



PNI SVM-10K/ PNI SVT-10K

Voltage stabilizer / Stabilizator de tensiune



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High-accuracy Full-automatic AC Voltage Stabilizer

1. General

1.1 The voltage stabilizers PNI SVM-10K and PNI SVT-10K are designed to stabilize the output voltage. When the input voltage from the electrical network fluctuates, the voltage stabilizer will automatically adjust the voltage as close as possible to the preset value. These stabilizers have high capacity, high efficiency, no waveform distortion and automatic voltage regulation, so that the connected devices can work correctly. PNI servo motor voltage stabilizers have a wide range of applications. Depending on their capacity, they can connect: electric mechanical equipment, industrial equipment, air conditioners, televisions, household appliances, electric tools, refrigerators and, in general, electronics that need stable voltage.

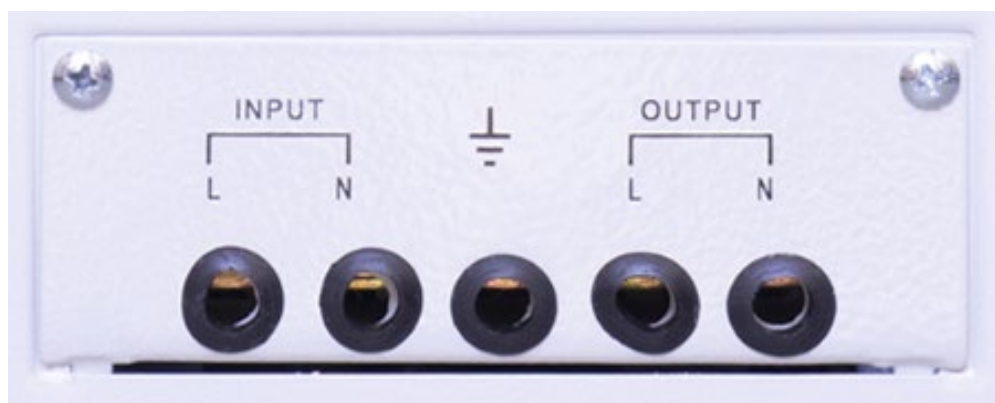
2. Model description

SVM-10K: single-phase high-accuracy full-automatic AC voltage stabilizer

1. Input Voltage
2. Output Voltage
3. Normal functionality
4. Overvoltage
5. Undervoltage
6. General protection switch



Input Ground Output

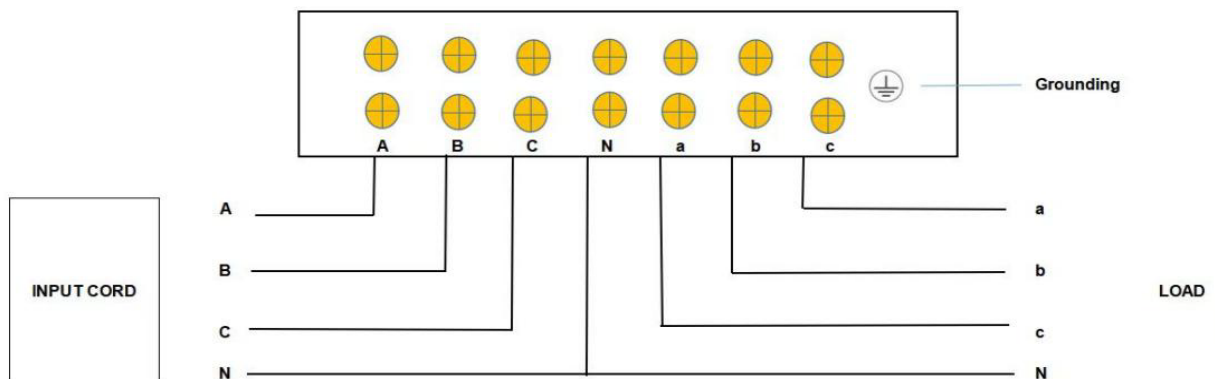


SVT-10K: three-phase high-accuracy full-automatic AC voltage stabilizer

1. Output Voltage
2. Normal functionality
3. Overvoltage
4. Undervoltage
5. General protection switch
6. Phase voltage display switch



