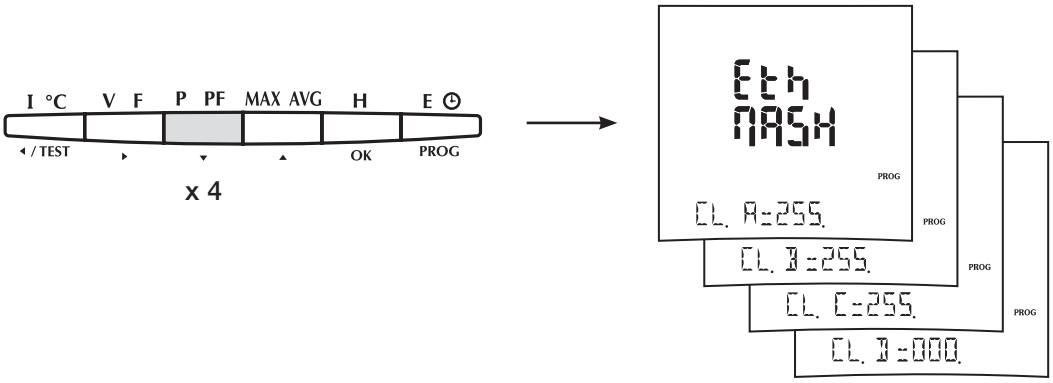


> For example: Programming the address 191.158.1.7
CLASS C = 7



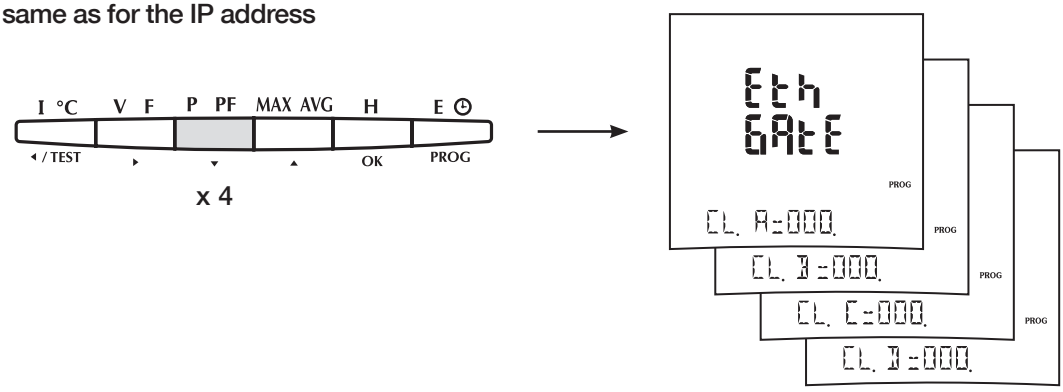
MASQUE:

> **For example: 255.255.255.0**
The principle is the same as for the IP address



GATEWAY:

