

ATEQ VT620 Version 1.0





www.ateq-tpms.com

Reference: UM-JS1AI1-01-10-EN



REVISION OF USER MANUAL VT620

We continuously work on improving our products. This is why the information contained in this user manual, the tool and its technical specifications may be modified without notice.

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1. SAFETY RECOMMENDATIONS

1.1 Electromagnetic field emission device



This device emits electromagnetic fields. Its use and access to it must be regulated.

No electromagnetic field is produced when the device is not transmitting. So there is no exposure during this period. Access (exposure zones) need only to be limited during the transmission period.

It is imperative that exposure zones around the device antenna are defined. There are four such zones:

- Zone A: access prohibited, except by special arrangement.
- Zone B: strictly limited access.
- > Zone C: limited access (work area).
- > Zone D: free access (public zone).
- Public zone: \leq 5 A/m (zone D)
- Work zone: ≤ 25 A/m (Zone C)



1.2 Standards and references

Installation must be carried out according to industry regulations and standard AFNOR UTE C99-111 (October 2002).



1.3 Safety

In the device menu, "Safety" mode prevents the starting of any cycle by pressing "Start cycle" on the front. You are advised to leave this function activated.

Please note that ATEQ will not be held liable for any accident connected with the misuse of the measuring instrument or with a failure to comply with the safety regulations in force when installing the device.

1.4 Definition of the VT620 unit and its antenna

The purpose of this device is to activate the TPMS/TMS sensors mounted in the wheels in order to recover and record their data.

- The VT620 can also program TPMS/TMS sensors.
- The device interacts with the sensors without contact.



2. TECHNICAL SPECIFICATIONS VT620

2.1.1.VT620 device specifications

| | VT620 |
|-------------------------------|--|
| Dimensions H x L x D (mm): | 400 x 300 x 132 |
| Power supply | 90V-230V DC stabilized (+/- 0.5 V) 2.5 A min. |
| Weight (kg): | Approx. 2.5 |
| Temperature | |
| operation | +10°C to +45°C |
| storage | 0°C to +60°C |

2.1.2. Dimensions





2.2. Technical specifications of the universal antenna

2.2.1. Specifications





2.2.2. Antennas

The universal antenna comprises three different types of transmitting antennas and one receiving antenna.

- Transmitting antenna Axial LF (CW Continuous Wave),
- Transmitting antenna Axial LF (Modulated),
- Transmitting antenna Radial (Tangent).
- Receiving antenna RF (315 & 433 MHz)
- The Axial antenna is recommended when the antenna of the TPMS sensor in the wheel is oriented perpendicular to the antenna pane of the VT620.



The Radial antenna is recommended when the antenna of the TPMS sensor in the wheel is oriented parallel to the antenna pane of the VT620.



2.2.3. Radio frequencies used

- The transmission and activation frequency is: 125 kHz (LF).
- The current reception frequencies are: 433 and 315 MHz (RF) and their derivatives.

Other frequencies are also available on request.



3. DEVICE DESCRIPTION

3.1. Kit contents



- VT620 device
- Mains power cable
- User manual

Optional

- Communication gateways:
 - Profibus
 - \circ Profinet
 - \circ Devicenet

Accessories

- Universal programming antenna
- Mini antenna

3.2. Description of the VT620

The ATEQ VT620 unit is made of molded plastic. The top cover is attached to the main body by six screws.



4. USER INTERFACE

4.1. Overview of VT620 front panel



4.2. Overview of keypad functions

4.2.1.Control keys

| Keys | Functions |
|--------------------|---|
| | Scroll upIncrease a number |
| \bigtriangledown | Scroll downDecrease a number |
| | Scroll left |
| | Scroll right |



| οκ | OK/Enter Opens the SETTINGS menu by pressing for three seconds. |
|----|---|
| С | C for CANCEL Back to previous menu Back to previous function Exit with no change Stop current cycle |
| (1 | Start a measurement cycle |

4.3. Overview of the VT620 back panel



4.3.1.On/Off switch



- I: On
- **O**: Off

4.3.2. Power supply



• The **ATEQ VT620** operates at a voltage between 84V and 260V AC.

4.3.3. Reception antenna ports (J1 & J2)





- Two BNC co-axial ports (315 MHz and 433 MHz)
- **J1** is the 315 MHz antenna port
- **J2** is the 433 MHz antenna port

4.3.4.USB port (J3)

The USB port connects the VT620 to a PC in order to carry out software updates.