THREE PHASE WIRING DIAGRAM

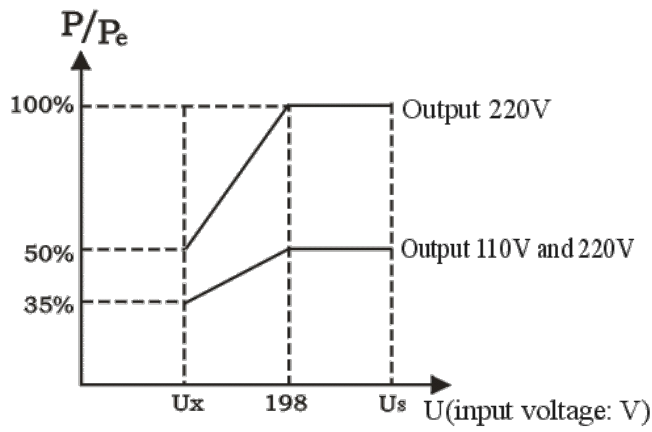


2.1 Main technical parameters

Model	PNI SVM-10K	PNI SVT-10K
AC input		
Voltage range	160V ~ 255V	277 V ~ 433 V
Frequency	50 / 60 Hz	

Phase	Single-phase + N + G	Three-phase + N + G
AC output		
tension	380 V / 400V	
Precision voltage regulation	$\leq \pm 3 \%$	
Wave form	Sine wave	
Efficiency	$\geq 96\%$	
Capacity	10KVA	
Maximum load	8000W	
Current	34.8A	
Power factor	0.8	
Distortion	No wave form distortion	
Overload protection	433 V \pm 5 V	
Under voltage protection	316 V \pm 5 V	
Other protections	Start-up delay, mechanical error, over current, short circuit, over temperature	
Other		
Working temperature	-26°C ~ +80°C	
Altitude	< 1000 m above sea level	
Humidity	$\leq 90\%$	
Dimensions	410 x 240 x 370 mm	310 x 345 x 720 mm

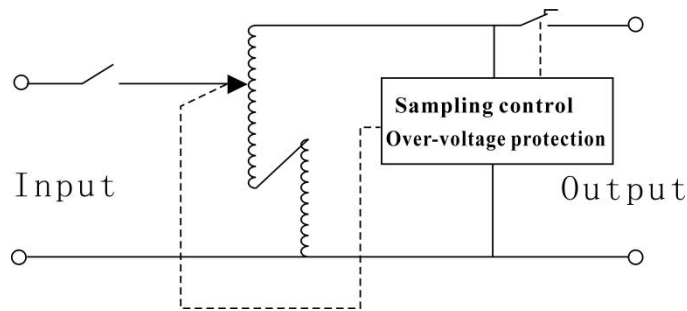
2.3 Curve of output capacity (see below diagram)



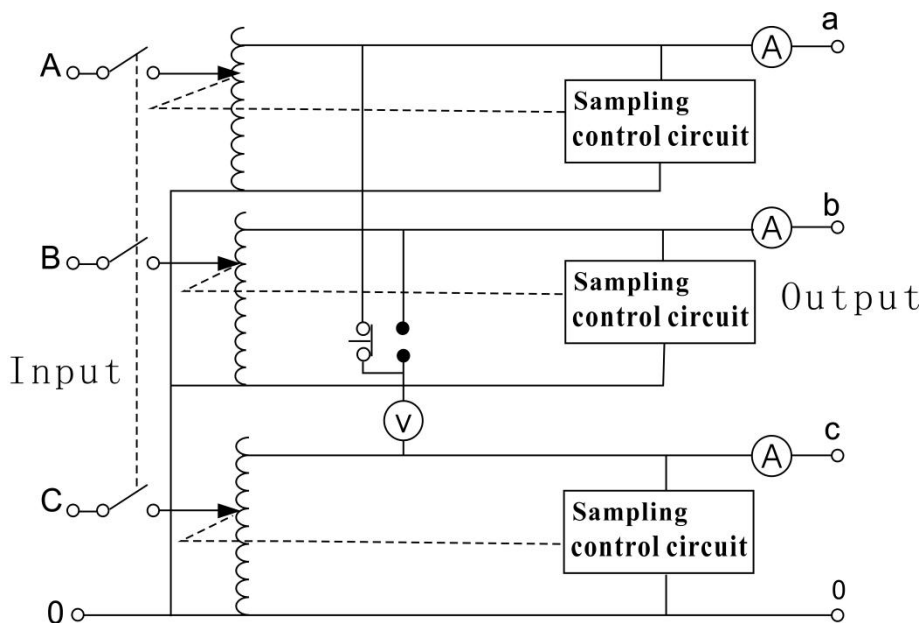
P : Output capacity
 P_e : Rated output capacity
 U : Input voltage
 U_x : Lower limit of the permitted input voltage range
 U_s : Upper limit of the permitted input voltage range

