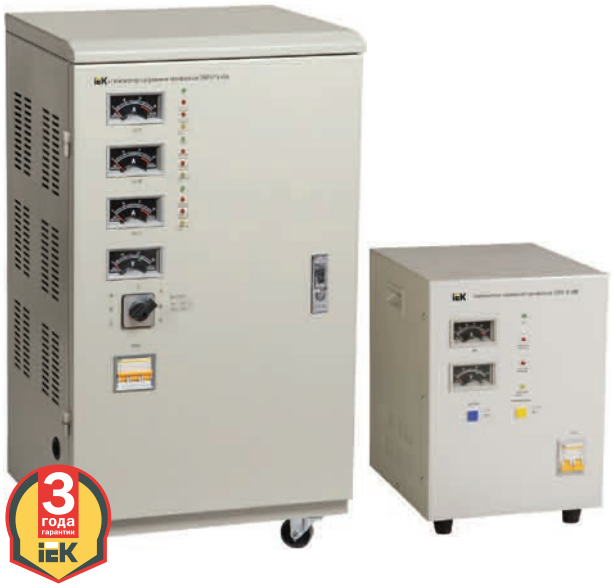
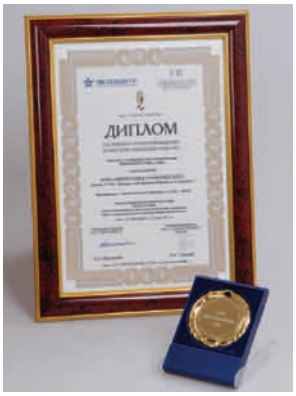
SNI voltage stabilizer

SNI1 (single-phase) and SNI3 (three-phase) voltage stabilizers of IEK® brand are intended for maintaining stable single/three-phase supply voltage of residential and industrial loads of 220 V/3 x 220 V, 50 Hz at power fluctuations within wide range of value and period of time.

They are applied for stabilizing voltage when working with highly-sensitive equipment in industrial sites, medical institutions, telecommunication companies, low-rise building as well as housing and public utility sector. SNI voltage regulators provide for extending the service life of alarm systems, computer equipment etc.
Correspond to standards EN 55014-1, EN 55014-2, EN 60335-1, EN 61000-3-2.





These devices were awarded gold medal of the International Exhibition “Elektro-2009” in nomination “Best Electrical Equipment” for their high quality, reliability and exploitation ratings as well as efficient engineering solutions.

Advantages

- Stepless adjustment of output voltage.
- Improved accuracy of output voltage stabilizing: 220±3%.
- Modern schematic solutions.
- Six protection levels: against overload, short-circuit, overheating, hazardous overvoltage, hazardous undervoltage, surge voltages.
- High efficiency.
- No distortions in sinusoidal shape of output voltage curve.
- Good resistance against short-term overloads.
- Extra wide range of products: 0.5 to 150 kVA.
- Extended manufacturer's warranty period: 3 years from purchase date.
- Broad national network of service centers for IEK® voltage stabilizers.

Electromechanical voltage stabilizers of SHIFT series

The voltage stabilizer of SHIFT series perfectly suits to the task of steady power supply even under conditions of constantly lowered mains voltage, maintaining the voltage level with high accuracy (220 V ± 3%).

Power, kVA	Maximum input current, A	Type of circuit breaker	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
3,5	16	Circuit breaker C16 A 2P	16×25×37	13,2	IVS12-1-03500
5,5	25	Circuit breaker C25 A 2P	18×37×39	16,6	IVS12-1-05500
8	36	Circuit breaker C40 A 2P	18×37×39	20,55	IVS12-1-08000
10	45	Circuit breaker C50 A 2P	20×30×43	25,7	IVS12-1-10000

Electromechanical voltage stabilizers of SNI series

Electromechanical voltage stabilizers of SNI series are represented in the products' stock by widest range of power (0.5 to 150 kVA), where models list includes the stabilizers for different types of mains: single-phase (SNI1 series) and three-phase (SNI3 series).

SNI electromechanical voltage stabilizers have high energy efficiency performances, increased stabilization precision and good resistance against overloads. The advantages mentioned above are highly appreciated primarily by commercial customers.

