

UPS REGULATOR İNVERTÖR REDRESÖR AKÜ RÜZGAR VE GÜNEŞ ENERJİSİ
KESİNTİSİZ GÜÇ KAYNAKLARI REGÜLATÖR İNVERTÖR REDRESÖR BATTERY WIND and SOLAR ENERGY



LEGA IN TURKEY

We as LEGA Electronics, are one of the leading manufacturer and provider of UPS (Uninterruptible Power Supply), Regulators and Solar Energy Systems of TURKEY.

LEGA Electronics gained a place for itself in domestic markets with qualified, functional and technological products continues to held in different and new projects in each passing day.

LEGA Electronics has established a significantly advantageous position over its competitors, both in local and global markets thanks to the our quality and market strategies. In the local market, LEGA Electronics has gained ground steadily every year, reaching quite important place of total market.

Although LEGA Electronics is not the first company established in the area of UPS and Regulators, but today it is thriving force of local market. As a result of dedication to quality and reliable customer service, LEGA Electronics has been becoming one of the best of Turkey in its sector.

LEGA IN THE WORLD

LEGA Electronics is a global establishment that has reached a high export capacity with its product quality and its competitiveness by adopting being open to developments and customer satisfaction. Apart from Turkey, LEGA operates in 4 different continents.

LEGA Electronics, one of the Turkish leading power solution specialist, via its right business understanding also aiming of leading electronic systems solutions in global market.

In global market, LEGA Electronics follows there indispensable policies; Total quality of its products and services, solutions to specific customer needs, customer satisfaction and happiness.

Our world network has extended from Eastrean Europe to Middle Asia, Central Asia to Africa, demonstrating its adaptability to different markets and their conditions at around 25 countries. LEGA Electronics has been becoming one of the leading company at worldwide in its sector with its quality and global customer service.

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Line Interactive UPS / Line Interactive UPS

LeGa P-K-T Model

- * Line Interactive tasarım
- * Kompakt boyutlar
- * Geniş voltaj regülasyon aralığı (162 V 290 V)
- * Topraklı priz çıkışı sayesinde kolay kurulum
- * CPU kontrollü güvenilir dijital tasarım
- * Elektrik geldiğinde otomatik devreye girme
- * Kapalı konumda şarj edilebilme özelliği
- * Cold Start
- * Sorunsuz güvenilir teknoloji
- * Otomatik sigorta
- * LED Gösterge (Akü Şarj Yüzdesi, Yük Yüzdesi ve Arıza Durumu)
- * Modem / Network koruması,
- * USB haberleşme portu ve yazılım (Windows, Mac, Linux)
- * CE & ISO9001 uyumluluğu
- * Geniş servis ağı

- * Line Interactive design
- * Full digitized microprocessor controlled
- * Wide input voltage range
- * Boost and Buck AVR
- * Compatible with generators
- * LED indication and audible alarm function
- * Lighting and Surge Protection
- * Protection for short circuit and battery low voltage
- * Automatic self-detection on startup
- * Automatic battery charging in UPS off mode
- * Dry contact communication with monitoring software
- * RS232,RJ45, USB (optional)
- * Cold start function
- * Intelligent battery management
- * CE and ISO9001 certificates
- * Widespread service network



LeGa P Model



LeGa K-T Model





	LeGa P Model	LeGa K Model	LeGa T Model
Power	650VA/390W	1000VA/600W	1500VA/900W
Voltage Tolerance	1 Phase + Neutral	1 Phase + Neutral	1 Phase + Neutral
Voltage	220 VAC ± %25	220 VAC ± %25	220 VAC ± %25
Frequency	50 Hz ± %10	50 Hz ± %10	50 Hz ± %10
Voltage	220 VAC ± %10	220 VAC ± %10	220 VAC ± %10
Voltage Waveform	Pure Sine Wave (mains); Pure Sine Wave (battery mode)	Pure Sine Wave (mains); Pure Sine Wave (battery mode)	Pure Sine Wave (mains); Pure Sine Wave (battery mode)
Frequency	50 Hz ± %1 (battery mode)	50 Hz ± %1 (battery mode)	50 Hz ± %1 (battery mode)
Crest Factor	03:01	03:01	03:01
Transfer Time	< 10ms	< 10ms	< 10ms
Socket Type	2 x Schuko (Selectable)	3x Schuko (Selectable)	3 x Schuko (Selectable)
Model	VRLA	VRLA	VRLA
Battery	1X12V/7AH	2X12V/7AH	2X12V / 9AH
Charging Time	For 90% Capacity 8 Hours	For 90% Capacity 8 Hours	For 90% Capacity 8 Hours
Back-Up Time	10-20 Minutes, Depends On the Level of Load	10-20 Minutes, Depends On the Level of Load	10-20 Minutes, Depends On the Level of Load
Modem and Network Protection	Modem / LAN RJ11 / RJ45 (OPTIONEL)	Modem / LAN RJ11 / RJ45 (OPTIONEL)	Modem / LAN RJ11 / RJ45 (OPTIONEL)
Communication	USB (OPTIONEL) & RS232	USB (OPTIONEL) & RS232	USB (OPTIONEL) & RS232
Noise Level (1m)	< 42dBA	< 42dBA	< 42dBA
Temperature	0 ~ 40 °C	0 ~ 40 °C	0 ~ 40 °C
Humidity	20 ~ 90% (non-condensed)	20 ~ 90% (non-condensed)	20 ~ 90% (non-condensed)
Weight	5.7 kg	10.1 kg	13.5 kg
Dimension (WxHxD)	95x165x340 mm	125x220x400 mm	125x220x400 mm

STANDARDS

CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950

Lega Monofaze Giriş Monofaze Çıkış UPS / Monophase In Monophase Out UPS

LeGa 11 L-E-G Model

Genel Özellikler

- * Gerçek sinüs dalga çıkışlı, On-Line
- * Geniş giriş gerilim aralığı
- * Çift çevrim teknolojisi (double conversion)
- * CPU kontrolü ile maksimum güvenlik
- * Statik By-Pass
- * Aküden başlatma (Cold Start)
- * RS-232 port üzerinden haberleşme
- * Girişte güç faktörü düzeltmesi (PFC)
- * Aşırı yük ve kısa devre koruması
- * Açılışta otomatik test (Self Check)
- * Yüksek verim ile enerjiden tasarruf
- * LCD panel ile kullanım bilgilerine kolay ulaşım
- * Gelişmiş akü yönetimi
- * Kompakt, hafif ve sessiz yapı

Çevreci tasarım

- * Yüksek verim ile enerjiden tasarruf
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * SNMP ile akıllı haberleşme
- * Ek akü ile uzun yedekleme süresi

Standartlar

- * CE, ISO 9001:2008

General Features

- * Maximum Safety with Microprocessor Control
- * True On-Line Double Conversion
- * Active Input Power Factor Correction(PFC)
- * Wide Input Voltage Range
- * True Sine Wave Output
- * Energy Savings via High Efficiency
- * Advanced Battery Management
- * Self Check at Start Up
- * Overload and Short Circuit Protection
- * Static By-Pass
- * Cold Start Feature
- * PC Communication over RS-232
- * Monitorable Operation Datas with LCD

Environment Friendly Design

- * Compact, Light Weight Structure, Silent Operation
- * Ease of Installation and Service
- * Low Installation and Operation Costs
- * 10 Years Spare Part Availability
- * 7/24 Technical Support&Customer Services