2.4 Circuit diagram

2.4.1 Circuit diagram of single-phase high-accuracy full-automatic AC voltage stabilizer of 0.5kVA~10kVA (see below diagram)



2.4.2 Circuit diagram of three-phase high-accuracy full-automatic AC voltage stabilizer (see below diagram)



Operating instruction

Voltage stabilizers are only used indoors, taking into account the following requirements:

- Operating temperature: $-26^{\circ}\text{C} \sim +80^{\circ}\text{C}$
- Altitude: < 1000 m above sea level
- Humidity: $\leq 90\%$
- There must be no gases, vapors, chemicals or explosive substances, excess dust, excess humidity in the work space.
- The surface on which the stabilizer is installed must be flat, without vibrations.
- For installation under special conditions, ask for specialist advice.

3.1 The output power indicated on the voltage stabilizer that is the max power, and the nominal power of household appliance refers to the active power, the power of inductive loads such as refrigerator, air conditioner, etc. shall be multiplied by 3 to 5 times, because they have high current at the starting moment. If the input voltage is too low, the load shall be reduced.

3.2 The supply voltage shall be in the range of nominal input voltage, when output voltage is in the state of over voltage, the “over voltage” indicator lamp of voltage stabilizer will go on, at this moment, the voltage stabilizer can cut off the output voltage automatically to ensure the safety of power device.

3.3 When user uses the motor or other starting equipment of high current, please select voltage stabilizer with capacity of above 3 times, in order that the equipment can work smoothly not affected by large voltage drop of circuit for too high starting current.

3.4 Three-phase voltage stabilizer must be connected with neutral wire that forms three-phase four-wire system, only that, it can work normally, but the neutral wire can't be taken the place of earth wire.

3.5 To ensure the device and human safety, the enclosure of voltage stabilizer is mounted with grounding screw or grounding terminal, user must connect the grounding wire properly.

3.6 After finishing installing, please turn on the input power switch, in case that the operation indicator lamp goes on, and the output voltage is in the normal range, user can turn on the electrical appliance to let the load run normally.

Maintenance

To ensure operation in optimal conditions for a long period of time, follow the following instructions:

- do not block the ventilation slots of the stabilizer
- periodically clean the stabilizer housing of dust
- check the input and output cables if they are correctly connected and if they are in good condition
- check that the stabilizer does not have condensation on the housing.

Table 1 Common symptom and remedy

In case of improper operation of the voltage stabilizer, before calling a specialized service center, check the following:

- check the power cable of the stabilizer and the power cable of the device connected to the stabilizer.
- check the starting power of the device connected to the stabilizer. It is recommended that this does not exceed 80% of the nominal power of the stabilizer. If it exceeds this threshold for a long time, it is recommended to increase the ventilation capacity of the stabilizer.
- If there is a power failure while the stabilizer and the consumers are working, after the power returns, gradually connect the consumers.

Symptom	Cause	Remedy
No voltage stabilization	1. There is something wrong with driving mechanism of servo motor. 2. Input voltage is beyond the voltage regulating range.	1. Although the motor rotates or has voltage, it can't drive the movable arm, the motor shall be changed. 2. If the motor has no voltage, please check the micro-adjustment resistance of the sensitive switch as well as circuit board

		of adjustment and protection, if the fault hasn't been eliminated, please repair or change the circuit board.
No output voltage	<ol style="list-style-type: none"> 1. Main circuit breaks. 2. The switch trips or fuse tube is burnt out for overload 	<ol style="list-style-type: none"> 1. Switch on the main circuit, check whether the wire head is welded firmly or not. 2. Change the fuse tube or re-close the switch, reduce the load capacity.
The voltage stabilizer is able to stabilize voltage, however, there is a deviation for the value of voltage stabilization	<ol style="list-style-type: none"> 1. The value of voltage trimmer potentiometer deviates. 2. The reading of voltmeter is not accurate. 	<p>Adjust the voltage trimmer</p> <ol style="list-style-type: none"> 1. potentiometer. 2. Change or repair the voltmeter.
The coil of voltage stabilization is burnt.	<ol style="list-style-type: none"> 1. Load is too heavy, beyond the load capability of voltage stabilizer. 	<ol style="list-style-type: none"> 1. Especially pay attention to the installation position for coils and output voltage when changing the coil.
Sometimes make the machine rotation noise and motor driving noise	<ol style="list-style-type: none"> 1. The frequent variety of input voltage leads to adjust voltage correspondingly 	<ol style="list-style-type: none"> 1. Just the output voltage is the stable rated voltage, it is normal that voltage stabilizer has the mentioned noise.
The voltmeter swings continuously and the carbon brush has spark	<ol style="list-style-type: none"> 1. Contact pressure between carbon brush and coil plane is too little. 2. The carbon brush has been worn seriously. 	<ol style="list-style-type: none"> 1. Use the fine file or sand paper to clean the coil and brush, then adjust the brush pressure. 2. Change the brush.

