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## WARRANTY CARD

**\$1**

"ProTech" company seems a Warranty Card to the device under the trade name

**"AquaMETR - flow meter V7-SERIES" (A / B / C)**

**\$2**

The device is covered by 12 months warranty from time of sale

**\$3**

Device manufacturer, the company "ProTech" ensure the exchange of the defective unit for a new during the warranty period.

**\$4**

This card is issued for each product with the serial number shown on the lead sealing placed on the device. Break the warranty seal will void the warranty.

**\$5**

The manufacturer undertakes to provide new / repaired equipment to 21 working days from receipt of the defective device.

**\$6**

Each device reported as defective will be subject to inspection to determine the cause of the damage. In case of damage resulting from improper installation or use of the device misused warranty service will not be respected.

.....  
 Sale Date and legible signature SELLER

.....  
 S/N device

.....  
 DEALERS STAMP

.....  
 Version Hardware / Software / Flow / Power supply

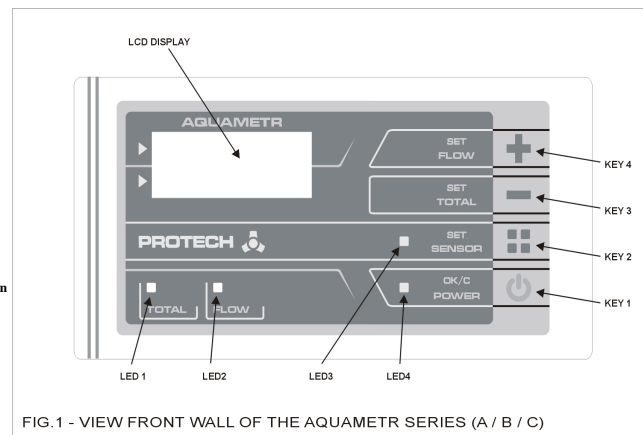
## USER MANUAL / INSTALLATION NOTICE / CONFIG / SET MANUAL

The "AquaMETR" flow meters series are electronic devices enabling determination of measurement instantaneous flow per unit of time (Result expressed in liters / minute, L / min) and, depending on the version of the software, in other units. In addition, measures allow an indication of the total flow medium by the sensor from the inclusion / deletion. Version B / C also have the ability to control external circuits for dispensing fluid.

### MAIN TECHNICAL PARAMETERS:

**NORMAL POWER SUPPLY:** 10...24V D.C.  
**MAX. POWER SUPPLY:** 09...30V D.C.  
**POWER CONSUMPTION:** 120mA@12V  
**MEASUREMENT RANGE (FLOW):** 0,1...499,9 L/min  
**MEASUREMENT RANGE (TOTAL):** 0,1...999,9 L  
**OWN MEASUREMENT ACCURACY:** 1%  
**OPERATING TEMPERATURE RANGE:** -5...+50 st.C  
**COVER PROTECTION STANDARD:** IP-54

**ACCURACY OF CALCULATIONS DECREASES WITH DECLINE OF IMPULSES FLOW IN LITRE (SMALL PULSE FACTOR IN LITRE WITH FLOWMETER MEANS MORE ERRORS OF REFERENCE**



