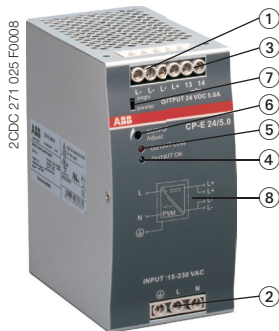


Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet



- ① OUTPUT L+, L+, L-, L-: terminals - output
- ② INPUT L, N, PE: terminals - input
- ③ 13-14: terminals - signalling contact
- ④ OUTPUT OK: green LED - output voltage OK
- ⑤ OUTPUT LOW: red LED - output voltage too low
- ⑥ OUTPUT Adjust: potentiometer - adjustment of the output voltage
- ⑦ single/parallel: sliding switch - adjustment of single or parallel operation
- ⑧ Circuit diagram

Features

- Rated output voltage 24 V DC
- Output voltage adjustable via front-face rotary potentiometer "OUTPUT Adjust"
- Rated output current 5 A
- Rated output power 120 W
- Supply range 115/230 V AC (90-132 V AC, 180-264 V AC, 210-375 V DC), auto select
- Typical efficiency of 86 %
- Low power dissipation and low heating
- Free convection cooling (no forced cooling with ventilators)
- Ambient temperature range during operation -35...+70 °C
- Open-circuit, overload and short-circuit stable
- Integrated input fuse
- Redundancy unit CP-A RU offering true redundancy, available as accessory
- Signalling contact "13-14" (Relay) for output voltage OK
- LEDs for status indication

Approvals

- UL 508, CAN/CSA C22.2 No.14
- ANSI/ISA-12.12 (Class I, Div. 2, hazardous locations)
- UL 60950, CAN/CSA C22.2 No.60950
- GOST
- CCC

Approval refers to rated input voltage U_{in}

Approval refers to rated input voltage U_{in}

Approval refers to rated input voltage U_{in}

Marks

- CE CE
- C-Tick C-Tick

Order data

Type	Input voltage range	Rated output voltage / current	Order code
CP-E 24/5.0	90-132 V AC / 180-264 V AC 210-375 V DC	24 V DC / 5 A	1SVR 427 034 R0000

Order data - Accessories

Type	Description	Order code
CP-A RU	Redundancy unit The CP-A RU provides decoupling of two CP-E power supply units ≤ 40 V and ≥ 5 A.	1SVR 427 071 R0000

Application

The primary switch mode power supply offers two voltage input ranges. This enables the supply with AC or DC. Furthermore it is equipped with two generous capacitors, which ensure mains buffering of at least 30 ms (at 230 V AC). That is why the devices can be used worldwide also in high fluctuating networks and battery-powered plants.

Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet

Operating mode

By means of the potentiometer „OUTPUT Adjust“ the output voltage can be adjusted within a range of 22.5 to 28.5 V DC. Thus, the power supply can be optimally adapted to the application, e.g. compensating the voltage drop caused by a long line length.

The green LED „OUTPUT OK“ is lightening during proper operation.

The red LED „OUTPUT LOW“ is lightening when the output voltage is too low.

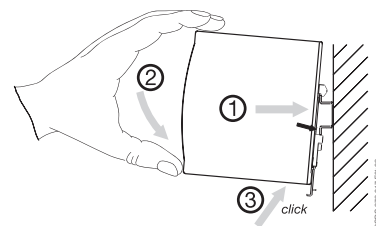
Switch „single/parallel“ for selection of single or parallel operation.

Signalling contact 13-14 (max. 60 V DC / 0.3 A) is ON when the output voltage is more than 75 %.

Installation

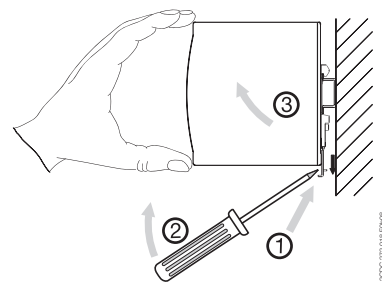
Mounting

The switch mode power supply can be snapped on a DIN rail according to IEC/EN 60715 as shown in the accompanying picture. For that the device is set with its mounting rail slide on the upper edge of the mounting rail and locked by lifting it downwards.



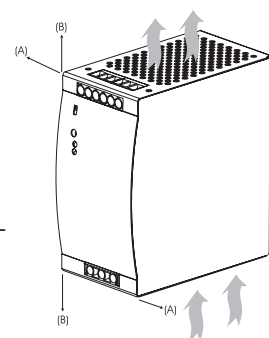
Demounting

Remove the switch mode power supply as shown in the accompanying picture. For that the latching lever is pulled downwards by means of the screwdriver. Alternatively you can press the unlock button to release the device. Then in both cases the device can be unhinged from the mounting rail edge and removed.



Mounting position

The devices have to be mounted horizontally with the input terminals on the bottom. In order to ensure a sufficient convection, the minimum distance to other modules should not be less than 25 mm in vertical and horizontal direction.



Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet

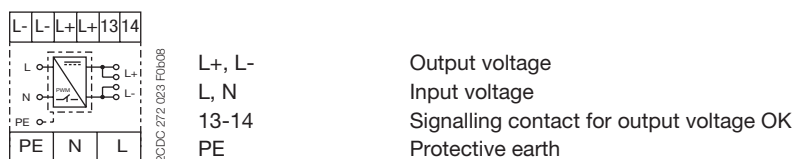
Installation

Electrical connection

Connect the input terminals L and N. The protective earth conductor PE must be connected. The installation must be executed acc. to EN 60950, provide a suitable disconnecting device (e. g. line protection switch) in the supply line. The input side is protected by an internal input fuse.

Rate the lines for the maximum output current (considering the short-circuit current) or provide a separate fuse protection. We recommend to choose the cable section as large as possible in order to minimize voltage drops. Observe the polarity. The device is overload, short-circuit and open-circuit proof. The secondary side of the power supply unit is electrically isolated from the input and internally not earthed (SELV) and can therefore be earthed by the user according to the needs with L+ or L- (PELV).

Connection diagram



Safety instructions and warnings



The device must be installed by qualified persons only and in accordance with the specific national regulations (e.g., VDE, etc.). The devices are maintenance-free chassis-mounted units.

Disconnect system from supply network!

Before any installation, maintenance or modification work: Disconnect the system from the supply network and protect against switching on.

Before start of operation:

Attention! Improper installation/operation may impair safety and cause operational difficulties or destruction of the unit. Before operation the following must be ensured:

- Connect to main according to the specific national regulations.
- Power supply cables and unit must be sufficiently fused. A disconnecting device has to be provided for the power supply to disengage unit and supply cables from supply mains if required.
- The protective earth conductor must be connected to the terminal PE (Protection class I)
- The secondary side of the power supply unit is not earthed and can be earthed by the user according to the needs with L+ or L-.
- Rate the output lines for the output current of the power supply and connect them with the correct polarity.
- In order to ensure sufficient air-cooling the distance to other devices has to be considered.

In operation:

- Do not modify the installation (primary and secondary side)! High current! Risk of electric arcs and electric shocks (danger to life)!
- Risk of burns: Depending on the operation conditions the enclosure can become very hot.
- The internal fuse is not user-replaceable. If the internal fuse blows, most probably the device is defective. In this case, an examination of the switch mode power supply by the manufacturer is necessary.

Attention! High voltage! Danger to life!



The power supplies contain components with high stored energy and circuits with high voltage! Do not introduce any objects into the unit, and do not open the unit. With some units of this range the output is capable of providing hazardous energy. Ensure that the service personnel is protected against inadvertent contact with parts carrying energy.

Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet

Technical data

Data at $T_a = 25\text{ °C}$, $U_{in} = 230\text{ V AC}$ and rated values, unless otherwise indicated

Type		CP-E 24/5.0
Input circuit		L, N
Rated input voltage U_{in}		115 / 230 V AC auto select
Input voltage range		90-132 V AC, 180-264 V AC / 210-375 V DC
Frequency range AC		47-63 Hz
Typical current consumption	at 115 V AC	2.2 A
	at 230 V AC	0.83 A
Typical power consumption		140 W
Inrush current limiting	at 115 V AC	24 A (max. 5 ms)
	at 230 V AC	48 A (max. 5 ms)
Discharge current	input / output	0.25 mA
	input / PE	3.5 mA
Power failure buffering time	at 115 V AC	min. 25 ms
	at 230 V AC	min. 30 ms
Internal input fuse		3.15 A slow-acting / 250 V AC
Power factor correction (PFC)		yes, passive, 0.7
Indication of operational states		
Output voltage	OUTPUT OK: green LED	┐: output voltage OK
	OUTPUT LOW: red LED	┐: output voltage too low
Output circuit		L+, L+, L-, L-
Rated output voltage		24 V DC
Tolerance of the output voltage		0...+1 %
Adjustment range of the output voltage		22.5-28.5 V DC
Rated output power		120 W
Rated output current I_r	$T_a \leq 60\text{ °C}$	5 A
Derating of the output current	$60\text{ °C} < T_a \leq 70\text{ °C}$	2.5 %/°C
Signalling contact for output voltage OK	13-14	Relay (max. 60 V DC, 0.3 A)
Maximum deviation with	load change statical	$\pm 1\text{ %}$ (single mode) $\pm 5\text{ %}$ (parallel mode)
	change of output voltage within the input voltage range	$\pm 0.5\text{ %}$
Control time		< 2 ms
Starting time after applying the supply voltage	at I_r	max. 1 s
	with 3500 μF	max. 1.5 s
Rise time	at I_r	max. 150 ms
	with 3500 μF	max. 500 ms
Fall time		max. 150 ms
Residual ripple and switching peaks	BW = 20 MHz	50 mV
Parallel connection		configurable, to increase power, up to 3 devices, min. 0.1 I_r - max. 0.9 I_r
Series connection		yes, to increase voltage, max. 2 devices
Resistance to reverse feed		max. 35 V DC
Output circuit - No-load, overload and short-circuit behaviour		
Characteristic curve of output		U/I characteristic curve
Short-circuit protection		continuous short-circuit proof
Short-circuit behaviour		continuation with output power limiting

Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet

Type		CP-E 24/5.0
Overload protection		output power limiting
No-load protection		continuous no-load stability
Starting of capacitive loads		3500 µF
General data		
Power dissipation		typ. 20 W
Efficiency		typ. 86 %
Duty time		100 %
Dimensions (W x H x D)		63.2 x 123.6 x 123.6 mm (2.49 x 4.87 x 4.87 in)
Weight		1 kg (2.20 lb)
Material of enclosure		metal
Mounting		DIN rail (EN 60715), snap-on mounting without any tool
Mounting position		horizontal
Minimum distance to other units	horizontal / vertical	25 mm / 25 mm (0.98 in / 0.98 in)
Degree of protection	enclosure / terminals	IP20 / IP20
Protection class		I
Electrical connection - input circuit / output circuit		
Wire size	fine-strand with wire end ferrule	
	0.2-4 mm ² (24-11 AWG)	
	fine-strand without wire end ferrule	
	rigid	0.2-6 mm ² (24-10 AWG)
Stripping length		8 mm (0.31 in)
Tightening torque	input / output	1.0 Nm (9 lb.in) / 0.62 Nm (5.5 lb.in)
Environmental data		
Ambient temperature range	operation	-35...+70 °C
	rated load	-35...+60 °C
	storage	-40...+85 °C
Damp heat		95 % RH, without condensation
Vibration (sinusoidal) (IEC/EN 60068-2-6)		10-500 Hz, 2 G, along X, Y, Z each axis, 60 min. for each axis
Shock (half-sine) (IEC/EN 60068-2-27)		15 G, 11 ms, 3 axis, 6 faces, 3 times for each face
Isolation data		
Rated insulation voltage U _i	input / output	3 kV AC
	input / PE	1.5 kV AC
Pollution degree		2
Overvoltage category (UL/IEC/EN 60950-1)		II
Standards		
Product standard		EN 61204-3
Low Voltage Directive		2006/95/EC
EMC directive		2004/108/EC
RoHS directive		2002/95/EC
Electrical safety		EN 60950-1, UL 60950-1, UL 508, EN 61558-1, EN 61558-2-17, EN 60204-1
Protective low voltage		SELV (EN 60950)
Electromagnetic compatibility		
Interference immunity to		IEC/EN 61000-6-2
electrostatic discharge	IEC/EN 61000-4-2	Level 4 (air discharge 15 kV / contact discharge 8 kV)
radiated, radio-frequency, electro-magnetic field	IEC/EN 61000-4-3	Level 3 (10 V/m)
electrical fast transient / burst	IEC/EN 61000-4-4	Level 4 (4 kV / 5 kHz)
surge	IEC/EN 61000-4-5	L-L Level 3 (2 kV) / L-PE Level 4 (4 kV)

Power supply CP-E 24/5.0

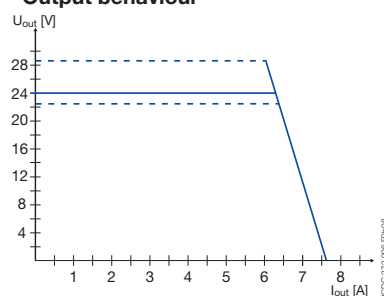
Primary switch mode power supply

Data sheet

Type		CP-E 24/5.0
conducted disturbances, induced by radio-frequency fields	IEC/EN 61000-4-6	Level 3 (10 V)
power frequency magnetic fields	IEC/EN 61000-4-8	Level 4 (30 A/m)
voltage dips, short interruptions and voltage variations	IEC/EN 61000-4-11	dip: >95 % 10 ms / >30 % 500 ms interruptions: >95 % 5000 ms
Interference emission		IEC/EN 61000-6-3
high-frequency radiated	IEC/CISPR 22, EN 55022	Class B
high-frequency conducted	IEC/CISPR 22, EN 55022	Class B
limits for harmonic current emissions	IEC/EN 61000-3-2	Class D

Technical diagrams

Output behaviour



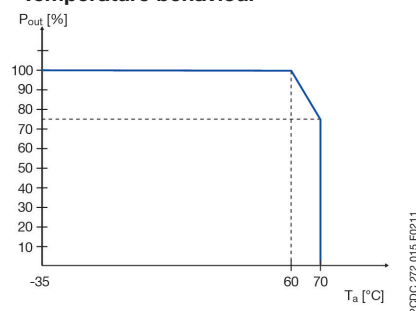
Characteristic curve of output at $T_a = 25\text{ °C}$

The switch mode power supply CP-E 24/5.0 is able to supply at 24 V DC output voltage and

- at an ambient temperature of:
≤ 60 °C a continuous output current of approx. 5 A
- at ambient temperatures of:
60 °C < T_a ≤ 70 °C the output power has to be reduced by 2.5 % per °C temperature increase.

If the switch mode power supply is loaded with an output current > 5 A, the operating point is passing through the U/I characteristic curve shown.

Temperature behaviour



Characteristic curve of temperature at rated load

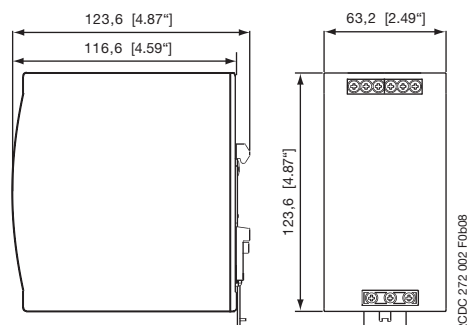
Power supply CP-E 24/5.0

Primary switch mode power supply

Data sheet

Dimensions

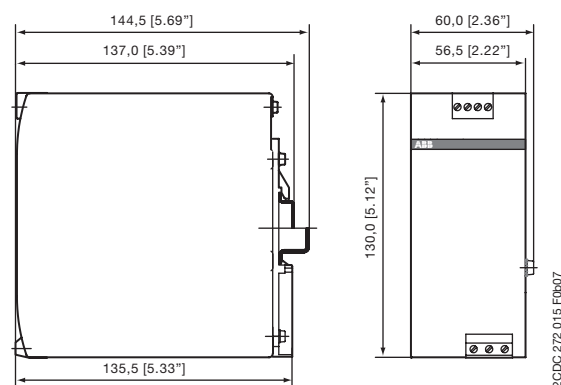
in mm



CP-E 24/5.0

Dimensions accessories

in mm



CP-A RU

Further Documentation

Document title	Document type	Document number
Electronic Products and Relays	Technical catalogue	2CDC 110 004 C020x
Power Supply Units	Application manual	2CDC 114 048 M020x
Redundancy unit CP-A RU	Data sheet	2CDC 114 036 D0202

You can find the documentation on the internet at www.abb.com/lowvoltage → Control Products → Power Supplies



As part of the on-going product improvement, ABB reserves the right to modify the characteristics of the products described in this document. The information given is non-contractual.

For further details please contact (www.abb.com/contacts) the ABB company marketing these products in your country.

Document number: 2CDC 114 060 D0201 (09/2011)

ABB STOTZ-KONTAKT GmbH

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Postfach 10 16 80, 69006 Heidelberg, Germany
Internet <http://www.abb.com/lowvoltage> → Control Products

Contact: <http://www.abb.com/contacts> → Low Voltage Products and Systems

Fișa de informații generale

de colectare a datelor și evaluare a operatorului economic

I. DATE GENERALE

1. Denumirea operatorului economic: _____ *PARTENER ENERGO SRL* _____
2. Codul fiscal: _____ *1014600016247* _____
3. Codul TVA _____ *0405060* _____
4. Adresa sediului central: _____ *m.Chisinau , str.Mesterul Manole 12* _____
Adresa poștală _____ *MD 2044* _____
Administrator _____ *IVAN Dumitrascu* _____
Persoana de contact _____ *IVAN Dumitrascu* _____
5. Telefon: _____ *078 0000 53* _____ Fax: _____ E-mail: _____ *partener.energo@yahoo.com* _____
6. Decizia de înregistrare _____ *dosar nr. 1014600016247 din 04.06.2014* _____
(numărul, data, înregistrării)
Camera inregistrării de
STAT

(instituția emitentă)
7. Domeniile principale de activitate: _____ *Comert cu utilaj Energetic, Digitalizare, Citirea Contoarelor* _____

(de indicat în conformitate cu prevederile din statutul operatorului)
11. Capitalul propriu la data de întocmire a ultimului bilanț _____ *555, 7 (31. 12. 2019)* _____
(de indicat valoarea și data)
12. Numărul personalului scriptic _____ *3* _____ persoane, din care muncitori _____ *1* _____ persoane
13. Numărul personalului care va fi încadrat în realizarea contractului _____ *3* _____ persoane, din care muncitori _____ *1* _____ persoane, inclusiv:

(de indicat profesiile și categoriile de calificare)
14. Valoarea de bilanț a mijloacelor fixe _____ *9.3* _____ mii lei
15. Dotare tehnică: _____
(de indicat principale mijloace care vor fi utilizate la executarea contractului)
15. Cifra de afaceri pe ultimii 3 ani pe tipurile de activități indicate în pct. 14 (mii lei):
Anul 2022 _____ *9 194.8* _____ mii lei
Anul 2021 _____ *4 381.4* _____ mii lei
Anul 2020 _____ *14 814.9* _____ mii lei
16. Datoriile totale ale operatorului economic _____ *3 405.6* _____ mii lei,
inclusiv: față de buget _____ *00,00* _____ mii lei
- Data completării _____ *23* _____ . _____ *03* _____ .2023 _____
- Numele, prenumele și funcția persoanei autorizate să reprezinte operatorul economic:
_____ Administrator _____ *IVAN Dumitrascu* _____

(semnătura)

EU DECLARATION OF CONFORMITY

1. Equipment model/Product (product, type, batch or serial number)

Type: ND40

2. Name and address of the manufacturer or his authorized representative

LUMEL S.A.
ul. Sulechowska 1
65-022 Zielona Góra
POLAND

3. This declaration of conformity is issued under the sole responsibility of the manufacturer

4. Object of the declaration (identification of the apparatus)

POWER NETWORK ANALYZER

5. The object of the declaration described above is in conformity with the relevant Union harmonization legislation:

EMC Directive – 2014/30/UE
LVD Directive – 2014/35/UE

6. References to the relevant harmonized standards used, including the date of the standard, or references to the other technical specifications, including the date of the specification, in relation to which conformity is declared:

EN 61000-6-4:2007
EN 61000-6-2:2005
EN 61010-1:2010

7. Additional information:

The Declaration of Conformity is not valid any longer, in case, without any written authorization by LUMEL S.A.:

- the product is modified, supplemented or changed in any other way;
- components, which are not part of the accessories, if any, are integrated in the product;
- the product is used or installed improperly.

The last two digits of the year in which the CE marking was affixed for the first time: 16

Zielona Góra, 2016-08-02
(place and data of issue)

KIEROWNIK
BIURA ROZWOJU
[Signature]
mgr Dariusz Tronf

(name of authorized person)

LUMEL S.A.

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65-022 Zielona Góra, Poland
tel. +48 68 45 75 100
www.lumel.com.pl

COVENANT OF INTEGRITY

To: North Central Heating Power Plant

„CET-Nord” SA takes very seriously allegations of fraud and corruption in its projects. When “CET-Nord” SA receives such allegations, they are processed in accordance with “CET-Nord” SA’s Enforcement Policy and Procedures (available at www.cet-nord.md). These policies provide that “CET-Nord” SA will investigate and, if necessary, impose a sanction for the following “Prohibited Practices”: coercion, collusion/secret agreement, corruption, fraud, misuse of resources, theft and obstruction.

We shall, for the duration of the Contract appoint and maintain in office an officer, who shall be a person reasonably satisfactory to you and to whom you shall have full and immediate access. This person will have the duty, and the necessary powers to ensure compliance with this Covenant.

For the purpose of complying with this Covenant, the terms set forth below define Prohibited Practices as:

- ✓ **coercive practice** which means impairing or harming, or threatening to impair or harm, directly or indirectly, any party or the property of any party to influence improperly the actions of a party;
- ✓ **collusive practice** which means an arrangement between two or more parties designed to achieve an improper purpose, including to influence improperly the actions of another party;
- ✓ **corrupt practice** which means the offering, giving, receiving or soliciting, directly or indirectly, of anything of value to influence improperly the actions of another party;
- ✓ **fraudulent practice** which means any act or omission, including a misrepresentation, that knowingly or recklessly misleads, or attempts to mislead, a party to obtain a financial or other benefit or to avoid an obligation;
- ✓ **misuse of the company’s resources or assets** which means improper use of the Company’s resources or assets, committed either knowingly or recklessly;
- ✓ **obstructive practice** which means any of (1) destroying, falsifying, altering or concealing of evidence material to a Company investigation, which impedes the Company’s investigation; (2) making false statements to investigators in order to materially impede a Company investigation into allegations of a

ANGAJAMENT DE INTEGRITATE

Către: Centrala Electrică cu Termoficare Nord

„CET-Nord” SA consideră foarte serioase acuzațiile de fraudă și corupție în proiectele sale. Atunci când „CET-Nord” SA primește astfel de acuzații, acestea sunt procesate în conformitate cu politica și procedurile de aplicare a cadrului normativ „CET-Nord” SA (disponibile la www.cet-nord.md). Aceste politici prevăd că „CET-Nord” SA va investiga și, dacă este necesar, va impune o sancțiune pentru următoarele „Practici interzise”: constrângere, coluziune / înțelegere secretă, corupție, fraudă, utilizare abuzivă a resurselor, furt și obstrucție.

Pe durata contractului vom numi și menține în funcție o persoană responsabilă, care va fi rezonabil de satisfăcătoare pentru Dvs. și la care veți avea acces deplin și imediat. Această persoană va avea datoria și împuternicirile necesare pentru a asigura respectarea prezentei Declarații.

În scopul respectării prezentei Declarații, termenii stabiliți mai jos definesc practicile interzise în felul următor:

- ✓ **practică coercitivă / de constrângere** înseamnă afectarea sau vătămarea, sau amenințarea cu afectarea sau vătămarea, direct sau indirect, a oricărei părți sau a proprietății oricărei părți pentru a influența în mod necorespunzător acțiunile uneia dintre părți;
- ✓ **practică coluzivă** înseamnă un acord între două sau mai multe părți menit să realizeze un scop necorespunzător, inclusiv să influențeze în mod nepotrivit acțiunile altei părți;
- ✓ **practică coruptă** înseamnă oferirea, acordarea, primirea sau solicitarea, directă sau indirectă, a oricărui lucru de valoare pentru a influența în mod necorespunzător acțiunile altei părți;
- ✓ **practică frauduloasă** înseamnă orice act sau omisiune, inclusiv o denaturare, care, în mod conștient sau imprudent, induce în eroare sau încearcă să inducă în eroare o parte pentru a obține un beneficiu financiar sau de altă natură sau pentru a evita o obligație;
- ✓ **utilizare abuzivă** a resurselor sau activelor Societății înseamnă utilizarea necorespunzătoare a resurselor sau activelor Societății, săvârșită fie în cunoștință de cauză, fie din imprudență;
- ✓ **practică obstructivă** înseamnă oricare dintre următoarele (1) distrugerea, falsificarea,

Prohibited Practice; (3) failing to comply with requests to provide information, documents or records in connection with a Company investigation; (4) threatening, harassing or intimidating any party to prevent it from disclosing its knowledge of matters relevant to a Company investigation or from pursuing the investigation; or (5) materially impeding the exercise of the Company's contractual rights of audit or inspection or access to information; and

- ✓ **theft** which means the misappropriation of property belonging to another party.

We declare and covenant that, except for the matters disclosed in this Covenant of Integrity:

1. we, as well as all of our directors and employees, have not been convicted in any court of any offence involving a Prohibited Practice in the provision of works, goods or services during the ten years immediately preceding the date of this Covenant;
2. none of our directors, employees, has been dismissed or has resigned from any employment on the grounds of being implicated in any Prohibited Practice;
3. we, and our directors, employees, have not been excluded by any business partner from participation in a public / sectoral procurement procedure or entering into a contract with any business partner on the grounds of engaging in a Prohibited Practice;
4. we further undertake to immediately inform the business partners if this situation were to occur at a later stage.

If applicable, provide full disclosure of any convictions, dismissal, resignations, exclusions or other information relevant to Articles (1), (2), (3) or (4) in the box below.

modificarea sau ascunderea materialelor de probă pentru o investigație a Societății, care împiedică ancheta Societății; (2) depunerea de declarații false pentru a împiedica în mod material o investigație a Societății asupra acuzațiilor de practică interzisă; (3) nerespectarea cererilor de furnizare de informații, documente sau înregistrări în legătură cu o investigație a Societății; (4) amenințarea, hărțuirea sau intimidarea oricărei părți pentru a o împiedica să dezvăluie cunoștințele sale despre aspectele relevante pentru o investigație a Societății sau să continue ancheta; sau (5) împiedicarea materială a exercitării drepturilor contractuale ale Societății pentru efectuare de audit sau inspecție sau de acces la informații; și

- ✓ **furt** înseamnă deturnarea bunurilor aparținând altei părți.

Declarăm și exprimăm angajamentul că, ținând cont de excepția aspectelor dezvăluite mai sus în acest Angajament de integritate:

1. noi, precum și toți directorii, angajații, nu am fost condamnați în nicio instanță pentru vreo infracțiune care implică o practică interzisă în prestarea de lucrări, bunuri sau servicii în timp de zece ani anterior datei acestui Angajament;
2. niciunul dintre directorii noștri, angajații, nu a fost demis sau nu a demisionat pe motiv că este implicat într-o practică interzisă;
3. noi, și directorii, angajații, nu am fost excluși de nici un partener de afaceri de la participarea la o procedură de achiziții publice / sectoriale sau încheierea unui contract cu oricare partener de afaceri din motivul implicării într-o practică interzisă;
4. ne angajăm în continuare să informăm imediat partenerii de afaceri dacă această situație ar avea loc într-o etapă ulterioară.

Dacă este cazul, furnizați dezvăluirea completă a oricăror condamnări, revocări, demisii, excluderi sau alte informații relevante pentru articolele (1), (2), (3) sau (4) în tabelul de mai jos.

Name of Entity Required to be Disclosed / Numele entităţii care trebuie să fie dezvăluit	Reason Disclosure is Required¹ / Motivul pentru care dezvăluirea este obligatorie

We grant „CET-Nord” SA and/or persons appointed by them, the right of inspection of our, and any proposed subcontractors, suppliers, sub-suppliers, concessionaires, consultants and sub-consultants accounts and records and permission to have any such accounts and records audited by auditors appointed by „CET-Nord” SA, if required by „CET-Nord” SA. We accept to preserve these records generally in accordance with applicable law, but in any case, for at least 5 (five) years from the date of substantial completion of the Contract.

Acordăm „CET-Nord” SA şi / sau persoanelor desemnate de acesta, dreptul de verificare a conturilor şi înregistrărilor noastre şi ale oricăror subcontractanţi, parteneri de afaceri, concesionari, consultanţi şi sub-consultanţi, precum şi permisiunea de a supune astfel de conturi şi înregistrări auditului de către auditori desemnaţi de „CET-Nord” SA, în caz că este solicitat de „CET-Nord” SA. Acceptăm păstrarea acestor înregistrări în conformitate cu legislaţia aplicabilă, dar în orice caz timp de cel puţin 5 (cinci) ani de la data finalizării Contractului.