Stabilizator de tensiune AC complet automat de Inalta precizie

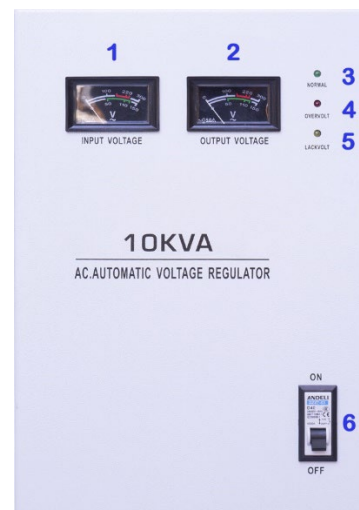
1. Introducere

1.1 Stabilizatoarele de tensiune PNI SVM-10K si PNI SVT-10K sunt proiectate pentru a stabili tensiunea de iesire. Cand tensiunea de intrare de la reseaua electrica fluctueaza, stabilizatorul de tensiune va ajusta automat tensiunea de iesire cat mai aproape de valoarea prestabilita. Aceste stabilizatoare de tensiune au capacitate mare, eficienta ridicata, fara distorsiuni ale formei de unda si reglare automata a tensiunii, astfel incat dispozitivele conectate sa poata functiona corect. Stabilizatoarele de tensiune cu servomotor PNI au o gama larga de aplicatii. In functie de capacitatea lor, pot alimenta: echipamente electro-mecanice, echipamente industriale, aparate de aer conditionat, televizoare, aparate electrocasnice, unelte electrice, frigidere si in general electronice care au nevoie de tensiune stabila.

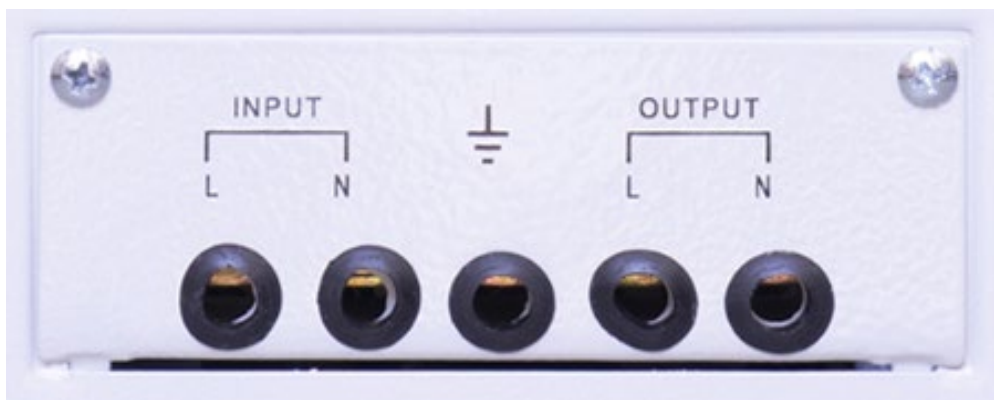
2. Descriere generala

SVM-10K: stabilizator monofazat automat AC de Inalta precizie

1. Tensiune de intrare
2. Tensiune de iesire
3. Functionalitate normala
4. Supratensiune
5. Subtensiune
6. Comutator general de protectie