### PREPARING TO WORK / OPERATION / CYCLE / RESULTS:

- 1- EXAMINING EQUIPMENT AFTER UNPACKING. MECHANICAL DAMAGE MAY BE ASSOCIATED WITH FAULTS MEASURING, BAD PERFORMANCE ETC.
- 2- AS DESCRIBED, ON THE BACK PANEL, PLEASE CONNECT POWER SUPPLY, FLOW SENSOR AND VALVE CONTROL CIRCUIT (OPTIONAL).
- 3- REQUIRED PULSE FLOW SENSOR WITH NPN, NON-POTENTIAL ENCODER / IMPULSATOR OR HALL-SENSOR (N.P.N. -IMPULSE -VCC TO GROUND WHEN WORK)
- 4- IT IS RECOMMENDED THAT YOU USE DEDICATED POWER SUPPLY + 12V.DC TO REDUCE HEAT LOSS.
- 5- POWER OF THE UNIT. SEQUENCE METER SHOULD HOME PAGE ILLUMINATE, DISPLAYS OWN VERSION AND GO TO CYCLE OF WORK.
- 6- CHECK METER FOR REACHING PROPERLY RECOGNIZED WITH FLOW PULSE. TEST DURING FLOW INDICATOR ON THE FRONT PANEL WILL PERIODICALLY FLASH (LIGHTEN AT 0,1SEC EVERY MOMENT OF FLOW) IS 10ML). IF EVERYTHING WORK GOOD-RESULT IN THE LCD DISPLAY OF INSTANTANEOUS FLOW AND TOTAL FLOW WILL BE CHANGED.
- 7- AFTER INSTALL SUCCESSFUL, TEST AT THE DESIRED LOCATION MEASUREMENT AND FLOW METER. MAKE TEST LEAK-FREE.
- 8- ATTENTION TO CORRECT INSTALLATION FLOW-SENSOR, IF SHEET NOT PROVIDED OTHERWISE, TRY TO FIT THE FLOW VERTICALLY OR DIAGONALLY. LEAD INTO MEDIUM OUTFLOW. DIRECTION OF MEDIUM FLOW IS USUALLY SELECTED ARROW EXPRESS ON THE FLOW METER.
- 9- VENTING FLOW AIR BY REMOVE ANY REMAINING TURBINE FLOW REGION.
- 10- MEDIUM SHOULD NOT INCLUDE GAS, SUSPENSIONS, WASTE, DUST ETC... MAY SIGNIFICANTLY DISTURB THE MEASUREMENT AND SHORTEN THE LIFETIME OF THE FLOW SENSOR.
- 11- ATTENTION TO THE CORRECT DIRECTION OF FLOW MEDIUM SENSOR: BAD DIRECT CAN SIGNIFICANTLY INCREASE THE INSTALLATION OF TOTAL FAILURE OF MEASUREMENT EQUIPMENT.
- 12- IF DOSAGE CIRCUIT IS USED. NOTE: IN THE EVENT OF DOSAGE SWITH, AND INTERNAL RELAY OPEN THE CIRCUIT (DISCONNECT) RELAY INTERNAL MACHINE "AquaMETR"
- 13- MAXIMUM CURRENT EXCEED THE VOLTAGE 60V IS 0,5A FOR BOTH CHANNELS RELAY1 / REL1B RELAY CONTACTS TO PAIR OF CONTACT (NORMALLY OPEN THAT WILL REMAIN CLOSED WHEN PROGRAMMING LIMITS WILL NOT BE ACHIEVED - CONTACTS REMAIN CLOSED UNTIL SO ACHIEVE THE DESIRED TOTAL FLOW. REL2A / REL2B RELAY CONTACTS TO PAIR OF CONTACT N.O.(NORMALLY OPEN) THAT WILL REMAIN CLOSED WHEN PROGRAMMING LIMITS WILL NOT BE ACHIEVED - CONTACTS REMAIN CLOSED UNTIL SO ACHIEVE THE DESIRED INSTANTANEOUS FLOW. AFTER REACHING THE BORDER COUNT / SPEED RELAY CONTACTS FLOW CIRCUIT DISCONNECT THE CIRCUIT. THIS ALLOWS EASY DOSAGE, SPECIFIED QUANTITIES OF LIQUIDS TO BE DISPENSED DEVICE AFTER WHAT CAN STAY AHEAD OF MOVEMENT FOR MEDIUM CIRCUIT WITH ITS CONTROLLED.
- REL2A / REL2B IS CHANNEL TO CONTROL, DEPENDING ON SPEED FLOW (LIMIT VALUE FLOW) A CONTACTS REL1A / REL1B RELAY IS CHANNEL TO CONTROL DEPENDING ON REACHING THE SPECIFIED VALUE TOTAL FLOW (TOTALIZER).
- 14- FRONT PANEL LED LIGHT SHOW WHAT IS STATE THE RELAY CHANNEL (FIG.1). LED1 OFF WHEN THE FLOW CHANNEL RELAY CONTACT IS COMPLETELY CLOSED (GOES OUT WHEN LEVEL OF COUNTING REACHED THIS LIMIT TOTAL AMOUNT MOVEMENT - A SO THE INTERNAL RELAY UNIT DISCONNECTS REL1A / REL1B). LED2 OFF WHEN CHANNEL RELAY CONTACT IS CLOSED INSTANTANEOUS FLOW (GOES OUT WHEN LEVEL LOW REACHED THIS LIMIT INSTANTANEOUS FLOW - SO THE INTERNAL RELAY UNIT DISCONNECTS REL2A / REL2B).
- 15- LED3 FLASH RECORDING ARRIVAL OF PULSE FROM FLOW SENSOR / IMPULSATOR. WHAT IS THE CORRECT SPEED AND EVENT WORK. TEMPORARY FLARE WHAT FOLLOWS EACH 100 ML FLOW (DEPENDING ON THE DEVICE SOFTWARE VERSION). LED4 IS LIGHT WHEN NORMAL OPERATION DURING THE APPLIANCE AND FLASHES BETWEEN 5 SECONDS WHEN THE MACHINE IS IN THE SLEEP-MODE (ST-BY)-SEE FIG.1
- 16- KEY1 IS FOR ON / OFF SWITCH AND WHEN DEVICE IS WORKING - PROVIDES A CLEAR (DELETE) RESULTS OF REGISTERED DURING A WORK CYCLE.
- KEY1 APPROVES DATA ALSO INTRODUCED DURING SETUP (WRITING WILL EEPROM NON-VOLATILE MEMORY).
- 17- KEY2 IS FOR INPUT TYPE OF FLOW-SENSOR (PROGRAMMING IMPULSES PER LITER. CONFIGURATION QUANTITY OF PULSES IN 1 LITRE OF MOVEMENT WHICH WILL SEND FROM FLOWSENSOR).
- 18- KEY3 IS FOR PROGRAMMING DURING THE LIMITS ("SET TOTAL" / "SET FLOW") WILL ALSO OUT OF THESE MODES NOT REMEMBER AS OF CHANGES. KEY3 ALLOWS YOU TO CONFIGURE VALUE TOTAL (TOTAL FLOW PROGRAMMING), BEYOND WHICH RELAY CONTACT THIS CHANNEL IS OPEN, KEY3 ALSO DECREMENT VALUE. KEY4 ALLOWS YOU TO CONFIGURE VALUE FLOW (PROGRAMMING INSTANTANEOUS FLOW), BEYOND WHICH RELAY CONTACT THIS CHANNEL IS OPEN, KEY4 ALSO INCREMENTS ADDED VALUE.
- 19- DURING WORK IS ALSO POSSIBLE SLEEP THE DEVICE. -LONGER PRES (HOLD) KEY1-OK.C/POWER) - COUNT AND CYCLE IS STOPPED, LED LIGHTS WILL BE OFF, RELAYS AND INTERNAL SWITCH ALSO IS OFF-MODE. SLEEP STATE IS SIGNALLED EVERY 5 SECONDS LED4 CONTROLS SHORT FLASH. METER WILL REBOOT AFTER PRESSING KEY 1. ATTENTION: FLOWSENSORS REMAINS ACTIVE POWER EVEN SLEEP MODE (TO ENABLE FLOW AND AUTOMATIC RECORDING DEVICE AFTER LAUNCH DETECTED - NOT FOR THIS SOFTWARE VERSION).
- 20- CYCLE UNIT MAKES ONE-SECOND MEASUREMENT AND CALCULATIONS. THE RESULT IS MATH CONVERTED & DISPLAYED.
- 21- DEPENDING ON SOFTWARE VERSION DEVICE CAN DISPLAY RESULTS IN DIFFERENT UNITS FLOW, VOLUME, WEIGHT, SUM.TTP. DESCRIPTION / SYMBOL FOR LCD ANNOUNCES THE UNITS CURRENTLY CONVERTED.
- 22- RESULTS AFTER LOSS VOLTAGE NOT INCLUDED BUT IS IT POSSIBLE IN SOME SOFTWARE VERSIONS. IN VERSIONS V7A / V7B / V7C STORAGE IS NOT AVAILABLE. SO WHEN YOU TURN THE MACHINE CONDITION ALWAYS COUNT AND MOVEMENT IS STARTED FROM ZERO.

