Electricity meter NIK 2100 AP6T.2200.MC.22
Passport AAШX.411152.072 ПС

1. PRODUCT DESIGNATION

1.1. Electric meter NIK 2100 AP6T.2200.MC.22 type NIK 2100 A...P6... single-phase multi-rate, with electronic reading device and two current measuring elements is designed to measure electricity and to provide its accounting in forward and reverse directions with accuracy class B.

1.2. The meter is equipped with an optical port and RS-485 interfaces, magnetic and electromagnetic field sensors.

1.3. According to climatic and mechanical requirements, the meter complies with the requirements of EN 50470-1, EN 50470-3 when used in premises where there are no aggressive vapors and gases.

1.4. Meters are used to organize electricity metering in the utility system and in other industries

1.5. The meter meets the requirements of the Compliance with requirements of European Parliament and EC Directive 2014/32/EU.

2. DELIVERY SET

2.1. The delivery set of the meter is given in Table 1.

Table 1

Name	Quantity
AC meter NIK 2100 AP6T.2200.MC.22	1 pc.
Passport AAШX.411152.072 ПС*	1 copy.
Operations manual AAШX.411152.072 НЕ*	1 copy.
Software **	1 copy.
Consumer packaging	1 pc.
Declaration of Conformity	1 copy.
* It can be downloaded electronically from the manufacturer's site at https://nik-el.com Other options for delivery of operational documentation are reflected in the supply contract. **According to the supply contract.	

3. MAINTENANCE

3.1. Maintenance includes a calibration operation – in all cases, calibration and repair of the meter as needed. Frequency of verification according to Table 2

3.2. The repair and calibration operations are carried out at the factory.

4. STORAGE AND TRANSPORT CONDITIONS

4.1. Conditions of storage of the meter in the warehouse of the consumer (supplier) in consumer packaging are in accordance with the requirements of GOST 22261.

4.2. The meters can be operated in areas with climate types "cold" and "cold temperature" in climatic conditions of category 3K7 according to the classification according to IEC 60721-3-3 (except for the possibility of condensation and ice formation in the environment where they are operated).

4.3.

5. MANUFACTURER WARRANTY

5.1. The manufacturer guarantees that the meter complies with the requirements of EN 50470-1, EN 50470-3 when the conditions of installation, operation, transportation and storage are met by the consumer.

5.2. Before operating the meter, it is necessary to read the user manual included in the supply or posted on the official site - see Table 1.

5.3. The warranty period (operation period and storage period in total) is 3 years from the date of sale.

5.4. The meter, which has non-compliance with the requirements of the technical specifications and the current passport during the warranty period, must be replaced or repaired by the manufacturer or the enterprise authorized to make warranty repairs.

5.5. The warranty period of a meter continues for a time, computing from the moment of submission of the application by the consumer to eliminate the defect by the manufacturer.

5.6. Upon expiration of the warranty period, during the service life of the meter, the repairs are carried out by the manufacturer or service organizations. In this case, repair is carried out at the expense of the consumer.

5.7. The meters that were transported, stored, installed, connected or used in violation of the requirements specified in the operating manual and meters that have damage to the casing, base, clamp pads or the consequences of their thermal heating, damaged seal of the manufacturer, as well as if the product has a pronounced mechanical damage received as a result of any actions of the buyer or third parties, not subject to warranty repair.

5.8. The manufacturer's warranty does not apply to external backup batteries.

5.9. Meters that are sent for maintenance should be provided in good condition with a passport and a description of the reasons for the failure.

5.10. Please, inform the manufacturer "NIK-ELEKTRONIKA"-LLC about the detected shortcomings of the meters.

6. TECHNICAL SPECIFICATIONS

6.1. The technical specifications of the meter are given in Table 2

Table 2

Accuracy class when measuring active energy according to EN 50470-3	B
Reference voltage Un, V	230
Acceptable voltage deviation, V	from minus 20% to plus 15%
Starting current strength (sensitivity) when measuring active energy Ist, mA	12,5
Reference current Iref, A	5
Transitional current ltr, A	0,5
Maximum current Imax, A	80
Minimal current Imin, A	0,25
Constant of a meter (active), imp/(kW·h)	6400
Power consumption in voltage circuits, V•A (W)	No more than 10 (2)
Power consumption in current circuits (I = Iref), V•A	No more than 0,2
Reference frequency fn, Hz	50
Storage of a load profile with integration period of 60 minutes, days	180
Storage of energy consumption data at all rates at the end of the day, days	180
Storage of energy consumption data at all rates at the end of the month, months	48
Storage of average voltage values with an integration period of 10 minutes, days	10
Number of digits for LCD to display basic information	8
Multirate accounting of active energy consumption	up to 4 rates and 12 time zones
Calibration interval, years	16
Operating temperature range, °C	from minus 40 to plus 70
Storage temperature range, °C	from minus 40 to plus 70
Relative humidity of air at temperature plus 30 °C, %	No more than 95
Degree of protection	IP54
Class by external mechanical conditions	M2
Class by external electromagnetic conditions	E2
Weight, kg	Less than 1
Average service life before the first overhaul, years	No less than 30
Mean time to failure, taking into account maintenance, hours	No less than 200 000

6.2. The structure, operating principle and other technical information regarding the meter are described in detail in the user manual AAIIIX.411152.072 HE.

6.3. The overall and installation dimensions of the meter are shown in Figure 1.

6.4. The connection diagram of the meter is shown in Figure 2.

7. METER PLACEMENT, INSTALLATION AND PRESTARTING PROCEDURE

7.1. Installation, dismantling, connection and disconnection of the meter can only be performed by an authorized organization. An organization authorized to perform the installation, maintenance and dismantling of meters is not fully responsible for the fact that its personnel have carefully studied this instruction, has sufficient qualifications to perform the work, strictly complies with the local rules for the safety and operation of electrical installations.

7.2. Installation, dismantling, connection and disconnection of the meter must be carried out in accordance with the applicable rules of operation and safety of electrical installations, only by qualified personnel in accordance with the requirements of this document.

7.3. The meter must be installed in premises without aggressive vapors, dust and gases.

7.4. Connecting and disconnecting the meter from the network should only be performed after disconnecting the voltage in the network and providing the necessary protection against accidental voltage activation.

7.5. Before installing the meter, it is necessary to do an external review of the meter, to ensure that there is no mechanical damage, and the availability of seals. The connection of the meter must be carried out in accordance with the diagram shown in Figure 2. All screws must be tightened with a flat blade screwdriver (thickness of the blade is 1 mm) to the point with the force of 3,5 N·m.

7.6. When connecting the meter to the electrical network with an aluminum wire, it is required the specified wires be pressed into special sleeves to prevent corrosion of the connections in the meter clamps.

7.7. After the voltage is applied to the terminal of the meter, it is necessary to make sure the indicators work properly, secure the terminal block cover with screws, and hold the seal.

7.8. The screws of the terminal block cover must be tightened with a flat blade screwdriver (thickness of the blade is 1 mm) to the point with the force of 0.5 ± 0.1 N·m.

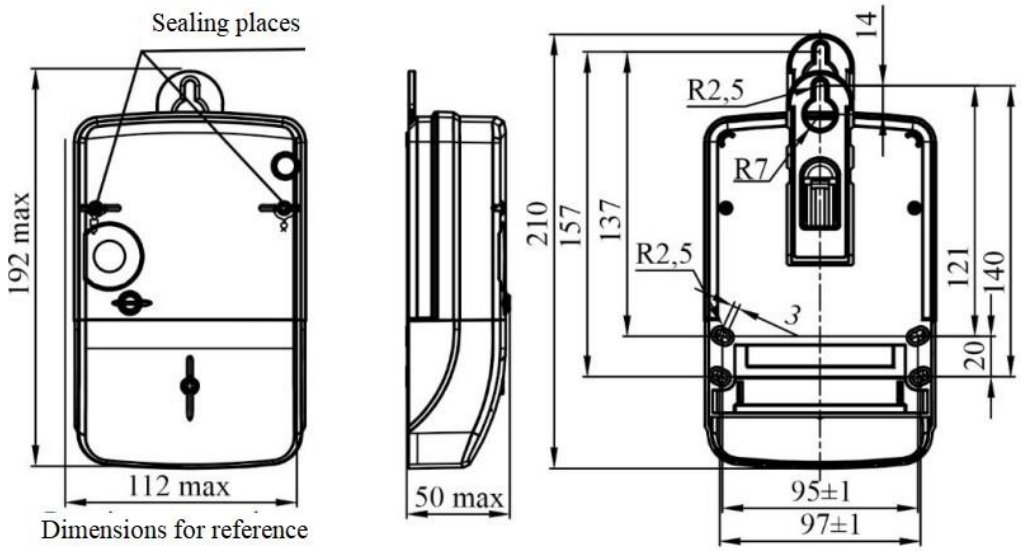

Figure 1. Overall and installation dimensions

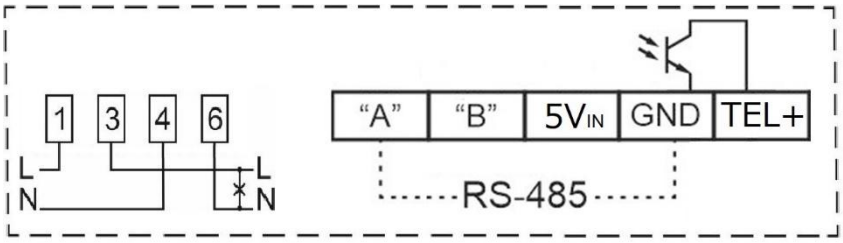

Figure 2. The meters wiring diagram

CERTIFICATE OF ACCEPTANCE

Electricity Meter		**NIK 2100 AP6T.2200.MC.22**	
Manufacturing №			
is produced, accepted and recognized as fit for operation in accordance with			
EN 50470-1, EN 50470-3.			
Production date			
Manufacturer`s representative			
Date of sale _____			
name of organization, seal and signature of the Seller.			

Date of defect occurrence	Defect description	Repair date	Note about calibration

Additional information:

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