

For more information please refer to our website at www.binom3.ru

For more information please refer to integrated Web-server at www.binom3.com

8 (800) 222 00 72



MORE THAN
2 300
PARAMETERS

Mean life: **30 years**
Mean time between failures: not less than **150,000 h**
Recalibration period: **12 years**

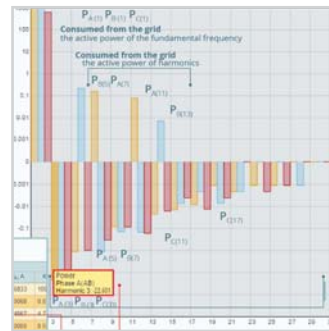
New Standard of Industrial Metering Devices

THREE-PHASE MEASURING TRANSDUCER



- Rated current – **1 A, 5 A**
- Rated voltage – **220/380 V, 57,7/100 V**
- Range of measurements with retention of claimed accuracy **2U_N, 2I_N**
- Three-phase three-wire and four-wire network
- Period of measurement of RMS values – **200 ms**
- Vector diagrams of phase currents, voltages and apparent power.

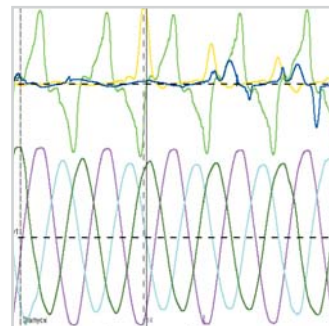
POWER QUALITY METER AND ANALYZER



- EN 50160:2010
- IEC 61000-4-30:2008 (Class A)
- IEC 61000-4-7:2009 (Class I)
- IEC 61000-4-15:2010

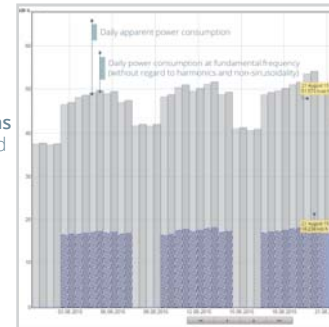
- Statistical evaluation of conformity of power quality parameters to standard values
- Adjustable averaging intervals and evaluation of conformity of Power Quality parameters to standards
- Power Quality Test Report (ready-for-use statistic report) created in the device
- Methods of measuring harmonics (to the **50th** order) and interharmonics (to the **49th** order)

"BLACK BOX" OF ELECTRICAL PROCESSES FAULT (EMERGENCY EVENTS) RECORDER



- Synchronous recording of instantaneous current and voltage values
- Historical data: up to **60 seconds**
- Waveform duration: up to **120 seconds**
- Number of waveforms that can be stored up to **1000**
- Recording changes of discrete signals
- Archiving of RMS and averaged values
- Recording rate: up to **5,000 events/s**
- Number of archives: from **1 to 32**
- Simultaneous display of up to **50 graphs**
- The combination of waveforms and graphs

REVENUE METER



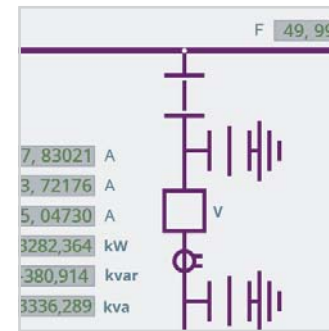
- IEC 62052-11:2003
- IEC 62053-22:2003
- IEC 62053-23:2003

Active energy metering in accuracy class: **0,2S**
Reactive energy metering in accuracy class: **0,5**
Energy metering:

In each of the **16 energy metering** channels there are **2** metering **profiles**:

- **commercial (revenue)**, storage for **49 months** (30 min)
- **technical**, storage for **99 days** (3 min)
- Metering per day/month, storage for **9 years 10 months**
- Multi-tariff (time-of-use) metering in 4 tariff rates (in summary form and also outside tariff rates)
- Event logging as required by "Market Council" Non-Profit Partnership

FEEDER BAY CONTROLLER

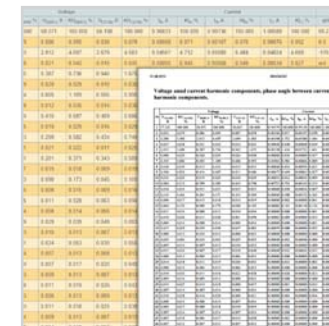


- IEC 870-3-89
- IEC 60870-4:1990
- IEC 60870-5-104:2000
- IEC 60870-5-101:2003

- Digital inputs (**16 DI**), **+24 V**
- DI sampling rate cycle: **100 μs**
- Positional accuracy of teleindication readouts to UTC: **100 μs**
- Support for single-element and two-element teleindication

- **2, 3, 4** remote control channels
- Single-stage and two-stage teleswitching conditions
- Switching capacity: up to **5A** in circuits **~220 V, =220 V**.

AUTOMATIC PROCESS CONTROL OF FEEDER BAY IN ONE DEVICE



- Built-in MicroSD memory card, **4 GB**
- Storage of **16,000,000 events** in a **1 GB** memory
- Built-in **Web-server**
- Built-in **display viewing tools** for graphs, waveforms, tables, diagrams, forms and reports.

- generation of reports and saving them on user disk as ***xls** and ***pdf** files, printing from the browser
- Built-in system for limiting access rights
- Positional accuracy of teleindication readouts to single time: not more than **1 μs**
- Built-in system for diagnosis
- Hard real-time multitasking operating system, **guaranteed event response time**, simultaneous execution of tasks **with equal priority**.

Certificates

Type Approval Certificates of Measuring Instrument
RU.C.34.001A № 57810, 18.02.2015.

Type Approval Certificates of Measuring Instrument
RU.C.34.001A № 58154, 23.03.2015



Using the BINOM₃ universal device in feeder bays yields benefits not only in the technical sphere but also in financial and operational terms:

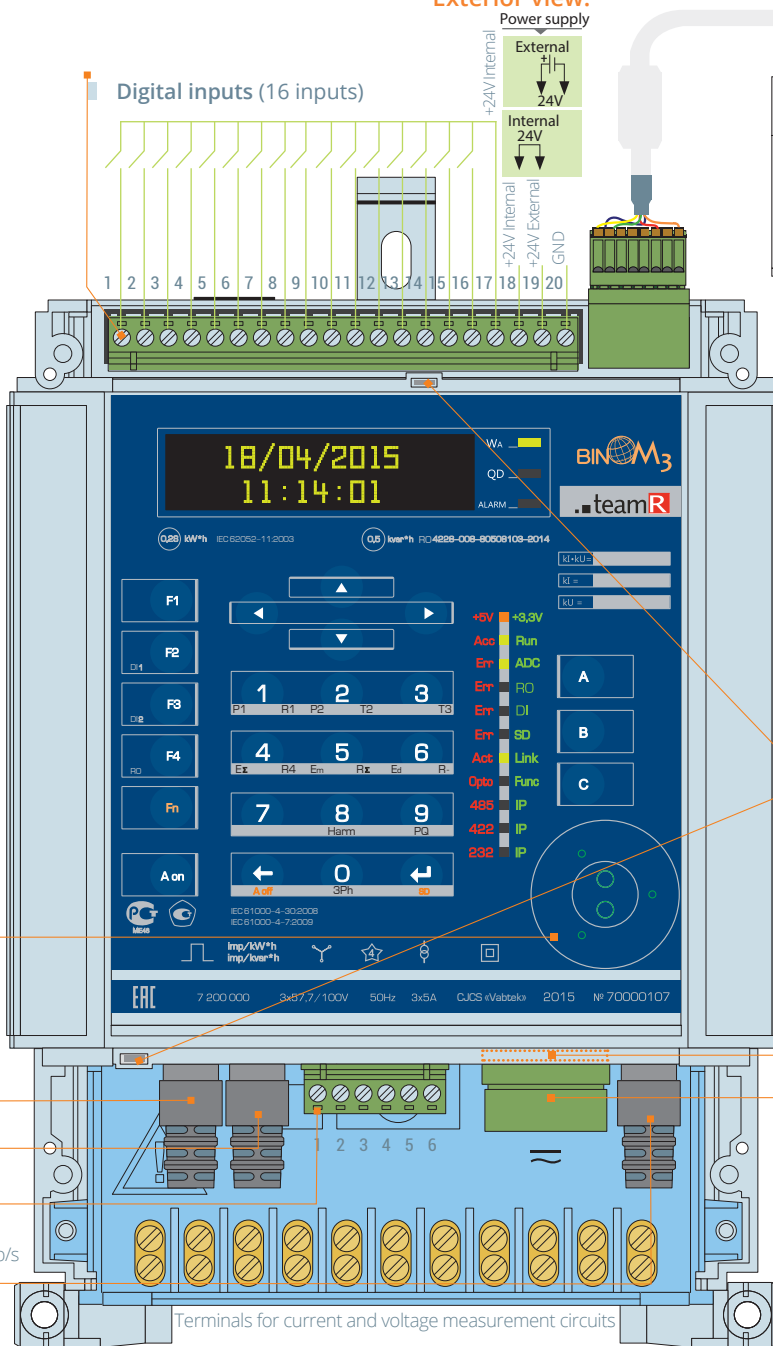
1. Significant **decrease in the unit cost** of a set of **measurement channels** (for teleindication, remote control (teleswitching), measurement and waveform recording) by a factor of up to four, by reducing the range of connected measurement devices to a single model.
2. Reduced requirements to data acquisition and transmission devices, concentrators and computers in control centres, and lower capacity requirements for communication channels, due to the execution of many computing tasks within the device, the provision of local archiving resources and the possibility of access to measurement and monitoring results via communications channels.
3. Significant reduction, by a factor of up to 3 - 4, in **one-off costs of automation of power systems**, due not only to the reduced cost of measuring devices, but also the associated reduction in the cost of middle and higher level hardware, distribution panels and communication equipment, materials and labour (for design, installation, commissioning and testing) at all stages of automated systems development.
4. **Reduction in operating costs** due to the smaller range of hardware and the decreased demand on human and time resources (reduced number of call-outs for servicing, decreased expenditure on spares and accessories).
5. **Improved reliability of the power supply** because of the reduction in faults and the decrease in time spent tracing the causes of anomalous and fault conditions.
6. **Financial benefits** from implementation of **power quality assurance measures**.
7. Comprehensive database for theoretical investigations of the monitored system, to ensure that the multiplicity of details are not missed and previously unknown characteristics of its behaviour are visible.

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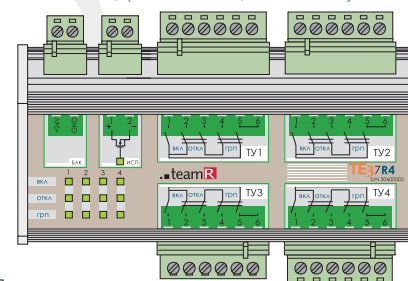
Delivery time:
from 5 days to 3 months
depending on the models
and volume of the order.

BINOM₃ 37U3.220I3.1S16T4 Multifunctional Revenue Energy Meter and Power Quality Analyzer.

Exterior view.



Relay (remote control) outputs (up to 4 channels) - TE37R4 relay unit



Electromagnetic compatibility:

Immunity according to IEC 61000-6-5:2001
for technical equipment intended for use in power stations and substations for high voltage class H.

Connection type	Isolation for 1 min.	Immunity
Measurement circuits	~ 4 kV	h
Ethernet	~ 2 kV	f
RS-485/SYNC	~ 4 kV	f
RS-485/422	~ 4 kV	l
RS-232	~ 4 kV	l
Digital inputs (teleindication)	~ 3 kV	f
Relay outputs:		
electromagnetic relay	~ 4 kV	f
solid-state relay	~ 2,5 kV	f

h - connections to high-voltage equipment f - field connections l - local connections

Unlocking sensor (electronic seal)

MicroSD connector

220 V connector: main and standby supply, earthing contact (PE)

Main supply: ~ 90-265 V;
Standby supply: = 125-350 V

Built-in autonomous power source (30 mins.)

- Optical port
- RS-232 interface, IEC 101 460.8 kbit/s
- RS-485/422 interface, IEC 101 NMEA/PPS 460.8 kb/s
- RS-485/SYNC interface, pulsed output, pulsed input, IEC 101, NMEA/PPS, 460.8 kb/s
- Ethernet interface, IEC 104 SNTPE IEC 61850 100 Mb/s



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