### IF THE MACHINE DOES NOT WORK PROPERLY:

- 1- CHECK POLARITY OF POWER SUPPLY, CONTACT CABLE AND TERMINAL BLOCK IN REAR PANEL.
- 2- CHECK WIRES FROM FLOW-SENSOR AND CABLE FAULT.
- 3- INSPECT DEVICE - HIGH TEMPERATURES OR VISIBLE DAMAGES COVER MATERIAL MAY PROVIDE A INTERNAL FAILURE
- 4- MAKE SURE THAT THE DEVICE IS NOT FLOODED.
- 5- TURN ON DEVICE AND OBSERVE IT FOR EMERGING MESSAGES ON DISPLAY LCD. PROCESS ERROR WHEN SWITCHING ATODIAGNOSIS REPORT TO MANUFACTURER
- 6- NEW IMPULSE PER LITER WITH FLOWSENSOR (FUNCTION: "SET SENSOR") WILL RECORDING AND STORING IN NONVOLATILE MEMORY THIS VALUE. SET NEW VALUE ONLY IF YOU KNOW HOW VALUE CORRECT IS - WRONG VALUE SETTING CAUSES BAD MEASURE AND DOSAGE RESULT!
- 7- POWER CABLES AND FLOW-SENSOR WIRES (FLOW-SENSOR) CAN BE EXTENDED, BUT IT IS RECOMMENDED THAT USE ABOVE SCREENED CABLE <5M. RECOMMENDED MAXIMUM LENGTH OF CABLE TO DEVICE FLOWMETERS SHOULD NOT EXCEED 30M.

### FINAL NOTES:

LEAK CLASS: IP54. EXTREMELY LOW OPERATING TEMPERATURES MAY RESULT IN THE MEASUREMENT CYCLE STOP (-20°C). TO CLEAN USE WATER + DETERGENT (NON-AGRESIVE). AVOID ANY LIQUID BORDER TO FLOODING FRONT - THIS MAY CAUSE THE LATER FALL OFF. THE RAPID CHANGES OF TEMPERATURE MAY OCCUR WATER CONDENSATION ENVIRONMENTAL EFFECT - PLEASE WAIT - 10 MINUTES BEFORE USING THIS DEVICE. DO NOT USE FOR CLEANING ANY ORGANIC SOLVENTS, SHARP OBJECTS. THE DEVICE IS NOT WATERPROOF OR WATERTIGHT. FRONT MASK LABEL IS NOT FAULT TO ANY SOLVENT. STRONG PRINCIPLES OF FUEL AND MECHANICAL DAMAGE. IN THE EVENT OF LONG-TERM EXPOSURE TO STRONG SUNLIGHT CASE MAY BE STAINED PEELING.