4.3.5.RJ45 port (J4)

If the Profinet or Profibus option has been added, the RJ45 port connects the VT620 to the factory PLC.

4.3.6. Transmission antenna link port (J5)



• Note: A 5 m cable is supplied with the antenna.

4.4. Display screen and indicator lights

4.4.1.LCD display



• LCD display for monitoring the current cycle and adjusting the device settings.



4.4.2. Indicator lights

| FAIL PASS | TRANSMISSION indicator → Flashes when LF transmission is in progress. |
|--------------|--|
| FAIL PASS | PASS indicator → Lights up when a sensor has responded. |
| FAIL PASS | FAIL indicator → Lights up when no sensor is detected. The sensor has a set time to respond (the time is set by the selected program). If the VT620 has received no response after this time, the message "COM ERROR. PLEASE TRY AGAIN" is displayed. Action: Check that the selected program is compatible with the sensor you want to read. |



5. INSTALLATION RECOMMENDATIONS

Installing the ATEQ universal antenna in an industrial environment requires certain precautions to be taken. The electromagnetic field generated by this antenna (125 kHz) may be weakened or modified by external factors that can impair its operation. The main precautions to be taken relate to fixing the device and the environment near the antenna.

For correct operation of the TPMS installation, avoid placing the VT620 and its antenna near equipment that can generate electrical or electromagnetic disturbance (motors, electronic drives, PLCs, PCs, etc.).

5.1. Fixing the antenna

The antenna structure is made from industrial aluminum profiles. These profiles are joined together by plastic blocks acting as insulation.



The insulation placed between each upright has to be maintained regardless of the fixing method. The antenna must not be fixed directly onto metal uprights or profiles. The uprights must not be electrically connected to each other. To fix the antenna without short-circuiting the uprights, use the plastic insulating brackets supplied.

5.2. Antenna environment

The proximity of metal components affects the electromagnetic field generated by the antenna. If possible, do not install metal components in the antenna field, i.e. less than 40 cm from either side of the antenna.

If there are no metal components nearby, the field generated by the antenna will be the same on both sides of the antenna.

5.3. Positioning the antennas



5.3.1. For automobile production

A VT620 instrument and an antenna are required on each side of the vehicle.

The operation entails activating each wheel of the vehicle. The following two configurations show the order of passing:



5.3.1.1. Typical vehicle sequence

- new vehicle detection,
- vehicle identification,
- wheel 1 detection,
- wheel 1 cycle start,
- wheel 1 ID reception,
- wheel 2 detection,
- wheel 2 cycle start,
- wheel 2 ID reception,
- wheel 3 detection,



- wheel 3 cycle start,
- wheel 3 ID reception,
- wheel 4 detection,
- wheel 4 cycle start,
- wheel 4 ID reception,
- vehicle end-of-passage detection,
- sending IDs to factory network.

Note: Case of line stop just after cycle start:

• the valve was activated > OK,

the valve cannot be activated because the wheel was not exposed long enough in front of the antenna > when the line restarts, the cycle start should be repeated until the sensor is activated.

5.3.1.2. Determining the antenna spacing

The antenna spacing is calculated as follows:



Using this calculation means the exposure time to LF radiation for each of the four wheels will be the same.

Note: If vehicles with different wheelbases are produced on the same line, an intermediate value should be used.



5.3.1.3. Distance between antenna and vehicle wheel

The recommended distance between the antenna and the vehicle wheel is 15 cm to 30 cm. Increasing this distance also increases the risk of activating sensors in another wheel of the vehicle at the same time.

The antenna should be installed at ground level – at the same height as the wheel – and the space in between antenna and vehicle must remain completely free.

5.3.1.4. Automation

The installation must be controlled by a PLC connected to a wheel passage detection system and to a vehicle identification system.

The PLC should be used to manage:

- photocells,
- choice of read/write program,
- vehicle identification,
- cycle start actions,
- collection of cycle results,
- sending read results to the factory network,
- information confirming that the line is running.

5.3.2. For wheel production plants

5.3.2.1. Distance between antenna and wheel

For a wheel conveyor system, the antenna is installed horizontally above the wheel. The ideal distance between antenna and wheel is 20 cm. If tires of different width are produced on the same line, an intermediate value should be used.

5.3.2.2. Automation

The installation must be controlled by a PLC connected to a wheel passage detection system.