	Power, kVA	Maximum input current, A	Fuse link/Circuit breaker,type	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
Single-phase, SNI1						
	0,5	2,25	Fuse link, In 5A	19,3×16,5×13	4,5	IVS10-1-00500
	1	4,5	Fuse link, I_n 7A	22,5×26×20	6,5	IVS10-1-01000
	1,5	6,75	Fuse link, I_n 8A	22,5×20×26	7,5	IVS10-1-01500
	2	9	Circuit breaker VA47-29 C10 2P	22,5×29×21,5	10	IVS10-1-02000
	3	13,5	Circuit breaker VA47-29 C16 2P	22,5×31×25	12,5	IVS10-1-03000
	5	22,5	Circuit breaker VA47-29 C20 2P	22×31,7×28,3	18	IVS10-1-05000
	7	32	Circuit breaker VA47-29 C32 2P	27,3×31,1×44	26	IVS10-1-07000
	10	45	Circuit breaker VA47-29 D50 2P	27,3×31,1×44	27	IVS10-1-10000
	15	67	Circuit breaker VA47-29 D63 2P	33×38,5×65	60	IVS10-1-15000
	20	80	Circuit breaker VA47-100 D100 2P	57,5×48×84	75	IVS10-1-20000
	30	125	Circuit breaker VA88-32 In 125A 3P	65×55×110	160	IVS10-1-30000
Three-phase, SNI3						
	3 (3×1)	3×4,5	Circuit breaker VA47-29 C8 3P	31,5×45,5×17,5	18	IVS10-3-03000
	6 (3×2)	3×9	Circuit breaker VA47-29 C10 3P	27,5×37,3×67	33,5	IVS10-3-06000
	7,5 (3×2,5)	3×10	Circuit breaker VA47-29 C10 3P	32×35,5×76,8	43,5	IVS10-3-07500
	15 (3×5)	3×22,5	Circuit breaker VA47-29 C20 3P	43,8×39×79,3	78	IVS10-3-15000
	20 (3×6,6)	3×32	Circuit breaker VA47-29 C32 3P	51×44×85	102	IVS10-3-20000
	30 (3×10)	3×45	Circuit breaker VA47-29 D50 3P	51×44×97,5	111	IVS10-3-30000
	45 (3×15)	3×68	Circuit breaker VA88-32 80A 3P	79×58,5×128	200	IVS10-3-45000
	60 (3×20)	3×90	Circuit breaker VA88-32 100A	79×58,5×139	220	IVS10-3-60000
	90 (3×30)	3 x150	Circuit breaker VA88-33 160A	54x109x70,5	270	IVS10-3-90000
	100 (3×33)	3x167	Circuit breaker VA88-33 160A	85x152x64	420	IVS10-3-100000
	150 (3×50)	3x250	Circuit breaker VA88-35 250A	100x170x720	550	IVS10-3-150000

Technical Features

Feature		SHIFT	SNI1	SNI3			
Rated output power P_n at input voltage of 200 V, kVA		3,5; 5,5; 8; 10	0,5; 1; 1,5; 2; 3; 5; 7; 10; 15; 20; 30	3; 6; 7,5; 15; 20; 30; 45; 60; 90		100; 150	
Operating input voltage range U_{in}, V		120÷250	160÷250	– phase: – line:	160÷250 280÷430	– – line:	 304÷456
Max. input voltage range, V		–	135÷275	– phase: – line:	135÷275 235÷475	– – line:	 256÷511
Output voltage U_{out}, V		220	220	– phase: – line:	220 380	– phase: – line:	220 380
Output voltage maintenance accuracy in operating input voltage range, %		± 3	± 3	± 3		± 3	
Tripping voltage from increased output voltage U_{max}, V		243±4	246	246 (for each phase voltage)		246 (for each phase voltage)	
Tripping voltage from decreased output voltage, U_{min}, V		188±4	184	184 (for each phase voltage)		184 (for each phase voltage)	
Thermal protection at increase of transformer temperature, °C		120±5	105	105		105	
Output voltage delay	standard	5 s	5 s	5 s		5 s	
	long	255 s	5 min	no		yes	
Bypass function		yes	no	no		yes	
Efficiency, %		≥ 90	≥ 90	≥ 90		≥ 90	
Response time, s		< 1 (for voltage range of ±10%)					
Ambient temperature range, °C		0÷+ 40	–5÷+ 40	–5÷+ 40		–5÷+ 40	
Degree of protection		IP20	IP20	IP20		IP20	
Climatic version and location category according to GOST 15150		UHL4	UHL4	UHL4		UHL4	