Intrare Impamantare Iesire

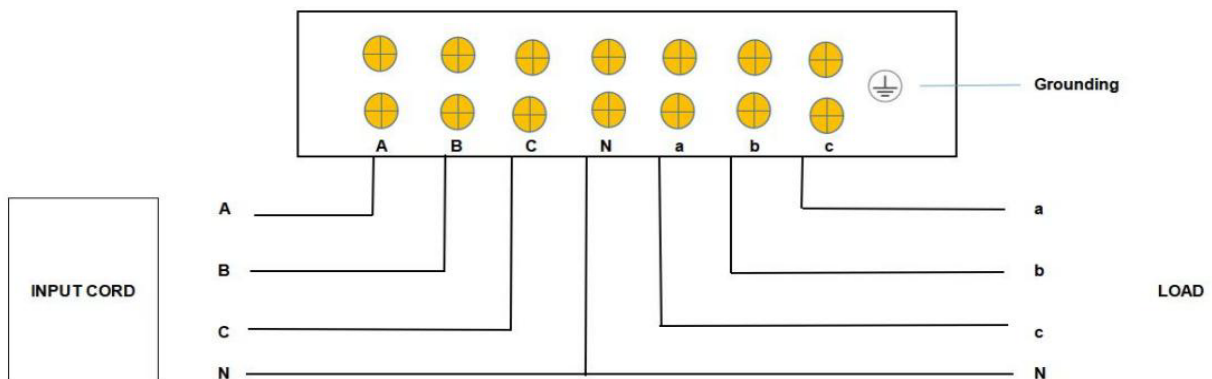


SVT-10K: stabilizator de tensiune automat AC trifazat de Inalta precizie,

1. Tensiune de iesire
2. Functionalitate normala
3. Supratensiune
4. Subtensiune
5. Comutator general de protectie
6. Comutator de afisare a tensiunii de faza



THREE PHASE WIRING DIAGRAM



2.2 Parametri tehnici

Model	PNI SVM-10K	PNI SVT-10K
Intrare AC		
Tensiune	160V ~ 255V	277 V ~ 433 V
Frecventa	50 / 60 Hz	

Faze	O faza + N + G	Trei faze + N + G
Iesire AC		
Tensiune	230 V	380 V / 400V
Precizie tensiune	$\leq \pm 3 \%$	
Forma de unda	Sinus pur	
Eficienta	$\geq 96\%$	
Capacitate	10KVA	
Sarcina maxima	8000W	
Curent	34.8A	
Factor de putere	0.8	
Distorsiuni	Fara distorsiuni ale formei de unda	
Protectie la suprasarcina	433 V \pm 5 V	
Protectie sub tensiune	316 V \pm 5 V	
Alte protectii	Intarziere la pornire, eroare mecanica, supracurent, scurtcircuit, supratemperatura	
Altele		
Temperatura de lucru	-26°C ~ +80°C	
Altitudine	< 1000 m peste nivelul marii	
Umiditate	$\leq 90\%$	
Dimensiuni	410 x 240 x 370 mm	310 x 345 x 720 mm

2.3 Curba capacitatii de iesire (vezi diagrama de mai jos)

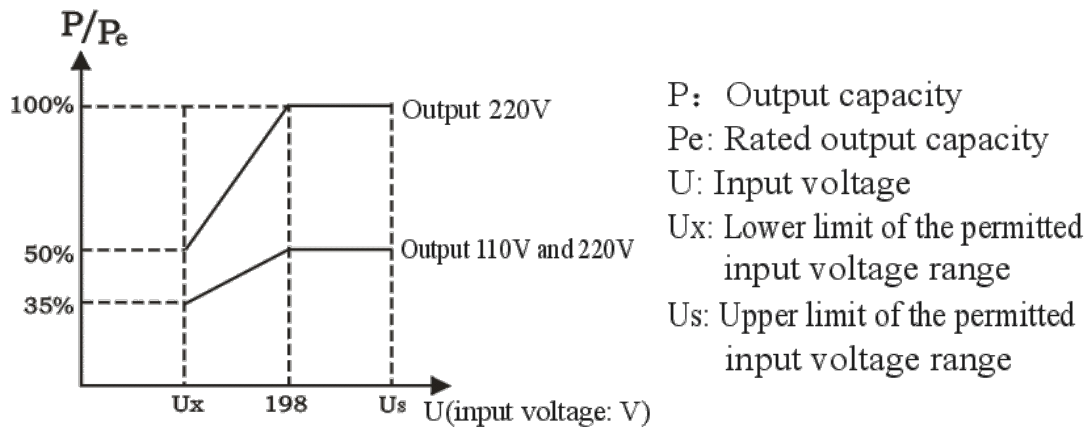
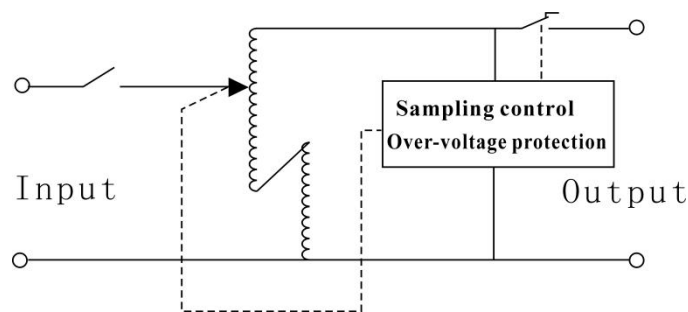