The PLC should be used to manage:

- photocells,
- choice of read/write program,
- cycle start actions,
- collection of cycle results,
- sending read results to the factory network.

5.4. Positioning the ATEQ VT620

The standard link cable between the VT620 and antenna is 5 meters long. This length allows the device to be moved away from the antenna. The VT620 unit must not be installed in the antenna field.



If the antenna is installed in a zone with controlled access, the VT620 unit must be installed outside this zone for easy access to the settings.

6. STARTING AND ADJUSTING

6.1. Starting the ATEQ VT620

Connect the device to the mains with 84 ~ 240V AC. Power up the device. When the unit is powered up, the following screens are displayed:

| . ATEQ | When unit is turned on, the ATEQ screen is displayed for a few seconds. |
|---|---|
| JS1A11-01-18 | Then the software version screen is displayed for a few seconds. |
| Program 1: PAL Tire Data (FA) Get Sensor Identification RERDY | • Finally, the READY screen is displayed. |

6.2. Menu tree

6.2.1.Settings menu

Press the OK key for three seconds to access the Settings menu. This menu is for starting a cycle, changing the settings of the VT620, and creating, editing or deleting cycle programs. Here is the Settings menu tree.













7. USING THE VT620

7.1. Selecting a program

| From the main menu, press the right arrow to select the Settings menu, then press OK. | οκ | HREN HENU |
|--|------------|---|
| The Global Settings screen is displayed. Use the up or down arrows to select Run Program. Press OK. | OK | GLOBAL SETTINGS |
| The list of available programs is displayed. Please note : the programs available vary according to the configuration of the VT620. | | SELECT PROGRAM |
| Use the up or down arrows to select your desired program. | \bigcirc | SELECT PROGRAM (a) 1: WAL sensor 2: PAL sensor 3: PAL Tire Data 4: PAL sensor |



Press **OK** to confirm your choice.

The **Global Settings** screen is displayed.

RUN PROGRAM shows the number of the program selected.



GLOBAL SETTINGS RUN PROGRAM: 2 GLOBAL SETTINGS PROGRAM SETTINGS ABOUT

7.2. Starting a cycle program

The activation cycle includes three phases:

- **START:** starting a test cycle;
- **SENSOR ACTIVATION:** the VT620 sends data to the sensor and then switches to receiving mode to receive the sensor's response;
- **END:** the cycle stops automatically as soon as the response from the sensor is obtained or according to the time-out set by the selected program. The data sent by the sensor (ID, pressure, temperature) is displayed.

| From the main menu, press the left arrow to select the RUN SELECTED PROGRAM menu. | \bigcirc | HPIDN HENU |
|---|------------|--|
| Press OK. The READY screen is displayed. | ΟΚ | Program 1: PAL Tire Data III Get Sensor identification READY |
| Press the Transmit key. The cycle program starts and the TRIGGER PROCESSING screen is displayed. | ? | Program 1: PFL Tire Data En Get Sensor identification TRIGGER PROCESSING |



7.3. Stopping the current program

Press **C** to stop the current cycle program.

The **Ready** screen shows that the VT620 is ready to start a new cycle program.





7.4. Creating a program

| From the main menu, press the right arrow to select the Settings menu. | \square | HREN HENU |
|---|------------|-----------------|
| Press OK to open the Global Settings menu. | ΟΚ | HREN HENU |
| Use the up or down keys to select PROGRAM SETTING . | \bigcirc | GLOBAL SETTINGS |



| Press OK . The PROGRAM SETTINGS screen is displayed. | ΟΚ | PROGRAM SETTINGS fml 1: WAL sensor 2: PAL sensor 2: PAL time Data 4: PAL sensor 5: 6: 6: 7: 8: 9: |
|--|-----------|---|
| Use the up or down arrows to select an empty line. | \square | PROGRAM SETTINGS 1: WAL sensor 2: PAL sensor 3: PAL Time Data 4: PAL sensor 5: 6: 7: 8: 9: |
| Press OK to start creating the program. | ΟΚ | PROGRAM SETTINGS End Sensor: Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Enase Program |
| Press OK to display the Sensor screen. | ΟΚ | Sensor 📻 PAL Tire Data PAL sensor WAL sensor |
| Use the up or down arrows to select a sensor type. | | Sensor 🚮 PAL Tire Data PAL sensor WAL sensor |