Delivery Package

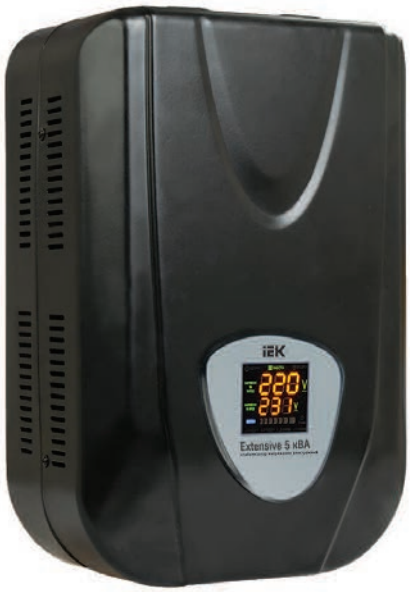
SNI1
– stabilizer – 1 pcs.
– operation manual. Passport – 1 pcs.
– warranty card – 1 pcs.
– spare fuses (for models 0,5; 1; 1,5 kVA) – 2 pcs.
– spare autotransformer brush – 1 pcs.
– packaging – 1 pcs.

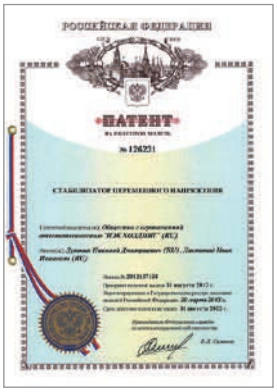
SNI3
– stabilizer – 1 pcs.
– operation manual. Passport – 1 pcs.
– warranty card – 1 pcs.
– spare autotransformer brushes – 1 pcs.
– packaging – 1 pcs.

SHIFT
– voltage stabilizer: 1 pc.
– operation manual, data sheet: 1 pc.
– warranty card: 1 pc.
– set of brackets for wall mounting: 1 pc.
– packing box: 1 pc.

SNR electronic voltage stabilizers

SNR electronic voltage stabilizers are intended for maintaining stable supply voltage of residential and industrial loads of 220 V/3 x 220 V, 50 Hz at power fluctuations within wide range of value and period of time.
Electronic voltage regulators are applied for stabilizing voltage when working with domestic and industrial equipment, commercial units, communication devices as well as complex supply systems of cottages, flats and offices. Single-phase electronic voltage regulators SNR1 correspond to the requirements of EN 55014-1, EN 55014-2, EN 60335-1, EN 61000-3-2.





These devices were awarded silver medal of the International Exhibition “Elektro-2011” in nomination “Best Electrical Equipment” for their high quality, reliability and exploitation ratings as well as efficient engineering solutions.

Advantages

- Strict correspondence of the rated power due to using high-power transformers and power electronic switches.
- Six protection degrees: from overload short circuit, overheating, dangerous overvoltage, dangerous undervoltage, surge overvoltages.
- High efficiency ≥ 95%.
- Wide input voltage range: 140÷270 V.
- High response speed – less than 20 ms.
- Preserving operating condition at short-term overloads up to 120%.
- No disturbing of the sinusoidal waveform.
- Contemporary design.
- Warranty period for stabilizers maintenance is 3 years since date of purchase (1 year for SIMPLE series).
- Expanded network of service centers throughout the country.

Relay voltage stabilizers of HOME series

Unique patented schematic solution and microprocessor-based control of new generation allow the voltage stabilizers of HOME series to ensure high-quality power supply for any home appliances. Good manufacturability along with affordable price ensure the highest demand on the market for the HOME stabilizers.

Power, kVA	Maximum input current, A	Type of fuse / circuit breaker	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
0,5	2,25	Fuse In 6 A	14×24×18	2,6	IVS20-1-00500
1	4,5	Fuse In 6 A	14×24×18	3,3	IVS20-1-01000
1,5	6,75	Fuse In 8 A	14×24×18	3,5	IVS20-1-01500
2	9	Circuit breaker 10 A 1P	16×29×20	5,7	IVS20-1-02000
3	13,5	Circuit breaker 16 A 2P	22×33×24	10,6	IVS20-1-03000
5	22,5	Circuit breaker 25 A 2P	21×36×27	15,4	IVS20-1-05000
8	36	Circuit breaker 40 A 2P	21×36×27	17,9	IVS20-1-08000
10	45	Circuit breaker 50 A 2P	22×39×30	24,2	IVS20-1-10000
12	54	Circuit breaker 63 A 2P	22×38×30	27,2	IVS20-1-12000

Relay voltage stabilizers of EXTENSIVE series

The voltage stabilizers of EXTENSIVE series are designed for the most extreme conditions of power supply mains.