Name / Nume:	Dumitrascu Ivan	
In the capacity of / În poziţia de:	Administrator	
Signed / Semnat:		
Duly authorised to sign for and on behalf of / Autorizat în mod corespunzător să semneze pentru şi în numele:	PARTENER ENERGO SRL	
Date / Data:	28.III.2023	
I also confirm that I have taken the training course “ASB Consultant Integrity Training” ² on Date / De asemenea, confirm că am urmat cursul de instruire „ASB Consultant Integrity Training” pe data:	----	

¹ For each matter disclosed, provide details of the measures that were taken, or shall be taken, to ensure that neither the disclosed entity nor any of its directors, employees or agents commits any Prohibited Conduct in connection with the procurement process for the Contract.

² As available at <https://www.cet-nord.md>

¹ Pentru fiecare problemă dezvăluită, furnizaţi detalii cu privire la măsurile care au fost luate sau care trebuie luate pentru a se asigura că nici entitatea dezvăluită, nici vreunul dintre directorii, angajaţii sau agenţii săi nu comite nicio conduită interzisă în legătură cu procesul de achiziţie pentru Contract.

² După cum este disponibil la <https://www.cet-nord.md>

DECLARAȚIE PRIVIND ELIGIBILITATEA

Subsemnatul, _____ **Dumitrascu Ivan , Administrator PARTENER ENERGO SRL** _____
(numele, prenumele și funcția reprezentantului operatorului economic)

Denumirea și adresa operatorului economic

declar pe propria răspundere că materialele și informațiile furnizate beneficiarului sunt corecte și înțeleg că beneficiarul are dreptul de a solicita, în scopul verificării și al confirmării informației și a documentelor care însoțesc oferta, orice informații suplimentare privind eligibilitatea noastră, precum și experiența, competența și resursele de care dispunem.

Prezenta declarație este valabilă până la data de _____ **derularea concurs 21075491** _____
(se indică data expirării perioadei de valabilitate a ofertei)

Numele, prenumele și funcția reprezentantului operatorului economic: _____ **Dumitrascu Ivan , Administrator PARTENER ENERGO SRL** _____

Semnătura, L.Ș.

Data completării: _____

PARTENER ENERGO SRL

(denumirea operatorului economic)

EXPERIENȚĂ SIMILARĂ ÎN ULTIMII 3 ANI

1. Numărul de contracte similare,

executate 40

2. Valoarea contractelor similare, executate (fără TVA):

1) Conform contractelor inițial semnate 12000 mii lei;

2) Final la data executării contractelor 12000 mii lei

3. Denumirea beneficiarilor și adresa acestora SRL GAGAUZ GAZ, SRL ORHEI GAZ, SA APA CANAL CHISINAU, SRL STEFAN VODA GAZ, SA TERMoeLECTRICA, CENTRALE ELECTRICE EOLIENE – 32 BUC.,

(de enumerat beneficiarii la care sau executat contractele

similare și de indicat adresa acestora)

4. Calitatea în care a participat la executarea contractelor

(se notează opțiunea corespunzătoare de mai jos și valoare contractelor executate pentru fiecare opțiune)

- **antreprenor sau antreprenor general;**

- antreprenor asociat;

- subantreprenor.

5. Litigii apărute privind executarea contractelor, natura acestora și modul lor de soluționare:

6 Durata medie de executare a contractelor (zile,):

a) contractată - 30-90 ZILE

b) efectiv realizată -

c) motivul de decalare a termenelor contractate (de indicat,)

7. Principalele completări (suplimente) la contractele inițial semnate (de indicat)

8. Principalele remedieri și completări înscrise în procesele-verbale de recepție față de devizele de cheltuieli anexate la contracte:

9. Alte aspecte relevante prin care operatorul economic își susține experiența similară:

Data completării: 28.03.2023

Numele, prenumele și funcția persoanei autorizate să reprezinte operatorul economic
Semnătura, L.Ș.



☎ Mobile :+(373) 69 108 658

Email: partener.energo@yahoo.com

mun.Chisinau str.M.Manole 12 ***c/f.1014600016247 ***c/c: IBAN MD37EX0000002251669192MD ***EXMMMD22477***TVA-0405060

NR.373

__29__ __MARTIE__ __2023__

SA "CET NORD"

STIMAȚI PARTENERI,

COMPANIA "PARTENER ENERGO" S.R.L. , VA PROPUNE UN SISTEM DE MONITORIZARE ȘI ÎNREGISTRARE A PARAMETRILOR DE CALITATE A ENERGIEI ELECTRICE ÎN REȚELELE DE 10 kV ȘI DE 110kV , INTEGRU .

SUNTEM DISPUSI A FACE PREZENTAREA SOLUTIEI NOASTRE , CIT SI DEMONSTRA FUNCTIONALITATEA LA OBIECTELE CARE DEJA LIAM INDEPLINIT.

CU RESPECT,
DUMITRASCU IVAN



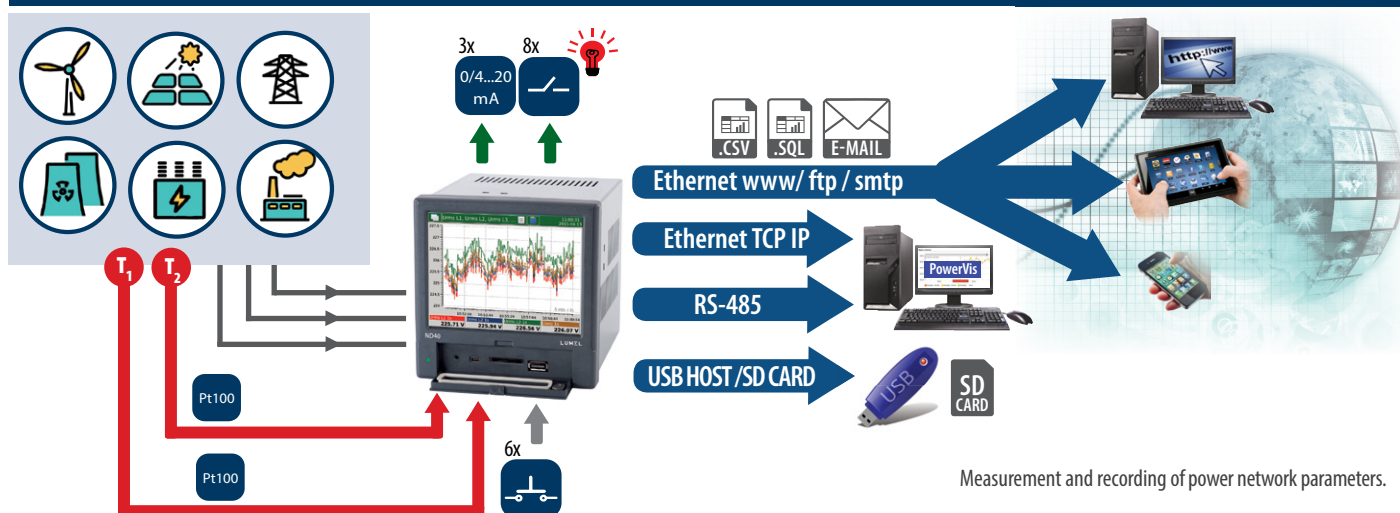
* for selected parameters - details in the technical data

ND40

- POWER NETWORK ANALYZER / RECORDER

- Measurement and recording of over 500 electric energy quality parameters acc. to EN 50160, EN 61000-4-30, EN 61000-4-7 standards.
- Measuring class A - for 3 second aggregation. 10 minute and 2 hour aggregation - class S.
- Operation in 3 or 4-wire, 3-phase, balanced or unbalanced power networks.
- Analysis of current and voltage harmonics up to the 51 st for class I (acc. to EN 61000-4-7).
- Configurable archives of actual values and event recording.
- Data archiving on an SD card - memory up to 32 GB.
- E-mail messages in case of alarm occurs,
- Web Server, FTP Server.
- Interfaces: RS-485 Modbus Slave, Ethernet 100 Base-T (Modbus TCP Server), USB Device & Host.
- Colour touch screen: LCD TFT 5.6", 640 x 480 pixels.
- IP65 protection grade from the frontal side.
- Synchronization of RTC clock with the NTP time server.

EXAMPLE OF APPLICATION



Measurement and recording of power network parameters.

MEASUREMENT AND VISUALIZATION OF POWER NETWORK PARAMETERS

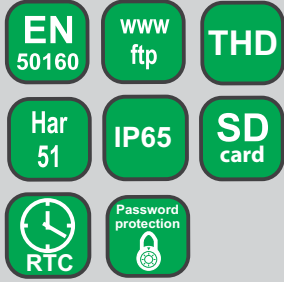
Aggregated values for 3 seconds, 10 minutes and two hours:

- phase voltages $U_1, U_2, U_3, U_{123\text{ avg}}$
- phase current $I_1, I_2, I_3, I_{123\text{ avg}}$
- active phase powers $P_1, P_2, P_3, \Sigma P_{123}, P_{123\text{ avg}}$
- reactive phase powers $Q_1, Q_2, Q_3, \Sigma Q_{123}, Q_{123\text{ avg}}$
- apparent phase powers $S_1, S_2, S_3, \Sigma S_{123}, S_{123\text{ avg}}$
- active power factors $PF_1, PF_2, PF_3, PF_{123\text{ avg}}$
- power factor distortion $dPF_1, dPF_2, dPF_3, dPF_{123\text{ avg}}$
- reactive/active power factors $tg\varphi_1, tg\varphi_2, tg\varphi_3, tg\varphi_{123\text{ avg}}$
- phase-to-phase voltages $U_{12}, U_{31}, U_{23}, U_{123\text{ avg}}$
- current in neutral wire I_n
- the angle between the voltage and current $\varphi_1, \varphi_2, \varphi_3, \varphi_1, \varphi_{123\text{ avg}}$ (degrees and radians)
- voltage phase-to-phase angle $\angle U_{12}, \angle U_{31}, \angle U_{23}, \angle U_{123\text{ avg}}$

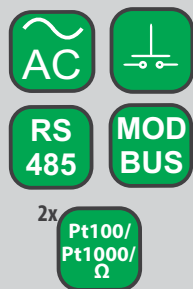
Other parameters:

- frequency (aggregation for 1 and 10 seconds)
- temperature/ resistance values (two channels)
- Demand values: P, Q, S, U, I (15-minute, 30-minute or 1 hour).
- energy: active imported/exported, reactive imported/exported and apparent. All energies are calculated for each phase and 3-phase parameters.
- factors: THD, THDS, THDG, PWHD. Calculated for currents and voltages of each phase and 3-phase parameters.
- harmonics from 1 up to 51st for each phase of currents and voltages
- the half wave voltage of each phase
- recording of dips, swells and overvoltages
- storage of minimum and maximum of measured values.

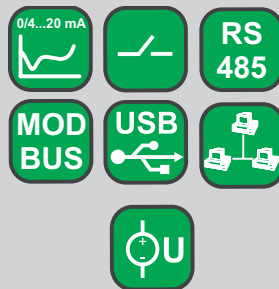
FEATURES



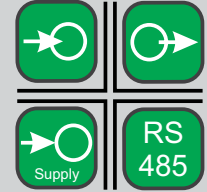
INPUTS



OUTPUTS



GALVANIC ISOLATION



TECHNICAL DATA

INPUTS

Input type	Measuring range	Parameters	Basic error
Voltage input	230/400 V 57,7/100V	0.05...1.5 Un	± 0.1%
Current input	1 A or 5A	0.005...1.5 In	± 0.1%
Logic input	6 logic inputs: 0/5...24V d.c.	switching frequency up to 50 Hz	
Input for temperature measurement	Pt100: -200...850°C, Pt1000: -200...850°C , resistance: 0...5000 Ω		± 0.2%

OUTPUTS

Output type	Properties
Analog output	3 programmable current outputs 0/4...20 mA, load resistance < 500 Ω
Relay output	8 programmable electromagnetic relays, voltageless NO contacts, load capacity 250 V a.c./1 A a.c.

DIGITAL INTERFACES

Interface type	Properties
RS-485	interface: MODBUS Slave, baud rate 300...115200 bit/s, transmission mode RTU
USB	2 interfaces: Device & Host, USB v.2.0
Ethernet	100 Base-T, RJ45 socket, Modbus TCP Server

RATED OPERATING CONDITIONS

Supply voltage	85 V...240 V a.c., 40...400Hz 90 V...320 V d.c.	power consumption: 15 VA, 35 VA (when loading)
Ambient temperature	work: 0 up to 50°C	storage: - 20...50°C
Relative humidity	< 75%	Condensation inadmissible
Reaction against	supply decays	Data and device state preservation
	supply recovery	Continuation of device work
Short term load (5s)	2 Un (max. 1000 V)	10 In
Casing protection grade	IP 65	
Safety requirements	Installation category III Pollution grade 2	EN 61010-1
Maximum phase-to-earth operating voltage	RS485, temperature/resistance input, USB: 50V measuring circuit, relays, supply: 300 V	EN 61010-1

MEASURING RANGES AND ADMISSIBLE BASIC CONVERSION ERRORS

Measuring quantity	Measurement method	Range	Basic error
Voltage U RMS	U RMS averaged values: 1 s class: B 3 s class: A 10 min class: S 2 hrs class: S	U RMS L-N (150% Un) Un = 230 V 23.0...46...345.0 V (Ku=1) ...480.0 kV (Ku≠1) Un = 57.7 V 5.7...11.5 ...70.0 V (Ku=1) U RMS L-L (150% Un): Un = 400 V 40.0...80...600.0 V (Ku=1) ...1020.0 kV (Ku≠1) Un = 100V 10.0 ...20...120.0 V (Ku=1)	class A acc. to EN 61000-4-30:2008 U RMS L-N (10% U _{din} - 150% U _{din}): ±0.1% U _{din} .
Current I RMS	I RMS : averaged values: 1 s class: B 3 s class: A 10 min class: S 2 hrs class: S	I RMS (150% In) : In = 1 A - 0.010...0.1...1.5 A (Ki=1) In = 5 A - 0.050...0.5...7.5 A (Ki=1) ...480.0 kA (Ki≠1)	I RMS (10% In - 150% In): ±0.1% of measurement
Frequency	Class S appointed from 10 or 12 cycles in 200 ms. Class A appointed from 100 or 120 cycles in 10 s.	42.5 up to 57.5 Hz for 50 Hz a.c. of supply 51.0 up to 69.0 Hz for 60 Hz a.c. of supply	Class S acc. to EN 61000-4-30:2008 ±0.050 Hz Class A acc. to EN 61000-4-30:2008 ±0.010 Hz

