CHRONOS METER

O·NEO·PRO

NeoPro-Chronos Digital Ecosystem for Water, Gas and Heat Supply Organizations

- Management of enterprise commercial activities (complete range/line of billing);
- Automated readings collection from metering devices for common house and individual ones;
- Reduction of commercial and technical losses;
- Optimization of time resources for operating services employees;
- Integration with digital platforms by means of client-server technology (Federal Bailiff Service, State Services, Housing and Communal Services Reform, MoyArbitr, Operators Electronic Document Circulation, Fiscal Data Operator, Federal Information Address System – Address Directory, etc.)
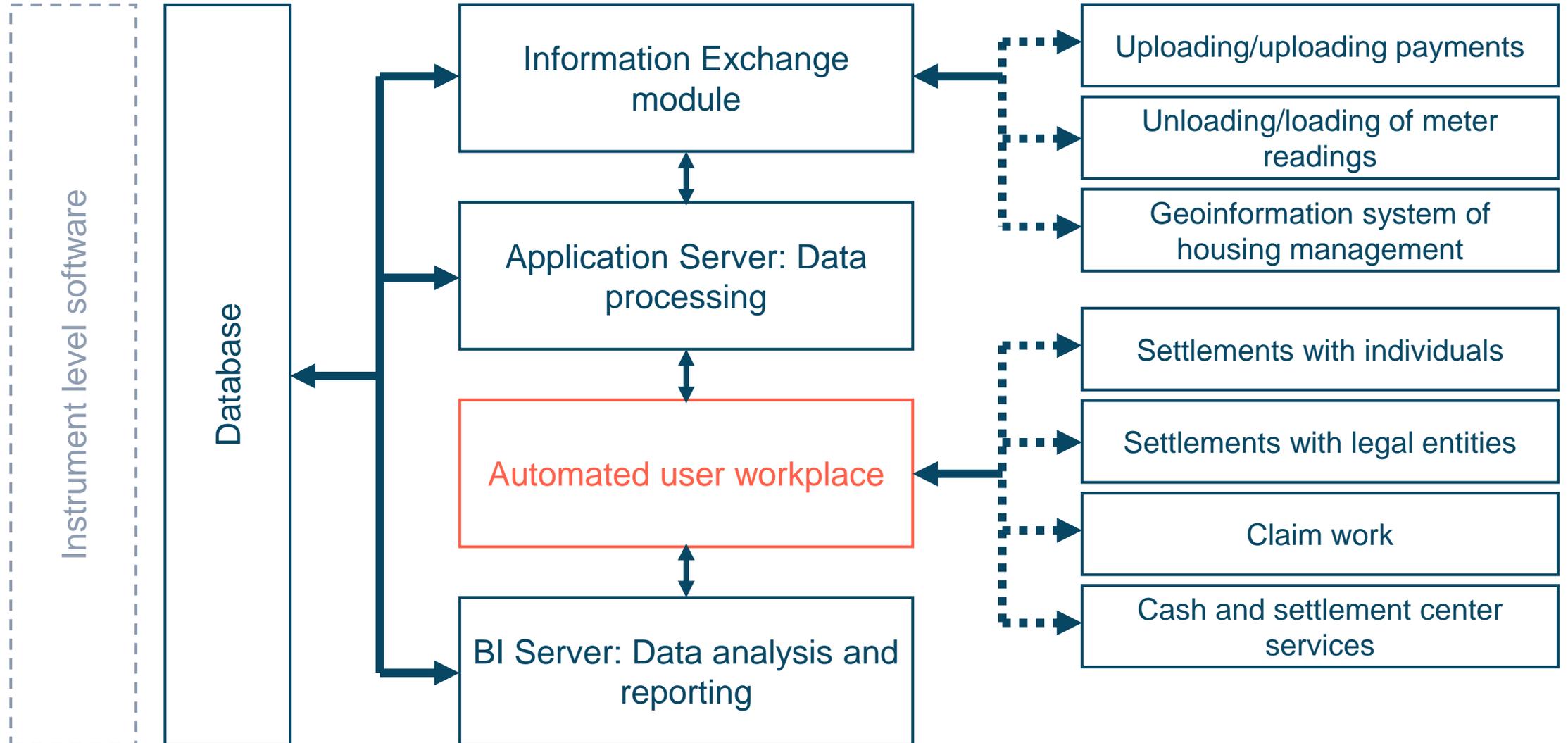
Digital Ecosystem Composition:

- Software system for PC "NeoPro" (automated system to process and transmit information (Billing);

- Software complex for PC "Chronos" (automated system to collect and process readings from metering devices in remotely operated manner);

- Telecommunication equipment Chronos to construct a system to collect data from metering sensors;

- Metering devices "Chronos" for individuals and common house

Designed to automate the following processes:

- payments with individual and legal persons for consumed resources (utilities), other activities;

- work on the debt of consumers and customer services;

- document turn-over, report information development;

- information disclosure in accordance with the legislation of the country of implementation/ introduction/ adoption/ integration;

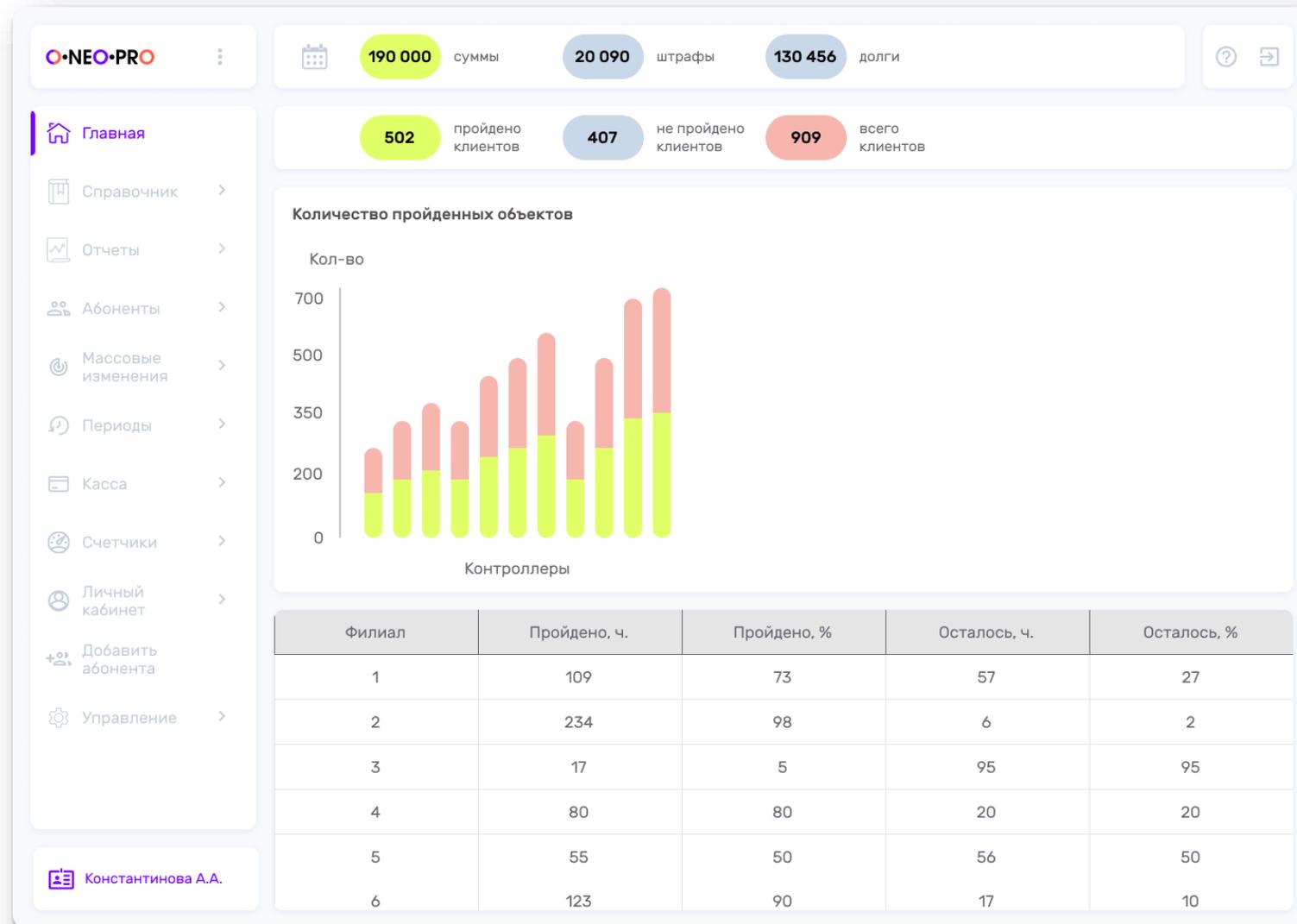- activities of cash settlement center

Complex structure for PC «NeoPro»

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Visualization of the software package for PC «NeoPro»

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O·NEO·PRO

| | 190 000 суммы | 20 090 штрафы | 130 456 долги |

| 502 пройдено клиентов | 407 не пройдено клиентов | 909 всего клиентов |

- Главная
- Справочник
- Отчеты
- Абоненты
- Массовые изменения
- Периоды
- Касса
- Счетчики
- Личный кабинет
- Добавить абонента
- Управление

Константинова А.А.

Количество пройденных объектов

Кол-во

700
500
350
200
0

Контроллеры

Филиал	Пройдено, ч.	Пройдено, %	Осталось, ч.	Осталось, %
1	109	73	57	27
2	234	98	6	2
3	17	5	95	95
4	80	80	20	20
5	55	50	56	50
6	123	90	17	10

Visualization of the software package for PC «NeoPro»

CHRONOS METER | O·NEO·PRO

O·NEO·PRO

190 000 суммы   20 090 штрафы   130 456 долги

Поиск   226 найдено

Лицевой счет   Адрес   ФИО   Счетчик

- Главная
- Справочник
- Отчеты
- **Абоненты**
  - ● Физлица
  - Юрлица
- Массовые изменения
- Периоды
- Касса
- Счетчики
- Личный кабинет
- Добавить абонента
- Управление

Константинова А.А.

Список абонентов

ЛС	ФИО	Адрес	Проживает	Филиал	Тип	Счетчики
001909	Ахметов А.А.	Ленина, 4, кв. 7	2	3	ХВ	2
001920	Баталов Г.В.	Кирова, 8, кв. 100	4	3	ХВ	0
001921	Вавилов С.С.	Андрианова, 11-1, кв. 5	1	2	ХВ	2
001922	Ганибаллов А.Ф.	Малунцева, 17, кв. 26	2	1	ХВ	1
001923	Димитрова Л.И.	Доковая, 12, кв. 5	5	3	ХВ	3
001924	Ежова Л.С.	Красный путь, 4, кв. 200	3	4	ХВ	2
001925	Живоглядов А.К.	Перелета, 1, кв. 123	2	5	ХВ	1
001926	Зимородков В.В.	Полковая, 25, кв. 4	2	1	ХВ	2
001927	Игорева Н.О.	Масленникова, 40 ,кв. 90	1	3	ХВ	4
001928	Костромской К.К.	Котельниковый, 1, кв. 2	1	5	ХВ	2
001929	Мельников П.Л.	Химиков, 8, кв. 45	2	4	ХВ	0
001930	Лиходеева С.Д.	22 Апреля, 14, кв. 67	4	3	ХВ	2

Visualization of the software package for PC «NeoPro»

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The software package "Chronos" (automated system for remotely collection of readings from metering devices for general/ public (block of flats/ apartment house) and individual ones

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The software package "Chronos" is designed to organize the collection and storage, to analysis data about consumed resources from metering devices.

The software package is multi-platform and applied on both Windows and Linux operating systems. Intuitively intelligible interface makes possible to train users quickly.

A number of special reports for management companies (Homeowners Associations, resource-supplying organizations) and integration with accounting software (1C) permit to generate easily payment receipts. For the control room there are included reports that allow tracking emergency situations, unauthorized access to resources, subscribers' applications from their personal accounts.

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The software package provides the operation of the data collection system for the following data collection technologies:

- Digital interfaces RS485 (Mod MUS RTU), M-BUS, pulse output;

- Radio channels LoRaWAN, WM-BUS, GPRS/GSM, NB-IoT.

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- Chronos Server

- LoRaWAN Network Control Server

- Database is based on the Database Management System and managed by PostgreSQL

- Client application for legal persons

- Web-client for legal persons

- Web-client for individual persons

- Mobile application for individual persons

- Configurator of end/terminal devices and instruments

- RUSSIAN SOFTWARE (Unified Register of Russian Programs for Electronic Computers and Databases. Order of the Ministry of Communications of the Russian Federation No. 4 of 10.01.2020, Registration No. - 6157)

- Client-server technology API

- Competitive price

- Turn-key solution (hardware + software from one manufacturer)

- Technical support 24/7

- Sale: "out-of-the-box solution" (customer's server), cloud solution (data storage in the Chronos data center)

- Customization speed with customer requirements

- A large list of supported metering devices, timely addition of new instruments and devices

Chronos telecommunication equipment for the ACMS systems construction

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PULSE COUNTERSWIRELESS

PULSE COUNTERSWIRED

GSM/GPRS MODEMS

DATA COLLECTION AND TRANSMISSION DEVICE-1000

Triton

Water metering in tenement houses, industrial enterprises, in pipeline systems with the possibility to take readings in remotely operated manner.

Number in the State Register of Measuring Devices

RF – 75446-19.

Production according to GOST R 52931-2008

Advantages:

- Made in Russia
- Warranty period 5 years
- Calibration interval 6 years
- Availability of versions with digital interfaces
- Degree of protection IP65 or IP68 (suitable for flooded rooms)
- Inductive data reading by an electronic module
- External magnetic field sensor inside the electronic module
- Determination of the flow direction with the electronic module
- Open protocol of electronic module exchange
- Increased operating life of the turbine
- There is no need to synchronize water meter readings and metering systems
- Private software for debugging and data collecting

Interfaces

- RS-485

- M-Bus

- Wireless M-Bus

- LoRa

- IoT

Technical data

The diameter of the conditional passage, mm		50	65	80	100	150
Water consumption, m3/h						
– the largest, Qmach		50	78,75	80	125	312,5
– nominal, Qn		40	63	63	100	250
– transitional, Qt		0,8	1,26	1,26	2,0	5,0
– smallest, Qmin		0,45	0,75	0,78	1,25	3,12
Permissible error in the range of Qt≤Q≤ Qmax, %		±2				
Permissible error in the range Qmin≤ Q< Qt, %		±5				
Temperature of the measured medium, °C	cold	+5...+40				
	hot	+5...+95				
Pulse weight, l/imp		100 или 1000				
Archive depth, hours, day, month		1480, 160, 24				
Capacity of the counting mechanism, m3		999999,999				
The lowest price of dividing the indicator device, m3		0,001				

Water metering in tenement houses, private sector, offices, shops with the possibility to take readings in remotely operated manner.

Number in the State Register of Measuring Instruments of the Russian Federation 56351-14

Advantages:

- Made in Russia
- Warranty period 5 years
- Brass body
- Archive of readings
- Degree of protection IP65 or IP68 (suitable for flooded rooms)
- External magnetic field sensor
- Possibility of wireless data reading without access to the house, basement, well
- Inductive data reading by an electronic module
- Automatic readings synchronization for water meters and system
- Availability of versions/ modifications with digital interfaces
- External magnetic field sensor inside electronic module
- Determination of flow direction by electronic module
- Open protocol of electronic module exchange
- Increased service life of multi-jet measuring capsule
- Private software for debugging and data collecting

Interfaces

- RS-485

- M-Bus

- Wireless M-Bus

- LoRa

- IoT

Technical data

The diameter of the conditional passage, mm	15		20		25		32		40		50	
Metrological class according to GOST R 50193.1	A	B	A	B	A	B	A	B	A	B	A	B
Water consumption, m3/h												
– the largest, Qmach	3,0		5,0		7,0		12,0		20,0		30,0	
– nominal, Qn	1,5		2,5		3,5		6,0		10,0		15,0	
– transitional, Qt	0,15	0,12	0,25	0,2	0,35	0,28	0,6	0,48	1,0	0,8	4,5	3,0
– smallest, Qmin	0,06	0,03	0,1	0,05	0,14	0,07	0,24	0,12	0,4	0,2	1,2	0,45
Permissible error in the range of Qt≤Q≤ Qmax, %	±2											
Permissible error in the range Qmin≤ Q< Qt, %	±5											
Temperature of the measured medium, °C	5...120											
Archive depth, hours, day, month	1 480, 160, 24											
Pulse weight, l/imp	1 или 10											
Connection distance via RS-485 interface, m	1200 (next with a repeater)											
Verification interval	for cold water meters, 6 years						for hot water meters, 4 years					

Designed to measure the volume of cold or hot water flowing in the pipelines for cold and hot water supply.

Number in the State Register of Measuring Instruments RF 77346-20.

Advantages:

- Made in Russia

- Warranty period 5 years

- Calibration interval 6 years

- Reading data via digital interfaces including radio

- Mounting simplicity and system reliability (there are no odd switchings)

- Magnetic field sensor

- Degree of protection IP 68 (optional)

- Private software for debugging and data collecting

- Meter withstands pressures up to 2.5 Mpa

- RS-485

- M-Bus

- Wireless M-Bus

- LoRa

- IoT

- NB-IoT

- GPRS

Technical data

The diameter of the conditional passage, mm	15			20		
Metrological class according to GOST R 50193.1	Class A	Class B	Class C	Class A	Class B	Class C
Nominal flow rate, Qn, m3/h	1,5	1,5	1,5	2,5	2,5	2,5
Maximum flow rate, Qmax, m3/h	3	3	3	3	5	5
Transient flow rate, Qt, m3/h	0,15	0,12	0,0225	0,25	0,2	0,037
Lowest flow rate, Qmin, m3/h	0,06	0,03	0,015	0,1	0,05	0,025
Sensitivity threshold, Qt m3/h, no more	0,02	0,01	0,007	0,03	0,017	0,012
Pressure loss at Qmax, MPa, no more	0,1					
Water temperature ranges, °C	for the cold water meter: от 0 до +40					
	for a universal water meter: от 0 до +95					
Pressure of the measured medium, MPa,no more	1,6					
Data archive in non-volatile memory, hours/day/month	1 488, 184, 60					

Water metering in apartments

Number in the State Register of Measuring Instruments

RF – 63458—16.

Produced according to GOST R 50601-93, GOST R 50193.1.

Advantages:

- Warranty period 5 years

- Calibration interval 6 years

- Output monitoring and calibration at circulating unit of our own

- Counting mechanism is manufactured from virgin plastic

- Meter withstands pressures up to 2.5 MPa

Technical data

The diameter of the conditional passage, mm	15		20	
Length without connecting fittings, mm	80, 110, 115		130	
Metrological class according to GOST R 50193.1	A	B	A	B
Water consumption, m3/h				
– smallest, Qmin	0,06	0,03	0,10	0,05
– transitional, Qt	0,15	0,12	0,25	5
– nominal, Qn	1,5	1,5	2,5	2,5
– the largest, Qmax	3,0	3,0	5,0	5,0
Nominal pressure, MPa	1,6			
Permissible error in the range of Qt ≤ Q ≤ Qmax, %	±2			
Permissible error in the range Qmin ≤ Q ≤ Qt, %	±5			
Water temperature, °C	+50 cold water, +90 hot water			
Pulse weight, l/imp	10			
Minimum pulse duration, ms	100			
Maximum voltage for reed sensor, V	50			
Maximum current for reed sensor, mA	50			