They provide reliable protection for the electric equipment at big fluctuations of mains voltage from the normal level and are capable to suppress voltage surges quickly

Portable

Power, kVA	Maximum input current, A	Type of circuit breaker	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
5	22,5	Circuit breaker 25 A 2P	26×37×28	15,7	IVS23-1-05000
10	45	Circuit breaker 50 A 2P	29×43×35	24,2	IVS23-1-10000

Wall-mounted

3	13,5	Circuit breaker 16 A 2P	25×16×37	8,7	IVS28-1-03000
5	22,5	Circuit breaker 25 A 2P	37×18×39	14	IVS28-1-05000
8	36	Circuit breaker 40 A 2P	37×20×39	15,5	IVS28-1-08000
10	45	Circuit breaker 50 A 2P	30×20×43	20,5	IVS28-1-10000
12	54	Circuit breaker 63 A 2P	30×20×43	23,5	IVS28-1-12000

Relay voltage stabilizers of ECOLINE series

While being simple device, the ECOLINE voltage stabilizer is efficient and reliable in operation.
Due to utilized economical solutions, it offers cost efficiency not only at purchase but also during maintenance thereafter.
The operational reliability is proved by extended manufacturer's warranty period, which is 3 years from purchase date.

	Power, kVA	Maximum input current, A	Type of circuit breaker	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
Portable	5	18	Circuit breaker C25 2P	22×32×24	10,4	IVS26-1-05000
	10	36	Circuit breaker C50 2P	22×39×24	17,7	IVS26-1-10000
Wall-mounted	5	18	Circuit breaker C25 2P	25×37×15	11,2	IVS27-1-05000
	10	36	Circuit breaker C50 2P	28×40×18	21,7	IVS27-1-10000

Relay voltage stabilizers of SIMPLE series

Relay voltage stabilizers of SIMPLE series are designed to protect TV sets, home cinemas, computers, etc. as well as low-power household electronic devices from voltage fluctuations. The SIMPLE stabilizers are featured by compactness, simple design and convenient usage.

	Power, kVA	Maximum input current, A	Fuse	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
	0,35	1,2	Fuse In 6 A	27×15×8	1,5	IVS25-1-00350
	0,75	2,3	Fuse In 6 A	27×15×8	1,9	IVS25-1-00750
	1	3,4	Fuse In 8 A	27×15×8	2	IVS25-1-01000
	1,5	4,1	Fuse In 10 A	27×15×8	2,1	IVS25-1-01500

Relay voltage stabilizers of BOILER series

Electronic controls of gas heating equipment requires a stabilized supply voltage.
The innovative voltage stabilizer of BOILER series was designed as a result of thorough investigation of power supply parameters for gas boilers. Now, gas heating systems have reliable protection against failures!

	Power, kVA	Maximum input current, A	Fuse	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
	0,5	2,3	Fuse In 6 A	20×16×24	2,6	IVS24-1-00500

Technical characteristics

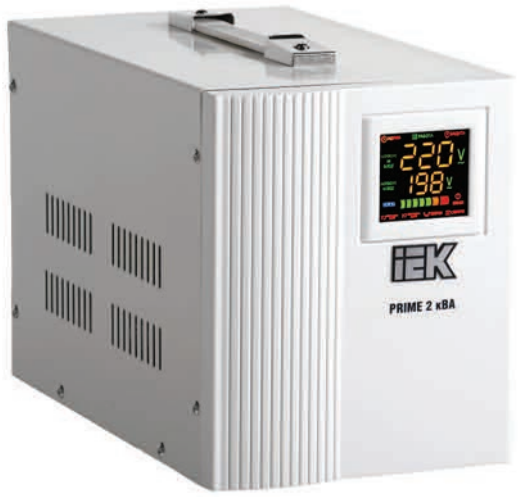
Parameter		HOME	ECOLINE	SIMPLE	EXTENSIVE	BOILER
Output power at input voltage 220 V, kVA		0,5; 1; 1,5; 2; 3; 5; 8; 10; 12	5; 10	0,35; 0,75; 1; 1,5	3; 5; 8; 10; 12	0,5
Operating input voltage range, V		140÷270	125÷270	125÷270	90÷280	110÷270
Output voltage, V		220	220	220	220	220
Precision of maintaining output voltage over operating input voltage range, %		8	8	8	8	6
Voltage level for tripping of protection against output overvoltage, V		243±4	246±4	246±4	243±4	243±4
Voltage level for tripping of protection against output undervoltage, V		188±4	184±4	184±4	188±4	188±4
Temperature level for tripping of thermal protection when transformer temperature rises, єC		120	110	85	120	120
Time delay for output voltage supply, s	short	5	5	5	5	5
	long (when "Delay Uout" button is pressed)	255	255	255	255	255
Efficiency, %		≥95	≥95	≥95	≥95	≥95
Bypass function		yes	yes	yes	yes	no
Response time, ms		≤20	≤20	≤20	≤20	≤20
Insulation strength, V		1500	1500	1500	1500	1500
Insulation resistance, Mohm		≥2	≥2	≥2	≥2	≥2
Range of operating temperatures, °C		0÷+40	0÷+40	0÷+40	0÷+40	0÷+40
Degree of protection		IP20	IP20	IP20	IP20	IP20

Delivery Package

– voltage stabilizer: 1 pc.
– operation manual, data sheet: 1 pc.
– warranty card: 1 pc.
– spare fuses (for models up to 2 kVA): 2 pcs.
– set of brackets for wall mounting (for wall-mounted models): 1 pc.
– packing box: 1 pc.