Optional Features

- * Smart Communication via SNMP
- * Long Back Up Time with Additional Battery Set
- *

Standards

- * CE, ISO 9001:2008





Power	LeGa L Model 1 kVA	LeGa E Model 2 kVA	LeGa G 3 kVA
INPUT			
Voltage Range	140-300VAC	140-300 VAC	140-300 VAC
Frequency Range	50 Hz ± 10%	50 Hz ± 10%	50 Hz ± 10%
Input Power Factor	> 0.99	> 0.99	> 0.99
OUTPUT			
Voltage Range	220 V ± 3%	220 V ± 3%	220 V ± 3%
Frequency Tolerance	50 Hz ± 5%	50 Hz ± 5%	50 Hz ± 5%
Waveform	True Sine	True Sine	True Sine
THDv	< %3	< %3	< %3
Crest Factor	> 3:1	> 3:1	> 3:1
Overload	10 sec. at 110%-130 Load, 200 ms at 150% Load	10 sec. at 110%-130 Load, 200 ms at 150% Load	10 sec. at 110%-130 Load, 200 ms at 150% Load
BATTERY			
Voltage/Quantity	24 V 9 AH (2 pcs 12 V)	48V 9 AH (4 pcs 12 V)	72 V 9AH (3 pcs 12 V)
COMMUNICATION			
Advanced Communication	RS232, SNMP	RS232, SNMP	RS232, SNMP
ENVIRONMENT			
Operating Temperature	0-40 C	0-40 C	0-40 C
Relative Humidity	%0 %95 (non-condensing)	%0 %95 (non-condensing)	%0 %95 (non-condensing)
Noise	< 45 dB	< 45 dB	< 45 dB
PHYSICAL			
Dimensions (W x D x H mm)	357*144*215	439*190*341	439*190*341
Weight	10 kg.	20 kg.	21 kg
STANDARDS			
CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950			

Lega Monofaze Giriş Monofaze Çıkış UPS / Monophase In Monophase Out UPS

LeGa 11 A-M-B Model

Genel Özellikler

- * Gerçek sinüs dalga çıkışlı, On-Line
- * Geniş giriş gerilim aralığı
- * Çift çevrim teknolojisi (double conversion)
- * CPU kontrolü ile maksimum güvenlik
- * Statik By-Pass
- * Aküden başlatma (Cold Start)
- * RS-232 port üzerinden haberleşme
- * Girişte güç faktörü düzeltilmesi (PFC)
- * Aşırı yük ve kısa devre koruması
- * Açılıştaki otomatik test (Self Check)
- * Yüksek verim ile enerjiden tasarruf
- * LCD panel ile kullanım bilgilerine kolay ulaşım
- * Gelişmiş akü yönetimi
- * Kompakt, hafif ve sessiz yapı

Çevreci tasarım

- * Yüksek verim ile enerjiden tasarruf
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * SNMP ile akıllı haberleşme
- * Ek akü ile uzun yedekleme süresi

Standartlar

- * CE, ISO 9001:2008

General Features

- * Maximum Safety with Microprocessor Control
- * True On-Line Double Conversion
- * Active Input Power Factor Correction(PFC)
- * Wide Input Voltage Range
- * True Sine Wave Output
- * Energy Savings via High Efficiency
- * Advanced Battery Management
- * Self Check at Start Up
- * Overload and Short Circuit Protection
- * Static By-Pass
- * Cold Start Feature
- * PC Communication over RS-232
- * Monitorable Operation Datas with LCD

Environment Friendly Design

- * Compact, Light Weight Structure, Silent Operation
- * Ease of Installation and Service
- * Low Installation and Operation Costs
- * 10 Years Spare Part Availability
- * 7/24 Technical Support&Customer Services

Optional Features

- * Smart Communication via SNMP
- * Long Back Up Time with Additional Battery Set

Standards

- * CE, ISO 9001:2008





Power	LeGa A Model 6 kVA	LeGa M Model 10 kVA	LeGa B Model 15 kVA
INPUT			
Voltage	220 VAC ± 20% (1P + N)	220 VAC ± 20% (1P + N)	220 VAC ± 20% (1P + N)
Frequency	50 Hz ± 5%	50 Hz ± 5%	50 Hz ± 5%
Input Power Factor	≥ 0,99	≥ 0,99	≥ 0,99
THDi	<3%	<3%	<3%
OUTPUT			
Voltage	220 VAC + 1% (1P + N)	220 VAC + 1% (1P + N)	220 VAC + 1% (1P + N)
Frequency	50 Hz ± 1%	50 Hz ± 1%	50 Hz ± 1%
Power Factor	0,9	0,9	0,9
Crest Factor	03:01	03:01	03:01
Waveform	Pure Sine	Pure Sine	Pure Sine
THDv	< 3% (linear load) < 5% (non-linear load)	< 3% (linear load) < 5% (non-linear load)	< 3% (linear load) < 5% (non-linear load)
STATIC BY-PASS			
Transfer Time	0 ms	0 ms	0 ms
Overload Capacity	150%	150%	150%
Protection	Overload, Short Circuit	Overload, Short Circuit	Overload, Short Circuit
BATTERY			
Voltage / Quantity	Depends on Power (Standard / 16 pcs. 12V)	Depends on Power (Standard / 16 pcs. 12V)	Depends on Power (Standard / 16 pcs. 12V)
Type	Maintenance Free Dry Type	Maintenance Free Dry Type	Maintenance Free Dry Type
Back Up Time	Selectable	Selectable	Selectable
GENERAL			
Technology	On-Line Double Conversion	On-Line Double Conversion	On-Line Double Conversion
Control	DSP Microprocessor Controlled, High Frequency PWM	DSP Microprocessor Controlled, High Frequency PWM	DSP Microprocessor Controlled, High Frequency PWM
Efficiency	Up To 93%	Up To 93%	Up To 93%
Parallel Operation	Optional	Optional	Optional
Redundant Operation	Optional	Optional	Optional
Protection	Overload, Over Temperature, Input/ Output Short Circuit Protection	Overload, Over Temperature, Input/ Output Short Circuit Protection	Overload, Over Temperature, Input/ Output Short Circuit Protection
COMMUNICATION			
Display	2x16 Character LCD Display / 4x20 Character LCD Optional (Different Language Options)	2x16 Character LCD Display / 4x20 Character LCD Optional (Different Language Options)	2x16 Character LCD Display / 4x20 Character LCD Optional (Different Language Options)
Alert/ Event	Normal Operation Datas, Battery Low, Overload, UPS Fault	Normal Operation Datas, Battery Low, Overload, UPS Fault	Normal Operation Datas, Battery Low, Overload, UPS Fault
Advanced Communication	RS232, SNMP (Optional)	RS232, SNMP (Optional)	RS232, SNMP (Optional)
Software	Netpro PC Software	Netpro PC Software	Netpro PC Software
ENVIRONMENT			
Operating Temperature Range	0 °C ~ 40 °C	0 °C ~ 40 °C	0 °C ~ 40 °C
Relative Humidity	0% ~ 95% (Non-Condensing)	0% ~ 95% (Non-Condensing)	0% ~ 95% (Non-Condensing)
Noise	< 50 db	< 50 db	< 50 db
Allitude	≤ 3000 m	≤ 3000 m	≤ 3000 m
Protection Class	IP20	IP20	IP20
STANDARDS			
CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950			