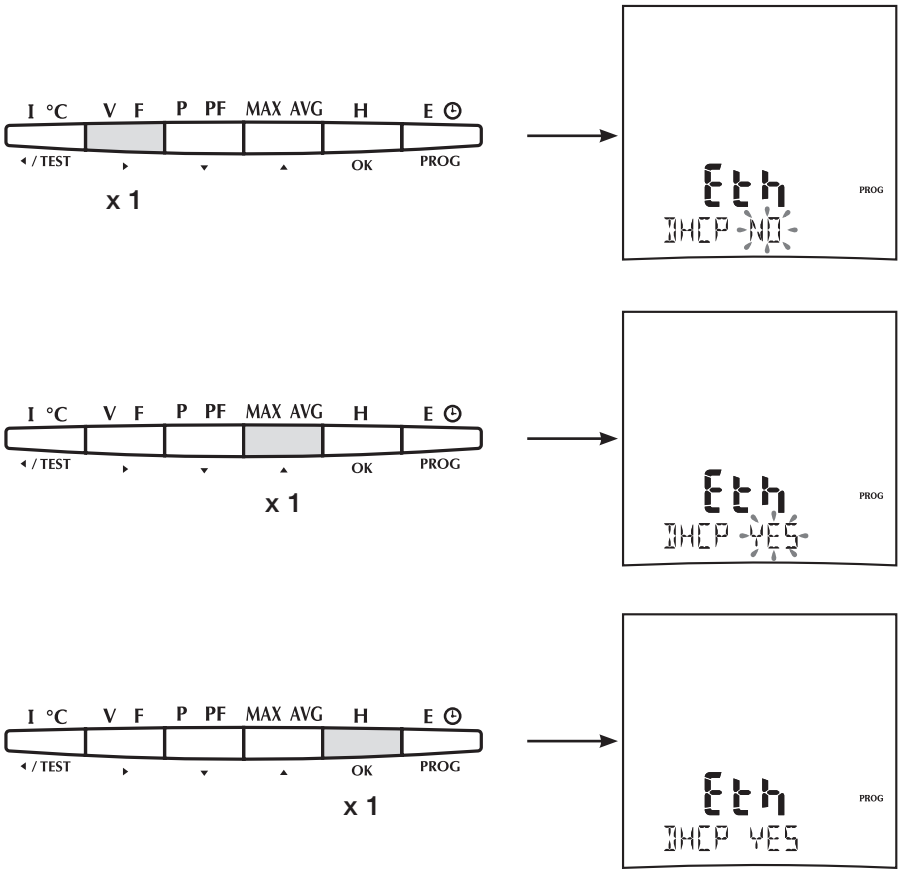
> **For example: 0.0.0.0**
The principle is the same as for the IP address



PROGRAMMING

DHCP :

> ***WARNING: The DHCP function is not recommended.***
> ***Contact your IT networks administrator.***



ENVIRONMENTAL CONDITIONS AND TYPE OF TEST

> Electromagnetic compatibility:

Description	Standard	Level
Electrostatic discharge	IEC 61000-4-2	4 kV contact 8 kV air
Modulated A electromagnetic radiation	IEC 61000-4-3	10 V/m (80 MHz – 1 GHz) 3 V/m (1,4 GHz – 2 GHz) 1 V/m (2,0 GHz – 2,7 GHz)
Magnetic fields frequency factor	IEC 61000-4-8	50 Hz / 60 Hz 30 A/m
Rapid transients in bursts	IEC 61000-4-4	1 kV
Impulse waves (lightning)	IEC 61000-4-5	1 kV
Injection of HF current	IEC 61000-4-6	150 KHz – 80 MHz 80% AM, 1 KHz sinusoidal wave 1,5 x 10E-3 decade/s 3 V

> Environmental:

Operational temperature	-25 to +70°C
Storage temperature	-40 to +70°C

INTERFACE SPECIFICATIONS: SUPPLY

Supply voltage (from the ***DIRIS***)	+ 9 VDC
Consumption	Between 1.3 and 1.7 W

UL-CSA APPROVAL

Standard	UL 61010-1 CSA-C22.2 No. 61010-1
Certificate	UL file No: E257746

RS485

Electrical specification	RS485 EIA 3-wire half duplex
Transmission speed	38,4 kBit/s
Stop bit	2
Parity	without
Maximum number of slaves	246

ETHERNET

Electrical specification	RJ45 Norme IEE 3-wire
Transmission speed	10MBits/s or 100MBits/s
Protocol	Modbus/TCP or Jbus/Modbus RTU with TCP

COMMUNICATION

COMMUNICATION TABLE

DIRIS A-30

DIRIS A-41

DIRIS A-60

536181C

HEAD OFFICE

SOCOMEC GROUP
SAS SOCOMEC capital 10 633 100 €
R.C.S. Strasbourg B 548 500 149
B.P. 60010 - 1, rue de Westhouse
F-67235 Benfeld Cedex
Tel. +33 3 88 57 41 41 - Fax +33 3 88 57 78 78
info.scp.isd@socomec.com

www.socomec.com

YOUR DISTRIBUTOR / PARTNER

ENERGY SPECIALIST SINCE 1922

socomec
Innovative Power Solutions

Non contractual document. © 2018, Socomec SAS. All rights reserved.