Active, reactive and apparent power	Active power: Measured every 10 cycles (50 Hz) or 12 cycles (60 Hz) Reactive power: appointed from apparent and active power. Apparent power: appointed from value U RMS and I RMS.	Depends on voltage and actual ratio value.	acc. to EN 61557-12: Active power: $\pm 0.5\%$ Pn Reactive power: $\pm 1\%$ Qn Apparent power: $\pm 0.5\%$ Sn
Measuring quantity	Measurement method	Range	Basic error
Active imported/exported energy, reactive imported/exported energy, apparent energy	Measured every 10 cycles (50 Hz) or 12 cycles (60 Hz). Separate measurement for exporten, imported active and reactive energy .	Depends on voltage and actual ratio value.	acc. to EN 61557-12: Active power: $\pm 0.5\%$ Reactive power: $\pm 1\%$ Apparent power: $\pm 2\%$
Active power factor, Power distortion factor	Active power factor : depends on U RMS, I RMS and active power. Power distortion factor depends on THD I.	-1,000 .. 0 .. 1,000	Power factor PF $\pm 0.01\%$ Power distortion factor PFdist $\pm 0.05\%$
Harmonics of voltages and current	acc. to EN 61000-4-7:2007, up to 51st harmonic Window: 10 cycles (for 50 Hz), 12 cycles (for 60 Hz). FFT: 4096 points	Voltage harmonics: 0.00 .. 100.00 % Current harmonics: 0.00 .. 100.00 %	Voltage harmonics – class II $\pm 5\%$ Urdg if Urdg > 1% $\pm 0.05\%$ Un if Urdg < 1% Current harmonics – class II $\pm 5\%$ Urdg if Urdg > 3% $\pm 0.5\%$ Un if Urdg < 3%
THD U, THD I, THDG U, THDG I, THDS U, THDS I, PWHU, PWHI	acc. to EN 61000-4-7:2007, up to 51st harmonic Window: 10 cycles (for 50 Hz), 12 cycles (for 60 Hz). FFT: 4096 points	THD U: 0.00 .. 100.00 % THD I: 0.00 .. 100.00 % THDG U: 0.00 .. 100.00 % THDG I: 0.00 .. 100.00 % THDS U: 0.00 .. 100.00 % THDS I: 0.00 .. 100.00 % PWHU: 0.00 .. 100.00 % PWHI: 0.00 .. 100.00 %	THD U: $\pm 5\%$ (50/60Hz) THD I: $\pm 5\%$ (50/60Hz) THDG U: $\pm 5\%$ (50/60Hz) THDG I: $\pm 5\%$ (50/60Hz) THDS U: $\pm 5\%$ (50/60Hz) THDS I: $\pm 5\%$ (50/60Hz) PWHU: $\pm 5\%$ (50/60Hz) PWHI: $\pm 5\%$ (50/60Hz)

where:

Ku - voltage transformer ratio
Ki - current transformer ratio
Udin - declared input voltage
Urdg, Irdg - measurement values
Un, In, Pn, Qn - nominal values

EXAMPLES OF MEASURING DATA PRESENTATION

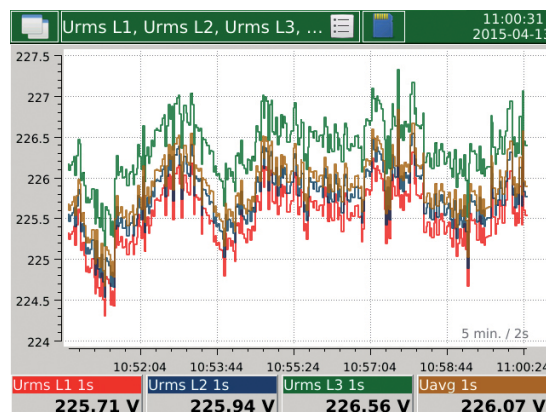
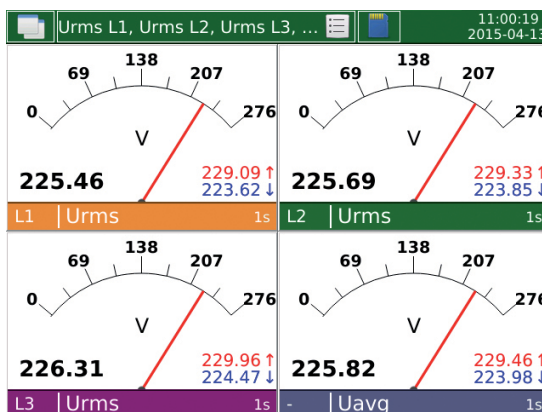
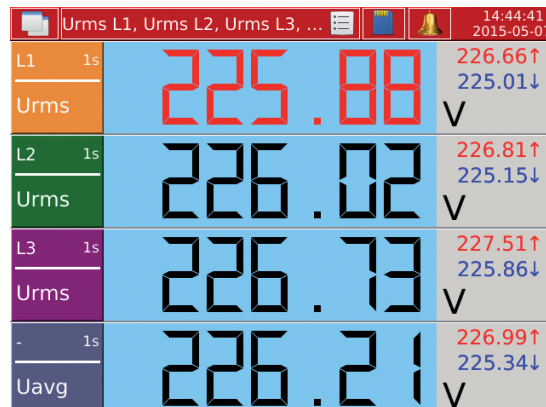
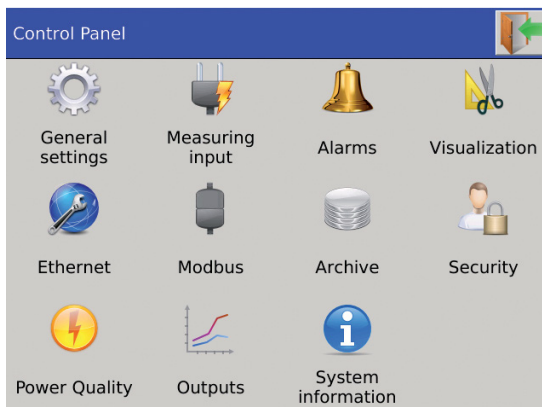
Various forms of data display:

- digital display
- analog view,
- bargraphs,
- vector diagrams
- trends
- energy meter
- harmonics analysis
- energy meter.

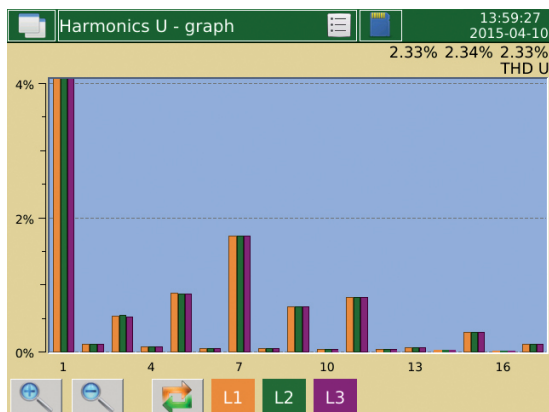
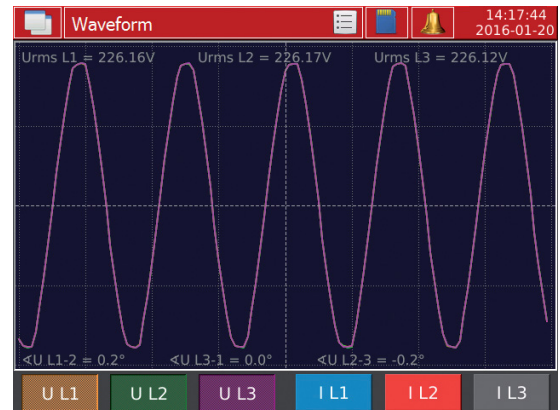
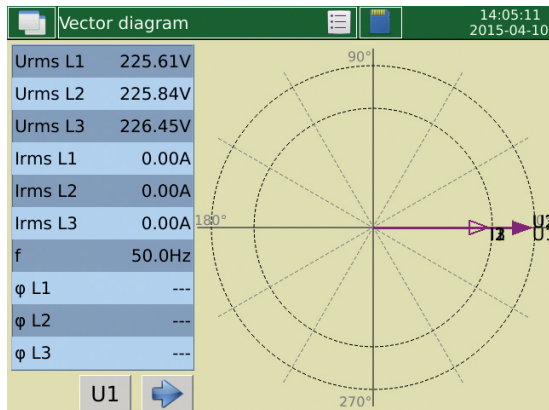
Screen system log files.

Screens log alarms.

Control panel.



EXAMPLES OF MEASURING DATA PRESENTATION



Harmonics U - table 14:00:48 2015-04-10

	L1 [%]	L2 [%]	L3 [%]
THD	2.34	2.35	2.34
THDG	2.34	2.35	2.34
THDS	0.00	0.00	0.00
PWHD	2.34	2.35	2.34
1	100.00	100.00	100.00
2	0.05	0.04	0.05
3	0.78	0.79	0.78
4	0.02	0.02	0.02
5	0.63	0.63	0.63
6	0.02	0.02	0.02
7	1.78	1.79	1.78
8	0.03	0.03	0.03
9	0.66	0.66	0.66
10	0.03	0.03	0.03

Energy 13:08:41 2015-04-15

	value	unit
Σ EnP+	00000000.0	kWh
L1	00000000.0	kWh
L2	00000000.0	kWh
L3	00000000.0	kWh
Σ EnP-	00000000.0	kWh
L1	00000000.0	kWh
L2	00000000.0	kWh
L3	00000000.0	kWh
Σ EnQ+	00000000.0	kVARh
L1	00000000.0	kVARh

Binary inputs 14:07:45 2015-10-20

	BI1 1		BI2 0
	BI3 0		BI4 0
	BI5 0		BI6 0

Alarm logs 14:18:23 2016-01-20

No	Date	Time	Description
43	2016-01-20	13:49:54	Alarm 2 - Wt. (Urms L2 200ms 224.811V) (> 210)
42	2016-01-20	13:49:54	Alarm 1 - Wt. (Urms L1 200ms 224.823V) (> 200)
41	2016-01-20	08:53:15	Alarm 1 - Wt. (Urms L1 200ms 240.477V) (> 200)
40	2016-01-19	16:00:19	Alarm 2 - Wt. (Urms L2 200ms 229.91V) (> 210)
39	2016-01-19	16:00:19	Alarm 1 - Wt. (Urms L1 200ms 229.898V) (> 200)
38	2016-01-19	15:36:32	Alarm 2 - Wt. (Urms L2 200ms 228.824V) (> 210)
37	2016-01-19	15:36:31	Alarm 1 - Wt. (Urms L1 200ms 228.798V) (> 200)

ETHERNET: WWW SERVER, FTP

LUMEL ND40 Meter

Measurement data	
Name	Value
Urms L1 1s	226.07V
Urms L2 1s	226.10V
Urms L3 1s	226.04V
Irms L1 1s	0.0603A
Irms L2 1s	0.0603A
Irms L3 1s	0.0603A
Pavg 1s	0.0071kW
ΣP 1s	0.0214kW
ΣQ 1s	-0.0349kvar
ΣS 1s	0.0409kVA
PFavg 1s	0.52
Umfavg 1s	0.2533V

Alarms

Alarm 1 (Urms L1 200ms = 226.501V) (> 0.0)

Confirm

Files / ND40

Name	Modified	Size
Config_20160420_1026 ND40	2016-04-20 10:26:39	10.7 kB

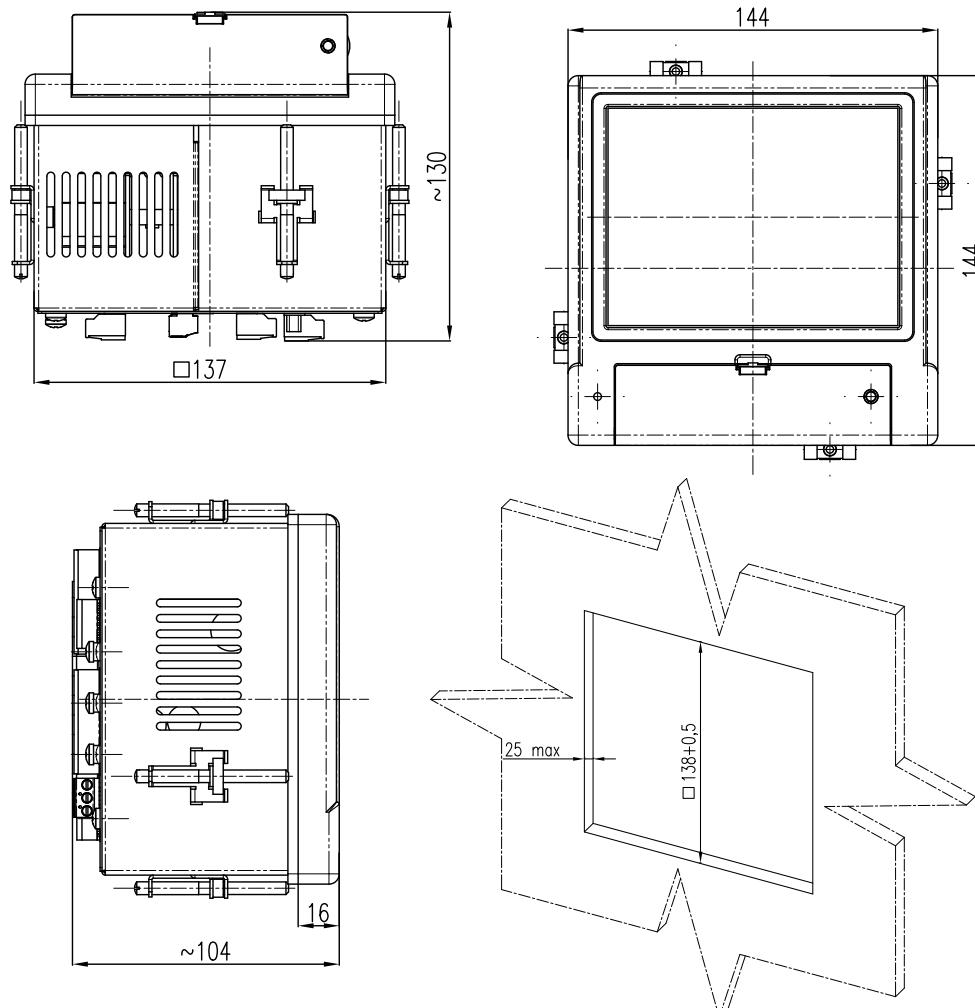
System information

Device name	ND40
Device description	Power Analyzer
Serial number	16010002
System version	0.2.11
Used space on SD card	

Indeks ftp://10.0.1.84/ND40/

Name	Size	Data Modified
2015-07-15 08_49_41.ND40Arch	35 KB	2015-07-15 08:55:00
2015-07-15 08_55_40.ND40Arch	35 KB	2015-07-15 09:01:00
2015-07-15 09_01_40.ND40Arch	35 KB	2015-07-15 09:07:00
2015-07-15 09_07_35.ND40Arch	35 KB	2015-07-15 09:13:00
alarm.log.csv	2 KB	2015-07-15 09:21:00
audit.log.csv	2 KB	2015-07-15 09:22:00

DIMENSIONS AND ASSEMBLY



ORDERING CODE

Analyzer/recorder ND40 -	X	X	XX	X	X
Class:					
class S	0				
class A/S	1				
Inputs / outputs:					
whitout	0				
8 relay outputs	1				
6 logic inputs, 4 relay outputs	2				
6 logic inputs, 3 analog outputs	3				
Version:					
standard		00			
voltage input 3 x 57.7/ 100 V		01			
custom-made		XX			
Language:					
Polish			P		
English			E		
German			D		
Russian			R		
other*			X		
Acceptance tests:					
without additional quality requirements				0	
with an extra quality inspection certificate				1	
acc.to customer's request*				X	

Order example:

The code: **ND40 - 0 1 00 E 0** means:

ND40 - analyzer/ recorder ND40

0 - class S

1 - 8 relay outputs

00 - standard version

E - user's manual in English

0 - without additional quality requirements.

* only after agreeing with the manufacturer

SEE ALSO:



ND30 - power network meter with Ethernet and recording



RE92 - dual loop controller



P30U - universal transducer of temperature and standard signals



ND20 - power network meter



N43 - rail mounted 3-phase power network meter



P43 - 3-phase transducer of power network parameters



Current transformers from 5 A up to 6 kA



PowerVis - process visualization software



Free **eCON** software

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Specificații tehnice

[Acest tabel va fi completat de către ofertant în coloanele 2, 3, 4, 6, 7, iar de către autoritatea contractantă – în coloanele 1, 5,]

Numărul procedurii de achiziție ____ 21075491 ____ din ____ 10.03.2023 ____
Obiectul achiziției: __ Sistem de monitorizare și înregistrare a parametrilor de calitate a energiei electrice în rețelele de 10 kV și de 110kV

Denumirea bunurilor/serviciilor	Denumirea modelului bunului/serviciului	Țara de origine	Produ-cătorul	Specificarea tehnică deplină solicitată de către autoritatea contractantă	Specificarea tehnică deplină propusă de către ofertant	Standarde de referință
1	2	3	4	5	6	7
Bunuri/servicii						
Lotul 1						
Licenta Nelimitata - Software SCADA IoT pentru colectarea datelor pe server tip cloud(baza de date PostgreSQL si Cassandra, WEB interfata pentru vizualizare grafic si tabelara, export in xls, csv, generare rapoarte periodice pe Email, notificari alarme SMS, chat bot Telegram, Whatsapp etc)	SCADA IoT	MOLDOVA	PARTENER ENERGO SRL			
RTU - Teltonika RUT955, 4G (LTE) – Cat 4 up to 150 Mbps, 3G – Up to 42 Mbps, 2G – Up to 236.8 kbps, 2 SIM cards, auto-switch cases, SMS status, SMS configuration, send/read SMS via HTTP , POST/GET, EMAIL to SMS, SMS to EMAIL, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP, VPN	- Teltonika RUT955	Lituania	Teltonika Networks	Se anexeaza	Se anexeaza	Se anexeaza
PMM0402_DLMS Gateway protocol converter DLMS/COSEM, ModbusTCP/RTU, IEC-104, IEC-61850, VPN						IEC 62443
Analizator a calitatii de energie electrica LUMEL ND40 ModbusTCP/RTU , WebInterface, + Transformatoare de curent,	LUMEL ND40	Polonia	LUMEL	Se anexeaza	Se anexeaza	EN 61000–6–4:2007 EN 61000–6–

Masurarea tensiunii de pe celule de masura existente. Se considera Instalarea Analizoarelor pe usa celulei de masurare cu ecranul la inaltimea operatorilor.						2:2005 EN 61010–1:2010
Instalare si montare, Pentru Instalare echipamentului se considera compartimentul circuitelor secundare RIDICARE BARE, care de obicei este liber						
Servicii de configurare și reglare		MOLDOVA	PARTENER ENERGO SRL			
Serviciile de proiectare		MOLDOVA	PARTENER ENERGO SRL			
Servicii de instruire		MOLDOVA	PARTENER ENERGO SRL			
Serviciile de asistență tehnică pentru perioada de derulare a lucrărilor:		MOLDOVA	PARTENER ENERGO SRL			
Licenta Nelimitata -App Android SCADA IoT	SCADA IoT	MOLDOVA	PARTENER ENERGO SRL			
Total lot 1						
Lotul 2						
TOTAL						

Semnat:_____ Numele, Prenumele:_____ Dumitrascu Ivan_____ În calitate de: _____Administrator_____

Ofertantul: _____PARTENER ENERGO SRL_____ Adresa: _____mun.Chisinau str.Mesterul Manole 12_____

Specificații de preț

[Acest tabel va fi completat de către ofertant în coloanele 5,6,7,8 și 11 la necesitate, iar de către autoritatea contractantă – în coloanele 1,2,3,4,9,10]

	Numărul procedurii de achiziție ____ 21075491 ____ din ____ 10.03.2023 ____
	Obiectul achiziției: __ Sistem de monitorizare și înregistrare a parametrilor de calitate a energiei electrice în rețelele de 10 kV și de 110kV

Cod CPV	Denumirea bunurilor/serviciilor	Unitatea de măsură	Cantitatea	Preț unitar (fără TVA)	Preț unitar (cu TVA)	Suma fără TVA	Suma cu TVA	Termenul de livrare/prestare	Clasificație bugetară (IBAN)	Discount %
1	2	3	4	5	6	7	8	9	10	11
	Bunuri/servicii									
	Lotul 1									
	Licenta Nelimitata - Software SCADA IoT pentru colectarea datelor pe server tip cloud(baza de date PostgreSQL si Cassandra, WEB interfata pentru vizualizare grafic si tabelara, export in xls, csv, generare rapoarte periodice pe Email, notificari alarme SMS, chat bot Telegram, Whatsapp etc)	Buc.	1	669.900,00	803.880,00	669.900,00	803.880,00	180 zile		
	RTU - Teltonika RUT955, 4G (LTE) – Cat 4 up to 150 Mbps, 3G – Up to 42 Mbps, 2G – Up to 236.8 kbps, 2 SIM cards, auto-switch cases,	Buc.	4	30.450,00	36.540,00	121.800,00	146.160,00	180 zile		

	SMS status, SMS configuration, send/read SMS via HTTP , POST/GET, EMAIL to SMS, SMS to EMAIL, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP, VPN									
	PMM0402_DLMS Gateway protocol converter DLMS/COSEM, ModbusTCP/RTU, IEC-104, IEC-61850, VPN	Buc.	4	36.540,00	43.848,00	146.160,00	175.392,00	180 zile		
	Analizator a calitatii de energie electrica LUMEL ND40 ModbusTCP/RTU , WebInterface, + Transformatoare de curent, Masurarea tensiunii de pe celule de masura existente. Se considera Instalarea Analizoarelor pe usa celulei de masurare cu ecranul la inaltimea operatorilor.	Buc.	11	60.900,00	73.080,00	669.900,00	803.880,00	180 zile		
	Instalare si montare, Pentru Instalare echupamentului se considera compartimentul circuitelor secundare RIDICARE BARE, care de obicei este liber	serv	1	243.600,00	292.320,00	243.600,00	292.320,00	180 zile		
	Servicii de configurare și reglare	serv	1	298.410,00	358.092,00	298.410,00	358.092,00	180 zile		
	Serviciile de proiectare	serv	1	199.752,00	239.702,40	199.752,00	239.702,40	180 zile		
	Servicii de instruire	serv	1	24.360,00	29.232,00	24.360,00	29.232,00	180 zile		
	Serviciile de asistență tehnică pentru perioada de derulare a lucrărilor:	serv	1	24.360,00	29.232,00	24.360,00	29.232,00	180 zile		
	Licenta Nelimitata -App Android SCADA IoT	serv	1	121.800,00	146.160,00	121.800,00	146.160,00			

	Total lot 1					2.520.042,00	3.024.050,40			
	Lotul 2									
	TOTAL									

Semnat: _____ Numele, Prenumele: _____ În calitate de: _____

Ofertantul: _____ Adresa: _____



Power Meter Monitor

Business and Mission-

Critical Solutions Provider

DLMS - Modbus Protocol Gateway

Data Sheet



Model: PMM0402

Document: Data Sheet

Document version: 1.2

Date: May 2022

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DECLARATION OF CONFORMITY

This restriction is subject to protect the operational process of the system in the business environment, which will produce, use, and transmit radiofrequency energy. Harmful interference to radio communication could result if instructions to the correct installation and usage were not applied. The interference prevention cannot be guaranteed even with proper installation according to the manual. If the device causes a bad effect on the radio / TV signal. The user could preclude that by turning the device on/off.

When this device produces some harmful interference, the user can use the following measure to solve the interference problem:

1-Setting the receiving antenna's direction or location to increase the distance between this device and receiver.

2-Plug in the device's power connector into different circuits of the power outlet with the receiver.

3-If any technical support is needed, the dealer or experienced radio/TV technical personnel must be informed.

TECHNICAL SUPPORT AND SERVICE

Visit Pmm-usa.us to browse FAQs and get further details.

User should collect the following information before submitting technical support and service requests:

- Product name, model and serial number.
- Installed software (operating system, OS version, installed applications and so on).
- Full description of the problem
- Detailed information about every error.

SAFETY INSTRUCTIONS

- Only trained and qualified personnel can install, operate, or maintain the device.
- Before starting the installation, all safety precautions must be read and warning labels affixed to the device must be observed. Doing so protects the device from damage and ensures your safety.
- Safety precautions provided in this document may not cover all safety aspects, note to always remain mindful of safety.
- PMM is not liable for any consequence that results from violation of regulations pertaining to safe operations or safety codes pertaining to design, production, and equipment usage.
- DO NOT use liquids or decontamination spray to clean the device surface and assure that it is totally disconnected while cleaning.
- Take all measures to prevent device drop before or during installation.
- Prior to connecting the device to power source, ensure the source and device voltage and power are 100% matched.
- Keep the cables in a suitable covered place.
- If the device is not used for a long time, shut off the power to avoid the damages by transient overvoltage.
- DO NOT allow any liquid flow into the device; to avoid fire or short circuit.
- The recommended storage temperature range should NOT be less than 30°C OR higher than 85°C.



Warning:

- Read the power source and device inlet carefully.
- Handle device with both hands.
- Clean and maintain the device using recommended, safe and suitable methods.



Caution:

If any unauthorized changes of settings or repairs are done without PMM approval; then user's rights of controlling this device will be canceled.



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KEY FEATURES

- Supports Modbus RTU/TCP
- Supports meters such as: Iskraemeco, Landis+Gyr, EMH meter, Actaris SL7000, Elster A1700, Elster A1500, KAMSTRUP, DPEE
- Effortless configuration via web-based wizard
- Built-in ethernet cascading for easy wiring
- Embedded traffic monitoring as well as diagnostic information for easy trouble shooting
- MicroSD card for configuration backup and duplication for event logs
- Status monitoring and fault protection for easy maintenance
- Redundant dual DC power inputs and relay output
- Operating temperature: -40 to 75°C
- Storage temperature: -40 to 85°C
- EMI, EMS, EMC and shock protected
- Serial port with power surge 2kV isolation protection
- Security features based on IEC 62443

DESCRIPTION

PMM0402 is a highly configurable industrial ethernet gateway device which is capable of reading data from any device containing DLMS protocol like energy meters, and converting it to RTU/TCP Modbus protocol. PMM0402 provides the flexibility needed to fulfill the various conditions that arise with field devices that use different communication protocols to connect to the SCADA system.

PMM0402 gateways support a system log function that record events; users can easily review log data remotely through a web interface. The gateways also support status monitoring and fault protection functions. The status monitoring function notifies the SCADA system when a device gets disconnected or does not respond. In such case, the SCADA system gets the status of each end device and then issues alarms to notify operators.

PMM0402 can be contained within multiple hardware chassis which are designed with a wide range of highly configurable communication ports needed in the field. All hardware chassis are sturdy, powerful, reliable, fanless, and support a wide selection of power supply options that deliver excellent performance while consuming minimal power. The technology is specifically built to fulfill the needs of all power substations. Furthermore, it covers all field standards of power, reliability, easy configuration and long-lasting life.

SOFTWARE SPECIFICATIONS

Ethernet Software Features

Protocols	Modbus TCP
Configuration Options	Web Console (HTTP/HTTPS), Device Search Utility (DSU), Telnet Console

Serial Software Features

Protocols	Modbus RTU
Configuration Options	Serial Console

HARDWARE CPU CHASSIS SPECIFICATIONS (3 Options)

CPU



Option1: PMM0103



Option2: PMM0105



Option3: PMM0107

CPU	All winner H3 processor, Quad-core 64-bit high-performance Cortex A53	All winner H3 processor, Quad-core 64-bit high-performance Cortex A53	Intel® Atom™ x5-Z8350 CPU
DRAM	512 MB	512 MB	4GB DD3RAM
Storage	8GB eMMC	8GB eMMC	16GB eMMC
RTC CHIP (OPTIONAL)	DS3231	DS3231	CR2032
Pre-installed OS	Linux	Linux	Windows 10 lite

Computer Interface

Ethernet	2x 10/100 Base ports	2x 10/100 Base ports	1x 10/100/1000Base-T RJ45
Fiber	N/A	2x 1000Base-X SC fiber optic port	1x 1000Base-X SFP
USB	1x USB3.0 Type A 1x Micro USB	1x USB2.0 type A	1x USB3.0 Type A
Wi-Fi	2.4/5 GHz	2.4/5 GHz	MediaTek RT5572 2.5/5GHz/2x2 with external antennas
Serial	1x RS485	1x RS485	1x RS485
Optional Interface	3x customizable communication slots:PMM RS485 Module PMM RS232 Module PMM RS422 Module	2x customizable communication slots:PMM RS485 Module PMM RS232 Module PMM RS422 Module	8 pins connector on edge with following options (max 2 options can be chosen upon order to be factory pre-fitted) RS232 RS485 RS422 CAN bus Analog Input Analog Output Digital Input Digital Output
SD Slot	1x MicroSD	1x MicroSD	1x MicroSD card socket for user supplied card up to 256GB

Power Parameters

Power Supply Options	10-56 VDC 8-40 VAC 36-72 VDC 25-50 VAC 85-285 VAC / 100-300 VDC	10-56 VDC 8-40 VAC 36-72 VDC 25-50 VAC 85-285 VAC / 100-300 VDC	10-56 VDC 8-40 VAC 36-72 VDC 25-50 VAC 85-285 VAC / 100-300 VDC
Power Connector	Phoenix Contact 4 pins 3.5mm	Phoenix Contact 6 pins 3.5mm	

Physical Characteristics

Housing	Metal	Metal	Metal
Dimensions	3.93*3.93*1.45 inch (100*100*37 mm)	5.27*5.27*1.45 inch (134*134*37 mm)	5.27*5.27*1.45 inch (134*134*37 mm)
Mounting Options	Standard 35mm DIN RailDirect Panel Mounting Front Panel Mounting 19" rack 1U	Standard 35mm DIN Rail Direct Panel Mounting Front Panel Mounting 19" rack 1U	Standard 35mm DIN RailDirect Panel Mounting Front Panel Mounting 19" rack 1U

ORDERING INFORMATION

Order Configuration Table					
	PMM010x	-x	-09xx	-09xx	-09xx
CPU Chassis					
PMM0103 Arm based industrial computer	-3				
PMM0105 Arm based industrial computer	-5				
Power Supply					
10-56 VDC		-1			
8-40 VAC		-2			
36-72 VDC		-3			
25-50 VAC		-4			
85-285 VAC / 100-300 VDC		-5			
COM Port 1					
RS485			-0912		
RS422			-0913		
RS422			-0914		
RS232			-0915		
COM port 2 (Same as COM port 1 options)				-09xx	
COM port 3 (Same as COM port 1&2 options)					
DIN Mounting Kit (Included 1 Kit)	DIN Rail Mounting Bracket				
Wall Mounting Kit (Included 1 Kit)	2x Wall Mounting Bracket				
Panel Mounting Kit (Optional)	2x Panel Mounting Bracket				
Rack Mounting Kit (Optional)	Rack Mounting Bracket				

CONTACT INFORMATION:

For direct inquiries or any customized orders, contact us on info@pmm-usa.us

EU Declaration of Conformity

12th of January, 2021

Kaunas

Declaring Organization: **TELTONIKA NETWORKS UAB**

Product Name: **LTE Router**

Product Model Name: **RUT955**

Technical description of built in RF module:

Frequency range:

Band	UL f, MHz	DL f, MHz
GSM	900	880-915
	1800	1710-1785
WCDMA	1	1920-1980
	5*	824-849
	8	880-915
LTE	1	1920-1980
	3	1710-1785
	5*	824-849
	7	2500-2570
	8	880-915
	20	832-862
	28	703-748
	38	2570-2620
	40	2300-2400
GNSS	-	1559-1610
WiFi 2.4GHz	1-13	2412-2472

Transmit Power: **Max. 33 dBm (GSM)**

* Band applicable to product code RUT955 V*****

TELTONIKA NETWORKS UAB
K. Barsausko st. 66, LT-51436
Kaunas, Lithuania

Registration code 305579419
VAT number LT100013223510

Swedbank AB
LT78 7300 0101 6274 0111
S.W.I.F.T. HABALT22



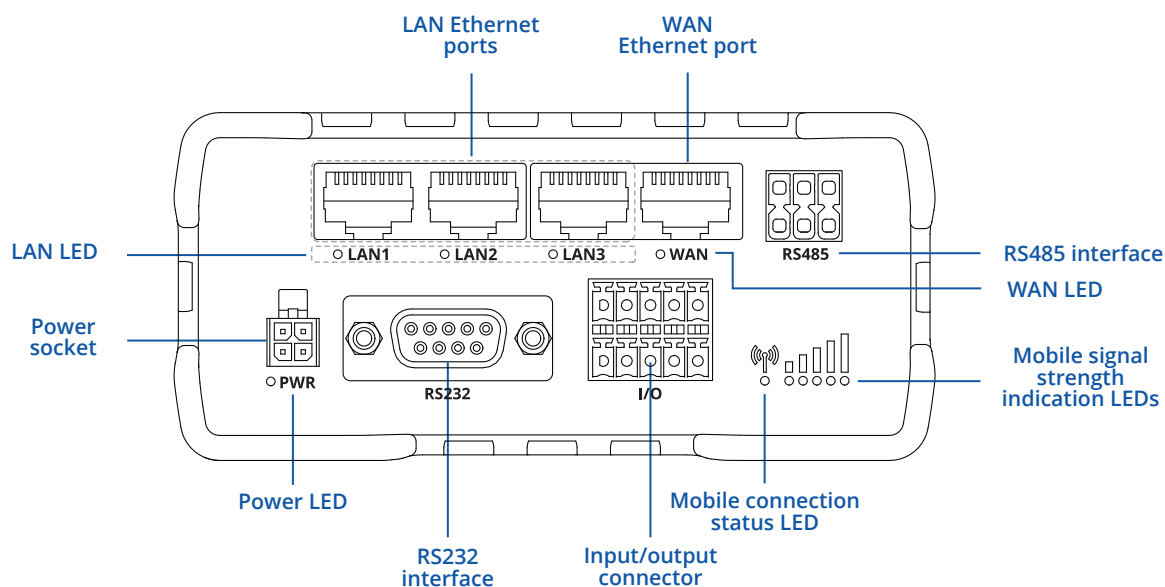


RUT955

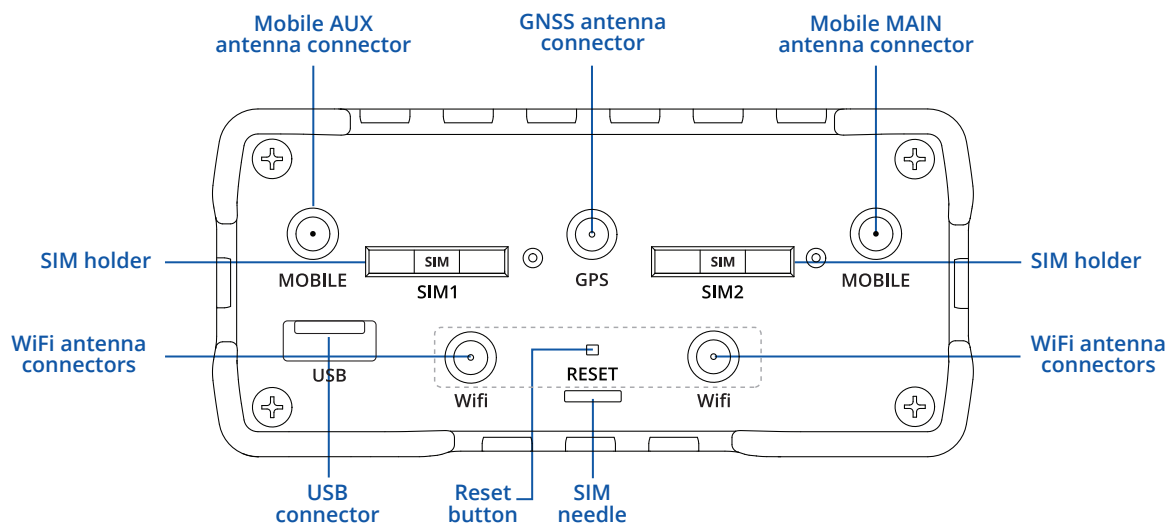


HARDWARE

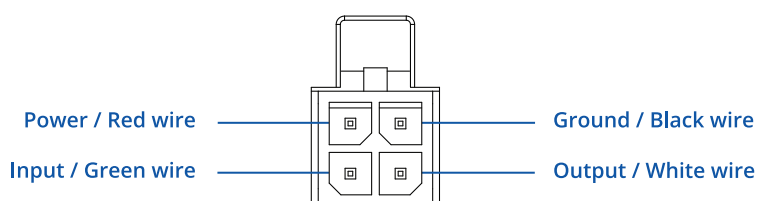
FRONT VIEW



BACK VIEW



POWER SOCKET PINOUT



FEATURES

MOBILE

Mobile module	4G (LTE) – Cat 4 up to 150 Mbps, 3G – Up to 42 Mbps, 2G – Up to 236.8 kbps
SIM switch	2 SIM cards, auto-switch cases: weak signal, data limit, SMS limit, roaming, no network, network denied, data connection fail, SIM idle protection
Status	Signal strength (RSSI), SINR, RSRP, RSRQ, EC/IO, RSCP, Bytes sent/received, connected band, IMSI, ICCID
SMS	SMS status, SMS configuration, send/read SMS via HTTP POST/GET, EMAIL to SMS, SMS to EMAIL, SMS to HTTP, SMS to SMS, scheduled SMS, SMS autoreply, SMPP
Black/White list	Operator black/white list
Band management	Band lock, Used band status display
APN	Auto APN
Bridge	Direct connection (bridge) between mobile ISP and device on LAN
Passthrough	Router assigns its mobile WAN IP address to another device on LAN
Multiple PDN (optional)	Possibility to use different PDNs for multiple network access and services (not available in standard FW)

WIRELESS

Wireless mode	IEEE 802.11b/g/n, Access Point (AP), Station (STA)
WiFi security	WPA2-Enterprise - PEAP, WPA2-PSK, WEP, WPA-EAP, WPA-PSK; AES-CCMP, TKIP, Auto Cipher modes, client separation
SSID	SSID stealth mode and access control based on MAC address
WiFi users	up to 100 simultaneous connections
Wireless Hotspot	Captive portal (Hotspot), internal/external Radius server, built in customizable landing page

NETWORK

Routing	Static routing, Dynamic routing (BGP, OSPF v2, RIP v1/v2)
Network protocols	TCP, UDP, IPv4, IPv6, ICMP, NTP, DNS, HTTP, HTTPS, FTP, SMTP, SSL v3, TLS, ARP, VRRP, PPP, PPPoE, UPNP, SSH, DHCP, Telnet, SMPP, MQTT, Wake On Lan (WOL)
VoIP passthrough support	H.323 and SIP-alg protocol NAT helpers, allowing proper routing of VoIP packets
Connection monitoring	Ping Reboot, Wget Reboot, Periodic Reboot, LCP and ICMP for link inspection
Firewall	Port forward, traffic rules, custom rules
DHCP	Static and dynamic IP allocation, DHCP Relay, Relayd
QoS / Smart Queue Management (SQM)	Traffic priority queuing by source/destination, service, protocol or port, WMM, 802.11e
DDNS	Supported >25 service providers, others can be configured manually
Network backup	VRRP, Mobile, Wired and WiFi WAN options, each of which can be used as backup, using automatic Failover
Load balancing	Balance your internet traffic over multiple WAN connections
SSHFS (optional)	Possibility to mount remote file system via SSH protocol (not available in standard FW)

SECURITY

Authentication	Pre-shared key, digital certificates, X.509 certificates
Firewall	Pre-configured firewall rules can be enabled via web-ui, unlimited firewall configuration via CLI; DMZ; NAT; NAT-T
Attack prevention	DDOS prevention (SYN flood protection, SSH attack prevention, HTTP/HTTPS attack prevention), port scan prevention (SYN-FIN, SYN-RST, X-mas, NULL flags, FIN scan attacks)
VLAN	Port and tag based VLAN separation
Mobile quota control	Set up custom data limits for both SIM cards
WEB filter	Blacklist for blocking out unwanted websites, whitelist for specifying allowed sites only
Access control	Flexible access control of TCP, UDP, ICMP packets, MAC address filter

ETHERNET

WAN	1 x WAN port (can be configured to LAN) 10/100 Mbps, compliance IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX
LAN	3 x LAN ports, 10/100 Mbps, compliance IEEE 802.3, IEEE 802.3u standards, supports auto MDI/MDIX

VPN

OpenVPN	Multiple clients and server can be running simultaneously, 12 encryption methods
OpenVPN Encryption	DES-CBC, RC2-CBC, DES-EDE-CBC, DES-EDE3-CBC, DESX-CBC, BF-CBC, RC2-40-CBC, CAST5-CBC, RC2-64-CBC, AES-128-CBC, AES-192-CBC, AES-256-CBC
IPsec	IKEv1, IKEv2, supports up to 4 x VPN IPsec tunnels (instances), with 5 encryption methods (DES, 3DES, AES128, AES192, AES256)
GRE	GRE tunnel
PPTP, L2TP	Client/Server services can run simultaneously
Stunnel	Proxy designed to add TLS encryption functionality to existing clients and servers without any changes in the programs' code
DMVPN	Method of building scalable IPsec VPNs
SSTP	SSTP client instance support
ZeroTier	ZeroTier VPN
WireGuard	WireGuard VPN client and server support

MODBUS TCP SLAVE

ID range	Respond to one ID in range [1;255] or any
Allow Remote Access	Allow access through WAN
Custom registers	Modbus TCP custom register block requests, which read/write to a file inside the router, and can be used to extend Modbus TCP Slave functionality

MODBUS TCP MASTER

Supported functions	01, 02, 03, 04, 05, 06, 15, 16
Supported data formats	8 bit: INT, UINT; 16 bit: INT, UINT (MSB or LSB first); 32 bit: float, INT, UINT (ABCD (big-endian), DCBA (little-endian), CDAB, BADC)

MODBUS RTU MASTER (RS232)

Supported baud rates	From 300 to 115200
Supported functions	01, 02, 03, 04, 05, 06, 15, 16
Number of data bits	From 5 to 8
Number of stop bits	1 or 2
Parity	None, Even, Odd
Flow	None, RTS/CTS, Xon/Xoff
Duplex	Full duplex

MODBUS RTU MASTER (RS485)

Supported baud rates	From 300 to 115200
Supported functions	01, 02, 03, 04, 05, 06, 15, 16
Number of data bits	8
Number of stop bits	1
Parity	None, Even, Odd
Flow	None, Xon/Xoff
Duplex	Half duplex

MODBUS DATA TO SERVER

Protocol	HTTP(S), MQTT, Azure MQTT
----------	---------------------------

MQTT GATEWAY

MQTT gateway	Allows sending commands and receiving data from Modbus Master through MQTT broker
--------------	---

MONITORING & MANAGEMENT

WEB UI	HTTP/HTTPS, status, configuration, FW update, CLI, troubleshoot, event log, system log, kernel log
FOTA	Firmware update from server, automatic notification
SSH	SSH (v1, v2)
SMS	SMS status, SMS configuration, send/read SMS via HTTP POST/GET
CALL	Reboot, Status, WiFi on/off, Mobile data on/off, Output on/off, answer/hang-up with a timer
TR-069	OpenACS, EasyCwmp, ACSLite, tGem, LibreACS, GenieACS, FreeACS, LibCWMP, Friendly tech, AVSystem
MQTT	MQTT Broker, MQTT publisher
SNMP	SNMP (v1, v2, v3), SNMP trap
JSON-RPC	Management API over HTTP/HTTPS
MODBUS	MODBUS TCP status/control
RMS	Teltonika Remote Management System (RMS)

IoT PLATFORMS

Clouds of things	Allows monitoring of: Device data, Mobile data, Network info, Availability
ThingWorx	Allows monitoring of: WAN Type, WAN IP Mobile Operator Name, Mobile Signal Strength, Mobile Network Type
Cumulocity	Allows monitoring of: Device Model, Revision and Serial Number, Mobile Cell ID, ICCID, IMEI, Connection Type, Operator, Signal Strength, WAN Type and IP
Azure IoT Hub	Can send device IP, Number of bytes send/received/ 3G connection state, Network link state, IMEI, ICCID, Model, Manufacturer, Serial, Revision, IMSI, Sim State, PIN state, GSM signal, WCDMA RSCP WCDMA EC/IO, LTE RSRP, LTE SINR, LTE RSRQ, CELL ID, Operator, Operator number, Connection type, Temperature, PIN count to Azure IoT Hub server

SYSTEM CHARACTERISTICS

CPU	Atheros Wasp, MIPS 74Kc, 550 MHz
RAM	128 MB, DDR2
FLASH storage	16 MB, SPI Flash

FIRMWARE / CONFIGURATION

WEB UI	Update FW from file, check FW on server, configuration profiles, configuration backup, restore point
FOTA	Update FW/configuration from server
RMS	Update FW/configuration for multiple devices
Keep settings	Update FW without losing current configuration

FIRMWARE CUSTOMIZATION

Operating system	RutOS (OpenWrt based Linux OS)
Supported languages	Busybox shell, Lua, C, C++
Development tools	SDK package with build environment provided

SERIAL

RS232	DB9 connector, full RS232 (with RTS, CTS)
RS485	RS485 Full Duplex (4 wires) and Half Duplex (2 wires). 300-115200 baud rate
Serial functions	Console, Serial over IP, Modem, Modbus gateway, NTRIP Client

LOCATION TRACKING

GNSS	GPS, GLONASS, BeiDou, Galileo and QZSS
Coordinates	GNSS coordinates via WebUI, SMS, TAVL, RMS
NMEA	NMEA 0183
NTRIP	NTRIP protocol (Networked Transport of RTCM via Internet Protocol)
Server software	Supported server software TAVL, RMS
Geofencing	Configurable multiple geofence zones

INPUT/OUTPUT

Input	1 x digital input (0 - 3 V), 1 x digital galvanically isolated input (0 - 30 V), 1 x analog input (0 - 24 V), 1 x Digital non-isolated input (on 4 pin power connector)
Output	1 x digital open collector output (30 V, 250 mA), 1 x SPST relay output (40 V, 4 A), 1 x Digital open collector output (30 V, 300 mA, on 4 pin power connector)
Events	SMS, EMAIL, RMS

USB

Data rate	USB 2.0
Applications	Samba share, USB-to-serial
External devices	Possibility to connect external HDD, flash drive, additional modem, printer
Storage formats	FAT, FAT32, NTFS

SD CARD

Physical size	Micro SD
Applications	Samba share, Storage Memory Expansion, DLNA
Capacity	Up to 64 GB
Storage Formats	FAT32, NTFS, ext2, ext3, ext4

POWER

Connector	4 pin industrial DC power socket
Input voltage range	9 – 30 VDC reverse polarity protection; surge protection >31 VDC 10us max
PoE (passive)	Passive PoE over spare pairs. Possibility to power up through LAN port, not compatible with IEEE802.3af, 802.3at and 802.3bt standards
Power consumption	< 2 W idle, < 7 W Max

PHYSICAL INTERFACES (PORTS, LEDS, ANTENNAS, BUTTONS, SIM)

Ethernet	4 x RJ45 ports, 10/100 Mbps
I/O's	2 x Inputs and 2 x Outputs on 10 pin industrial socket, 1 x Digital input and 1 x Digital output on 4 pin power connector (available from HW revision 1600)
Status LEDs	1 x bi-color connection status LED, 5 x connection strength LEDs, 4 x LAN status LEDs, 1 x Power LED
SIM	2 x SIM slots (Mini SIM - 2FF), 1.8 V/3 V, external SIM holders, eSIM (Optional)
Power	1 x 4 pin power connector
Input/output	1x 10 pin industrial socket for inputs/outputs
Antennas	2 x SMA for LTE, 2 x RP-SMA for WiFi, 1 x SMA for GNSS
USB	1 x USB A port for external devices
SD card	Micro SD card slot
RS232	1 x DB9 socket
RS485	1 x 6 pin industrial socket
Reset	Reboot/User default reset/Factory reset button

PHYSICAL SPECIFICATION

Casing material	Aluminium housing, plastic panels
Dimensions (W x H x D)	110 x 50 x 100 mm
Weight	287 g
Mounting options	DIN rail (can be mounted on two sides), flat surface placement

OPERATING ENVIRONMENT

Operating temperature	-40 °C to 75 °C
Operating humidity	10% to 90% non-condensing
Ingress Protection Rating	IP30

REGULATORY & TYPE APPROVALS

Regulatory	CE/RED, FCC, IC/ISED, EAC, RCM, PTCRB, RoHS, WEEE, Wi-Fi Alliance CE/RED, FCC, IC, PTCRB, RCM, EAC, CCC, RoHS, WEEE, IP rating, Anatel, GCF, REACH, E-mark, DNV GL, ECE Regulation 118, Morocco ANRT, Thailand NBTC, Ukraine UCRF, SDPPI (POSTEL), WiFi Certified, Modbus Conformance
Operator	AT&T, Verizon
Regulatory	ECE R10 (E-mark) ECE R118

EMI IMMUNITY

Standards	Draft EN 301 489-1 V2.2.0, Draft EN 301 489-17 V3.2.0, Draft EN 301 489-19 V2.1.0, Draft EN 301 489-52 V1.1.0 FCC 47 CFR Part 15B (2017), ANSI C63.4 (2014)
ESD	EN61000-4-2:2009
RS	EN 61000-4-3:2006 + A1:2008 + A2:2010
EFT	EN 61000-4-4:2012
Surge immunity (AC Power Line)	EN 61000-4-5:2006
Surge immunity (Ethernet ports)	EN 61000-4-5:2014, clause 7.1 of ITU-T K21
Transient and surges	ISO 7632-2:2004
CS	EN 61000-4-6:2009
DIP	EN 61000-4-11:2004

RF

Standards	EN 300 328 V2.1.1, EN 301 511 V12.5.1, EN 301 908-1 V11.1.1, EN 301 908-2 V11.1.1, EN 301 908-13 V11.1.1, EN 303 413 V1.1.0 AS/CA S042.1:2018, AS/ACIF S042.3:2005, AS/CA S042.4:2018, AS/NZS 4268:2017 FCC 47 CFR Part 15C (2017), FCC 47 CFR Part 2 (2017), FCC 47 CFR Part 22H (2017), FCC 47 CFR Part 24E (2017), FCC 47 CFR Part 27C (2017) RSS-Gen Issue 4 (2014), RSS-247 Issue 2 (2017), RSS-132 Issue 3 (2013), RSS-133 Issue 6 (2013), RSS-139 Issue 3, RSS-130 Issue 1
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SAFETY

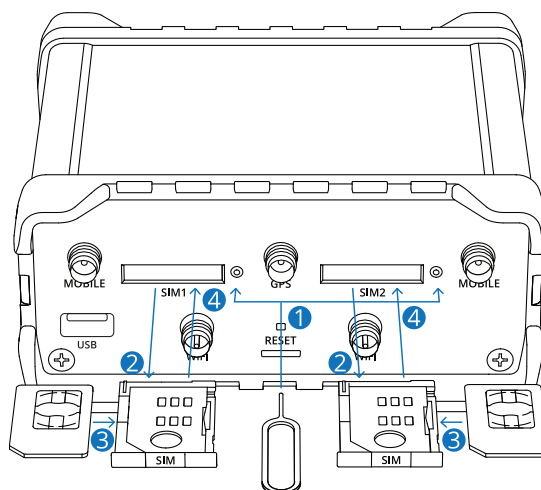
Standards	IEC 60950-1:2005 (Second Edition) + Am 1:2009 + Am 2:2013 AS/NZS 60950.1:2015 EN 50665:2017, EN 62311:2008 FCC 47 CFR Part 1 1.1310 RSS-102 Issue 5 (2015)
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ENVIRONMENTAL

Ingress Protect	LST EN 60529:1999+A1+AC:2002
Vibration	Class guideline-DNVGL-CG-0339:2016 EN 60068-2-6:2008

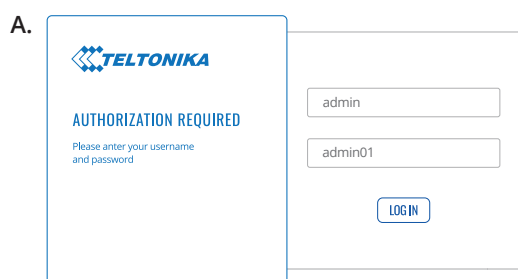
HARDWARE INSTALLATION

1. Push the SIM holder button with the SIM needle.
2. Pull out the SIM holder.
3. Insert your SIM card into the SIM holder.
4. Slide the SIM holder back into the router.
5. Attach all antennas.
6. Connect the power adapter to the socket on the front of the device. Then plug the other end of the power adapter into a power outlet.
7. Connect to the device wirelessly using SSID and password provided on the device information label or use an Ethernet cable connected to LAN port.



LOGIN TO DEVICE

1. To enter the router's Web interface (WebUI), type <http://192.168.1.1> into the URL field of your Internet browser.
2. Use login information shown in image A when prompted for authentication.
3. After you log in, you will be prompted to change your password for security reasons. The new password must contain at least 8 characters, including at least one uppercase letter, one lowercase letter, and one digit. This step is mandatory, and **you will not be able to interact with the router's WebUI before you change the password.**
4. When you change the router's password, the [Configuration Wizard](#) will start. The [Configuration Wizard](#) is a tool used to set up some of the router's main operating parameters.
5. Go to the [Overview](#) page and pay attention to the [Signal Strength](#) indication (image B). To maximize the cellular performance try adjusting the antennas or changing the location of your device to achieve the best signal conditions.



TECHNICAL INFORMATION

Radio specifications	
RF technologies	2G, 3G, 4G, WiFi, GNSS
Max RF power	33 dBm@GSM, 24 dBm@WCDMA, 23 dBm@LTE, 20 dBm@ WiFi
Bundled accessories specifications*	
Power adapter	Input: 0.4A@100-240VAC, Output: 9VDC, 1A, 4-pin plug
Mobile antenna	698~960/1710~2690 MHz, 50 Ω, VSWR<3, gain** 3 dBi, omnidirectional, SMA male connector
WiFi antenna	2400~2483.5 MHz, 50 Ω, VSWR<2, gain** 5 dBi, omnidirectional, RP-SMA male connector
GNSS antenna	1575.42~1602 MHz, 2.2~5 VDC, VSWR<1.5, gain** 28 dB (typ.), RHCP polarization, SMA male connector

*Order code dependent.

**Higher gain antenna can be connected to compensate for cable attenuation when a cable is used. The user is responsible for the compliance with the legal regulations.

WHAT'S IN THE BOX?

STANDARD PACKAGE CONTAINS*

- Router RUT955
- 9 W PSU
- 2 x LTE antennas (magnetic mount, SMA male, 3 m cable)
- 2 x WiFi antennas (magnetic mount, RP-SMA male, 1.5 m cable)
- GNSS antenna (adhesive , SMA male, 3 m cable)
- RS485 connector block
- I/O connector block
- Ethernet cable (1.5 m)
- SIM Adapter kit
- RMS Flyer
- QSG (Quick Start Guide)
- Packaging box



ROUTER RUT955



9 W PSU



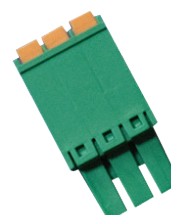
2 X LTE ANTENNAS (MAGNETIC MOUNT, SMA MALE, 3 M CABLE)



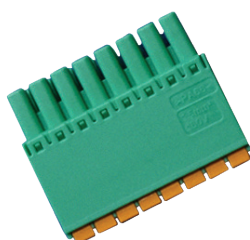
2 X WIFI ANTENNAS (MAGNETIC MOUNT, RP-SMA MALE, 1.5 M CABLE)



GNSS ANTENNA (ADHESIVE , SMA MALE, 3 M CABLE)



RS485 CONNECTOR BLOCK



I/O CONNECTOR BLOCK



ETHERNET CABLE (1.5 M)



SIM ADAPTER KIT

* For all standard order codes standard package contents are the same, except for PSU.

STANDARD ORDER CODES

PRODUCT CODE	HS CODE	HTS CODE	PACKAGE CONTAINS
RUT955 T033B0	851762	8517.62.00	Standard package with Euro PSU
RUT955 K034S0	851762	8517.62.00	Standard package with US PSU
RUT955 J034S0	851762	8517.62.00	Standard package with US PSU
RUT955 W03660	851762	8517.62.00	Standard package with US PSU

For more information on all available packaging options – please contact us directly.

AVAILABLE VERSIONS

PRODUCT CODE	REGION (OPERATOR)	FREQUENCY
RUT955 0*****	Europe ¹ , the Middle East, Africa	• 4G (LTE-FDD): B1, B3, B5, B7, B8, B20 • 4G (LTE-TDD): B40 • 3G: B1, B5, B8 • 2G: B3, B8
RUT955 T*****	Europe ¹ , the Middle East, Africa, Korea, Thailand, India, Malaysia	• 4G (LTE-FDD): B1, B3, B7, B8, B20, B28A • 4G (LTE-TDD): B38, B40, B41 • 3G: B1, B8 • 2G: B3, B8
RUT955 H*****	Europe ¹ , the Middle East, Africa, Korea, Thailand, India, Malaysia	• 4G (LTE-FDD): B1, B3, B5, B7, B8, B20 • 4G (LTE-TDD): B38, B40, B41 • 3G: B1, B5, B8 • 2G: B3, B8
RUT955 J*****	North America (AT&T, Bell, T-Mobile) ¹	• 4G (LTE-FDD): B2, B4, B12 • 3G: B2, B4, B5
RUT955 K*****	North America (Verizon)	• 4G (LTE-FDD): B4, B13
RUT955 W*****	North America (AT&T/ Verizon/ T-mobile)	• 4G (LTE-FDD): B2, B4, B5, B12, B13, B14, B66, B71 • 3G: B2, B4, B5
RUT955 M*****	South America, Australia, New Zealand, Taiwan	• 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B28 • 4G (LTE-TDD): B40 • 3G: B1, B2, B5, B8 • 2G: B2, B3, B5, B8
RUT955 P*****	Japan	• 4G (LTE-FDD): B1, B3, B8, B18, B19, B26 • 4G (LTE-TDD): B41 • 3G: B1, B6, B8, B19
RUT955 V*****	Global ¹	• 4G (LTE-FDD): B1, B2, B3, B4, B5, B7, B8, B12, B13, B18, B19, B20, B25, B26, B28 • 4G (LTE-TDD): B38, B39, B40, B41 • 3G: B1, B2, B4, B5, B6, B8, B19 • 2G: B2, B3, B5, B8
RUT955 Z*****	Europe ¹ , the Middle East, Africa, Korea, Thailand	• 4G (LTE-FDD): B1, B3, B7, B8, B20, B28A • 4G (LTE-TDD): B38, B40, B41 • 3G: B1, B8 • 2G: B3, B8

The price and lead-times for region (operator) specific versions may vary. For more information please contact us.