Voltage stabilizers of triac type

Triac voltage stabilizers are classified as type of autotransformer stabilizers with electronic control that ensure adjustment of output voltage with maximum speed of response for change and high precision of its maintaining. The adjustment is ensured by switching between the line autotransformer winding leads made by triacs that are controlled by the stabilizer electronic control module.
The triac voltage stabilizers are intended for maintaining stable voltage that supplies household and industrial loads when mains voltage fluctuates over wide limits of value and time.



Advantages

- The most up-to-date principle of switching based on use of powerful contactless electronic switches, triacs.
- No mechanical contact between switching parts and no wear of the stabilizer, thus ensuring high operational reliability and long lifetime.
- Perfectly noiseless work (can be used in living premises).
- Extra quick response to changes of input voltage: response speed 20 ms.
- Improved accuracy of stabilizing: 4% over range 140–250 V.
- High efficiency: >95%.
- Extended output voltage range: 90–270 V.
- No distortions of the output signal sinusoidal shape (switching between the autotransformer winding leads takes place at transition through "zero").
- Six protection levels: against overload, short-circuit, overheating, hazardous overvoltage, hazardous undervoltage, surge voltages.
- No distortions of sinusoidal shape.
- Warranty period for the stabilizer maintenance is 3 years since date of purchase.
- Broad national network of service centers for IEK® voltage stabilizers.

Triac voltage stabilizers of PRIME series

PRIME is the most advanced technologically series of voltage stabilizers designed by IEK®. Innovative schematic solution based on triacs ensures noiseless work of the voltage stabilizer and unsurpassed parameters of electric energy quality. Due to absence of mechanical wear in the PRIME voltage stabilizers, the manufacturer guarantees high operational reliability and long lifetime.

	Power, kVA	Maximum input current, A	Type of circuit breaker	Overall dimensions, cm (W×D×H)	Weight, kg	Product ID
Portable 	0,5	16	Fuse I_n 6 A and circuit breaker 3A 1P	24×14×18	3,4	IVS31-1-00500
	1	25	Fuse I_n 6 A and circuit breaker 6 A 1P	24×14×18	4,1	IVS31-1-01000
	1,5	36	Fuse I_n 8 A and circuit breaker 8 A 1P	29×16×20	4,8	IVS31-1-01500
	2	45	Fuse I_n 10 A and circuit breaker 10 A 1P	29×16×20	6,5	IVS31-1-02000
	3	13,5	Circuit breaker C16 A 3P	33×22×24	11,6	IVS31-1-03000
	5	22,5	Circuit breaker C25 A 3P	33×22×24	15	IVS31-1-05000
	8	36	Circuit breaker C40 A 3P	39×22×24	17,6	IVS31-1-08000
	10	45	Circuit breaker C50 A 3P	39×22×24	24	IVS31-1-10000
Wall-mounted 	5	22,5	Circuit breaker 25 A 3P	18×37×39	16,5	IVS32-1-05000
	10	45	Circuit breaker 50 A 3P	20×30×43	22	IVS32-1-10000

Technical characteristics

Parameter		Value
Output power at input voltage 220 V, kVA		0,5; 1; 1,5; 2; 3; 5; 8; 10
Operating input voltage range, V		90÷270
Output voltage, V		220
Precision of maintaining output voltage over input voltage range 140–250 V, %		4
Precision of maintaining output voltage over input voltage range 90–140 V and 250–270 V, %		7
Voltage level for tripping of protection against output overvoltage $U_{макс}$, V		243±4
Voltage level for tripping of protection against output undervoltage $U_{мин}$, V		188±4
Temperature level for tripping of thermal protection when transformer temperature rises , °C		120±5
Bypass function		yes
Time delay for output voltage supply, s	short	5±2
	long (when "Delay Uout" button is pressed)	255±2
Efficiency, %		≥97
Response time, ms		<50
Insulation strength, V		1500
Insulation resistance, Mohm		≥2
Range of operating temperatures, °C		0÷+40
Degree of protection		IP20