| Press OK to confirm your selection of the sensor type. | ΟΚ | Sensor 🚮 PAL Tire Data PAL sensor WAL sensor |
|--|----|---|
| Use the up or down arrows to select Trigger, then press OK . | ΟΚ | PROGRAM SETTINGS EN Sensor: PAL Tire Data Trigger: Write all tire data Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Erase Program |
| Use the up and down arrows to select the activation mode, then press OK . | ОК | Trigger Get Sensor identification Write all tire data Read all tire data Write + Verify all tire data |
| Use the up or down arrows to select Frequency , then press OK . | | PROGRAM SETTINGS En Sensor: PAL Tire Data Trigger: Write all tire data Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Erase Program |



| Use the up or down arrows to select Auto detection or to select an available frequency. | | Frequency Ruto detection 315 MHz 314.9 MHz 314.85 MHz 433.92 MHz 434.42 MHz |
|---|---------|--|
| Press OK to confirm the choice of frequency. | οκ | Frequency Auto detection 315 MHz 314.9 MHz 314.85 MHz 433.92 MHz 434.42 MHz |
| Use the up or down arrows to select LF Settings , then press OK . | С Ок | PROGRAM SETTINGS Sensor: PAL Tire Data Trigger: Write all tire data Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Erase Program |
| Press OK again to adjust the antenna settings. The choice of antenna depends on the characteristics and the position of the sensor when the wheel is passing. Follow the recommendations of the approved installer. | ΟΚ | LF Settings 🚮 Antenna: Rodal LF (CW) LF Voltage: Undefined LF power: Undefined |



| Use Up or Down to select an antenna type, then press OK to confirm your selection. | OK OK | Avial LF (CK) Avial LF (Modulated) Radial |
|---|-----------|---|
| Use Up or Down to select LF Voltage , then press OK . | \square | LF Settings (Filler) Antenna: Avial LF (Modulated) LF Voltage: Default LF power: Default |
| LF Voltage is displayed in red. | | LF Settings ES Antenna: Avial LF (Modulated) LF Voltage: Default LF power: Default |
| Use Up or Down to select DEFAULT in order to choose the default voltage preset according to the sensor characteristics, or to select an available voltage. Press OK to confirm. | <u>ок</u> | LF Settings Es Antenna: Avial LF (Modulated) LF Voltage: 6 V LF power: Default |



| Use Up or Down to select LF power , then press OK . | О К | LF Settings (Antenna: Rxial LF (Modulated) LF Voltage: Default LF power: Default |
|--|--------|--|
| LF power is displayed in red. | | LF Settings 🚮 Antenna: Axial LF (Modulated) LF Voltage: Default LF power: Default |
| Use Up or Down to select DEFAULT in order to choose the default power or select a power percentage of between 1% and 100%. Press OK to confirm your choice. Note: The LF transmission power is preset according to sensor sensitivity. It can be adjusted to limit the transmission field around the antenna. You are advised to follow the settings recommended by the approved installer. | | LF Settings 📻 Antenna: Axial LF (Modulated) LF Voltage: Default LF power: 20 % |
| Press C to return to PROGRAM SETTINGS . | C | LF Settings (Antenna: Avial LF (Modulated) LF Voltage: 6 V LF power: 20 % |

Т



| Use Up or Down to select RF Settings Receiver 315 , then press OK . | ΟΚ | PROGRAM SETTINGS ES Sensor: PAL Tire Data Trigger: Get Sensor identification Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Erase Program |
|---|---------------------|---|
| Use Up or Down to select Discard ID , then press OK . Note: Discard ID checks that the sensor being read is not the same as one that has previously been read. To do so, the unit analyses the last 32 readings. | OK | RF Settings Receiver 315 (ff) Discard ID : NO Attenuation: 0 dB Gain control : NO |
| Discard ID is displayed in red. | | RF Settings Receiver 315 (Finil) Discard ID : NO Attenuation: 0 dB Gain control : NO |
| Use Up or Down to select YES or NO , then press C to return to the previous menu. | C | RF Settings Receiver 315 (m) Discard ID : YES Attenuation: 0 dB Gain control : NO |



| Use Up or Down to select Attenuation , then press OK . | RF Settings Receiver 315 Discard ID : YES Attenuation: 0 dB Gain control : NO |
|---|--|
| Use Up or Down to select an attenuation value, then press OK to confirm your choice. | Attenuation 8 dB -6 d8 -12 dB -18 dB |
| Use Up or Down to select Gain Control , then press OK . | RF Settings Receiver 315 Discard ID : YES Attenuation: 0 dB Gain control : NO |
| Gain control is displayed in red. | RF Settings Receiver 315 E |