1 - Regional availability - excluding Russia & Belarus.

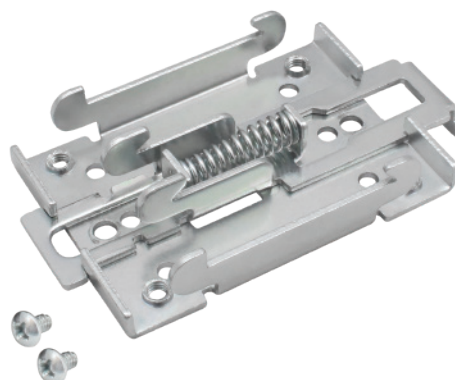
MOUNTING OPTIONS

DIN RAIL KIT

Parameter	Value
Mounting standard	35mm DIN Rail
Material	Low carbon steel
Weight	57g
Screws included	Philips Pan Head screw #6-32×3/16, 2pcs
Dimensions	82 mm x 46 mm x 20 mm
RoHS Compliant	V

DIN RAIL KIT

- DIN Rail adapter
- Philips Pan Head screw #6-32×3/16, 2pcs for RUT2xx/RUT9xx



ORDER CODE

PR5MEC00

HS CODE

73269098

HTS CODE

7326.90.98

For more information on all available packaging options – please contact us directly.

COMPACT DIN RAIL KIT

Parameter	Value
Mounting standard	35mm DIN Rail
Material	ABS + PC plastic
Weight	6.5 g
Screws included	Philips Pan Head screw #6-32×3/16, 2pcs
Dimensions	70 mm x 25 mm x 14,5 mm
RoHS Compliant	V

DIN RAIL KIT

- Compact plastic DIN Rail adapter (70x25x14,5mm)
- Philips Pan Head screw #6-32×3/16, 2pcs



ORDER CODE

PR5MEC11

HS CODE

73269098

HTS CODE

7326.90.98

For more information on all available packaging options – please contact us directly.

SURFACE MOUNTING KIT

Parameter	Value
Mounting standard	Flat surface mount
Material	ABS + PC plastic
Weight	2x5 g
Screws included	Philips Pan Head screw #6-32×3/16, 2pcs
Dimensions	25 mm x 48 mm x 7.5 mm
RoHS Compliant	V

DIN RAIL KIT

- Surface mounting kit
- Philips Pan Head screw #6-32×3/16, 2pcs



ORDER CODE

PR5MEC12

HS CODE

73269098

HTS CODE

7326.90.98

For more information on all available packaging options – please contact us directly.

RUT955 SPATIAL MEASUREMENTS & WEIGHT

MAIN MEASUREMENTS

W x H x D dimensions for RUT955:

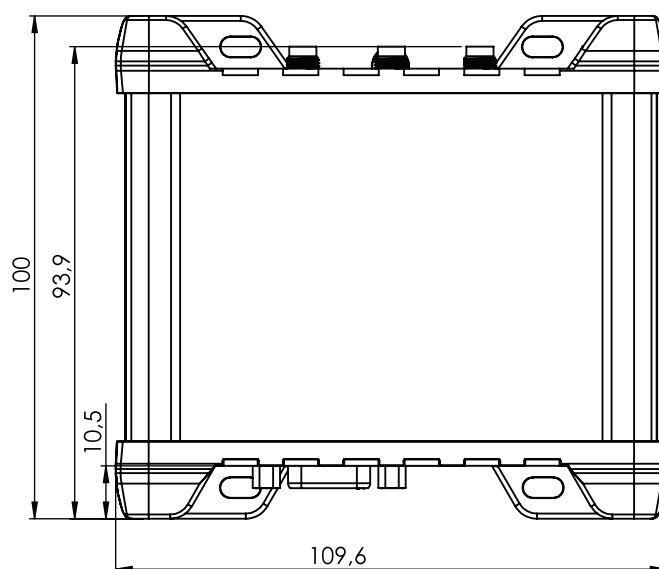
Device housing*: 110 x 50 x 100

Box: 355 x 60 x 175

*Housing measurements are presented without antenna connectors and screws; for measurements of other device elements look to the sections below.

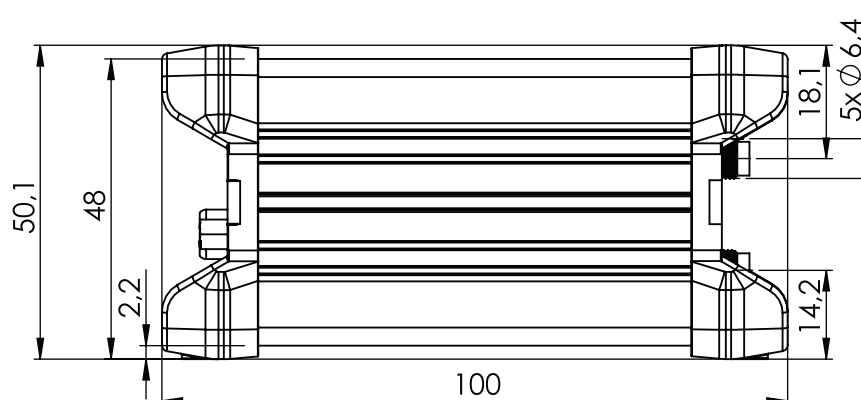
TOP VIEW

The figure below depicts the measurements of RUT955 and its components as seen from the top:



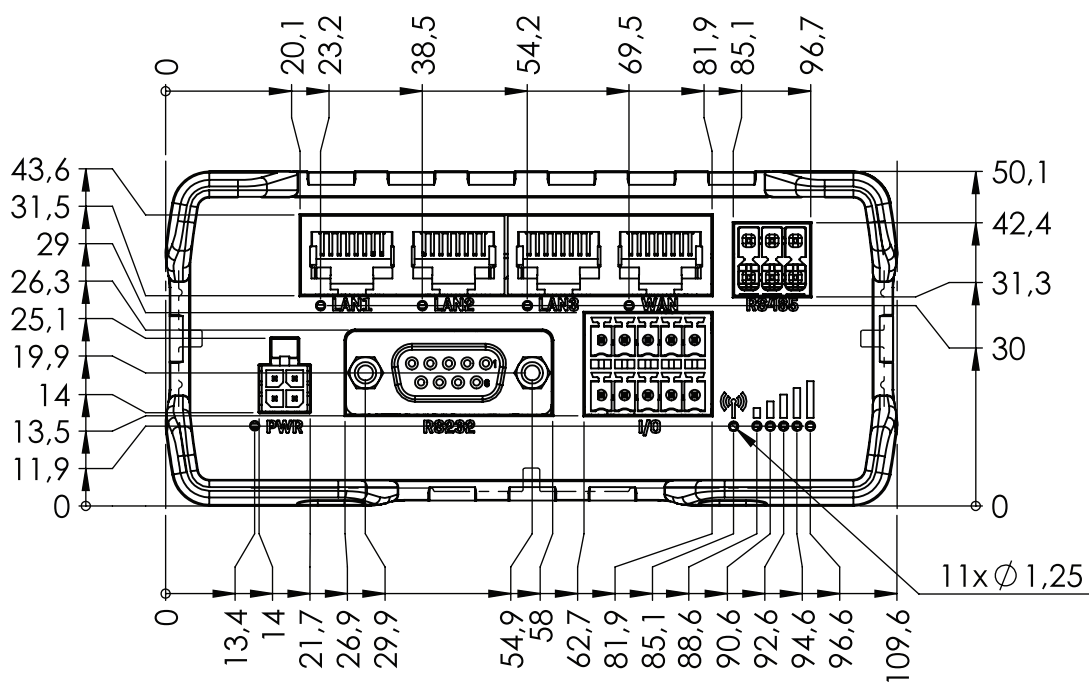
RIGHT VIEW

The figure below depicts the measurements of RUT955 and its components as seen from the right side:



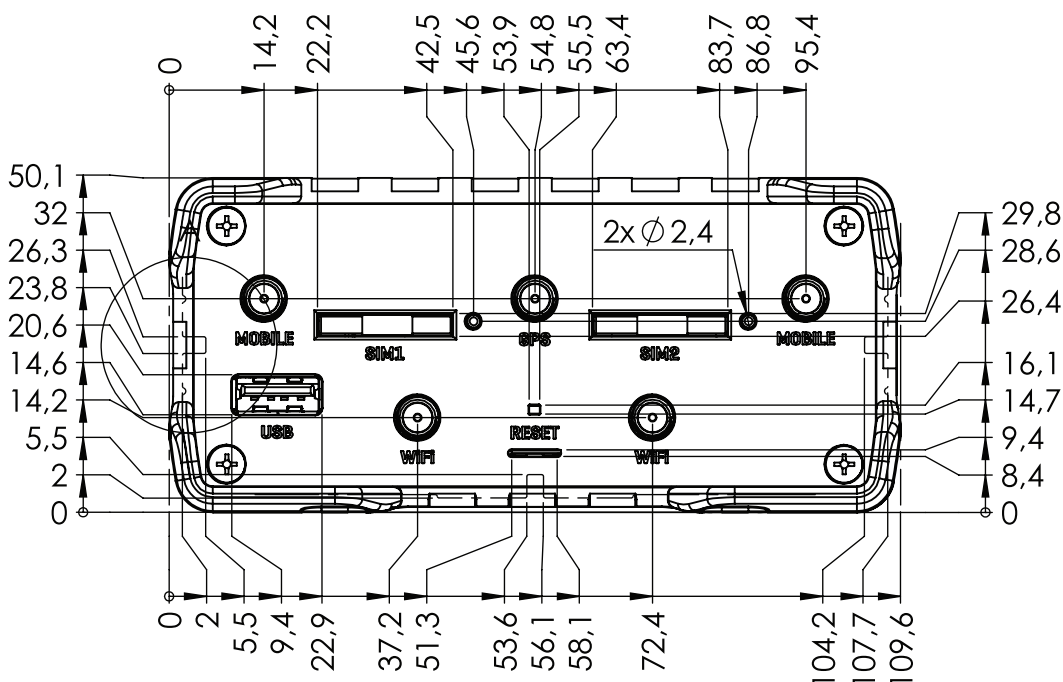
FRONT VIEW

The figure below depicts the measurements of RUT955 and its components as seen from the front panel side:



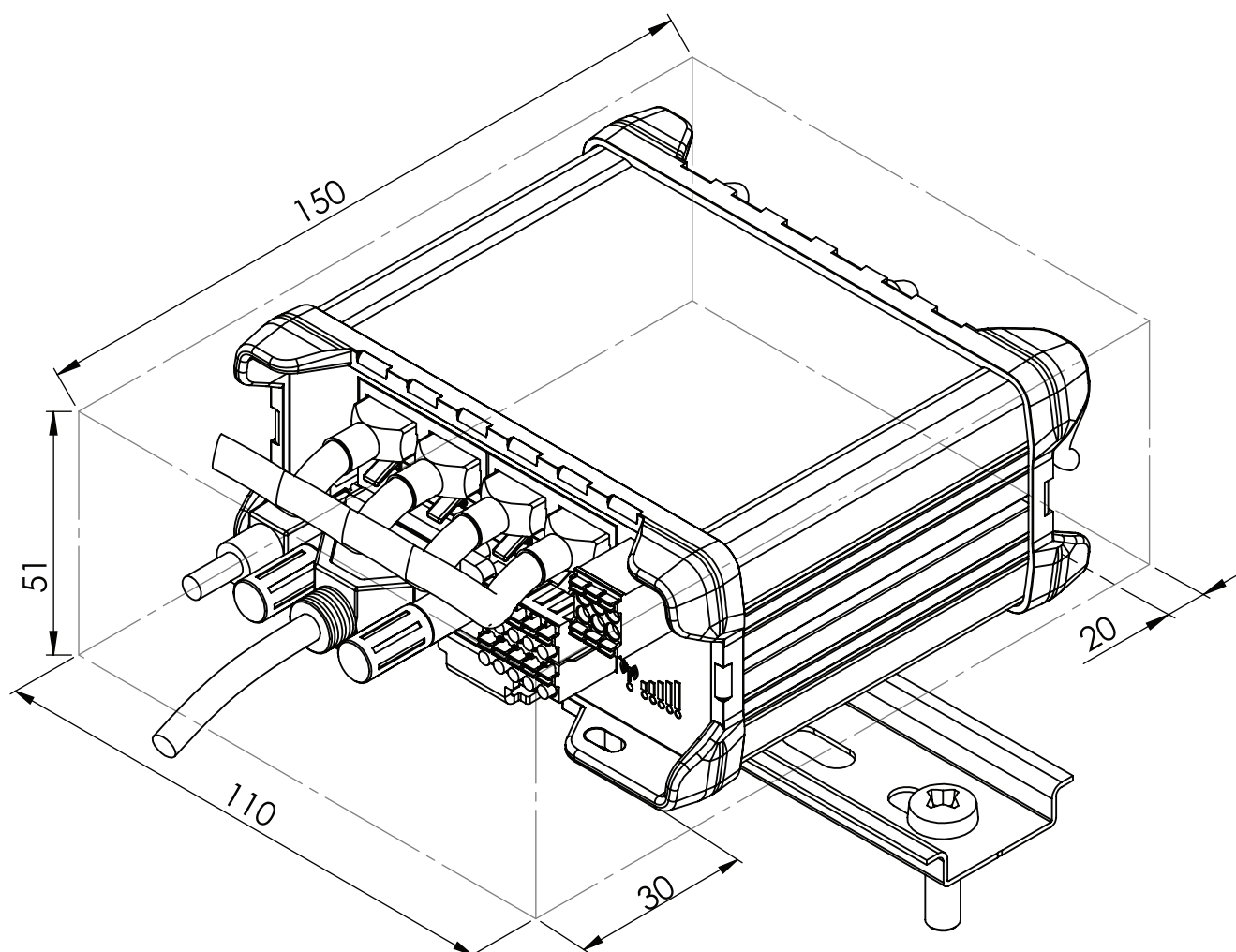
REAR VIEW

The figure below depicts the measurements of RUT955 and its components as seen from the back panel side:



MOUNTING SPACE REQUIREMENTS

The figure below depicts an approximation of the device's dimensions when cables and antennas are attached:



DIN RAIL

The scheme below depicts protrusion measurements of an attached DIN Rail:

