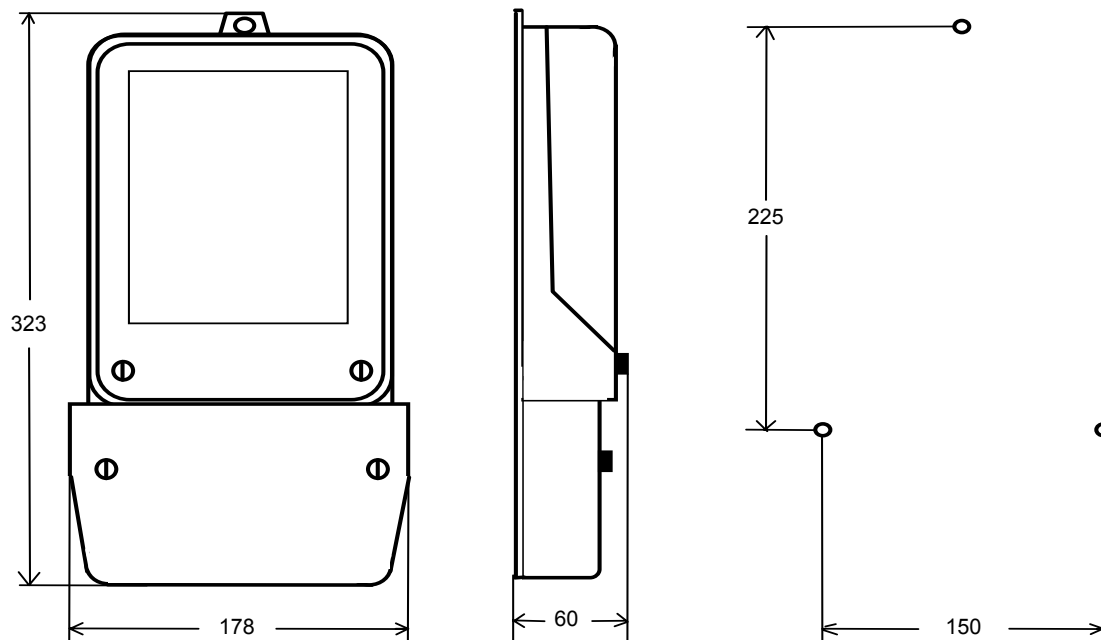


EPQM

The EPQM meter is a modern multi-tariff electrical energy meter capable of measuring of active and reactive electrical energy in both directions. The meter is designed for industrial use and can be incorporated into automated billing systems or power marketing systems.

The EPQM meter is designed for 3- or 4-wire connection through transformers.

The measurement accuracy complies with the IEC 687 requirements (Class 0.5s) for the active energy measurement and IEC 1036 requirements (Class 1.0) for the reactive energy measurement (substituting $\cos\phi$ with $\sin\phi$).



The overall dimensions and mounting holes

Technical specifications

The meter resistance to environmental and mechanical effects complies with the requirements of IEC687, IEC1036 standards. The main technical specifications are specified in Table.

Precision Class	0.5s (IEC 687)	1.0 (IEC 1036)	2.0 (IEC 1268)
Threshold sensitivity, % I_{nom}	0.1	0.2	0.3
Nominal current (I_{nom})	5A or 1A		
Maximum current % I_{nom}	125%		
Nominal voltage, (U_{nom}), V	3x57,7/100; 3x63,5/110; 3x69,2/120; 3x220/380; 3x230/400; 3x380; 3x400; 3x127/220; 3x120/208; 3x220; 3x230		
Permissible voltage range	-20% +15% of U_{nom}		
Power consumption:			
voltage circuits	No more than 1.5VA (1W)/phase		
current circuit	No more than 0.3 VA/phase		
Accuracy of the internal clock	$\leq \pm 0,5s/24h$ at 23°C $\leq \pm 0,1s/24h$ at 1°C		
Network frequency	50Hz or 60Hz		
Installation location	Closed premises free from dust and chemically active gas or vapour		
Operating temperature	from -20 °C to +55°C		
Atmospheric pressure	from 84 to 106.7kPa (630 - 800mm Hg),		
Relative humidity	up to 90% (t=30 °C)		
Protection class	2		
Dimensions, mm	328x178x60		
Weight	No more than 1,6kg		

EPQM Meter Designation for Ordering

Meter Type _____ EPQM - X X X . X X - XXXX

Connection: _____

- 3 – 3-element 4-wire connection
- 4 - 2-element 3-wire connection

Rated Voltage: _____

1 – (3 x 57,7/100) V; (3 x 63.5/110) V; (3x69,2/120) V
 (3 x100) V; (3 x 110) V; (3 x 120) V;

3 – (3 x 220/380) V; (3 x 230/400) V; (3 x 380) V; (3 x 400) V;
 4 – (3 x 127/220) V; (3 x 120/208) V; (3 x 220) V; (3 x 230) V;

Rated Current: _____

- 1 - 5 A (transformer connection);
- 2 - 1 A (transformer connection)

Software Version: _____

- 01 – Software in Lithuanian
- 02 - Software in Russian
- 03 - Software in English
- 04 - Software in Spanish
- 05 - Software in Latvian

Purpose of Auxiliary Outputs:

- on terminals 14-16 _____
- on terminals 13-23 _____
- on terminals 20-21 _____
- on auxiliary terminals _____

- 1 Relay
- 2 Telemetric input S0
- 3 Backup power supply (for disconnected meter data readout)
- 4 Current loop I (commercial data)
- 5 Current loop II (instantaneous data)
- 6 RS 485
- 7 M-BUS

Tariff Registers and Number of Values in the Registers

The calculation results are distributed by the tariff module according to tariff time zones and entered into appropriate registers. For each tariff time zone there can be set up to four daytime intervals when the tariff under consideration is active. The energy and power registers of the basic meter configuration are described in Table.

Registers	Parameter name / number of values stored in register									
	T1		T2		T3		T4		TΣ	
Energy	+W _{tot}	1	+W _{tot}	1	+W _{tot}	1	+W _{tot}	1	+W _{tot}	1
	-W _{tot}	1	-W _{tot}	1	-W _{tot}	1	-W _{tot}	1	-W _{tot}	1
	+Q _{tot}	1	+Q _{tot}	1	+Q _{tot}	1	+Q _{tot}	1	+Q _{tot}	1
	-Q _{tot}	1	-Q _{tot}	1	-Q _{tot}	1	-Q _{tot}	1	-Q _{tot}	1
	+W _{month}	15	+W _{month} _h	15	+W _{month}	15	+W _{month}	15	+W _{month} _h	15
	-W _{month}	15	-W _{month}	15	-W _{month}	15	-W _{month}	15	-W _{month}	15
	+Q _{month}	15	+Q _{month} _h	15	+Q _{month}	15	+Q _{month}	15	+Q _{month} _h	15
	-Q _{month}	15	-Q _{month}	15	-Q _{month}	15	-Q _{month}	15	-Q _{month}	15
	+W _{day}	36*	+W _{day}	36*	+W _{day}	36*	+W _{day}	36*	+W _{day}	36*
	-W _{day}	36*	-W _{day}	36*	-W _{day}	36*	-W _{day}	36*	-W _{day}	36*
	+Q _{day}	36*	+Q _{day}	36*	+Q _{day}	36*	+Q _{day}	36*	+Q _{day}	36*
	-Q _{day}	36*	-Q _{day}	36*	-Q _{day}	36*	-Q _{day}	36*	-Q _{day}	36*
	W _{tm}	2	W _{tm}	2	W _{tm}	2	W _{tm}	2	W _{tm}	2
Power	+p (15, 30, 60) / 3360									
	-p (15, 30, 60) / 3360									
	+q (15, 30, 60) / 3360									
	-q (15, 30, 60) / 3360									
	+p _{day}	36*	+p _{day}	36*	+p _{day}	36*	+p _{day}	36*	---	---
	-p _{day}	36*	-p _{day}	36*	-p _{day}	36*	-p _{day}	36*	---	---
	+q _{day}	36*	+q _{day}	36*	+q _{day}	36*	+q _{day}	36*	---	---
	-q _{day}	36*	-q _{day}	36*	-q _{day}	36*	-q _{day}	36*	---	---
	+p _{month}	15	+p _{month}	15	+p _{month}	15	+p _{month}	15	---	---
	-p _{month}	15	-p _{month}	15	-p _{month}	15	-p _{month}	15	---	---
	+q _{month}	15	+q _{month}	15	+q _{month}	15	+q _{month}	15	---	---
-q _{month}	15	-q _{month}	15	-q _{month}	15	-q _{month}	15	---	---	

* - not including the actual day that has not ended yet. Its data is stored in the operative memory and entered into EEPROM after the day is done.

The maximal quantity of values in power register is 3360, it means values of the last 35, 70, 140 days in case of 15, 30, 60 minutes integration periods respectively.