| Use Up or Down to select YES or NO , then press OK to confirm. Press C if you wish to cancel and return to the previous menu. | | RF Settings Receiver 315 (a) Discard ID : YES Attenuation: 0 dB Gain control : YES |
|---|----|--|
| When the Gain control setting is YES , an extra menu appears: RF gain limit . | | RF Settings Receiver 315 (Finite Control ID : NO Attenuation: 0 dB Gain control : YES RF gain limit: Learn |
| Use Up or Down to select RF gain limit , then press OK to confirm. The unit then displays the last gain values made. Select one of the values in order to filter reception of the next readings to values that are below or equal to the value selected. | OK | RF Gain Select Im 107 107 207 107 207 005 |
| Press C to return to PROGRAM SETTINGS . | C | PROGRAM SETTINGS (m) Sensor: PAL Time Data Trigger: Get Senson identification Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Enase Program |

Т

Τ



| Use Up or Down to select RF Settings Receiver 433 , then press OK . | С Ок | PROGRAM SETTINGS (In Sensor: PAL Time Data Trigger: Get Sensor identification Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Enase Program |
|--|---------|---|
| Use Up or Down to select Discard ID , then press OK . | | RF Settings Receiver 433 (F) Discard ID : NO Attenuation: 0 dB Gain control : NO |
| Discard ID is displayed in red. | | RF Settings Receiver 433 (a) Discard ID : NO Attenuation: 0 dB Gain control : NO |
| Use Up or Down to select YES or NO , then press C to return to the previous menu. | | RF Settings Receiver 433 (a) Discard ID : YES Attenuation: 0 dB Gain control : NO |



| Use Up or Down to select Attenuation , then press OK . | RF Settings Receiver 433 (Finil Discard ID : NO Attenuation: 0 dB Gain control : NO |
|---|--|
| Use Up or Down to select an attenuation value, then press OK to confirm your choice. | Attenuation En 8 dB -6 d8 -12 dB -18 dB |
| Use Up or Down to select Gain Control , then press OK . | RF Settings Receiver 433 (Fill) Discard ID : NO Attenuation: 0 dB Gain control : NO |
| Gain control is displayed in red. | RF Settings Receiver 433 E |



| Use Up or Down to select YES or NO , then press C to return to the previous menu. | | RF Settings Receiver 433 (a) Discard ID : NO Attenuation: 0 dB Gain control : YES |
|---|---|---|
| When the Gain Control setting is YES , an extra menu appears: RF gain limit . | | RF Settings Receiver 433 (78) Discard ID : NO Attenuation: 0 dB Gain control : YES RF gain limit: Learn |
| Use Up or Down to select RF gain limit , then press OK to confirm. The unit then displays the last gain values made. Select one of the values in order to filter reception of the next readings to values that are below or equal to the value selected. | | RF Gain Select (107) 107 207 107 207 005 |
| Press C four times or hold this key down for three seconds to return to the main menu. | C | HRIN HENU |

7.5. Editing a program



| From the main menu, press the right arrow to select the Settings menu, then press OK . | οκ | HRIN HENU |
|---|----|--|
| Use Up or Down to select PROGRAM SETTING, then press OK . | ΟΚ | GLOBAL SETTINGS RUN PROGRAM: 1 GLOBAL SETTINGS PROGRAM SETTINGS ABOUT |
| Use Up or Down to select the program you want to edit, then press OK . | | PROGRAM SETTINGS En 1: WAL sensor 2: PAL sensor 3: PAL Time Data 4: PAL sensor 5: 6: 6: 7: 8: 9: |
| The details of the selected program are displayed. All program settings can be edited. | οκ | PROGRAM SETTINGS 5 Sensor: PAL Tire Data Trigger: Get Sensor identification Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Erase Program |





7.6. Deleting a program

| From the main menu, press the right arrow to select the Settings menu, then press OK . | οκ | |
|---|-----------|--|
| Use Up or Down to select PROGRAM SETTING, then press OK . | <u>Ок</u> | GLOBAL SETTINGS |
| Use Up or Down to select the program you want to delete, then press OK . | С Ок | PROGRAM SETTINGS Image: Constraint of the sensor 1: WAL sensor 3: PAL Time Data 4: PAL sensor 5: |



| Use Up or Down to select Erase Program . | $\leq \left \right\rangle$ | PROGRAM SETTINGS EN Sensor: PAL Tire Data Trigger: Get Sensor identification Frequency: Auto detection LF Settings RF Settings Receiver 315 RF Settings Receiver 433 Enase Program |
|--|-----------------------------|---|
| Press OK. The program is deleted. The list of remaining programs is displayed. | ΟΚ | PROGRAM SETTINGS 1: WAL sensor 2: PAL sensor 3: 4: PAL sensor 5: 6: 7: 8: 9: |
| Press C several times to return to the main menu. | С | HRIN HENU |



8. GLOBAL SETTINGS MENU

The **GLOBAL SETTINGS** menu is for configuring the device. It is used to set up the operation of the VT620 and to store interface display options.

8.1. Opening the GLOBAL SETTINGS menu

| From the main menu, select the settings menu icon, then press OK . | ΟΚ | HRIN HENU |
|---|------------|-----------------|
| Use Up or Down to select GLOBAL SETTINGS , then press OK . | \bigcirc | GLOBAL SETTINGS |

8.2. Choosing the pressure and temperature units

| In GLOBAL SETTINGS , select UNITS, then press OK . | ΟΚ | GLOBAL SETTINGS |
|---|----|--|
| Use Up or Down to choose a pressure unit and a temperature unit. The pressure units are: • PSI, • kPa, • bar. The temperature units are: • °F • °C | | UNIT SELECTION (FR) PSI/ [°] C KPa/ [°] C kPa/ [°] F bar/ [°] F bar/ [°] C |



| Press OK to confirm the choice of pressure unit and temperature unit. | οκ | UNIT SELECTION EN PSI/ [°] F PSI/ [°] C kPa/ [°] C kPa/ [°] F ban/ [°] F ban/ [°] C |
|--|----|---|
|--|----|---|

8.3. Choosing the ID display format

| From the GLOBAL SETTINGS menu select FORMAT, then press OK . | ΟΚ | GLOBAL SETTINGS |
|--|----|--|
| Use Up or Down to select the format. The formats are: AUTO: the ID is displayed as received by the VT620, DECIMAL: the ID is always displayed in decimal even if it is received in hexadecimal, HEXADECIMAL: the ID is always displayed in hexadecimal even if it is received in decimal. | | Format (1) Auto Decimal Hexadecimal |
| Press OK to confirm the format choice. | ΟΚ | Format (1) Auto Decimal Hexadecimal |



8.4. Choosing the device language

| From the GLOBAL SETTINGS menu select LANGUAGE, then press OK . | ΟΚ | GLOBAL SETTINGS |
|--|------------|---|
| Use Up or Down to select the language you require. | \bigcirc | LANGUAGE ESTINA DANSK DEUTSCH ENGLISH ESPAÑOL FRANÇAIS HRVATSKI ITALIANO MAGYAR |
| Press OK to confirm the language choice. | ΟΚ | LANGUAGE ESTINA DANSK DEUTSCH ENGLISH ESPAÑOL FRANÇAIS HRVATSKI ITALIANO MAGYAR |



8.5. Adjusting the MODBUS setting

| From the GLOBAL SETTINGS menu select MODBUS, then press OK . | ΟΚ | GLOBAL SETTINGS |
|--|--------|-----------------|
| MODBUS is displayed in red. Use Up or Down to choose the MODBUS address, then press OK . | \leq | GLOBAL SETTINGS |

8.6. Setting the baud rate

| From the GLOBAL SETTINGS menu select BAUD RATE , then press OK . | ΟΚ | GLOBAL SETTINGS |
|--|-----------|--|
| Use Up or Down to select the baud rate you require. | \square | 3688 19200 38400 57600 115200 128000 256000 |



| Press OK to confirm the choice of baud rate. | οκ | 9600 19200 38400 57600 115200 128000 256000 |
|---|----|---|
|---|----|---|



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|----------------|--|---|

FCC Caution:

This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation.

Any changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- -- Reorient or relocate the receiving antenna.
- -- Increase the separation between the equipment and receiver.
- -- Connect the equipment into an outlet on a circuit different
- from that to which the receiver is connected.
- -- Consult the dealer or an experienced radio/TV technician for help.

To maintain compliance with FCC's RF Exposure guidelines, This equipment should be installed and operated with minimum distance between 20cm the radiator your body: Use only the supplied antenna.