Trifaze Giriş Monofaze Çıkış Ups / Triphase In Monophase Out Ups

LeGa 31 S-Y Model

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Genel Özellikler

- * Gerçek sinüs dalga çıkışlı, On-Line
- * Geniş giriş gerilim aralığı
- * Çift çevrim teknolojisi (double conversion)
- * CPU kontrolü ile maksimum güvenlik
- * Statik By-Pass
- * Aküden başlatma (Cold Start)
- * RS-232 port üzerinden haberleşme
- * Girişte güç faktörü düzeltmesi (PFC)
- * Aşırı yük ve kısa devre koruması
- * Açılışta otomatik test (Self Check)
- * Yüksek verim ile enerjiden tasarruf
- * LCD panel ile kullanım bilgilerine kolay ulaşım
- * Gelişmiş akü yönetimi
- * Kompakt, hafif ve sessiz yapı

Çevreci tasarım

- * Yüksek verim ile enerjiden tasarruf
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * SNMP ile akıllı haberleşme
- * Ek akü ile uzun yedekleme süresi

Standartlar

- * CE , EN 62040-1 EN 62040-2 EN 62040-3 EN 60950, ISO9001

General Features

- * DSP Microprocessor Control
- * True On-Line Double Conversion
- * IGBT Rectifier
- * Active Input Power Factor Correction ($\geq 0,99$)
- * Low Input Current THDi ($< 3\%$)
- * Wide Input Voltage Range ($\pm 25\%$)
- * Generator Compatible Operation
- * Low Output Voltage THDv ($< 3\%$)
- * High Efficiency (Normal Operation Up To 92%)
- * Highest Efficiency with Smart Eco-Mode Operation(%98)
- * Low Response Time ($< 2ms$)
- * Start on Battery (Cold Start)
- * Short Circuit, High-Low Voltage, Overload Protection
- * Standard Static & Maintenance By-Pass
- * Intelligent Battery Management Software
- * EMI / RFI Filter
- * Smart Fan Control
- * LCD Panel & LED Operation Mode Diagram
- * RS232 Communication

Optional Features

- * Smart Communicatitaon via SNMP
- * Long Back Up Time with Additional Battery Set

Standarts

- * CE , EN 62040-1 EN 62040-2 EN 62040-3 EN 60950, ISO9001





Power	LeGa S Model 10 kVA	LeGa Y Model 15 kVA
INPUT		
Voltage	380 VAC \pm 20% (3P + N)	380 VAC \pm 20% (3P + N)
Frequency	50/60 Hz \pm 5%	50/60 Hz \pm 5%
Input Power Factor	\geq 0,99	\geq 0,99
THDi	<3%	<3%
OUTPUT		
Voltage	220 VAC + 1% (3P + N)	220 VAC + 1% (3P + N)
Frequency	50/60 Hz \pm 1%	50/60 Hz \pm 1%
Power Factor	0,9	0,9
Crest Factor	03:01	03:01
Waveform	Pure Sine	Pure Sine
THDv	< 3% (Linear Load)/ < 5% (Non-Linear Load)	< 3% (Linear Load)/ < 5% (Non-Linear Load)
STATIC BY-PASS		
Transfer Time	0 ms	0 ms
Overload Capacity	150%	150%
Protection	Overload, Short Circuit	Overload, Short Circuit
BATTERY		
Voltage / Quantity	Depends on Power (Standard / 16 pcs. 12V)	Depends on Power (Standard / 16 pcs. 12V)
Type	Maintenance Free Dry Type	Maintenance Free Dry Type
Back Up Time	Selectable	Selectable
GENERAL		
Technology	On-Line Double Conversion	On-Line Double Conversion
Control	DSP Microprocessor Controlled, High Frequency PWM	DSP Microprocessor Controlled, High Frequency PWM
Efficiency	Up To 93%	Up To 93%
Parallel Operation	Optional	Optional
Redundant Operation	Optional	Optional
Protection	Overload, Over Temperature, Input/Output Short Circuit Protection	Overload, Over Temperature, Input/Output Short Circuit Protection
COMMUNICATION		
Display	2x16 Character LCD Display / 4x20 Character LCD Optional (Different Language Options)	2x16 Character LCD Display / 4x20 Character LCD Optional (Different Language Options)
Alert/ Event	Normal Operation Datas, Battery Low, Overload, UPS Fault	Normal Operation Datas, Battery Low, Overload, UPS Fault
Advanced Communication	RS232, SNMP (Optional)	RS232, SNMP (Optional)
Software	Netpro PC Software	Netpro PC Software
ENVIRONMENT		
Operating Temperature Range	0 °C ~ 40 °C (Recommended 20 25 °C for Longest Lifetime of Batteries)	0 °C ~ 40 °C (Recommended 20 25 °C for Longest Lifetime of Batteries)
Relative Humidity	0% ~ 95% (Non-Condensing)	0% ~ 95% (Non-Condensing)
Allitute	\leq 3000 m	\leq 3000 m
Noise	< 50 dB (from 1 meter distance)	< 50 dB (from 1 meter distance)
Protection Class	IP20	IP20
PHYSICAL		
Dimensions (WxDxH cm)	26 x 56 x 72	26 x 56 x 72
STANDARDS		
	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO9001	

Trifaze Giriş Trifaze Çıkış Ups / Triphase In Triphase Out Ups

LeGa 33 Plus Model

Genel Özellikler

- * Gelişmiş mikroişlemci kontrollü
- * Gerçek çift çevrim teknolojisi
- * IGBT doğrultuculu ve eviricili
- * Aktif giriş güç faktörü düzeltmesi (≥ 0.99)
- * Düşük giriş THDi $< 3\%$ ile mükemmel jeneratör uyumluluğu
- * Düşük çıkış THDv $< 3\%$ ile cihazınız için mükemmel enerji
- * Değişik güç faktörlerindeki yüklerle mükemmel uyum
- * Ayarlanabilir giriş çıkış gerilimi ve frekansı
- * Geniş giriş gerilim aralığı (160 260 VAC)
- * %95'e varan yüksek verim
- * Akıllı Eco-Mode ile yüksek verim (%98)
- * Yük senkronizasyonu ile güvenilir paralel/yedekli çalışma
- * Akıllı fan kontrolü
- * EMI / RFI filtre
- * Kısa devre, yüksek/düşük gerilim ve aşırı yük korumaları
- * Aküden başlatma özelliği (Cold Start)
- * Ayarlanabilir aküden çalışma süresi
- * Akü derin deşarj koruması
- * Sıcaklık kontrollü akü şarjı, seçilebilir akü şarj akımı
- * Standart statik ve manuel By-Pass
- * Gelişmiş hata/arıza tespiti, 1000 adet uyarı/olay hafızası
- * RS232 / RS485 ile gelişmiş haberleşme seçenekleri
- * Çevreci tasarım
- * Yüksek verim ile enerjiden tasarruf
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * SNMP ile gelişmiş uzaktan izleme ve yönetim seçeneği
- * 4 adet programlanabilir kullanıcı kontakları
- * GPRS modem / CAN BUS haberleşme seçenekleri
- * Paralleleme ile kolay güç artırımı
- * Mikroişlemci ve sensör kontrollü akıllı akü yönetimi
- * Özel giriş / çıkış opsiyonları

Standartlar

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO9001

General Features

- * Advanced Microprocessor Control
- * True Online Double Conversion
- * IGBT Rectifier and Inverter
- * Active Input Power Factor Correction (≥ 0.99)
- * Low Input THDi $< 3\%$ Perfect Generator Compatibility
- * Low Output THDv $< 3\%$ Perfect Energy for your Loads
- * Excellent Compability with Different Power Factor Loads
- * Selectable Input/Output Voltage and Frequency
- * Wide Input Voltage Range (160 260 VAC)
- * High Efficiency Up To 95%
- * Ultra High Efficiency with Smart Eco Mode (%98)
- * Reliable Parallel / Redundant Operation via Load Synchronization
- * Smart Fan Control
- * EMI / RFI Filter
- * Start on Battery Feature (Cold Start)
- * Short Circuit, High/Low Voltage and Overload Protections
- * Adjustable Time for Battery Operation
- * Battery Deep Discharge Protection
- * Standard Static ve Maintenance By-Pass
- * Temperature Compensated Battery Charge, Selectable Charge Current
- * Advanced Fault Identification, 1000 pcs Alert/Event Memory
- * Advanced Communication Options with RS232 / RS485
- * 100% Made in TURKEY
- * Environment Friendly Design, The Most Silent in Its Class
- * Low Installation and Operation Costs
- * Easy Maintenance and Service
- * 10 Years Spare Part Availability
- * 7/24 Technical Service and Customer Services

Optional Features

- * Advanced Remote Viewing and Management via SNMP
- * 4 Programmable Dry Contacts
- * GPRS Modem / CAN BUS Communication Options
- * Easy Scalability with Paralleling
- * Microprocessor Controlled Smart Battery Management
- * Customizable Input/Output Options

Standards

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO9001





Power (kVA)	10 kVA	15 kVA	20 kVA	30 kVA	40 kVA	60 kVA	80 kVA	100 kVA	120 kVA
INPUT									
Nominal Voltage / No. of Phases	220/380 VAC / 230/400 VAC / 240/415 VAC (3 P + N)								
Voltage Range	± 25%								
Nominal Frequency	50 Hz / 60 Hz								
Frequency Range	± 10%								
Input Power Factor	≥ 99								
THDi	< 3%								
OUTPUT									
Nominal Voltage / No. of Phases	380 VAC / 400 VAC / 415 VAC (3 P + N)								
Voltage Tolerance	± 1%								
Nominal Frequency	50 Hz / 60 Hz								
Frequency Tolerance	50 Hz ± 0,1% / 60 Hz ± 0,1%								
Power Factor	0,8								
Crest Factor	03:01								
THDv	< 2% (Linear Load) < 4% (Non-Linear Load)								
Waveform	Pure Sine								
Overload Operation	60 min. at 110% load / 10 min. at 125% load / 1 min. at 150% load								
STATIC BY-PASS									
Voltage	380 / 400 / 415 V (3 P + N)								
Transfer Time	0 ms.								
Overload Capacity	150%								
BATTERY									
Voltage / Quantity	1X62 12V								
Type	Maintenance Free Dry Type								
Charging Current	Selectable								
Temperature Compensated Charge	Microprocessor and Smart Sensor Controlled								
GENERAL									
Technology	On-Line Double Conversion)								
Control	SPWM Controlled IGBT Rectifier and Inverter								
Efficiency	Up To 95%								
Parallel/Redundant Operation	Optional								
Protection	Overload, Over Temperature, Input/Output Short Circuit								
COMMUNICATION									
Display	240 x 320 Graphical LCD (Touch Screen Display)								
Alert / Event Memory	1000 pcs.								
Advanced Communication	RS232, 6 Programmable Dry Contacts, GPRS(Optional), SNMP (Optional)								
ENVIRONMENT									
Operating Temperature Range	0 °C ~ 40 °C								
Relative Humidity	0% – 95% (Non-Condensing)								
Altitude	≤ 3000 m								
Noise	≤ 50 dB								
Protection Class	IP20								
STANDARDS									
CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO9001									

Trifaze Giriş Trifaze Çıkış Ups / Triphase In Triphase Out Ups

LeGa 33 Z Serisi

33

Teknoloji

- * IGBT doğrultucu & evirici
- * Yüksek verim (%92'ye kadar)
- * Yüksek giriş güç katsayısı ($\geq 0,99$)
- * Düşük giriş akım THD (<%4)
- * Düşük çıkış gerilimi THD (<%2)
- * Düşük tepki süresi (<2ms)
- * Yüksek giriş ve çıkış performansı

Güvenilir

- * Paralel çalışma (6 adede kadar)
- * Akıllı yedeklemeli çalışma (n, n+1 ve n+x)
- * Yükleme oranına bağlı değişken düşük giriş gerilimi (-%36'ya kadar)
- * Ayarlanabilir aşırı yüklenme
- * Kısa devre koruması
- * Panelden ve uzaktan acil kapatma
- * Harici bypass (Opsiyonel)
- * Optimum jeneratör uyumluluğu

Kullanıcı Dostu

- * Düşük ağırlık/hacim/kaplanan alan
- * Eko-mod ile yüksek verimli çalışma (%98'e kadar)
- * Kendi-kendini yükleme modu (rejeneratif mod)
- * Ayarlanabilir giriş / çıkış gerilimi & seçilebilir frekans
- * Akıllı akü şarj yönetimi ile uzun akü ömrü
- * Periyodu ve süresi ayarlanabilir otomatik ve manuel akü testi
- * Dokunmatik TFT LCD ön panel
- * Çoklu dil seçeneği
- * Gelişmiş data ve olay kaydı
- * 1024 gerçek zamanlı olay günlüğü ve kolay download
- * Panel üzerinden data analizi
- * Çoklu haberleşme seçenekleri
- * RS232/RS485 (standart)
- * USB Portu (standart)
- * SNMP (standart)
- * Gelişmiş izleme seçenekleri (standart)
- * Uzaktan izleme ve yönetim yazılımı
- * Programlanabilir kuru kontaklar ve özel girişler
- * Manuel bakım bypassı
- * Kolay bakım ve servis
- * 5 yıl yedek parça garantisi
- * 7/24 teknik destek ve müşteri hizmetleri
- * 2 yıl garanti

Standartlar

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO 9001

New Teknoloji

- * IGBT rectifier & inverter
- * High efficiency (up to 92%)
- * High input PF ($\geq 0,99$)
- * Low input current THD (<4%)
- * Low output voltage THD (<2%)
- * Short response time (<2ms)
- * High input and output performance

Safety

- * Parallel option up to 6 units
- * Intelligent redundancy management (n, n+1 and n+x)
- * Variable input low voltage depending on loading percentage (up to -36%)
- * Programmable high overload capacity
- * Short circuit protection
- * Local and remote emergency power off
- * Dual input
- * Optimum generator compatibility

User Friendly

- * Reduced weight/volume/footprint
- * Higher efficiency with eco-mode (up to 98%)
- * Self-loading (regenerative mode)
- * Adjustable input / output voltage & able frequency
- * Extended battery life with intelligent battery management
- * Automatic and manual battery test with adjustable period and duration
- * Touch screen TFT LCD user interface
- * RS232/RS485
- * USB Port
- * SNMP
- * Advance monitoring options
- * 1024 real time event log and easy download
- * Multi language options
- * Remote monitoring and management software
- * Programmable dry contacts
- * Custom inputs
- * Maintenance bypass
- * Easy maintenance
- * 10 years spare part warranty
- * 7/24 technical support and customer service

Standarts

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO 9001





INPUT									
Power Sn (kVA)	160	200	250	300	400	500	600	700	800
Power Pn (kW)	128	160	200	240	320	400	480	560	640
Voltage	380 / 400 / 415 Vac 3-faz + N								
Voltage tolerances	± 15% (without downgrading), -36% (depending on load percentage)								
Frequency	50 / 60 Hz								
Frequency tolerances	± %10								
Power factor	≥ 0,99								
THDi	< %4								
BYPASS									
Dual input	Optional								
OUTPUT									
Voltage	380 / 400 / 415 Vac 3-faz + N								
Voltage tolerances	± 10% (adjustable)								
Frequency	50 / 60 Hz								
Frequency tolerances	± 4% adjustable up to ± 10%								
Maintenance Bypass	Standard								
Voltage	380 / 400 / 415 Vac 3-faz + N								
Voltage tolerances	± 1% (static load), ± 5% (dynamic load)								
Frequency	50 / 60 Hz (able)								
Frequency tolerances	± 0.1% (self-synonize), ± 4% (mains-synonize, adjustable up to ± 5%)								
Power factor	0,8								
THDv	< 2% (linear load), < 5% (non-linear load)								
Crest factor	03:01								
OVERLOAD CAPACITY									
110%	up to 60 min.								
130%	up to 10 min.								
150%	up to 1 min.								
EFFICIENCY									
Online	up to 92%								
Eco-mode	up to 98%								
GENERAL									
Technology	True online-double conversion, IGBT rectifier								
Control	DSP, SPWM								
Classification in accordance with EN 62040-3	VFI - SS - 111 (Voltage Frequency Independent)								
Paralleling units	up to 6								
Communication	SNMP, RS232, RS485, MODBUS								
Remote monitoring	Remote monitoring panel (Optional)								
Dry contacts	Programmable 7 dry contacts								
Custom inputs	Generator, Battery temperature sensor, Remote EPO								
ENVIRONMENT									
Operating temperature	from 0 °C up to +40 °C (from 20 °C to 25 °C for maximum battery life)								
Relative humidity	0% - 85% (without condensation)								
Maximum altitude	≤ 2000 m								
Noise level	<65 dB (A)			<70 dB (A)			<75 dB (A)		
UPS CABINET									
Dimensions (W x D x H) (mm)	705 x 1160 x 1590		780 x 1260 x 1850		2200 x 810 x 2100			3500 x 810 x 2100	
Weight (kg)	490	730	850	870	1380	1600	1800	2050	2200
Degree of protection	IP20								
Colour	RAL7012								
BATTERY									
Battery Quantity	60 / 64								
Type	VRLA AGM / GEL								
STANDARDS									
Standarts	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950								
UPS LIFE TIME	10years								

Trifaze Giriş Trifaze Çıkış Ups / Triphase In Triphase Out Ups

LeGa 33 Zigana Serisi

33

Genel Özellikler

- * Gelişmiş mikroişlemci kontrollü
- * Gerçek çift çevrim teknolojisi
- * IGBT doğrultuculu ve evircili
- * Aktif giriş güç faktörü düzeltilmesi (≥ 0.99)
- * Düşük giriş THDi $< 3\%$ ile mükemmel jeneratör uyumluluğu
- * Düşük çıkış THDv $< 3\%$ ile cihazınız için mükemmel enerji
- * Değişik güç faktörlerindeki yüklerle mükemmel uyum
- * Ayarlanabilir giriş çıkış gerilimi ve frekansı
- * Geniş giriş gerilim aralığı (160 260 VAC)
- * %95'e varan yüksek verim
- * Akıllı Eco-Mode ile yüksek verim (%98)
- * Yük senkronizasyonu ile güvenilir paralel/yedekli çalışma
- * Akıllı fan kontrolü
- * EMI / RFI filtre
- * Kısa devre, yüksek/düşük gerilim ve aşırı yük korumaları
- * Aküden başlatma özelliği (Cold Start)
- * Ayarlanabilir aküden çalışma süresi
- * Akü derin deşarj koruması
- * Sıcaklık kontrollü akü şarjı, seçilebilir akü şarj akımı
- * Standart statik ve manuel By-Pass
- * Gelişmiş hata/arıza tespiti, 1000 adet uyarı/olay hafızası
- * RS232 / RS485 ile gelişmiş haberleşme seçenekleri
- * Çevreci tasarım
- * Yüksek verim ile enerjiden tasarruf
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

General Features

- * Advanced Microprocessor Control
- * True Online Double Conversion
- * IGBT Rectifier and Inverter
- * Active Input Power Factor Correction (≥ 0.99)
- * Low Input THDi $< 3\%$ Perfect Generator Compatibility
- * Low Output THDv $< 3\%$ Perfect Energy for your Loads
- * Excellent Compability with Different Power Factor Loads
- * Selectable Input/Output Voltage and Frequency
- * Wide Input Voltage Range (160 260 VAC)
- * High Efficiency Up To 95%
- * Ultra High Efficiency with Smart Eco Mode (%98)
- * Reliable Parallel / Redundant Operation via Load Synchronization
- * Smart Fan Control
- * EMI / RFI Filter
- * Start on Battery Feature (Cold Start)
- * Short Circuit, High/Low Voltage and Overload Protections
- * Adjustable Time for Battery Operation
- * Battery Deep Discharge Protection
- * Standard Static ve Maintenance By-Pass
- * Temperature Compensated Battery Charge, Selectable Charge Current
- * Advanced Fault Identification, 1000 pcs Alert/Event Memory
- * Advanced Communication Options with RS232 / RS485
- * 100% Made in TURKEY
- * Environment Friendly Design, The Most Silent in Its Class
- * Low Installation and Operation Costs
- * Easy Maintenance and Service
- * 10 Years Spare Part Availability
- * 7/24 Technical Service and Customer Services

Opsiyonel Özellikler

- * SNMP ile gelişmiş uzaktan izleme ve yönetim seçeneği
- * 4 adet programlanabilir kullanıcı kontakları
- * GPRS modem / CAN BUS haberleşme seçenekleri
- * Parallellleme ile kolay güç arttırım
- * Mikroişlemci ve sensör kontrollü akıllı akü yönetimi
- * Özel giriş / çıkış opsiyonları

Standartlar

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO 9001



Optional Features

- * Advanced Remote Viewing and Management via SNMP
- * 4 Programmable Dry Contacts
- * GPRS Modem / CAN BUS Communication Options
- * Easy Scalability with Parallelling
- * Microprocessor Controlled Smart Battery Management
- * Customizable Input/Output Options

StandartS

- * CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950, ISO 9001





Power (kVA)	160 kVA	200 kVA	250 kVA	300 kVA	400 kVA	500 kVA
INPUT						
Nominal Voltage / No. of Phases	220/380 VAC / 230/400 VAC / 240/415 VAC (3 P + N)					
Voltage Range	± 25%					
Nominal Frequency	50 Hz / 60 Hz					
Frequency Range	± 10%					
Input Power Factor	≥ 99					
THDi	< 3%					
OUTPUT						
Nominal Voltage / No. of Phases	380 VAC / 400 VAC / 415 VAC (3 P + N)					
Voltage Tolerance	± 1%					
Nominal Frequency	50 Hz / 60 Hz					
Frequency Tolerance	50 Hz ± 0,1% / 60 Hz ± 0,1%					
Power Factor	0,8 Inductive (0.9 Optional)					
Crest Factor	03:01					
THDv	< 2% (Linear Load) < 4% (Non-Linear Load)					
Waveform	Pure Sine					
Overload Operation	60 min. at 110% load / 10 min. at 125% load / 1 min. at 150% load					
STATIC BY-PASS						
Voltage	380 / 400 / 415 V (3 P + N)					
Transfer Time	0 ms.					
Overload Capacity	150%					
BATTERY						
Voltage / Quantity	1X50 12V					
Type	Maintenance Free Dry Type					
Charging Current	Selectable					
Temperature Compensated Charge	Microprocessor and Smart Sensor Controlled					
GENERAL						
Technology	On-Line Double Conversion					
Control	SPWM Controlled IGBT Rectifier and Inverter					
Efficiency	Up To 95%					
Parallel/Redundant Operation	Optional					
Protection	Overload, Over Temperature, Input/Output Short Circuit					
COMMUNICATION						
Display	240 x 320 Graphical LCD (Touch Screen Display)					
Alert / Event Memory	1000 pcs.					
Advanced Communication	RS232, 6 Programmable Dry Contacts, GPRS(Optional), SNMP (Optional)					
ENVIRONMENT						
Operating Temperature Range	0 °C ~ 40 °C					
Relative Humidity	0% – 95% (Non-Condensing)					
Altitude	≤ 3000 m					
Noise	≤ 50 dB					
Protection Class	IP20					
STANDARDS						
	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950					



(1-20 kVA)

Mini Smart Stabilizers 500 VA-20000 VA With Relay

LeGa Relay Model

11

Relay Type LEGA RELAY MODEL Single Phase Digital Stabilisers (0,5-20kVA) protect your home devices against voltage fluctuations, lengthens their life. They can be used for wall hung water boilers, DVD players, music centres, LCD & Plazma TV, Satellite receivers..etc to obtain much better efficiency

General Features

- * Type: RELAY
- * 1 phase in / 1 phase out
- * Power: 0.5 - 20 KVA
- * Input: 130 VAC / 260 VAC, 100 VAC / 240 VAC
- * Output: 220 VAC \pm 2%
- * Efficiency: %96
- * Regulation speed: 500 V/s
- * Working conditions: -40°C / +60°C
- * Protection: Overvoltage, low and high voltage protection
- * Smart Cooling Fan



For small home
Appliances
500-20000 VA





MODEL					
Power kVA	500-1000	2000-5000	5000-1000	1500	20000
REGULATOR INPUT					
In.Vol.Operating.Interval	120 - 260 Volt				
Operation Frequency	47...65 Hz				
Line Input Protection	Overcurrent,Low,High Voltage Protection				
REGULATOR OUTPUT					
Output Voltage	220 VAC RMS \pm 2 %10				
Overloading	Seconds 150 % Load				
Correction Speed	500 Volt/Second				
Upturn Period	500 Volt/Second				
Output Protection	Protects load by opening the circuit when overload, short circuit occurs				
WORKING PRINCIPLE					
	Relay type				
GENERAL					
Cooling	Smart Fan System				
Measured Value Monitor	Input and Output Voltage Display Screen				
Total Harmonic Distortion	-				
Total Efficiency	> 96 %				
Mechanical By-Pass	Manually Controlled Line				
Protection Level	IP 20 // IP 25				
ENVIRONMENTAL					
Operation Temperature	-10 °C / 50 °C				
Storage Temperature	-25 °C / 60 °C				
Relative Humidity	< 90 %, DIN (40040)				
Operation Altitude	< 2000 m.				
Acoustic Level	< 50 dB (1 metersquare)				
BOYUTLAR					
HxWxD (cm)	26 x 16,5 x 7,5		30 x 20 x 10		
Weight (kg)	4-6	8,5	14-16	18	20
STANDARDS					
	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950				

Servo Mikro İşlemcili Monofaze Regülatör / Avr Monophase Regulator

Lega 11 Servo Regulator / Stabilizer

11

Genel Özellikler

- * İleri teknoloji ürünü,
- * RISC mikroişlemci kontrolü ile yüksek performans
- * Tek fazlı ve üç fazlı sistemlerde geniş güç seçenekleri
- * Geniş giriş gerilim aralığı
- * Gerçek RMS ölçme, geri besleme ve kontrol
- * 70-200 V/s düzeltme hızı ile sınıfının en iyisi
- * %98'e varan yüksek verim
- * Her faz için bağımsız kontrol paneli
- * Ayarlanabilir çıkış maksimum/minimum gerilimi
- * Isı kontrollü akıllı soğutma
- * Kısa devre koruması,
- * Manuel By-Pass ile yükü sebekeye kolayca aktarma
- * Anormal durumlarda devreden çıkma tekrar devreye girme
- * Fazları birlikte veya bağımsız çalıştırabilme
- * %100 dengesiz yükte yüksek performans
- * Kompakt yapı, Sessiz çalışma
- * Darbelere karşı dayanıklı
- * Aşırı yük, yüksek/düşük gerilim, aşırı ısı korumaları
- * 1024 adet uyarı/olay hafızası
- * Özel ihtiyaca göre tasarım ve üretim

Opsiyonel Özellikler

- * SNMP ile gelişmiş uzaktan izleme ve yönetim seçeneği

Standartlar

- * CE, ISO 9001:2008

General Features

- * Advanced Technology
- * High Performance via RISC Microprocessor Control
- * Wide Power Options
- * Wide Input Voltage Range
- * True RMS Measurement, Feedback and Control
- * Best in Class with 70-200 V/s Regulation Speed
- * High Efficiency Up To 98%
- * Independent Control Panel for Each Phase
- * Selectable Output Max/Min Voltage
- * Temperature Controlled Smart Cooling
- * Short Circuit Protection,
- * Ease of Transfer of Load to Utility via Manual By-Pass
- * Automatic Deactivate/Reactivate in Abnormal Conditions
- * Independent/Together Operation of Phases
- * High Performance Even on 100% Unbalanced Load
- * Silent Operation
- * Compact/Impact Resistant
- * %100 Made in TURKEY
- * Environment Friendly Design
- * Small Dimensions
- * Easy Installation/Maintenance and Service
- * Low Installation and Operational Costs
- * 10 Years Spare Part Availability
- * 7/24 Technical Service and Customer Services

Optional Features

- * Overload, High/Low Voltage, Over Temp. Protection
- * 1024 pcs Alert/Event Memory
- * Custom Design and Production for Client' s Need

Standards

- * CE, ISO 9001:2008





Phase	1 Phase							
Power	1 kVA	2,5 kVA	3,5 kVA	5 kVA	7,5 kVA	10 kVA	15 kVA	20 kVA
INPUT								
Regulation Voltage Range	165 - 255 VAC (selectible)							
Operating Voltage Range	130 - 270 VAC (selectible)							
Frequency	45-65 Hz							
OUTPUT								
Nominal Voltage	220 VAC RMS							
Voltage Tolerance	± 1% (Selectable Between 1-8%)							
Frequency Range	45-65 Hz							
Regulation Speed	70 - 200 V/s							
THDv	0%							
Overload Operation	1 second at 150% load / 1 milisecond at 200% load							
GENERAL								
Technology	Microprocessor Controlled, Full Automatic Servo							
Control	RISC Microprocessor, H-Bridge MOSFET PWM Motor Drive Technics							
Independent Phase Regulation	Standard in 3 Phase Models							
Efficiency	98%							
Cooling	Temperature Controlled Cooling System							
Protection	Output Short Circuit, Overload, Output High / Low Voltage, Over Temperature, Motor Fault, Ground-Neutral (Optional) Protection							
Mechanic By-Pass	Manual Mains/Regulator Breaker							
CONTROL PANEL								
Display	2x16 Character LCD Display, Special LCD for each phase (Optional)							
Alert / Event Memory	Mimic Diagram, Fault Warning LEDs / Real Time 1024 pcs Event/Alert Memory							
Monitorable Datas	True RMS Input/Output Voltage, Load Percentage, Frequency Measurement							
COMMUNICATION								
Dry Contacts (Optional)	Regulator Normal Operation(NO,C,NC); High/Low Output Voltage Warning (NO,C,NC)							
Remote Monitoring (Optional)	over Netwok/LAN (Optional)							
ENVIRONMENT								
Operating Temperature Range	0 °C ~ 40 °C							
Relative Humidity	< 95% (Non-Condensing)							
Noise	<45 dB							
Altitude	≤ 3000 m							
Protection Class	IP20							
STANDARDS								
International Standards	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950							

Servo Mikro İşlemcili Trifaze Regülatör / AVR Triphase Regulator

LeGa 33 Servo Regulator/Stabiliser

33

Genel Özellikler

- * İleri teknoloji ürünü,
- * RISC mikroişlemci kontrolü ile yüksek performans
- * Tek fazlı ve üç fazlı sistemlerde geniş güç seçenekleri
- * Geniş giriş gerilim aralığı
- * Gerçek RMS ölçme, geri besleme ve kontrol
- * 70-200 V/s düzeltme hızı ile sınıfının en iyisi
- * %98'e varan yüksek verim
- * Her faz için bağımsız kontrol paneli
- * Ayarlanabilir çıkış maksimum/minimum gerilimi
- * Isı kontrollü akıllı soğutma
- * Kısa devre koruması,
- * Manuel By-Pass ile yükü sebekeye kolayca aktarma
- * Anormal durumlarda devreden çıkma tekrar devreye girme
- * Fazları birlikte veya bağımsız çalıştırabilme
- * %100 dengesiz yükte yüksek performans
- * Kompakt yapı, Sessiz çalışma
- * Darbelere karşı dayanıklı
- * Aşırı yük, yüksek/düşük gerilim, aşırı ısı korumaları
- * 1024 adet uyarı/olay hafızası
- * Özel ihtiyaca göre tasarım ve üretim

Opsiyonel Özellikler

- * SNMP ile gelişmiş uzaktan izleme ve yönetim seçeneği

Standartlar

- * CE, ISO 9001:2008



General Features

- * Advanced Technology
- * High Performance via RISC Microprocessor Control
- * Wide Power Options
- * Wide Input Voltage Range
- * True RMS Measurement, Feedback and Control
- * Best in Class with 70-200 V/s Regulation Speed
- * High Efficiency Up To 98%
- * Independent Control Panel for Each Phase
- * Selectable Output Max/Min Voltage
- * Temperature Controlled Smart Cooling
- * Short Circuit Protection,
- * Ease of Transfer of Load to Utility via Manual By-Pass
- * Automatic Deactivate/Reactivate in Abnormal Conditions
- * Independent/Together Operation of Phases
- * High Performance Even on 100% Unbalanced Load
- * Compact/Impact Resistant
- * %100 Made in TURKEY
- * Environment Friendly Design
- * Small Dimensions
- * Easy Installation/Maintenance and Service
- * Low Installation and Operational Costs
- * 10 Years Spare Part Availability
- * 7/24 Technical Service and Customer Services

Optional Features

- * Overload, High/Low Voltage, Over Temp. Protection
- * 1024 pcs Alert/Event Memory
- * Custom Design and Production for Client' s Need

Standards

- * CE, ISO 9001:2008





3 Phases																
Power kVA	10,5	15	22,5	30	45	60	75	100	120	160	200	250	300	400	500	
INPUT																
Regulation Voltage Range	285 - 440 VAC															
Operating Voltage Range	225 - 465 VAC															
Frequency	45-65 Hz															
OUTPUT																
Nominal Voltage	380 VAC RMS															
Voltage Tolerance	± 1% (Selectable Between 1-8%)															
Frequency Range	45-65 Hz															
Regulation Speed	70 - 200 V/s															
THDv	0%															
Overload Operation	1 second at 150% load / 1 milisecond at 200% load															
GENERAL																
Technology	Microprocessor Controlled, Full Automatic Servo															
Control	RISC Microprocessor, H-Bridge MOSFET PWM Motor Drive Technics															
Independent Phase Regulation	Standard in 3 Phase Models															
Efficiency	98%															
Cooling	Temperature Controlled Cooling System															
Protection	Output Short Circuit, Overload, Output High / Low Voltage, Over Temperature, Motor Fault, Ground-Neutral (Optional) Protection															
Mechanic By-Pass	Manual Mains/Regulator Breaker															
CONTROL PANEL																
Display	2x16 Character LCD Display, Special LCD for each phase (Optional)															
Alert / Event Memory	Mimic Diagram, Fault Warning LEDs / Real Time 1024 pcs Event/Alert Memory															
Monitorable Datas	True RMS Input/Output Voltage, Load Percentage, Frequency Measurement															
COMMUNICATION																
Dry Contacts (Optional)	Regulator Normal Operation(NO,C,NC); High/Low Output Voltage Warning (NO,C,NC)															
Remote Monitoring (Optional)	over Netwok/LAN (Optional)															
ENVIRONMENT																
Operating Temperature Range	0 °C ~ 40 °C															
Relative Humidity	< 95% (Non-Condensing)															
Noise	<45 dB															
Altitude	≤ 3000 m															
Protection Class	IP20															
STANDARDS																
International Standards	CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950															

Statik Monofaze Regülatör / SVR Monophase Regulator

LeGa 11 Statik Regulator / Stabilizer

33

Genel Özellikler

- * İleri teknoloji ürünü,
- * Tam dijital mikroişlemci kontrolü ile yüksek güvenilirlik
- * Tek fazlı ve üç fazlı sistemlerde geniş güç seçenekleri
- * Geniş giriş gerilim aralığı
- * Gerçek RMS ölçme ve geri besleme, kontrol
- * 5000 V/s düzeltme hızı ile sınıfının en iyisi
- * 20 ms toparlanma süresi ile 1 periyotta regülasyon
- * EMI / RFI filtresi
- * Aşırı yük, aşırı gerilim, düşük gerilim korumaları
- * Yıldırım koruması
- * Kısa devre koruması
- * Manuel By-Pass
- * Anormal durumlarda devreden çıkma/tekrar devreye girme
- * Fazları birlikte veya bağımsız çalıştırabilme
- * %100 dengesiz yükte yüksek performans
- * LCD ekran ile tüm çalışma bilgilerine kolay ulaşım
- * Sessiz çalışma, yüksek verim ve hassasiyet
- * Modüler yapı, ergonomik tasarım
- * %100 Yerli üretim
- * Çevreci tasarım
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * Uzaktan izleme ve yönetim seçenekleri
- * Özel ihtiyaca göre tasarım ve üretim

Standartlar

- * CE, ISO 9001:2008

General Features

- * Advanced Technology
- * High Reliability with Full Digital Microprocessor Control
- * Wide Power Options in Mono Phase and Three Phase Systems
- * Wide Input Voltage Range
- * True RMS Measurement and Feedback, Control
- * Best in Class with 5000 V/s Regulation Speed
- * Regulation in 1 period with 20 ms response time
- * EMI / RFI Filter
- * Overload, Over Voltage, Low Voltage Protections
- * Lightning Protection
- * Short Circuit Protection
- * Manuel By-Pass
- * Automatic Operation in Abnormal Conditions
- * Independent Phase Operation
- * High Performance Even on 100% Unbalanced Load
- * Silent Operation, High Efficiency and Sensibility
- * Modular, Ergonomic Design
- * 100% Made in TURKEY
- * Environmental Design
- * Small Dimensions, Silent Operation
- * Easy Installation/Maintenance and Service
- * Low Installation and Operational Costs
- * 10 Years Spare Part Warranty
- * 7/24 Technical Service and Customer Services

Optional Features

- * -Custom Design and Production for Client' s Need
- * Remote Monitoring and Management Options

Standards

- * CE, ISO 9001:2008





Phase	1 Phase					
Power	5 kVA	7,5 kVA	10 kVA	15 kVA	20 kVA	30 kVA
INPUT						
Operating Voltage Range	130 270 VAC					
Regulation Voltage Range	165 255 VAC					
Frequency	50 Hz \pm 5%					
Input Protection	Over Current Thermal Fuse, Surge Protection					
OUTPUT						
Voltage	220 VAC RMS \pm 1% ~ 3%					
Overload Operation	10 seconds at 200% load					
Regulation Speed	5000 V / s					
Response Time	~ 20 ms. (165 VAC 255 VAC)					
Output Protection	Short Circuit, Overload, Turning OFF of output over the Output Set Voltage					
GENERAL						
Technology	RISC Microprocessor Controlled, Full Automatic, Electronics Design with Static Semiconductors					
No Moving Parts Inside						
Efficiency	> 98% (at Full Load)					
Mechanic By-Pass	Utility – Regulator Selector PAKO Breaker					
CONTROL PANEL						
Display	4 x 20 Character LCD Display					
Warning Messages	Mains Low / Mains High, Output Low / Output High, Load >100% and Over Temperature					
Monitorable Datas	Output Voltage, Input Voltage, Load Percentage					
Output High Voltage Limit	Selectable between 230 VAC 250 VAC (via LCD)					
Output Low Voltage Limit	Selectable between 180 VAC 210 VAC (via LCD)					
COMMUNICATION						
Remote Monitoring	Monitoring of Operation over Network/LAN (Optional)					
ENVIRONMENT						
Operating Temperature Range	0 °C ~ 40 °C					
Relative Humidity	< 90% , DIN (40040)					
Altitude	\leq 3000 m					
Noise	< 50 dB (from 1 meter distance)					
Protection Level / Colour	IP20 / RAL 7035 / RAL 7032 (Optional)					
STANDARDS / CERTIFICATES						
International Standards/Certificates	ISO 9001:2008 CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950					

Statik Trifaze Regülatör / SVR Triphase Regulator

LeGa 33 Statik Regulator / Stabilizer

33

Genel Özellikler

- * İleri teknoloji ürünü,
- * Tam dijital mikroişlemci kontrolü ile yüksek güvenilirlik
- * Tek fazlı ve üç fazlı sistemlerde geniş güç seçenekleri
- * Geniş giriş gerilim aralığı
- * Gerçek RMS ölçme ve geri besleme, kontrol
- * 5000 V/s düzeltme hızı ile sınıfının en iyisi
- * 20 ms toparlanma süresi ile 1 periyotta regülasyon
- * EMI / RFI filtresi
- * Aşırı yük, aşırı gerilim, düşük gerilim korumaları
- * Yıldırım koruması
- * Kısa devre koruması
- * Manuel By-Pass
- * Anormal durumlarda devreden çıkma/tekrar devreye girme
- * Fazları birlikte veya bağımsız çalıştırabilme
- * %100 dengesiz yükte yüksek performans
- * LCD ekran ile tüm çalışma bilgilerine kolay ulaşım
- * Sessiz çalışma, yüksek verim ve hassasiyet
- * Modüler yapı, ergonomik tasarım
- * %100 Yerli üretim
- * Çevreci tasarım
- * Küçük boyut, sessiz çalışma
- * Servis ve devreye alma kolaylığı
- * Düşük kurulum ve işletme maliyeti
- * 10 yıl yedek parça temin garantisi
- * 7/24 teknik servis ve müşteri hizmetleri

Opsiyonel Özellikler

- * Uzaktan izleme ve yönetim seçenekleri
- * Özel ihtiyaca göre tasarım ve üretim

Standartlar

- * CE, ISO 9001:2008

General Features

- * Advanced Technology
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Optional Features

- * Custom Design and Production for Client' s Need
- * Remote Monitoring and Management Options

Standartds

- * CE, ISO 9001:2008





Phase	3 Phases																
Power	30 kVA	45 kVA	60 kVA	75 kVA	120 kVA	150 kVA	200 kVA	250 kVA	300 kVA	400 kVA	500 kVA	600 kVA	800 kVA	1000 kVA	1250 kVA	1500 kVA	2000 kVA
INPUT																	
Operating Voltage Range	210 - 475 VAC																
Regulation Voltage Range	285 - 440 VAC																
Frequency	50 Hz \pm 5%																
Input Protection	Over Current Thermal Fuse, Surge Protection																
OUTPUT																	
Voltage	380 VAC RMS \pm 1% ~ 3%																
Overload Operation	10 seconds at 200% load																
Regulation Speed	5000 V / s																
Response Time	~ 20 ms. (165 VAC - 255 VAC)																
Output Protection	Short Circuit, Overload, Turning OFF of output over the Output Set Voltage																
GENERAL																	
Technology	RISC Microprocessor Controlled, Full Automatic, Electronics Design with Static Semiconductors																
No Moving Parts Inside																	
Efficiency	> 98% (at Full Load)																
Mechanic By-Pass	Utility – Regulator Selector PAKO Breaker																
CONTROL PANEL																	
Display	4 x 20 Character LCD Display																
Warning Messages	Mains Low / Mains High, Output Low / Output High, Load >100% and Over Temperature																
Monitorable Datas	Output Voltage, Input Voltage, Load Percentage																
Output High Voltage Limit	Selectable between 230 VAC - 250 VAC (via LCD)																
Output Low Voltage Limit	Selectable between 180 VAC - 210 VAC (via LCD)																
COMMUNICATION																	
Remote Monitoring	Monitoring of Operation over Network/LAN (Optional)																
ENVIRONMENT																	
Operating Temperature Range	0 °C ~ 40 °C																
Relative Humidity	< 90%, DIN (40040)																
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Noise	< 50 dB (from 1 meter distance)																
Protection Level / Colour	IP20 / RAL 7035 / RAL 7032 (Optional)																
STANDARDS / CERTIFICATES																	
International Standards/Certificates	ISO 9001:2008 / CE, EN 62040-1, EN 62040-2, EN 62040-3, EN 60950																

UPS REGULATOR INVERTER REDRESOR BATTERY WIND and SOLAR ENERGY



Merkez / Head Office

- Yukarı Dudulu Mahallesi Cumhuriyet Caddesi
No:13 Ümraniye, İstanbul
- +90 216 533 09 02 - 03
- info@legaelektronik.com



Şube / Ege Bölge Müdürlüğü

- Özdemir Mah. Kuyu Sok. No:16/B
UŞAK
- T: +90 276 227 06 00
- M: egebolge@legaelektronik.com

Şube / Perpa

- H.Rifat Paşa Mah. Perpa Ticaret Merkezi
B Blok Kat.5 No.512 Okmeydanı İstanbul
- export@legaelektronik.com