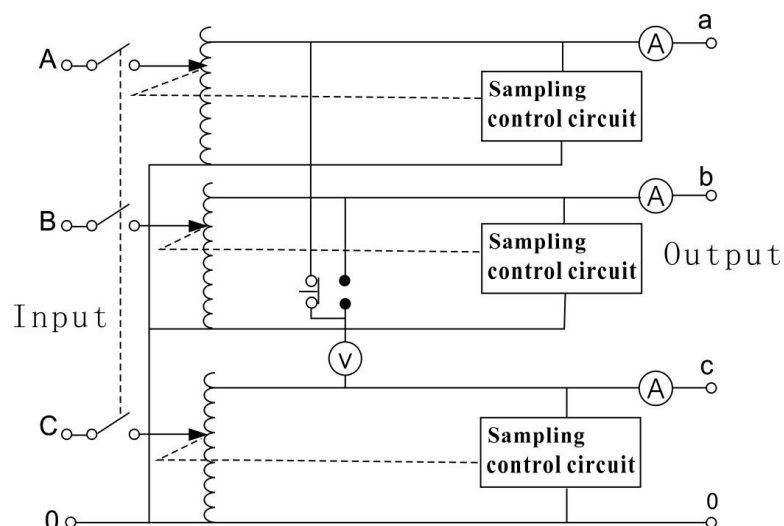
Diagrama 1

2.4 Diagrama circuite

2.4.1 Schema de circuit a tensiunii AC monofazate de Inalta precizie complet automata a stabilizatoarelor de 0,5kVA~10kVA (vezi diagrama de mai jos)



2.4.2 Schema circuitului stabilizatorului de tensiune AC complet automat trifazat de Inalta precizie (vezi diagrama de mai jos)



3. Instructiuni de operare

Stabilizatoarele de tensiune sunt utilizate numai In interior, tinand cont de urmatoarele cerinte:

- Temperatura de functionare: $-26^{\circ}\text{C} \sim +80^{\circ}\text{C}$
- Altitudine: < 1000 m deasupra nivelului marii
- Umiditate: $\leq 90\%$
- In spatiul de lucru nu trebuie sa existe gaze, vapori, substante chimice sau explozive, exces de praf, exces de umiditate.
- Suprafata pe care se instaleaza stabilizatorul trebuie sa fie plana, fara vibratii.
- Pentru instalare In conditii speciale, solicitati sfatul unui specialist.

3.1 Puterea de iesire indicata pe stabilizatorul de tensiune, este puterea maxima, iar puterea nominala a aparatului de uz casnic se refera la puterea activa consumata; Pentru calcul puterea sarcinilor inductive cum ar fi frigiderul, aparatul de aer conditionat etc. trebuie Inmultita de 3 pana la 5 ori si comparata cu puterea stabilizatorului, deoarece acestea au curent mai mare la momentul pornirii. Daca puterea consumatorilor de acest tip depaseste puterea stabilizatorului reduceti consumatorii. Daca tensiunea de intrare este prea mica, deasemeni trebuie sa reduceti numarul consumatorilor conectati.

3.2 Daca tensiunea de alimentare va fi In intervalul tensiunii nominale de intrare atunci cand tensiunea de iesire este In stare de supratensiune, indicatorul de „supra tensiune” al stabilizatorului de tensiune se va aprinde. In acest moment, stabilizatorul de tensiune poate Intrerupe tensiunea de iesire automat pentru a asigura siguranta dispozitivului si a consumatorilor.

3.3 Cand utilizatorul foloseste un motor sau alt echipament de pornire cu curent ridicat, va rugam sa alegeti un stabilizator de tensiune cu o capacitate mai mare de peste 3 ori, pentru ca echipamentul sa functioneze fara probleme, fara a fi afectat de caderea mare de tensiune a circuitului pentru un curent de pornire prea mare.

3.4 Stabilizatorul de tensiune trifazat trebuie conectat cu un fir neutru care formeaza un sistem trifazat cu patru fire, pentru a functiona normal. Atentie: firul neutru nu poate fi Inlocuit de firul de Impamantare.

3.5 Pentru siguranta dispozitivului si siguranta umana, carcasa stabilizatorului de tensiune este prevazuta cu surub de Impamantare sau terminal de Impamantare, iar utilizatorul trebuie sa conecteze firul de Impamantare la acesta In mod corespunzator.

3.6 Dupa terminarea instalarii, va rugam sa porniti comutatorul de alimentare; In cazul In care indicatorul luminos de functionare se aprinde si tensiunea de iesire este In intervalul normal, utilizatorul poate porni aparatura electrica pentru a lasa sarcina sa functioneze normal.

Intretinere

Pentru a asigura functionarea In conditii optime pentru o perioada lunga de timp, urmati urmatoarele instructiuni:

- nu blocati fantele de ventilatie ale stabilizatorului
- curatati periodic de praf carcasa stabilizatorului
- verificati cablurile de intrare si de iesire daca sunt conectate corect si daca sunt In stare buna
- verificati ca stabilizatorul sa nu prezinte condens pe carcasa.

Tabelul 1 Probleme comune si depanare

In caz de functionare necorespunzatoare a stabilizatorului de tensiune, Inainte de a apela la un centru de service specializat, verificati urmatoarele:

- verificati cablul de alimentare al stabilizatorului si cablul de alimentare al dispozitivului conectat la stabilizator.
- verificati puterea de pornire a dispozitivului conectat la stabilizator. Se recomanda ca aceasta sa nu depaseasca 80% din puterea nominala a stabilizatorului. Daca depaseste acest prag pentru o perioada lunga de timp, se recomanda cresterea capacitatii de ventilatie a stabilizatorului.
- Daca exista o pana de curent In timp ce stabilizatorul si consumatorii functioneaza, dupa revenirea curentului, conectati treptat consumatorii.

Problema	Cauza	Depanare
Fara stabilizare	1. Este ceva In neregula cu mecanismul de antrenare al	1. Chiar daca motorul se roteste sau are tensiune, dar nu poate conduce

	<p>servomotorului.</p> <p>2. Tensiunea de intrare este peste domeniul de reglare a tensiunii.</p>	<p>bratul mobil,atunci se va schimba motorul.</p> <p>2. Daca motorul nu are tensiune, va rugam sa verificati rezistenta de micro-ajustare a comutatorului de precizie, precum si placa cu circuitul de reglaj si protectie. In cazul In care defectul nu a fost eliminat, va rugam sa reparati sau sa schimbati placa de circuit.</p>
Fara tensiune de iesire	<p>1. Intreruperea circuitului principal.</p> <p>2. Comutatorul se declanseaza sau siguranta generala este arsa datorita suprasarcinii.</p>	<p>1. Porniti circuitul principal, verificati daca toate conexiunile de alimentare sunt stranse ferm sau nu.</p> <p>2. Schimbati siguranta sau Inchideti din nou comutatorul si reduceti capacitatea de Incarcare (consumatorii).</p>
Stabilizatorul de tensiune este capabil sa stabilizeze tensiune insa,exista o abatere pentru valoarea de stabilizare a tensiunii	<p>1. Valoarea tensiunii potentiometru trimmer deviaza de la normal.</p> <p>2. Citirea voltmetrului nu este exacta.corecta</p>	<p>1. Reglati potentiometrul de reglare a tensiunii.</p> <p>2. Schimbati sau reparati voltmetrul.</p>
Bobina de tensiune stabilizarea este arsa.	<p>1. Consumul instant este prea mare, dincolo de capacitatea maxima a stabilizatorului de tensiune.</p>	<p>1. Acordati o atentie deosebita pozitiei de instalare a bobinelor si tensiunii de iesire atunci cand schimbati bobina.</p>
Uneori, face	Varietatea frecventa a	1.Doar tensiunea de iesire este

zgomot de rotatie a motorului si zgomot de miscare a pantografului pe motor	tensiunii de intrare duce la ajustare tensiune In mod corespunzator	stabila Constant. Este normal ca stabilizatorul de tensiune sa produca zgomotul mentionat in timpul stabilizarii tensiunii.
Voltmetrul se balanseaza continuu si peria cu carbune produce scantei	1. Presiunea de contact dintre peria cu carbune si planul bobinei este prea mica. 2. Peria de carbune are uzura avansata	1. Folositi pila fina sau hartie abraziva pentru a curata bobina si peria, apoi reglati presiunea periei pe bobina. 2. Schimbati peria cu carbune.

EN:

EU Simplified Declaration of Conformity

ONLINESHOP SRL declares that **Voltage Stabilizer PNI SVM-10K** and **Three-phase Voltage Stabilizer PNI SVT-10K** complies with the Directive EMC 2014/30/EU. The full text of the EU declaration of conformity is available at the following Internet address:

<https://www.mypni.eu/products/8248/download/certifications>

<https://www.mypni.eu/products/8249/download/certifications>

RO:

Declaratie UE de conformitate simplificata

ONLINESHOP SRL declara ca **Stabilizator de tensiune PNI SVM-10K** si **Stabilizator de tensiune trifazat PNI SVT-10K** este in conformitate cu Directiva EMC 2014/30/EU.

Textul integral al declaratiei UE de conformitate este disponibil la urmatoarea adresa de internet:

<https://www.mypni.eu/products/8248/download/certifications>

<https://www.mypni.eu/products/8249/download/certifications>

English - CERTIFICATE OF QUALITY AND COMMERCIAL WARRANTY

The products identified in this certificate based on the trade name and the sole series number S/N benefit by a commercial warranty as follows:

The warranty period for natural persons is 24 months as of the delivery date for the manufacturing and material defects.

The warranty period for legal entities is 12 months as of the delivery date for the manufacturing and material defects.

The cables, adaptors, consumables, batteries, accumulators, battery chargers, transformers, microphones, earphones, aerials which are part of the products or are delivered with them shall have a **commercial warranty of 6 months** as of the date of the product sale to the end consumer. The term of warranty shall be calculated as of the invoicing date of each product individually.

The average term of the product service life is 48 months subject to the compliance with the assembly and operation instructions accompanying the product.

The commercial warranty shall not impair the consumer rights provided by the applicable legislation in force, namely Emergency Government Ordinance 140/28.12.2021 on certain issues related to contracts for the sale of goods, the Government Ordinance 21/1992 on the consumer protection as subsequently amended and supplemented by Law 296/2004 on the consumption code as subsequently amended and supplemented.

Romana - CERTIFICAT DE CALITATE SI GARANTIE COMERCIALA

Produsele identificate in acest certificat pe baza denumirii comerciale si a numarului unic de serie S/N, beneficiaza de o garantie comerciala dupa cum urmeaza:

Perioada de garantie pentru persoane fizice este de 24 luni de la data livrarii pentru defectele de fabricatie si de material.

Perioada de garantie pentru persoane juridice este de 12 luni de la data livrarii pentru defectele de fabricatie si de material.

Cablurile, adaptoarele, consumabilele, bateriile, acumulatorii, alimentatoarele, transformatoarele, microfoanele, castile, antenele care intra in componenta produselor sau se livreaza impreuna cu acestea au garantie comerciala de **6 luni** de la data vanzarii produsului catre consumatorul final.

Termenul de garantie se calculeaza de la data facturarii fiecarui produs in parte.

Durata medie de utilizare a produsului este de 48 luni cu conditia respectarii instructiunilor de montaj si utilizare care insotesc produsul.

Garantia comerciala nu afecteaza drepturile consumatorului prevazute prin legislatia aplicabila in vigoare, respectiv Ordonanta de Urgenta 140/28.12.2021 privind anumite aspecte referitoare la contractele de vanzare de bunuri, OG 21/1992 privind protectia consumatorilor cu modificarile si completarile ulterioare si Legea 296/2004 privind codul consumului cu modificarile si completarile ulterioare.

EN - Please download the full version of the warranty certificate:

BG - Моля, изтеглете пълната версия на гаранционния сертификат:

DE - Bitte laden Sie die Vollversion des Garantiezertifikats herunter:

ES - Descargue la versión completa del certificado de garantía:

FR - Veuillez télécharger la version complète du certificat de garantie :

HU - Kérjük, töltsse le a jótállási jegy teljes verzióját:

IT - Si prega di scaricare la versione completa del certificato di garanzia:

NL - Download de volledige versie van het garantiecertificaat:

PL - Pobierz pełną wersję karty gwarancyjnej:

RO - Va rugam descarcati versiunea completa a certificatului de garantie:



