always ON

Communications manual

ZGR VERSATILE

ZGR INFLUENCE 10-180K

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Three-phase online UPS

www.zigor.com

INDEX

1 PRECAUTIONS

1.1 General precautions

For your own safety and that of the unit, you must read and understand the instructions contained in this document before starting work.

Keep these instructions in a place accessible to all the personnel who work with the unit so that they can be consulted.

Only expert and duly authorised personnel may operate our units.

Danger warnings. When handling or accessing the interior of the UPS, please remember that some parts may be live. Pay special attention to soldering points, printed circuits, connecting terminals, relay contacts, etc. Before opening the equipment, disconnect the voltage of all poles (both alternating and direct) and wait at least 5 minutes for the internal condensers to discharge.

Arbitrary modifications are forbidden. The unit must not be subjected to any modification regarding its construction or safety without **ZIGOR's** express consent. Any modification will free **ZIGOR** of any responsibility for any damage caused as a result of the modification. In particular, all repair work, soldering of printed circuit boards and replacing of components, modules and printed circuit boards, without the express authorisation of **ZIGOR**, is forbidden. Should spare parts be used, only ZIGOR original parts shall be utilised.

Use the unit for the purpose for which it was designed. The system supplied must be used only for the purpose for which it was designed. Any other use is strictly forbidden. **ZIGOR** cannot accept responsibility for any damage that might result from its use for any other purpose. In such cases, the user shall assume exclusive responsibility for any risk. The use for which the unit was designed is defined in the documentation. The system shall be exposed only to admissible environmental conditions. These are defined in the technical details provided for the equipment.

ZIGOR accepts no responsibility for any inadequate, negligent or incorrect installation of the equipment.

WARNING

This supply equipment contains a lethal voltage comply with the instructions set out in this manual to avoid any risk of electrical shock.

Please follow the indications set out below to operate under conditions of complete safety:

- The System must be checked once the installation has been completed by a qualified technician and before being put into operation. Should these indications not be adhered to, the warranty shall be considered null and void.

There is a risk of electric shock, do not remove the protective cover of the UPS.

- These units do not contain parts usable for other purposes by the user.
- If any liquid is spilt accidentally on the System, disconnect this and consult **ZIGOR** personnel.
- Should you have any problems with the contents of this manual, you must ask **ZIGOR** for assistance.

1.2 Environmental precautions

Dispose of the packaging in an ecological way: *ZIGOR, based on the exceptions detailed in the First Additional Provision of Law 11/1997 on commercial or industrial packaging, informs that the final holder of the waste of used containers and packaging, as responsible for them, you must deliver them in appropriate conditions for reuse, to an authorized recuperator, recycler or re-valuer.*

The subsets of the system are recyclable products and cannot be treated as household / municipal waste at the end of its useful life.

To preserve the environment, manage them in accordance with current environmental regulations and requirements in each country or community. In case of doubt, consult the manufacturer.

Correct product disposal: *This electrical-electronic device (AEE) is marked with the symbol of compliance with the European Directive 2012/19 / EU (WEEE) regarding used electrical and electronic equipment (Waste electrical and electronic equipment WEEE, RD 110/2015).*

The Directive provides the general framework valid throughout the European Union for the removal and reuse of waste from EEE.

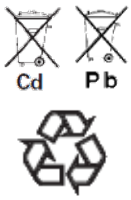
To dispose of this product and ensure its proper management, follow the current local environmental legislation and regulations. In this way it will contribute to conserve the environment.

The wheeled bin crossed out on the product, in the documentation or on its packaging, means that the electrical-electronic devices and batteries must be collected separately at the end of their life cycle.

Before the deposit of the RAEE in their collection facilities, the batteries must be removed and deposited separately from the rest of the RAEE for proper management, according to the current local legislation and environmental regulations.

Never dispose of with household waste. In this way it will help preserve the environment.

These symbols are valid in the European Union and in those places where separate collection systems are available.



Correct disposal of batteries: *Used batteries are reusable consumer products and a recycling process must be carried out.*

Used batteries that do not go through the recycling process must be disposed of according to the instructions regarding special waste, in accordance with the regulations and environmental requirements in force in each country or community. This requirement applies in the European Union and in those places where separate collection systems are available.

In case of doubt, consult the manufacturer.

In this way it will contribute to conserve the environment.

2 GENERAL MODBUS TCP TABLE

Function Code 03 - Read holding Registers

Battery Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES
40100	0099	UWORD	Battery Voltage	VDC
40101	0100	UWORD	Battery Capacity	0-100%
40102	0101	UWORD	Battery Time Remain	Minutes
40103	0102	UWORD	Battery Current	x0.1 A

Input Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES
40110	0109	UWORD	Input Frequency	x0.1 Hz
40111	0110	UWORD	Input Voltage R	x0.1 VAC
40112	0111	UWORD	Input Voltage S	x0.1 VAC
40113	0112	UWORD	Input Voltage T	x0.1 VAC

Output Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES
40120	0119	UWORD	Output Frequency	x0.1 Hz
40121	0120	UWORD	Output Voltage R	x0.1 VAC (Output Voltage in 3Ph/1Ph model)
40122	0121	UWORD	Output Voltage S	x0.1 VAC (equiv. to register 40124 in 3Ph/1Ph model)
40123	0122	UWORD	Output Voltage T	x0.1 VAC (equiv. to register 40101 in 3Ph/1Ph model)
40124	0123	UWORD	Output Load Percentage R	x0.1 % (Output Load in 3Ph/1Ph model)
40125	0124	UWORD	Output Load Percentage S	x0.1 % (Not available in 3Ph/1Ph model)
40126	0125	UWORD	Output Load Percentage T	x0.1 % (Not available in 3Ph/1Ph model)

Bypass Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES
40130	0129	UWORD	Bypass Source Frequency	x0.1 Hz
40131	0130	UWORD	Bypass Source Voltage R	x0.1 VAC
40132	0131	UWORD	Bypass Source Voltage S	x0.1 VAC
40133	0132	UWORD	Bypass Source Voltage T	x0.1 VAC

UPS Status Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES	
40140	0139	UWORD	DC and Rectifier Status RecRotError	Integer Value:	(14) yes (16) no
40141	0140	UWORD	DC and Rectifier Status LowBatteryShutdown	Integer Value:	(14) yes (16) no
40142	0141	UWORD	DC and Rectifier Status LowBattery	Integer Value:	(14) yes (16) no
40143	0142	UWORD	DC and Rectifier Status InAndOut	Integer Value:	(2) threeInOneOut (3) threeInThreeOut
40144	0143	UWORD	DC and Rectifier Status BatteryStatus	Integer Value:	(4) backup (5) acnormal
40145	0144	UWORD	DC and Rectifier Status ChargeStatus	Integer Value:	(6) boost (7) float (16) no
40146	0145	UWORD	DC and Rectifier Status RecOperating	Integer Value:	(14) yes (16) no
40147	0146	UWORD	UPS Status Bypass Freqency Fail	Integer Value: yes(14),no(16)	(14) yes (16) no
40148	0147	UWORD	UPS Status Manual Bypass Breaker	Integer Value:	(8) close (9) open
40149	0148	UWORD	UPS Status AC Status	Integer Value:	(10) normal (11) abnormal
40150	0149	UWORD	UPS Status Static Switch Mode	Integer Value:	(12) invermode (13) bypassmode
40151	0150	UWORD	UPS Status Inverter Operating	Integer Value:	(14) yes (16) no

Fault Status Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES	
40160	0159	UWORD	Fault Status Emergency Stop	Integer Value:	(14) yes (16) no

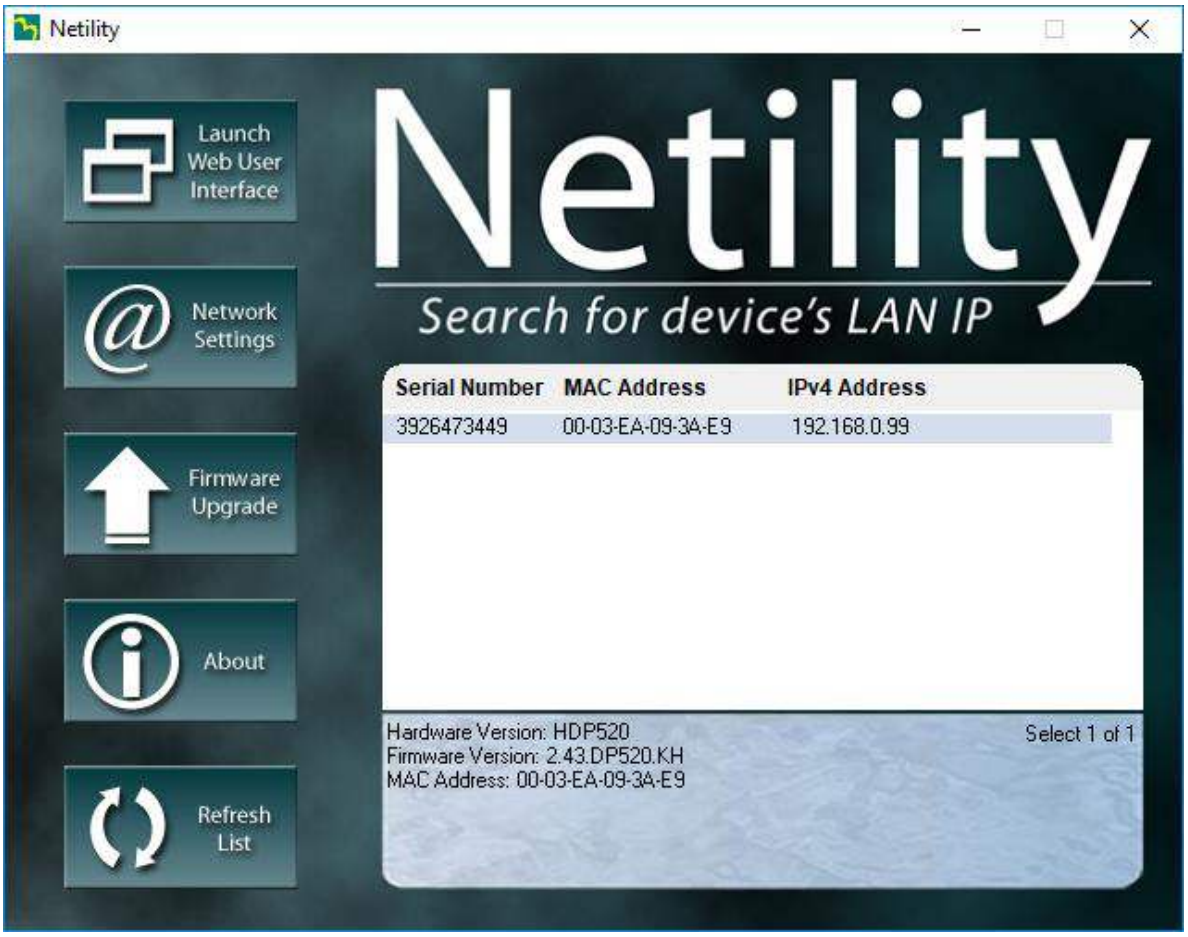
40161	0160	UWORD	Fault Status High DC Shutdown	Integer Value:	(14) yes (16) no
40162	0161	UWORD	Fault Status Bypass Breaker	Integer Value:	(14) yes (16) no
40163	0162	UWORD	Fault Status Over Load	Integer Value:	(14) yes (16) no
40164	0163	UWORD	Fault Status Inverter Output Fail	Integer Value:	(14) yes (16) no
40165	0164	UWORD	Fault Status Over Temperature	Integer Value:	(14) yes (16) no
40166	0165	UWORD	Fault Status Short Circuit	Integer Value:	(14) yes (16) no

Rating Group

REGISTER	QUERY ADDRS	SIZE	MEASUREMENT	NOTES
40170 - 40176	0169 - 0175	14 char	Rating Rectifier Voltage	14 characters
40177	0176	UWORD	Rating Rectifier Frequency	Hz
40178 - 40184	0177 - 0183	14 char	Rating Source Bypass Voltage	14 characters
40185	0184	UWORD	Rating Bypass Source Frequency	Hz
40186 - 40192	0185 - 0191	14 char	Rating Output Voltage	14 characters
40193	0192	UWORD	Rating Output Frequency	Hz
40194	0193	UWORD	Rating Battery Voltage	VDC
40195 - 40199	0194 - 0198	10 char	Rating Power	10 characters

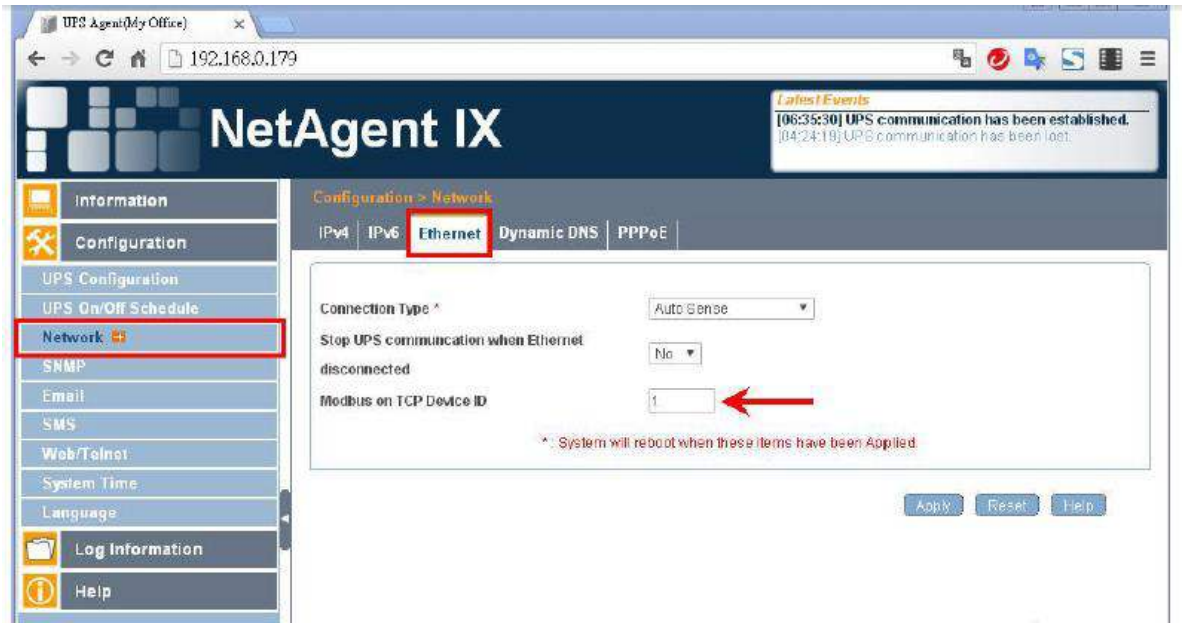
3 HOW TO DISCOVER YOUR SNMP/MODBUS TCP CARD IP

- Run Netility software with Administrator privileges.
- It will search your network for compatible cards.
- You will see detected cards info, firmware version and DHCP assigned IP.



4 How to set device Modbus ID

- Access to SNMP/Modbus TCP webpage through your preferred Internet browser.
- Follow to CONFIGURATION / Network setting.
- Under Ethernet tab set your desired Modbus ID.
- You can check communication with your preferred software/SCADA using standard TCP 502 port.



Zigor Corporación
Portal de Gamarra 28- 01013
Vitoria-Álava/ Spain
+34 945 21 46 00
www.zigor.com

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Refer to our website in order to contact the commercial branches network