ELECTRONIL

POWER SOLUTIONS

CORPORATE CATALOG

Power Generators
Soundproofing Solutions
Power Transfer Switches
Paralleling Systems
Switchgears
Controls

Generator Maintenance
Services Agreements
Control System Upgrade
Battery Chargers
Spareparts
Consumables

ELECTRONIL POWER SOLUTIONS

SINCE 1

POWER IS W

WHY ELECTRONIL !

We are a group of fearless thinkers, driven to empower people all over the nation – with reliable, revolutionary generators, power systems and power solutions.

We are nearly 30 years in the Egyptian markets, and only getting better. For the last two decades, we have engineered and shaped the future, redefining what power means to people's lives, careers and lifestyles.

We exist for one reason: to move you forward.

WHAT WE DO

لم تختار منتجات إلكترونيل !

نحن مجموعة من المفكرين لا يخافون الإبتكار، مدفوعون بشغف تمكين عملائنا في جميع أنحاء البلاد - بمحطات توليد طاقة إعتمادية وموثوقة، بالإضافة إلى أنظمة وحلول متكاملة للطاقة.

لدينا ما يقرب من ٣٠ عاماً من الخبرة في الأسواق المصرية، ونعمل في تقدم دائم. على مدار العقدين الزمنيين الماضيين، قمنا بتصميم وصياغة المستقبل، وإعادة صياغة المعنى الحقيقي للطاقة الكهربية لحياة عملائنا وأعمالهم وأنماط حياتهم.

نعمل بجهد لسبب واحد: للحفاظ على تقدمكم.

WE ARE ELECTRONIL.

Our Capabilities

Power Generation Systems Design and Supply

Complex Standby Systems, Synchronization and Load Sharing Including Multiple Utility Grid

Parallel with Utility Grid Operation

Power Stations

Mains, Feeder and Load Shedding Control Systems

BMS, SCADA and Remote Monitoring Systems

Low-Voltage Panel Building

Engine Driven Compressors and Pumps

Marine Certified Systems

Water Pump and Dredging Control Systems

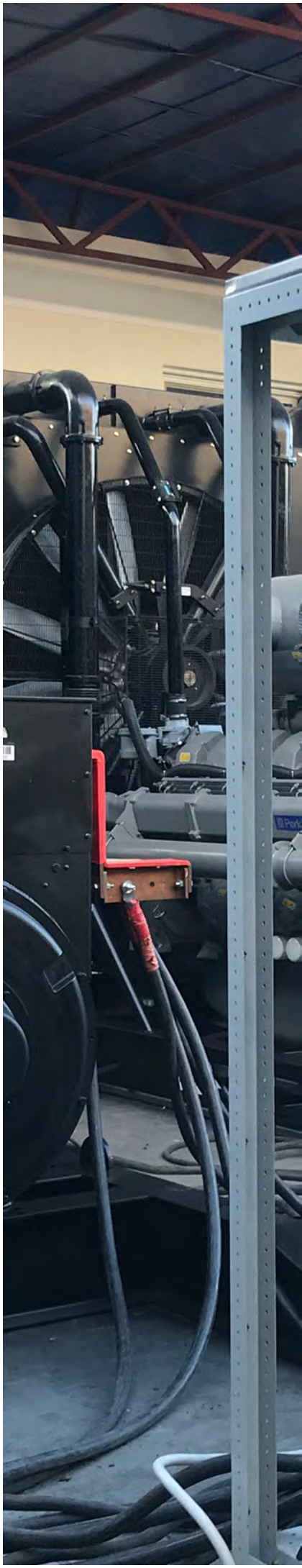
Design, Supply, Install, Commissioning, Startup and Service

Standard, Sophisticated and Bespoke Control Systems

Design

Engineering

Training and Technical Support




ELECTRONIC POWER SOLUTIONS

OUR STORY

A Magnificent force in power solutions since 1995, **ELECTRONIL POWER SOLUTIONS** is committed to reliable, intelligent products, advanced engineering and responsive after-sale support.

Over the years, we have amplified our well-known reputation to be a leader known for its premium range of generator-sets and control systems. Together, with building on the legacy of a leading brand, to create one of the largest generator-set and control systems providers in Egypt - and continued an unwavering focus on reliable power systems and innovation.

We deliver integrated industrial power systems for emergency, prime and continuous applications throughout whole Egypt—from data centers and hospitals to water treatment and hospitality facilities. With a deep understanding of your industry, we excel in designing customized power systems that simplify your most complex challenges.

من نحن

تُعد شركة **إلكترونيل لحلول الطاقة** قوة رائدة في مجالات حلول الطاقة الكهربية منذ عام ١٩٩٥، ومنذ ذلك الحين ونحن نلتزم بإمداد عملائنا بمنتجات موثوقة وذكية ومتطورة هندسياً بالإضافة إلى دعم سريع الاستجابة لخدمة ما بعد البيع والصيانة.

على مر الأعوام، ضاعفنا من سمعتنا المعروفة لكوننا من أكبر الكيانات الرائدة والمعروفة بمنتجاتها المتميزة من وحدات توليد الطاقة الكهربية وأنظمة التحكم والحماية والتشغيل. بالإضافة إلى، واستنادًا إلى إرث علامة تجارية رائدة، قمنا بإنشاء واحد من أكبر مزودي الأسواق المصرية بأنظمة الطاقة المتكاملة وأنظمة تحكم وتشغيل وحماية إعتمادية وموثوقة على مستوى جمهورية مصر العربية - واستمر التركيز المستمر على إبتكار أنظمة طاقة متكاملة وموثوقة ومتطورة.

نقوم بتقديم أنظمة توليد طاقة صناعية متكاملة لتطبيقات الطوارئ والمحطات الرئيسية والطاقة المستمرة في جميع أنحاء جمهورية مصر العربية - من مراكز المعلومات والمستشفيات إلى محطات معالجة مياه الشرب والصرف الصحي والفنادق. بدراسة وفهم عميق لمجال عملك، نتميز في تصميم أنظمة طاقة متكاملة ومتخصصة والتي تعمل على تبسيط التحديات الأكثر تعقيدًا التي يمكن أن تقابلك.

Table of Contents

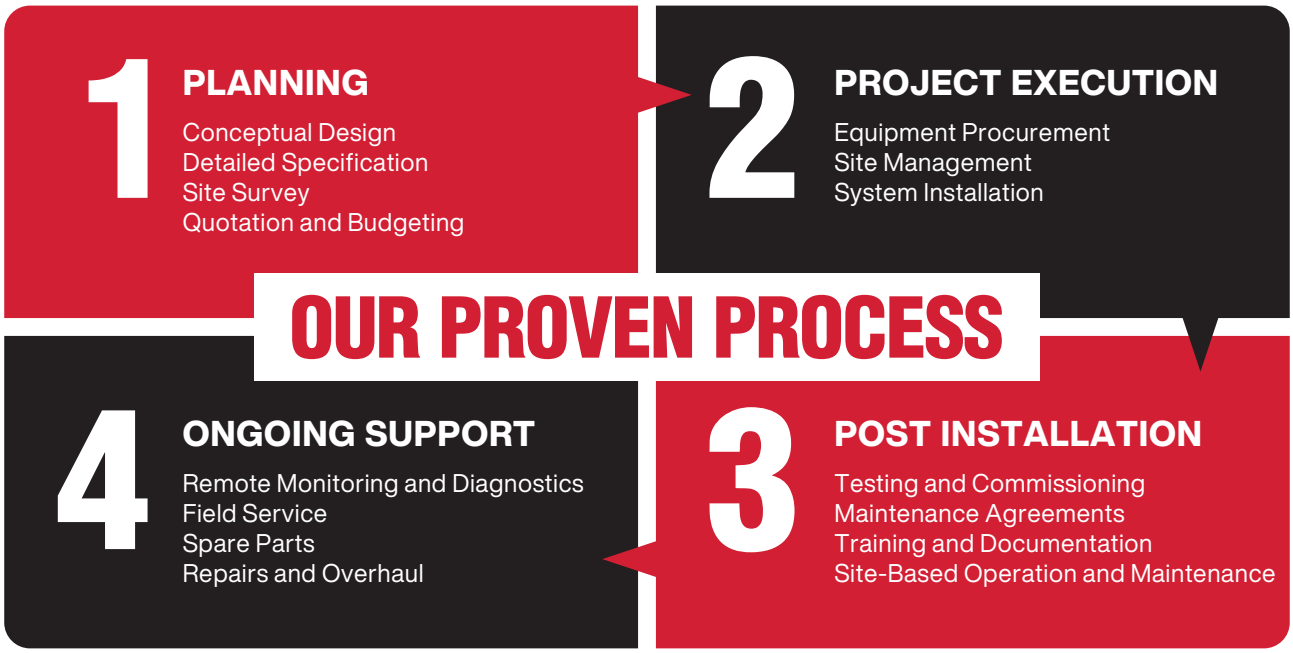
TOTAL SYSTEM INTEGRATION

Everything works together, Just as it should.

A Power System is only as good as the parts that define it. That's why we engineer every detail down to the last bolt. From generators and power transfer switches to paralleling systems and switchgear and controllers, everything works together seamlessly. Because we design, engineer and test it that way.

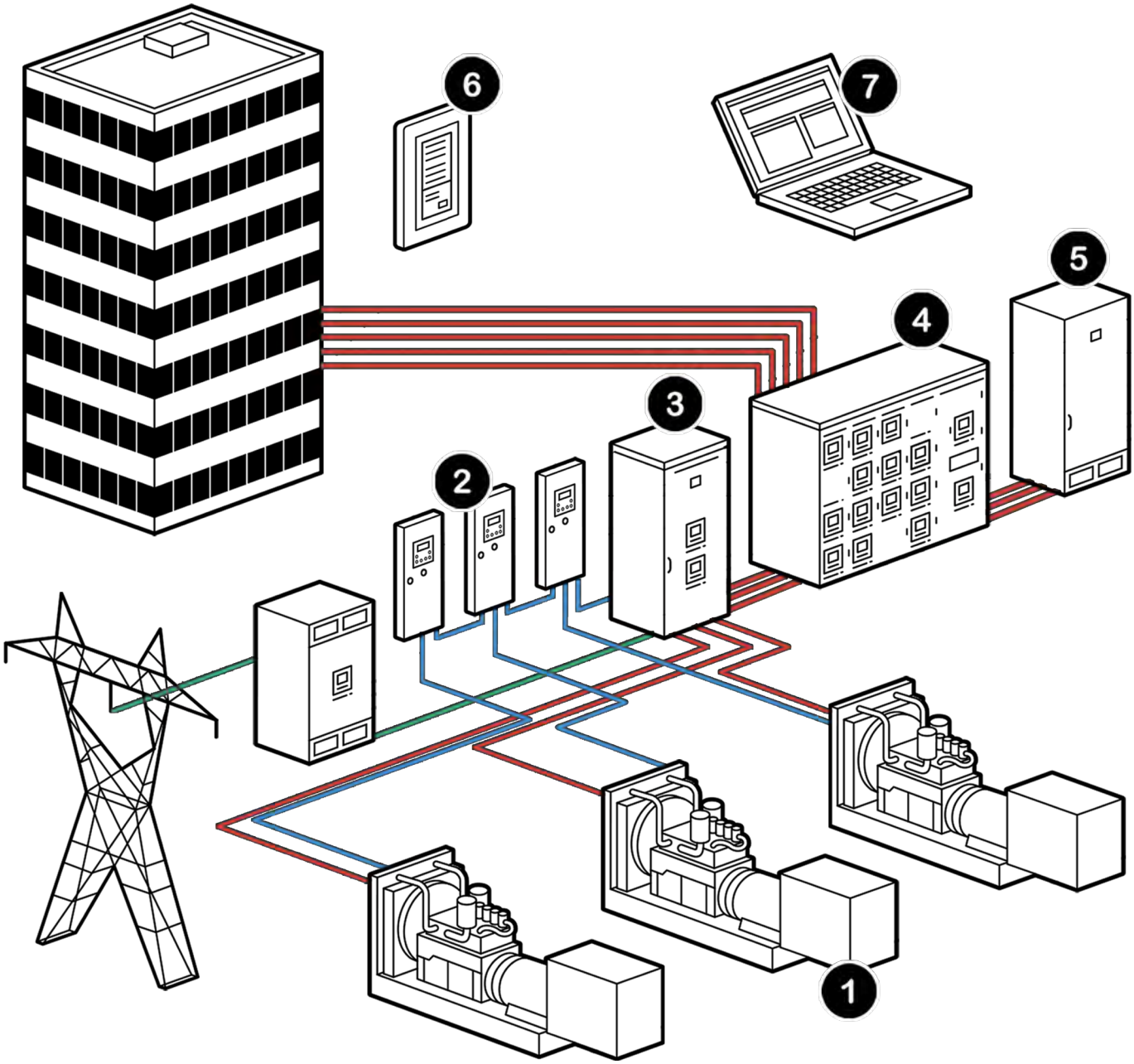
And that's the ELECTRONIL Difference.

Good news: There is more, behind that power system, there is a team of dedicated engineers that focuses on every element-generators, power transfer switches, switchgears and control systems — to be sure that the system you get is the system you need. You will know that your project is supported by an expert team, customized to your exact needs, brought in on budget and on time.



From spec to start-up to service, WE DO IT ALL.

Discover more at electronil.com/total_system_integration



TOTAL SYSTEM INTEGRATION

1. **ED SERIES DIESEL GENERATORS**
   Powered by Perkins, Volvo-Penta, or Cummins Diesel Engines, 9 - 3000 kVA

2. **ENCP 9.1 GENSETS PARALLELING SYSTEM**
   2-32 Generator set paralleling system with automatic power management and automatic engine run-hour balancing.

3. **ENCP 9.3/ENCP 6.x TRANSFER SWITCH**
   40-4000 A Power transfer switches, available in standard, bypass-isolation and service entrance switch configurations.

4. **ELECTRONIL POWER DISTRIBUTION PANEL**
   MCB, MCCB and ACB, Up to 6000 Amps.

5. **ELECTRONIL POWER FACTOR CORRECTION SYSTEMS**
   Up to 15 steps.

6. **REMOTE ANNUNCIATOR**
   Optional remote system monitoring.

7. **THE SUPERVISOR MONITORING SOFTWARE**
   Monitors generators and control systems from a PC and Smart Phones (Optional) Modbus or Ethernet.

INTEGRATED POWER SOLUTIONS

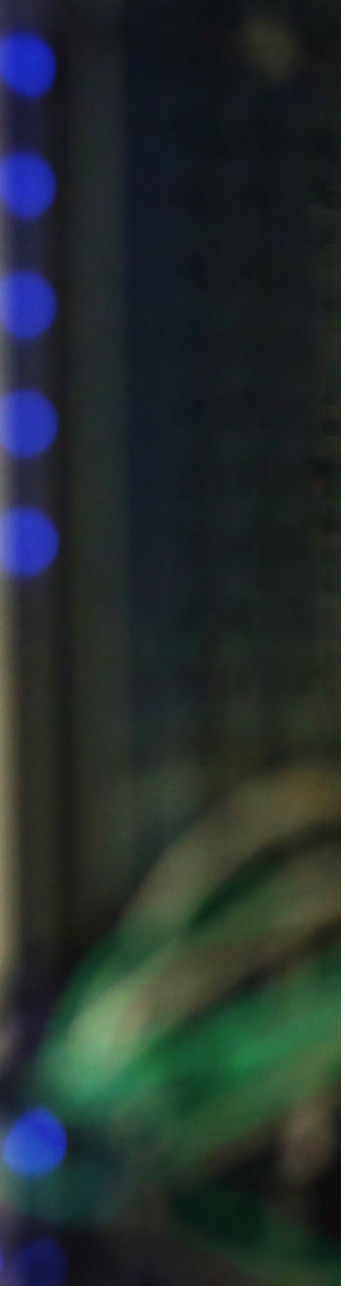
حلول طاقة متكاملة

INTEGRATED POWER SOLUTIONS

FOR DATACENTERS AND FINANCIAL INSTITUTIONS

Big data has changed the world. We generate 2.5 quintillion bytes of data daily—data that businesses, governments and people depend on. Further fueled by mobile devices and data-on-demand business, there are ever-growing demands on service levels in data centers around the world. Cloud computing and the Internet of Things are driving 12 percent growth per year in the data center market. The expectations for peak performance and uninterruptible power have never been higher.

The data center market itself is changing too. Data centers are moving closer to their customers, collocating and adopting multitenant architecture more than ever before. Many are becoming smaller and more scalable. Tax and energy incentives are common, aimed at attracting data center investment while improving the operational efficiency of these critical facilities.



Assessing Facility Needs

A data center's electrical power supply can be provided by several different circuits and supplemented by energy storage systems and generators. To provide a "No-Break" power supply (uninterruptible power with zero service interruptions), two independent power sources provide redundancy and risk reduction, rather than depend on a single source of inbound power.

POWER SUPPLY

Redundancy is an essential design feature built into a data center to provide a double layer of security. To prevent interruptions to the power supply, all components, including the emergency systems, are installed in duplicate with multiple generator sets.

PHYSICAL ENVIRONMENT

Maintaining precise, stable air conditioning and optimal control of environmental dust are two more factors creating larger loads and more dependence on backup generators.

INTEGRATED POWER SOLUTIONS

FOR HEALTHCARE FACILITIES

Healthcare is changing rapidly, and hospital and clinic staff are working hard to improve patient outcomes while simultaneously controlling costs. It is not a simple task, and it's one that's brought even more high-tech solutions to medical facilities. With this new technology comes an increased need for reliable, 24/7 backup power.

Discover more at electronil.com/healthcare

Assessing Facility Needs

Given the fact that power can be a life-sustaining necessity in the hospital setting, reliable backup power is essential. To provide a “No-Break” power supply (uninterruptible power with zero service interruptions), two independent power sources provide redundancy and risk reduction, rather than depending on a single source of inbound power.

POWER SUPPLY

Redundancy is an essential design feature in a hospital setting to ensure operating rooms keep running without disruption, medications are safely preserved and environmental control systems continue to function and protect against the spread of disease. To prevent interruptions to the power supply, all components, including the emergency systems, are installed in duplicate with multiple generator sets.

RESPONSE TIME

Healthcare facilities have power needs 24/7, so there is no time to wait for a response team. They need a service team that can provide timely emergency recovery no matter where the power system is installed.

INTEGRATED POWER SOLUTIONS

FOR HOSPITALITY FACILITIES

Years ago, hospitality needs were simpler. Hotel guests required little more than a clean room to rest in . And stadium goers were there for the gamenot all the action surrounding it These days, however, people have much different expectations, and they are driving a huge need for reliable backup power.

Assessing Facility Needs

Today's critical power needs go far beyond keeping the lights on. Whether they are traveling for work, visiting an amusement park or tourist attractions, people expect a safe, hassle-free experience. That means features we once thought of, as extras, such as Wi-Fi and big-screen TVs, need to be online 24/7 to keep guests satisfied and earn the positive reviews your business depends on.

SAFETY

The safety of your guests is of the utmost importance-especially if you are operating a theme park where a power outage could leave guests stranded on a ride. Hotels, stadiums and other entertainment complexes must make safety a priority as well, ensuring fire warning systems, water sprinklers and other safety equipment work during a power outage.

LOCATION & SOUND

Generators must meet electrical and building codes and ensure that placement meets all space requirements for maintenance and safety. In addition, generators must meet any local noise ordinances.

INTEGRATED POWER SOLUTIONS

FOR MARINE & OFFSHORE INDUSTRIES

Enhance your marine power management system with ELECTRONIL's flexible control systems.

Configure your ship's power management system to prevent power outages, ensure reliable operations and optimize your energy source's efficiency with ELECTRONIL's effective power management solutions.

Our Power Management System will help you control the ship's auxiliary and emergency power generators and any other energy source while enabling shore connection when the ship is docked.

COMMERCIAL VESSELS.

ELECTRONIL's Flexible product platform covers the full range of application possibilities. We're available to assist you and ensure you invest in and implement the best controller for your application.

OFFSHORE PLATFORMS AND RIGS.

We provide our customers with specifications, project specific documentation and parameter lists including check of customer's drawings.

Discover more at electronil.com/marine

OFFSHORE SUPPORT VESSELS.

Working with our dedicated project department for system solutions, you will soon experience how ELECTRONIL is more than a partner. Our know-how, experience and expertise guarantee advanced application solutions – quality-tested beyond marine standards.

PASSENGER SHIPS AND FERRIES.

ELECTRONIL's Flexible Power Control Solutions contain leading technology genset controllers and an exhaustive portfolio of switchboard equipment.

PLEASURE BOATS AND YACHTS.

Understanding the need to optimize engine rooms and electrical switchboards, ELECTRONIL's control systems have been designed to fit the smallest switchboards and require no complicated PLCs.

SPECIAL VESSELS.

Catering to the particular needs of special vessels, ELECTRONIL is capable to develop solutions with integrated control concepts that bolster customer requirements for safe and accurate operation.

Getting it right from the start, we advise customers with specifications, project-specific documentation and parameter lists including check of customer drawings.

SWITCHBOARD EQUIPMENT.

The main switchboard and a number of sub distribution switchboards form the electrical central nervous system of the ship. Because they are critical to power supply, control and system monitoring, instrument robustness is among the most important quality parameters.

INTEGRATED POWER SOLUTIONS

FOR TELECOMMUNICATIONS

Satellite, cable, broadband, cellular — no matter what service you provide the demand remains the same. Everyone expects their connections to be high-speed, always on and work seamlessly across a variety of devices.

However, we know staying up and running is only half the battle. As a telecom company, you also face the constant pressure to improve the way your customers consume entertainment and information.

Between this ever-present demand for connectivity and technological advancement, you need reliable power. That's where we come in.

Discover more at electronil.com/telecom

Assessing Facility Needs

It's no secret telecom companies need to ensure zero downtime at call centers, co-location sites, cell towers and datacenters. But there's also the challenge to develop the next "big thing". To help achieve these goals, we assess key needs including:

- Power requirements
- Specialized applications
- Local regulations
- Emissions
- Compact Size

INTEGRATED POWER SOLUTIONS

FOR WATER-TREATMENT FACILITIES

As water consumption doubles globally every 20 years, scarcity becomes an increasing concern, and individuals and municipalities are more focused than ever on using this resource wisely and efficiently for industrial, domestic and agricultural uses. That concern and new technologies are driving a rapid evolution in the reclamation and reuse of wastewater—and having a significant impact on the power systems needed to support water-treatment plants. In addition, countries are increasingly using water desalinization to transform seawater and brackish water sources into clean drinking water.

Discover more at electronil.com/water-treatment

Assessing Facility Needs

While most citizens take clean water for granted, a power outage could quickly jeopardize this essential resource. Reliable backup systems are critical to keep pumps and other key equipment running and avoid potential consumer safety issues.

Continuous power is also necessary to prevent flooding and discharge of untreated wastewater, which can lead to environmental issues and fines.

POWER SUPPLY

Redundancy is an essential design feature for sanitary and wastewater treatment facilities to ensure continuous operation of equipment and to keep communities supplied with fresh, safe water. Though technology has improved, the desalinization process requires a great deal of energy to purify brackish and seawater.

RESPONSE TIME

Wastewater facilities and the extended infrastructure of pumping and lifting stations have power needs 2 4/7, so there is no time to wait for a response team. They need a service team that can provide timely emergency recovery no matter where the power system is installed. Remote monitoring can help increase response time, lower operating costs and help improve safety.

ED SERIES GENERATORS

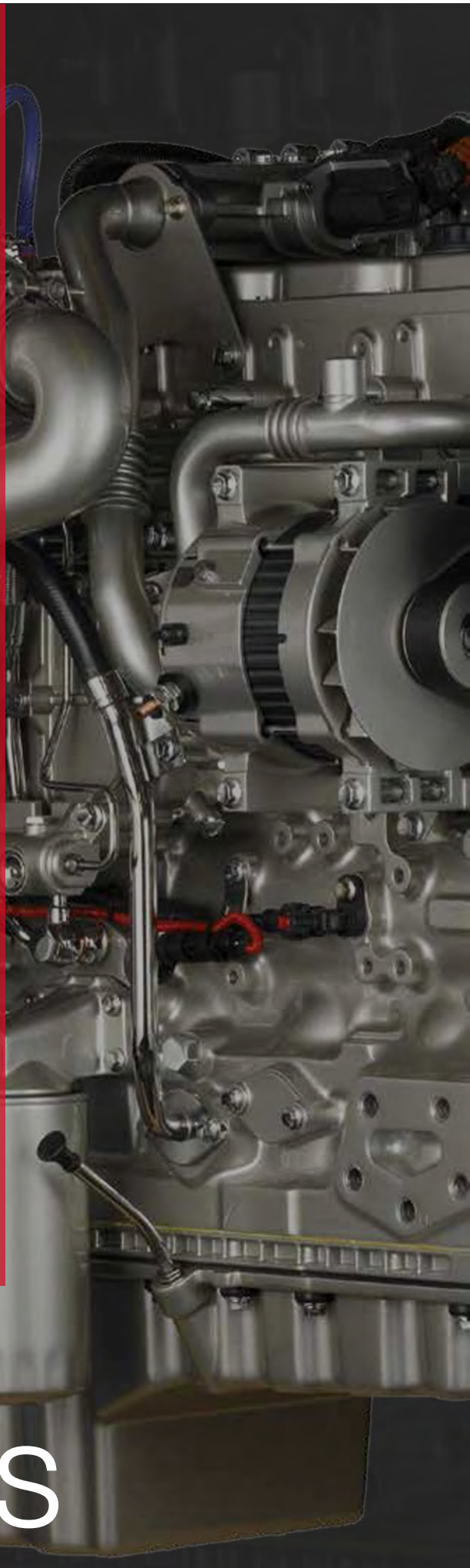
Built for the most critical jobs on earth.

Think about the most important places in the world:

- **Hospitals**
- **Airports**
- **Data Centers**
- **Water Treatment plants, etc.**

Those are the places we've designed our systems to protect. The ones that absolutely have to have power—no matter what.

And with diesel generators ranging from 9 to 3000 kVA, there's no job too small, no building too big. The ELECTRONIL ED Series Diesel Generators and ENCP Control Systems are built to protect the most critical facilities on earth. And you can customize them any way you like with a variety of accessories.



DIESEL GENERATORS

KEY FOR READING ED SERIES CODES

Standard Prefix
E: ELECTRONIL

Product Type
D: Diesel Genset

Soundproof Canopy
C

Rated Power
Prime kVA @ 400v, 1500rpm, 50Hz

E D 2250 P 16 L C

Engine Type
P: Perkins
V: Volvo Penta
C: Cummins

Generator type
L: Leroy Somer
S: Stamford

Number of Cylinders
03 - 08: 3-8 Cylinders, In-Line Formation
12 - 16 : 12-16 Cylinders, Vee Form

RATINGS DEFINITIONS

Discover more at electronil.com/diesel_generators

PRIME POWER RATING

Output available with varying loads for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated kWe with 10% overload capability for emergency use for a maximum of 1 hour in 12 hours. Overload operation cannot exceed 25 hours per year.

STANDBY POWER RATING

Output available with varying loads for the duration of the interruption of the normal source power. Average power output is 70% of the standby power rating. Typical operation is 200 hours per year, with maximum expected usage of 500 hours per year.

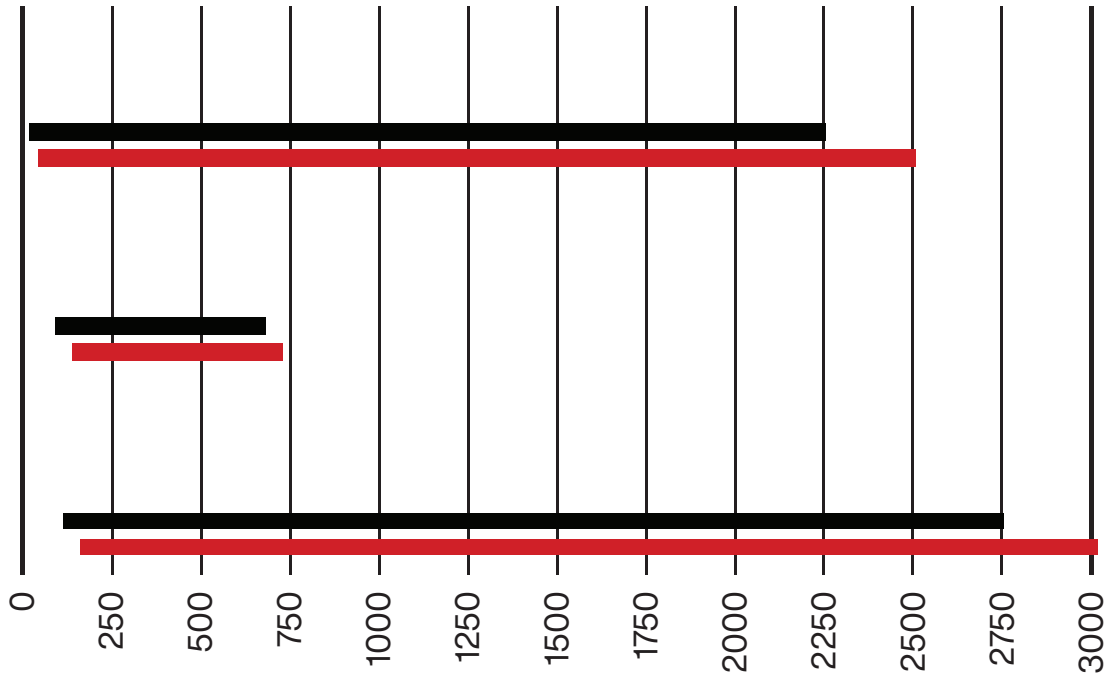
CONTINUOUS POWER RATING

Output available with non-varying load for an unlimited time. Average power output is 70-100% of the continuous power rating. Typical peak demand is 100% of continuous rated kWe for 100% of the operating hours.

Perkins
Prime 15 - 2250
Standby 17 - 2500

VOLVO PENTA
Prime 135 - 650
Standby 150 - 700

Cummins Power Generation
Prime 100 - 2750
Standby 110 - 3025



Rated Power
by (kVA)

Discover more at electronil.com/ed_series

ED P Series Generators.

Powered by Perkins Diesel Engines.

15-2500 kVA.

GENSET	RATED POWER				ENGINE		GENERATOR		DIMENSIONS AND WEIGHT							
MODEL	400volts, 1500rpm, 50hz				Model	Fuel Con.	Model		OPEN FRAME				SOUNDPROOF CANOPY			
	Prime		Standby		Perkins	100%	Stamford	Leroy Somer	(L)	(W)	(H)	Weight	(L)	(W)	(H)	Weight
	kVA	kWe	kVA	kWe		Lt/hr			cm			kg	cm			kg
ED P Series Designates A 50 Hz Genset With A Fuel Optimized Perkins Diesel Engines and Stamford or Leroy Somer Generators																
ED0015P03	15	12	17	13	403A-15G	5	S0L1-P1	TAL040D	150	70	120	445	200	100	120	795
ED0020P03	20	16	22	18	404A-22G	5.3	S0L2-G1	TAL040F	150	70	120	520	200	100	120	865
ED0030P03	30	24	33	26	1103A-33G	7.2	S0L2-P1	TAL042C	170	80	140	745	215	110	140	1175
ED0045P03	45	36	50	40	1103A-33TG1	10.8	UCI224D	TAL042F	180	90	140	880	250	110	140	1405
ED0060P03	60	48	66	53	1103A-33TG2	14.1	S1L2-Y1	TAL042H	180	90	140	910	250	110	140	1435
ED0065P04	65	52	72	57	1104A-44TG1	14.8	UCI224F	TAL044A	180	90	140	985	250	110	140	1550
ED0080P04	80	64	88	70	1104A-44TG2	18.7	UCI224G	TAL044B	190	100	150	1035	270	120	150	1600
ED0100P04	100	80	110	88	1104C-44TAG2	22.6	UCI274C	TAL044D	190	100	150	1145	270	120	150	1710
ED0135P06	135	108	150	120	1106A-70TG1	30.2	UCI274E	TAL044H	250	110	165	1420	330	130	165	2220
ED0150P06	150	120	165	132	1106A-70TAG2	33.4	UCI274F	TAL044J	250	110	165	1520	330	130	165	2320
ED0180P06	180	144	200	160	1106A-70TAG3	41.6	UCI274G	TAL046A	250	110	165	1600	330	130	165	2370
ED0200P06	200	160	220	176	1106A-70TAG4	45.8	UCI274H	TAL046B	260	120	185	1645	375	150	185	2515
ED0250P06	250	200	275	220	1506A-E88TAG3	56	UCDI274K	TAL046D	260	120	185	2115	375	150	185	2965
ED0300P06	300	240	330	264	1506A-E88TAG5	65	S4L1D-D41	TAL046F	300	135	200	2375	400	165	200	3225
ED0350P06	350	280	400	320	2206A-E13TAG2	71	S4LID-E41	TAL046H	320	135	200	2805	450	165	200	3855
ED0400P06	400	320	450	360	2206A-E13TAG3	81	S4L1D-F41	TAL047A	320	135	200	3140	450	165	200	3990
ED0450P06	450	360	500	400	2506A-E15TAG1	95	HCI5C	TAL047B	350	135	230	3400	500	200	230	4650
ED0500P06	500	400	550	440	2506A-E15TAG2	100	HCI5D	TAL047C	350	135	230	3530	500	200	230	4780
ED0600P06	600	480	660	528	2806A-E18TAG1	123	HCI5E	TAL047E	350	135	230	4095	500	200	230	5345
ED0650P06	650	520	700	560	2806A-E18TAG2	132	HCI5F	TAL047F	350	135	230	4435	500	200	230	5735
ED0750P06	750	600	825	660	4006-23TAG2A	157	HCI6G	TAL049C	400	150	280	5290	550	250	280	6690
ED0800P06	800	640	880	704	4006-23TAG3A	172	HCI6G	TAL049C	400	175	280	5290	550	250	280	6690
ED0900P08	911	728	1000	800	4008TAG1A	195	HCI6H	TAL049D	480	210	320	7440	750	290	320	8940
ED1000P08	1000	800	1100	880	4008TAG2A	215	HCI6J	LSA49.3L10	480	210	320	7600	750	290	320	9100
ED1250P12	1250	1000	1375	1100	4012-46TWG2A	259	PI7A	LSA50.2M6	520	220	320	9050	750	290	320	10550
ED1360P12	1364	1091	1500	1200	4012-46TWG3A	220	PI7B	LSA50.2L7	520	220	320	9050	750	290	320	10550
ED1500P12	1500	1200	1650	1320	4012-46TAG2A	310	PI7C	LSA50.2L8	520	220	320	8420	750	290	320	9920
ED1700P12	1710	1368	1880	1504	4012-46TAG3A	370	PI7E	LSA51.2S55	520	220	320	9460	750	290	320	10960
ED1840P16	1844	1475	2028	1623	4016-TAG1A	383	PI7E	LSA51.2S55	600	250	350	10630	800	300	350	12130
ED2000P16	2000	1600	2200	1760	4016-TAG2A	434	PI7F	LSA51.2L70	600	250	350	10910	800	300	350	12410
ED2200P16	2200	1760	2420	1936	4016-61TRG3	470	PI7G	LSA51.2VL90	600	250	350	11125	800	300	350	12625
ED2250P16	2250	1800	2500	2000	4016-61TRG3	470	PI7H	LSA51.2VL90	600	250	350	11400	800	300	350	12900

Dimensions and Weight are for Reference Only - Do Not Use for Installation Design.
Contact our Technical Department for the Exact Dimensions and Weight.

ED V Series Generators.

Powered by Volvo Penta Diesel Engines.

135-700 kVA.

GENSET	RATED POWER				ENGINE		GENERATOR		DIMENSIONS AND WEIGHT							
MODEL	400volts, 1500rpm, 50hz				Model	Fuel Con.	Model		OPEN FRAME				SOUNDPROOF CANOPY			
	Prime		Standby		Volvo Penta	100%	Stamford	Leroy Somer	(L)	(W)	(H)	Weight	(L)	(W)	(H)	Weight
	kVA	kWe	kVA	kWe		Lt/hr			cm			kg	cm			kg
ED V Series Designates A 50 Hz Genset With A Fuel Optimized Volvo Pents Diesel Engines and Stamford or Leroy Somer Generators																
ED0135V06	135	108	149	119	TAD730GE	34.6	UCI274E	TAL044H	250	110	165	1500	330	130	165	2300
ED0150V06	150	120	165	132	TAD731GE	41.5	UCI274F	TAL044J	250	110	165	1535	330	130	165	2335
ED0200V06	200	160	220	176	TAD733GE	47	UCI274H	TAL046B	260	120	185	1705	375	150	185	2555
ED0250V06	250	200	275	220	TAD734GE	54	UCDI274K	TAL046D	260	120	185	2000	375	150	185	2850
ED0300V06	300	240	330	264	TAD1341GE	63	S4L1D-D41	TAL046F	320	135	200	3000	450	165	200	3980
ED0350V06	350	280	385	308	TAD1342GE	68	S4LID-E41	TAL046H	320	135	200	3115	450	165	200	4165
ED0400V06	400	320	450	360	TAD1344GE	80	S4L1D-F41	TAL047A	320	135	200	3450	450	165	200	4300
ED0450V06	450	360	500	400	TAD1640GE	90	HCI5C	TAL047B	350	135	230	3675	500	200	230	4925
ED0500V06	500	400	550	440	TAD1641GE	100	HCI5D	TAL047C	350	135	230	3805	500	200	230	5055
ED0650V06	650	520	700	560	TWD1644GE	120	HCI5F	TAL047E	400	150	280	4585	550	250	280	5885

Dimensions and Weight are for Reference Only - Do Not Use for Installation Design.
Contact our Technical Department for the Exact Dimensions and Weight.

ED C Series Generators.

Powered by Cummins Diesel Engines.

100-3025 kVA.

GENSET	RATED POWER				ENGINE		GENERATOR		DIMENSIONS AND WEIGHT							
MODEL	400volts, 1500rpm, 50hz				Model	Fuel Con.	Model		OPEN FRAME				SOUNDPROOF CANOPY			
	Prime		Standby						(L)	(W)	(H)	Weight	(L)	(W)	(H)	Weight
	kVA	kWe	kVA	kWe	Cummins G Drive	100% Lt/hr	Stamford	Leroy Somer	cm			kg	cm			kg
ED C Series Designates A 50 Hz Genset With A Fuel Optimized Cummins G Drive Diesel Engines and Stamford or Leroy Somer Generators																
ED0100C06	100	80	110	88	6BTA5.9-G5	25	UCI274C	TAL044D	250	110	165	1100	330	130	165	1665
ED0135C06	135	108	150	120	6BTAA5.9-G6	35.16	UCI274E	TAL044H	250	110	165	1450	330	130	165	2250
ED0150C06	150	120	175	140	QSB7-G3	38	UCI274F	TAL044J	260	120	185	1315	375	150	185	2115
ED0200C06	200	160	220	176	QSB7-G5	45	UCI274H	TAL046B	260	120	185	1465	375	150	185	2315
ED0250C06	250	200	275	220	QSL9-G3	59	UCDI274K	TAL046D	260	120	185	1840	375	150	185	2690
ED0300C06	300	240	330	264	QSL9-G5	63	S4L1D-D41	TAL046F	300	135	200	2075	400	165	200	3055
ED0400C06	400	320	450	360	QSX15-G4	85.7	S4L1D-F41	TAL047A	350	135	230	3320	500	200	230	4170
ED0500C06	500	400	550	440	QSX15-G8	103	HCI5D	TAL047C	350	135	230	3555	500	200	230	4805
ED0600C12	600	480	660	528	VTA28-G5	140	HCI5E	TAL047E	400	150	280	5260	550	250	280	6510
ED0630C12	636	509	700	560	VTA28-G5	140	HCI5F	TAL047F	400	150	280	5600	550	250	280	6900
ED0800C06	800	640	880	704	QSK23-G3	161	HCI6G	TAL049C	480	210	320	5950	750	290	320	7350
ED1000C06	1000	800	1100	880	KTA38-G5	209	HCI6J	LSA49.3	480	210	320	8270	750	290	320	9770
ED1250C16	1250	1000	1375	1100	KTA50-G3	261	PI7A	LSA50.2	520	220	320	9660	750	290	320	11160
ED1400C16	1400	1120	1540	1232	QSK50-G3	289	PI734B	LSA50.2	600	250	350	11190	800	300	350	12690
ED1500C16	1500	1200	1650	1320	QSK50-G4	338	PI7C	LSA50.2	600	250	350	11450	800	300	350	12950
ED1850C16	1875	1500	2000	1600	QSK60-G3	371	PI7E	LSA51.2	700	300	380	14745	900	350	380	16245
ED2000C16	2000	1600	2200	1760	QSK60-G4	394	PI7F	LSA51.2	700	300	380	15025	900	350	380	16525
ED2500C16	2500	2000	2750	2200	QSK78-G9	528	LVI804S	LSA52.3	700	300	380	15200	900	350	380	16700
ED2750C18	2750	2200	3025	2420	QSK78-G9	528	LVSI804S	LSA53.2	700	300	380	15200	900	350	380	16700

Dimensions and Weight are for Reference Only - Do Not Use for Installation Design.
Contact our Technical Department for the Exact Dimensions and Weight.

ED SOUNDPROOF ENCLOSURES.

Reduce The Racket. And Put Mother Nature In Her Place.

Soundproof and Weatherproof Solutions.

If you want to keep the weather out and the noise in, there's really only one way to go.

ELECTRONIL Soundproof Enclosures are bolstered by heavy-duty acoustic insulation to protect your investment and keep the noise down. In addition, we coat every unit with anti-corrosion paint, as a textured industrial finish that provides corrosion-resistant, heavy-duty durability in harsh conditions. The new design includes a sloped roof to increase the life and safety of the generator.

Custom Options

Multiple weather/sound enclosure options are available on 9 to 3000 kVA generators.

Fitted Enclosures

Soundproofing enclosures feature durable construction, stainless steel external hardware and internal emergency lighting system.

Quiet Performance

Our enclosures offer acoustic insulation to meet your quiet applications.

Advanced Door System

Hinged doors, door handles and door holders provide security, protection and easy access for service.

Service Access

Multiple personnel doors and removable panels offer easy access to generator control, fuel fill, fuel gauge, oil fill and battery.

Internal Exhaust System

Features insulated exhaust silencer for improved aesthetics, safety and noise reduction.

Oil Drains

Provide an easier, quicker way to service your generator.

Available Accessories

Electrical packages, lighting, heaters, motorized louvers, stairs and more ...

POWER TRANSFER SWITCHES

To Protect Your Power. And Your Business.

Discover more at electronil.com/power_transfer_switches

THE ETS LINEUP

PEACE OF MIND STARTS HERE.

Bridging the gap between loss of utility and standby power is no small task. ELECTRONIL ETS Series Power Transfer Switches are designed to meet that challenge, distributing power to feed the critical loads of your facility.

Every power transfer switch needs a control system to ensure transfer of power from utility to generator and back again.

ELECTRONIL Power Transfer Switches, offer clear choices in matching function to application.

STANDARD FEATURES

Multiple Applications

Find the perfect option. ELECTRONIL Power Transfer Switches are available in standard, bypass, bypass-isolation and service-entrance configurations with open, closed and programmed transition operating modes, from 40 to 4000 amps.

Seamless System Integration

Everything works together. ELECTRONIL Power Transfer Switches are designed to interface perfectly with ELECTRONIL Generators and Paralleling Switchgears.

Advanced Communications

Every Power Transfer Switch comes fully loaded with the technology to do the job. Ethernet and Modbus communications capabilities are available.

TRANSFER SWITCH SOLUTIONS

To Empower You and Your Business.

IP ENCLOSURES

Protection degree IP42 as standard and up to IP65 is optional.

BYPASS OPERATION

Eliminates interruption to the loads during maintenance.

MICRO-POSSESSOR BASED CONTROLLERS

Provides a full array of features including communications, I/0 and other advanced functionality.

HEAVY-DUTY CONTACTOR

Choices from ABB, Socomec or Schneider Electric transfer devices; molded case circuit breakers, air circuit breakers, contactors, or motorized changeover switches.

AVAILABLE ACCESSORIES

Digital multimeter, communication accessories, load-shed / load-add system, remote annunciator and more.

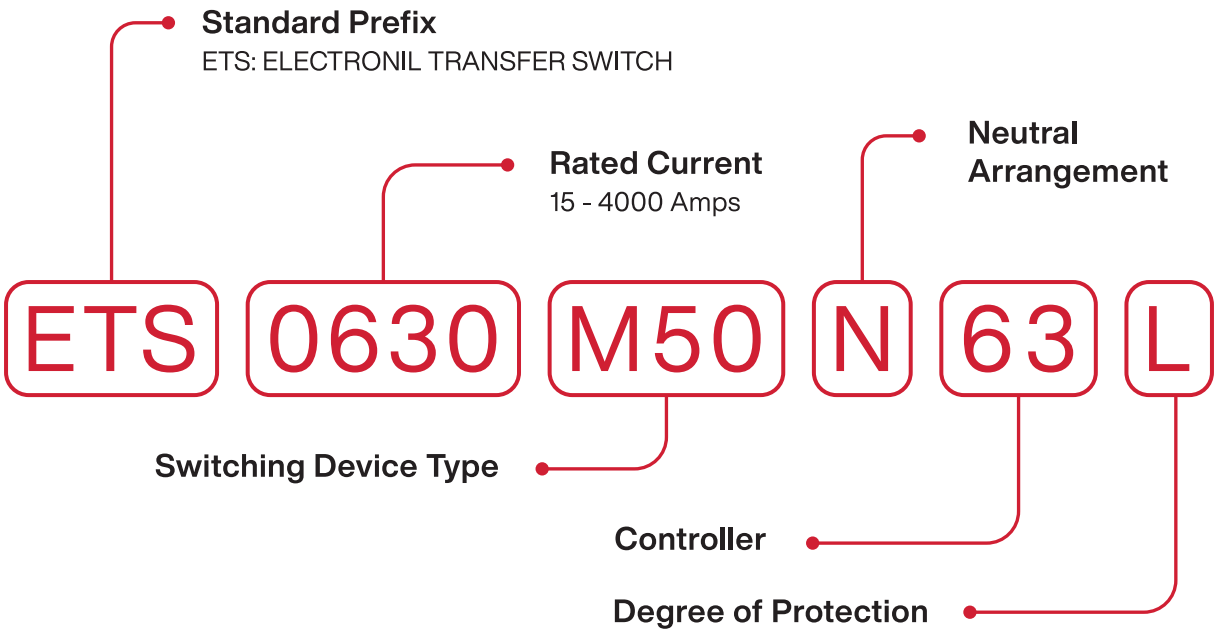
Discover more at electronil.com/power_transfer_switches

CUSTOM CONFIGURATION

The chart tells the story.

You can custom configure your power transfer switch by choosing the exact components needed. This standard process allows **ELECTRONIL** to provide the correct power transfer switch for your application with delivery in the shortest amount of time.

Each letter and numeral corresponds to a specific element of the ATS.



Configuration Options

Standard Prefix ETS		Rated Current 0630	
ETS	ELECTRONIL TRANSFER SWITCH	**15 - 4000** Amps.	

Switching Device Type M50

C	Contactor	**M25**	Molded Case Circuit Breaker (Icu=25kA)	**A50**	Air Circuit Breaker (Icu=50kA)
S	Motorized Changeover Switch	**M36**	Molded Case Circuit Breaker (Icu=36kA)	**A66**	Air Circuit Breaker (Icu=66kA)
		M50	Molded Case Circuit Breaker (Icu=50kA)	**A10**	Air Circuit Breaker (Icu=100kA)
		M70	Molded Case Circuit Breaker (Icu=70kA)		

Neutral Arrangement N		Controller 63		Degree of Protection L	
S	Single Phase, Two Wires with Switched Neutral (2 Pole)	**61**	ELECTRONIL ENCP 6.1 Control System	**L**	IP4x
C	3 Phase, 4 Wires with Solid Neutral (3 Pole)	**62**	ELECTRONIL ENCP 6.2 Control System	**M**	IP5x
N	3 Phase, 4 Wires with Switched Neutral (4 Pole)	**63**	ELECTRONIL ENCP 6.3 Control System	**H**	IP6x
		X2	ABB TruONE Level 2 ATS Controller		
		X3	ABB TruONE Level 3 ATS Controller		
		XC	ABB C21D ATS Controller		

TRANSITION TYPES.

Factory-Configured for Mode of Operation.

The transfer switch controller manages the power sensing, timing functions and fault monitoring needed for automatic operation. Depending on your application, the switch can be configured to operate in one of three modes: standard/open transition, delayed/programmed transition or closed transition.

STANDARD/OPEN TRANSITION

BREAK BEFORE MAKE

In open transition, the load is disconnected from one source before being connected to the alternate source.

This is the most common type of application, used for loads that are not highly inductive or mission-critical.

- One set of contacts opens before the other set closes.
- Load is disconnected from power during transfer.

DELAYED/PROGRAMMED

BREAK BOTH SIDES

Delayed/programmed mode is used with highly inductive loads such as motor loads and transformers.

The load disconnects from one source, then pauses in an “off” position before connecting to the alternate source to protect from power surges. The delay allows the magnetic field to decay to a safe level before transferring. Delayed transition can also be used with the load-shed option for lower-priority loads.

- One set of contacts opens before the other set closes.
- The other set of contacts delays in closing.
- Load is disconnected from power during all transfers.
- Delay time is user-programmable.

CLOSED TRANSITION

MAKE BEFORE BREAK

Closed transition is used in mission-critical applications, such as data centers and hospitals, where the system can’t withstand a momentary load interruption. The source from which the load is being transferred remains closed until the source to which the load will be transferred is also closed. After both sources are closed, the source from which power is being transferred is opened.

- Contacts overlap, with both sources providing power.
- Both sources synchronize before transfer occurs.
- Load is never disconnected from power during transfers when both services are available.
- Transfers via open transition if one source fails or fails to sync.
- External fail-safe timer provided.

POLES AND NEUTRAL SWITCHING.

Ground-Fault Protection Without Compromise.

A solid neutral or a switched neutral must be chosen when specifying an automatic transfer switch. A 3-pole ATS has a solid, unswitched neutral; a 2-poles/4-pole ATS has a half rated switched neutral that follows the contactor position.
The emergency system grounding and ground-fault protection method determine the use of a 2-pole/4-pole or 3-pole power transfer switch.

SOLID

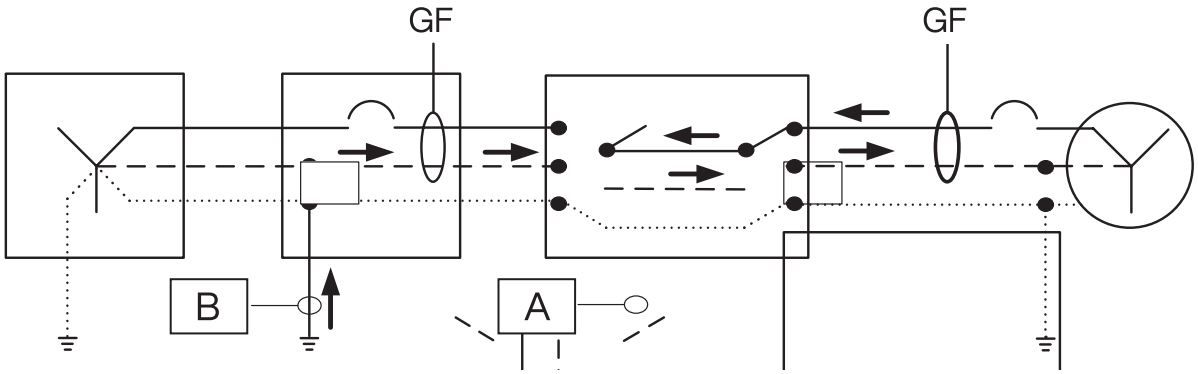
- 3 Pole
- Constant contact
- Generator is not a separately derived source

SWITCHED

- 2 Pole or 4 Pole
- Break-Before-Make on neutral
- Switching neutral with phase contacts
- Generator is a separately derived source

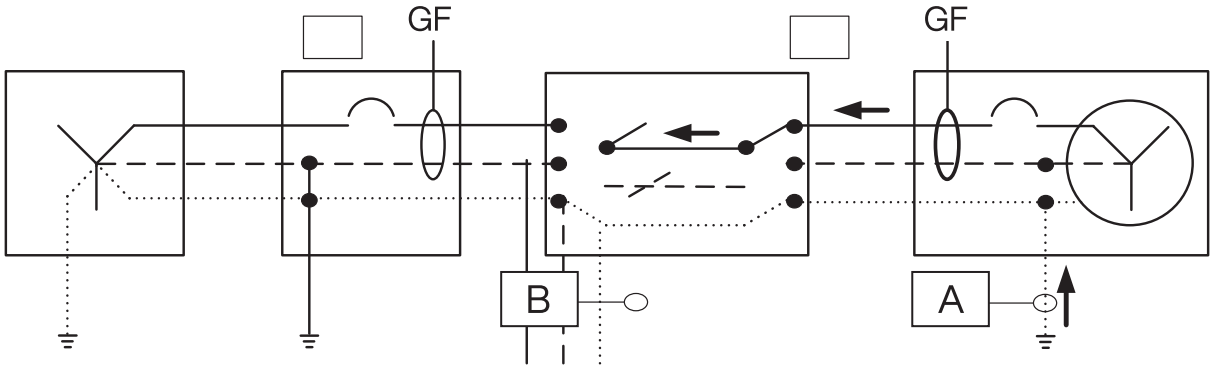
THREE POLE TRANSFER SWITCHES

A 3 Pole transfer switch has a solid neutral; the neutral connection is not dependent upon the position of the switch. In this system, the generator is not a separately derived source, and there is no neutral-to-ground link at the generator. Should a ground fault occur, it cannot be sensed by the generator breaker.



TWO POLE/FOUR POLE TRANSFER SWITCHES

In order for the generator's current-based ground fault sensor to detect the ground fault and trip the generator unit-mounted circuit breaker, a 2 Pole/4 Pole transfer switch is needed.
Because the neutral is switched and not continuous, the generator is a separately derived source that needs a neutral-to-ground link at the generator.



National Electrical Code (NEC) and National Fire Protection Association (NFPA) regulations specify how ground-fault protection (GFP) must be handled for a generator system, which in turn determines the number of poles and neutral switching type required of the transfer switch. These regulations also determine whether or not a system needs the generator as a separately derived source.

Contactor Based
Power Transfer Switches

TRANSFER SWITCH	SYSTEM RATINGS		SWITCHING DEVICE			CONTROL SYSTEM
Model	400volts, 50hz		Type	Model	Short circuit level	Model
	Amps	kWe	**ABB**	AF Contactors	Icu@380-415VAC	
This ETS Series Designates A Standard Contactor Based Automatic Power Transfer Switch						
ETS0018CC61	18	7.5	Mechanically and Electrically Interlocked 3 Pole Contactors.	AF16-30-10-13	This ETS Series Doesn't Provide Short Circuit Protection as Standard (Can be modified upon customer request).	Standard: ENCP 6.1, Optional: ENCP 6.2 Control System
ETS0026CC61	26	11		AF26-30-00-13		
ETS0040CC61	40	18.5		AF40-30-00-13		
ETS0065CC61	65	30		AF65-30-00-13		
ETS0080CC61	80	37		AF80-30-00-13		
ETS0096CC61	96	45		AF96-30-00-13		
ETS0116CC61	116	55		AF116-30-00-13		
ETS0146CC61	146	75		AF146-30-00-13		

BENEFITS

- AC/DC Operation
- Wide Range of Control Voltage
- Single Phase, Split-Phase and Three Phase.

Full list of features available at
electronil.com/standard-ats

Changeover Switch Based
Standard Power Transfer Switches

TRANSFER SWITCH	SYSTEM RATINGS		SWITCHING DEVICE			CONTROL SYSTEM
Model	400volts, 50hz		Type	Model	Short circuit level	Model
	Amps	kWe	ABB	OTM Switches	Icu@380-415VAC	
This ETS Series Designates A Standard Changeover Switch Based Automatic Power Transfer Switch						
ETS0040SC6x	40	22	Mechanically and Electrically Interlocked 3Pole Changeover Switch.	OTM40F3CMA230V	This ETS Series Doesn't Provide Short Circuit Protection as Standard (Can be modified upon customer request).	Standard: ENCP 6.1, Optional: ENCP 6.2, ENCP 6.3, ABB L2, ABB L3 and ABB C21D Control Systems
ETS0063SC6x	63	35		OTM63F3CMA230V		
ETS0080SC6x	80	44		OTM80F3CMA230V		
ETS0100SC6x	100	55		OTM100F3CMA230V		
ETS0125SC6x	125	69		OTM125F3CMA230V		
ETS0160SC6x	160	88		OTM160E3CM230C		
ETS0200SC6x	200	110		OTM200E3CM230C		
ETS0250SC6x	250	138		OTM250E3CM230C		
ETS0400SC6x	400	221		OTM400E3CM230C		
ETS0630SC6x	630	349		OTM630E3CM230C		
ETS0800SC6x	800	443		OTM800E3CM230C		
ETS1000SC6x	1000	554		OTM1000E3CM230C		
ETS1250SC6x	1250	692		OTM1250E3CM230C		
ETS1600SC6x	1600	886		OTM1600E3CM230C		
ETS2000SC6x	2000	1108		OTM2000E3CM230C		
ETS2500SC6x	2500	1385		OTM2500E3CM230C		
ETS0040SN6x	40	22	Mechanically and Electrically Interlocked 4Pole Changeover Switch.	OTM40F4CMA230V	This ETS Series Doesn't Provide Short Circuit Protection as Standard (Can be modified upon customer request).	Standard: ENCP 6.1, Optional: ENCP 6.2, ENCP 6.3, ABB L2, ABB L3 and ABB C21D Control Systems
ETS0063SN6x	63	35		OTM63F4CMA230V		
ETS0080SN6x	80	44		OTM80F4CMA230V		
ETS0100SN6x	100	55		OTM100F4CMA230V		
ETS0125SN6x	125	69		OTM125F4CMA230V		
ETS0160SN6x	160	88		OTM160E4CM230C		
ETS0200SN6x	200	110		OTM200E4CM230C		
ETS0250SN6x	250	138		OTM250E4CM230C		
ETS0400SN6x	400	221		OTM400E4CM230C		
ETS0630SN6x	630	349		OTM630E4CM230C		
ETS0800SN6x	800	443		OTM800E4CM230C		
ETS1000SN6x	1000	554		OTM1000E4CM230C		
ETS1250SN6x	1250	692		OTM1250E4CM230C		
ETS1600SN6x	1600	886		OTM1600E4CM230C		
ETS2000SN6x	2000	1108		OTM2000E4CM230C		
ETS2500SN6x	2500	1385		OTM2500E4CM230C		

Molded Case Circuit Breaker Based
Service Entrance Power Transfer Switches

TRANSFER SWITCH	SYSTEM RATINGS		SWITCHING DEVICE			CONTROL SYSTEM
Model	400volts, 50hz		Type	Model	Short circuit level	
	Amps	kWe	**ABB**	XT & Tmax MCCB	Icu@380-415VAC	
This ETS Series Designates a Standard Molded Case Circuit Breaker Based Automatic Service Entrance Power Transfer Switch						
ETS0040MxxC6x	40	22	Mechanically and Electrically Interlocked 3Pole Fixed Molded Case Circuit Breakers. (Optional Withdrawable and/or 4Poles Type).	XT1-160-40	Optional short circuit level (Icu) from 25kA and up to 70kA.	Standard: ENCP 6.1, Optional: ENCP 6.2 and ENCP 6.3 Control Systems
ETS0050MxxC6x	50	27		XT1-160-50		
ETS0063MxxC6x	63	35		XT1-160-63		
ETS0080MxxC6x	80	44		XT1-160-80		
ETS0100MxxC6x	100	55		XT1-160-100		
ETS0125MxxC6x	125	69		XT3-250-125		
ETS0160MxxC6x	160	88		XT3-250-160		
ETS0200MxxC6x	200	110		XT3-250-200		
ETS0250MxxC6x	250	138		XT3-250-250		
ETS0315MxxC6x	320	177		T4-320		
ETS0400MxxC6x	400	221		T5-400		
ETS0500MxxC6x	500	277		T5-630		
ETS0630MxxC6x	630	349		T6-630		
ETS0800MxxC6x	800	443		T6-800		
ETS1000MxxC6x	1000	554		T7-1000		
ETS1250MxxC6x	1250	692		T7-1250		
ETS1600MxxC6x	1600	886		T7-1600		

BENEFITS

- AC/DC Operation
- Built-in Short-Circuit Protection up to 70kA
- Overload Protection
- Fixed and Adjustable Circuit Breakers
- Service Entrance
- Wide Range of Control Voltage

Full list of features available at
electronil.com/service-entrance-ats

Air Circuit Breakers Based
Service Entrance Power Transfer Switches

TRANSFER SWITCH	SYSTEM RATINGS		SWITCHING DEVICE			CONTROL SYSTEM
Model	400volts, 50hz		Type	Model	Short circuit level	
	Amps	kWe	**ABB**	Emax ACB	Icu@380-415VAC	
This ETS Series Designates a Standard Air Circuit Breakers Based Automatic Service Entrance Power Transfer Switch						
ETS0630AxxC6x	630	349	Mechanically and Electrically Interlocked 3Pole Fixed Air Circuit Breakers. (Optional With-drawable and/or 4Poles Type).	E1.2-630	Optional short circuit level (Icu) from 50kA and up to 100kA.	Standard: ENCP 6.1, Optional: ENCP 6.2 and ENCP 6.3 Control Systems
ETS0800AxxC6x	800	443		E1.2-630		
ETS1000AxxC6x	1000	554		E1.2-630		
ETS1250AxxC6x	1250	692		E1.2-630		
ETS1600AxxC6x	1600	886		E1.2-630		
ETS2000AxxC6x	2000	1108		E2.2-2000		
ETS2500AxxC6x	2500	1385		E2.2-2500		
ETS3200AxxC6x	3200	1773		E4.2-3200		
ETS4000AxxC6x	4000	2217		E4.2-4000		

BENEFITS

- AC/DC Operation
- Built-in Short-Circuit Protection up to 100kA
- Overload Protection
- Fixed and Adjustable Circuit Breakers
- Service Entrance
- Available in 3 Poles and 4 Poles Formation
- Available in Fixed and Withdrawable Types.
- Wide Range of Control Voltage

Full list of features available at
electronil.com/service-entrance-ats

INTEGRATED CONTROL SYSTEMS

أنظمة تحكم متكاملة

ELECTRONIL CONTROL PANELS.

The Smart Choice in Backup Power Systems.

Control Systems are the brains of a power system. They continuously monitor and manage operating conditions to ensure the reliability, flexibility and performance of the equipment as well as protect it from damage. We design and manufacture every detail of all ENCP Series Control Systems to ensure dependability, ease-of-use, safety and seamless integration with the rest of our equipment.

Our power equipment is used in a wide variety of applications, each of which places unique demands and challenges on its power systems, so we design our controllers to be extremely versatile and customizable.

Each one features programmable I/O modules to support customization and is designed to communicate and interoperate with these advanced building management systems (BMS).

ENCP SERIES CONTROL SYSTEMS

Available to support either single generator or parallel operation, our ENCP Control Systems are easy to operate and provide dependable engine and alternator control, operating information and system diagnostics.

GENSET CONTROLS

ENCP 3 Series | Single manual and remote start genset control systems.
ENCP 7 Series | Single genset automatic mains failure control systems.
ENCP 9 Series | Single/multiple synchronizing and load sharing genset control systems.

POWER TRANSFER SWITCH CONTROLS

ENCP 6 Series | Automatic transfer switch control systems to communicate with the genset controllers to bridge the gap from utility to standby power, and back again, ensuring a smooth, seamless transition and minimal disruption.

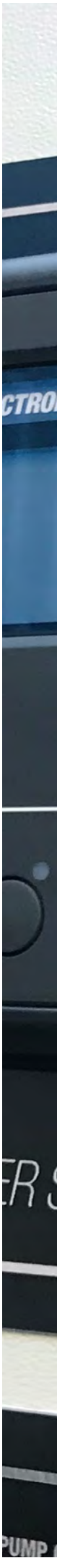
GENERATORS PARALLELING SWITCHGEARS

ENCP iX | 2-3 Genset synchronizing and load sharing switchgear control systems.
ENCP X | 2-20 Genset synchronizing and load sharing switchgear control systems.

PARALLELING SWITCHGEAR CONTROLS

Each ELECTRONIL Paralleling Switchgear Solution is developed to meet your specific needs, and the control systems are programmed to your exact specifications. ELECTRONIL Deploys fault-tolerant programming and provides an intuitive user interface with real-time system information to enable better operational decisions.

Discover more at
electronil.com/encp




ENCP 9.1
ALARM
WARNING
SHUTDOWN
SYSTEM
NOT IN AUTO
REMOTE START
INITIATED
REVERSE
POWER ALARM
GENSET
OVERLOADED
LOCK
REMOVE
KEY
UNLOCK
ALARM
RESET
EMERGENCY
STOP
GENSET 1
ON DUTY SELECTED
ENGINE FAIL TO START
LOW ENGINE OIL PRESSURE
HIGH ENGINE TEMPERATURE
AUTO
POWER SOLUTIONS
SOLUTIONS

ENCP GENSET

AUTO START GENERATOR CONTROLLERS.

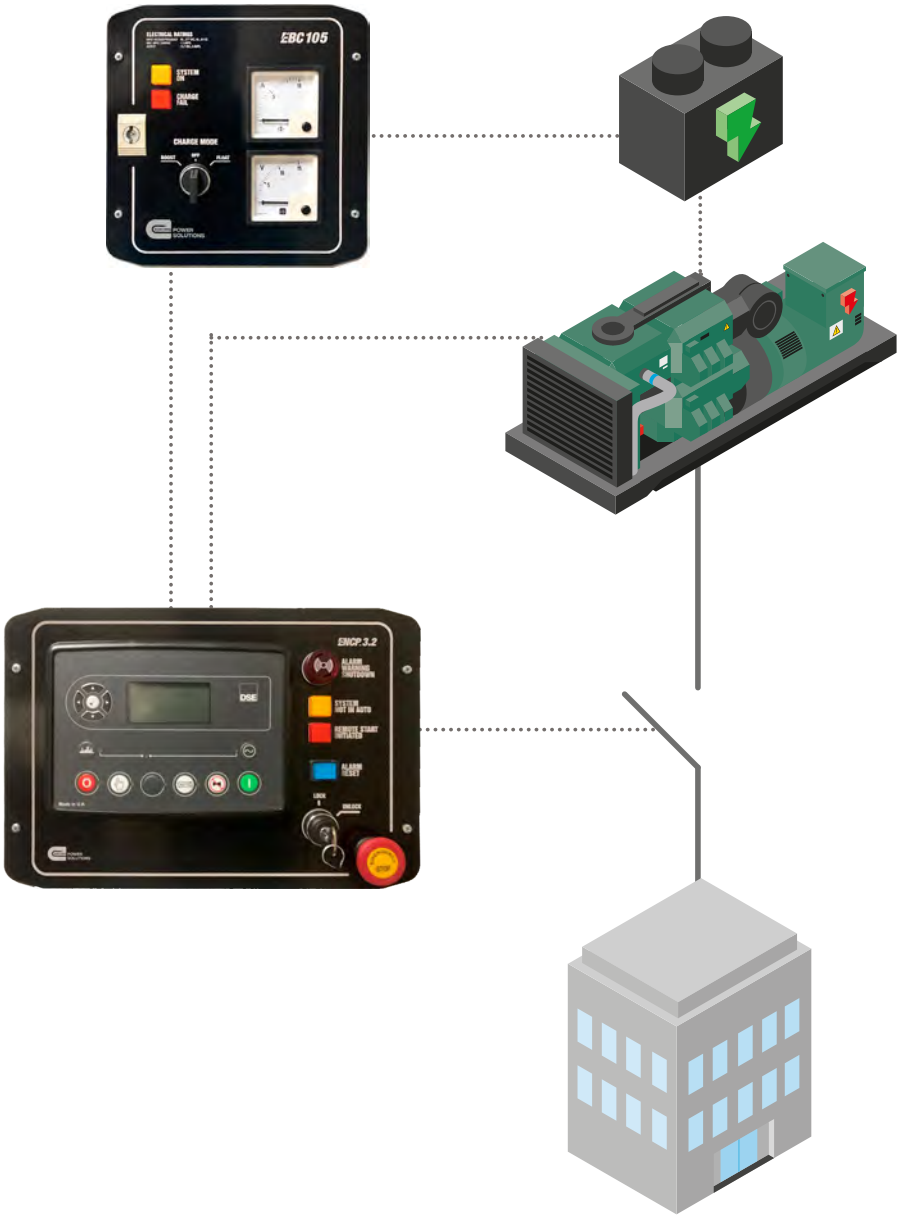
The ENCP 3 Series combines engine and generator control and monitoring with a single, robust panel for quick key access to engine and generator controls, diagnostics, and operating information.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the systems give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

Electronic J1939 (CAN) and non electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant. With a number of flexible inputs, outputs and protections, the systems can be easily adapted to suit a wide range of applications.

The ENCP 3 Series features a graphical display with an adjustable back-light as well as an advanced engine monitoring system. These features add to the sense of value and dependability that comes with your purchase of ELECTRONIL Products.

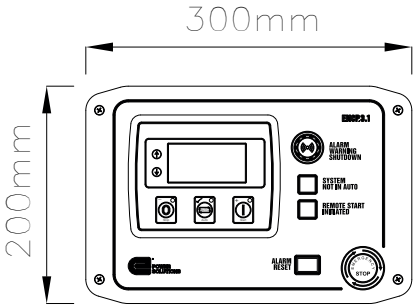
Full list of features available at
electronil.com/encp_genset



ENCP 3.1

AUTO START GENERATOR CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 300x200mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- CAN engine support (Tier 4F / Stage 5).
- Conventional engine support (Hz).
- Front panel (PIN protected).
- 3-phase generator sensing.
- Sophisticated alarms including water in fuel and tank bund.
- 0-10 V & 4-20 mA oil pressure sensor support.
- ECU periodic wake up for information retrieval.
- Comprehensive engine and alternator protections.
- Generator / load power & current monitoring and protection.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (4) Configurable inputs.
- (3) Configurable analog/digital inputs.
- (4) Configurable DC outputs.

COMMUNICATIONS

- USB for PC configuration

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

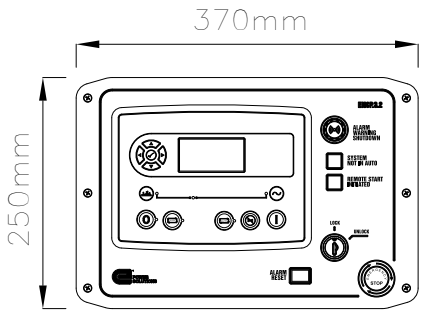
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_3.1

ENCP 3.2

AUTO START GENERATOR CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 370x250mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- CAN engine support (Tier 4F / Stage 5).
- Conventional engine support (MPU & Hz).
- Front panel (PIN protected).
- PLC editor.
- Generator current & power monitoring.
- 0-10 V & 4-20 mA oil pressure sensor support.
- Fuel level alarms.
- 1 alternative configuration.
- 3-phase generator sensing & protection.
- 5-key menu navigation / front panel breaker control buttons.
- Text based display.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (4) Configurable inputs.
- (3) Configurable analog/digital inputs.
- (4) Configurable DC outputs.

COMMUNICATIONS

- USB for PC configuration

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

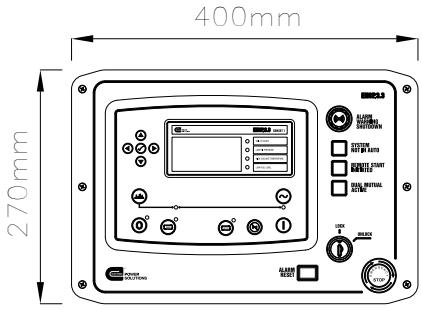
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_3.2

ENCP 3.3

AUTO START GENERATOR CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Independent fuel and start outputs.
- Simultaneous use of RS485 & RS232 ports.
- MODBUS RTU.
- SCADA software.
- Conventional engine support (MPU & Hz).
- CAN engine support (Tier 4F / Stage 5).
- Configurable front panel (PIN protected).
- Supports 7 languages.
- Advanced protections.
- Oil pressure disconnect delay.
- Configurable icon screens.
- Charge alternator disable functionality.
- Dedicated inputs for ECU specific operations.
- Advanced PLC editor.
- SMS alerts & control.
- Dual mutual standby.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (8) Configurable inputs.
- (6) Configurable analog/digital inputs.
- (6) Configurable DC outputs.
- (2) Configurable Volt-free outputs.

COMMUNICATIONS

- Simultaneous use of RS485 & RS23
- MODBUS RTU
- USB for PC configuration
- SCADA software

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

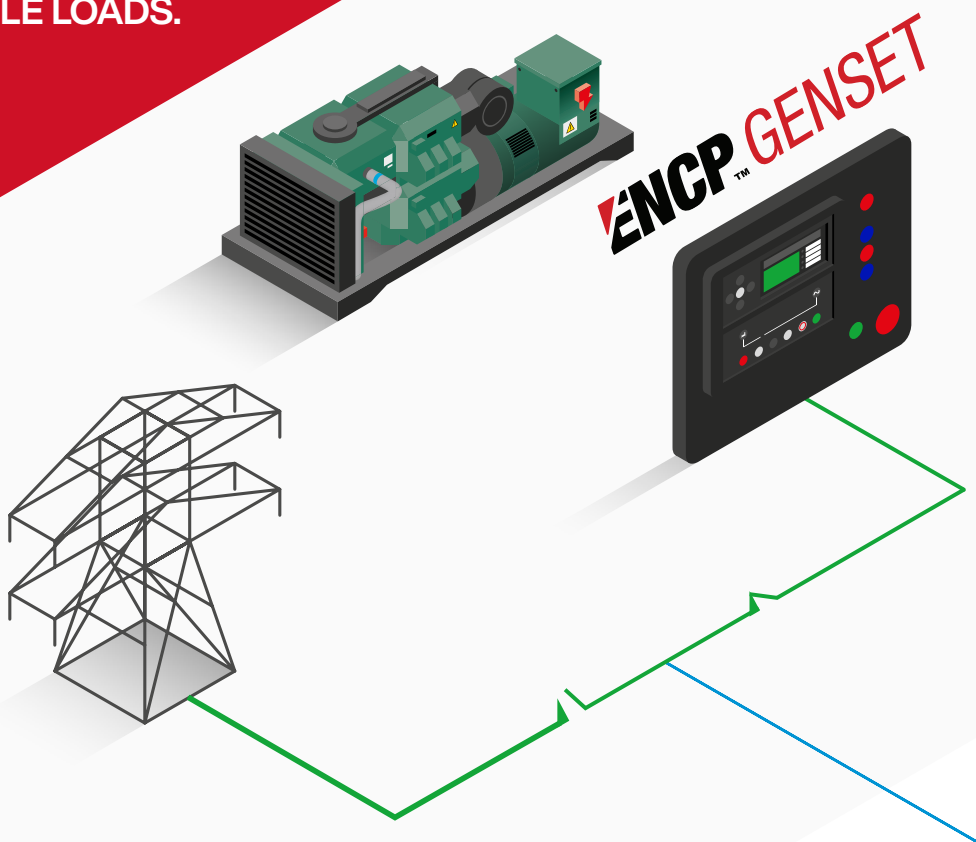
CONFIGURATION

- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_3.3

COMPLETE POWER MANAGEMENT SOLUTIONS.

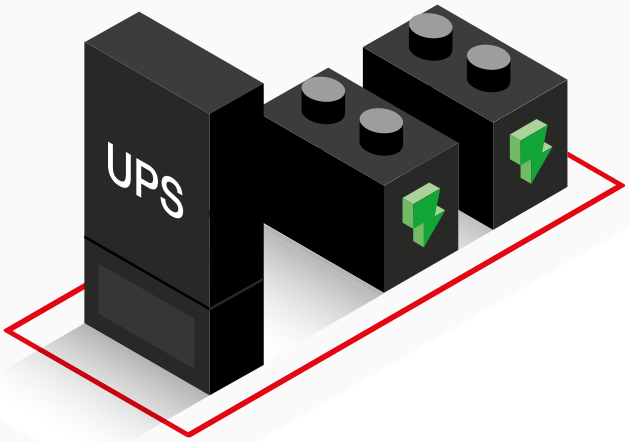
**MULTIPLE APPLICATIONS,
MULTIPLE SOURCES,
MULTIPLE LOADS.**

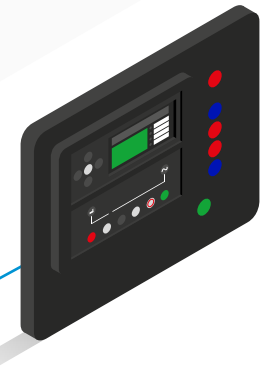


ENCP 3 Series

AUTO START GENERATOR CONTROLS.

Sophisticated genset controllers for single and multi-set systems.

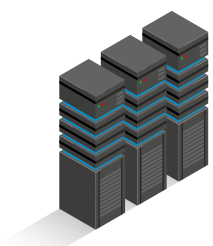


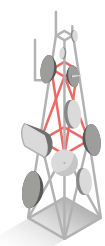


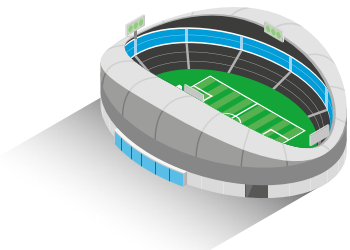
ENCP 6 Series

POWER TRANSFER SWITCH CONTROLS.

Dedicated auto power transfer switch controllers for demanding applications.







ENCP ATS

POWER TRANSFER SWITCH CONTROLLERS.

The ENCP 6 Series Power Transfer Switch Control Systems are designed for a variety of standby power applications. They provide flexibility, reliability and value in a compact package.

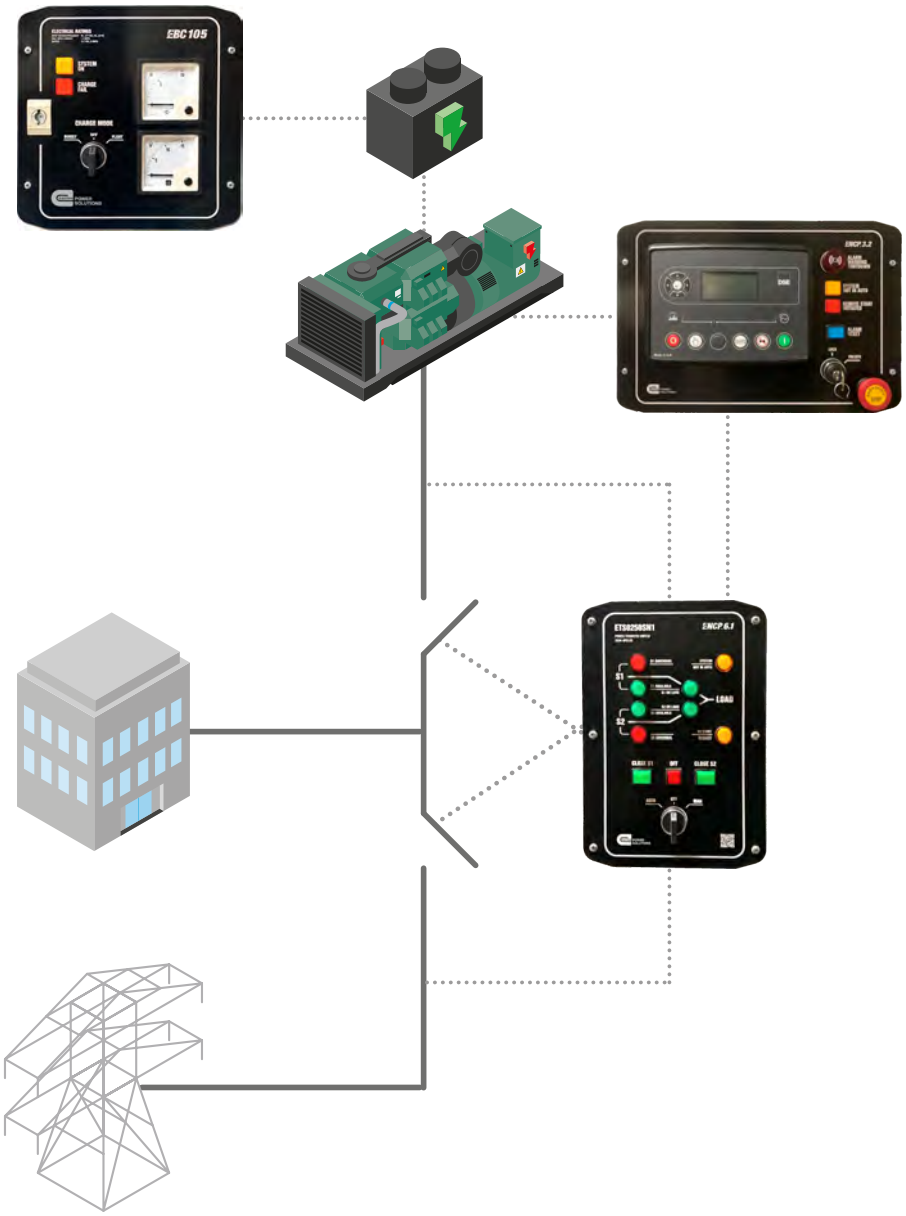
The ETS Open Transition Power Transfer Switches will provide fully functioning transfer in applications where a momentary loss of power is acceptable on re-transfer from emergency to normal power supply. The ENCP 6 Series Power Transfer Switch Control Systems also permits periodic testing of the emergency source without interrupting power to the loads.

The ETS Closed Transition Power Transfer Switches are designed to Meet application requirements where emergency backup power is required with no momentary loss of power by connecting/short time paralleling both sources before the transfer occurs. Closed transition also permits periodic testing of the emergency power source without interrupting power to the loads.

The ETS Service Entrance Power Transfer Switches are designed to provide standby power emergency power to entire installation loads to protect against utility power interruption; yet allow the ATS to be as close as possible to the point of service entrance.

By safely and in code compliance, integrating the necessary overcurrent protection and service disconnecting means into the power transfer switch, a single installation can be made at the service entrance. This design eliminates the need for a separate upstream fault protection and respective interconnections, which in turn reduces installation space, time, and cost.

Our Circuit Breaker based ETS Service Entrance Power Transfer Switches are available from 40A to 4000A.

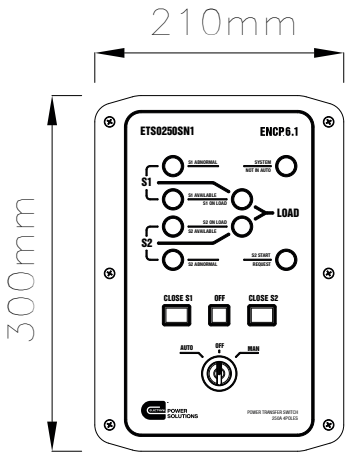


Full list of features available at
electronil.com/encp_ats

ENCP 6.1

POWER TRANSFER SWITCH CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 300x210mm

PRODUCT HIGHLIGHTS

FEATURES

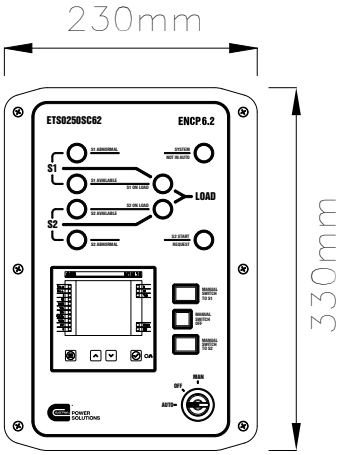
- Automatic switch-over between supplies.
- Source 1 / Source 2 control.
- LED Indicators.
- Not in Auto warning LED.
- S2 Start Request Indication LED.
- Self powered.
- Manual restore to S1.
- Configurable timers.
- Manual & automatic return.
- Rotary ATS configuration.

Full list of features available at
electronil.com/encp_6.1

ENCP 6.2

POWER TRANSFER SWITCH CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 330x220mm

PRODUCT HIGHLIGHTS

FEATURES

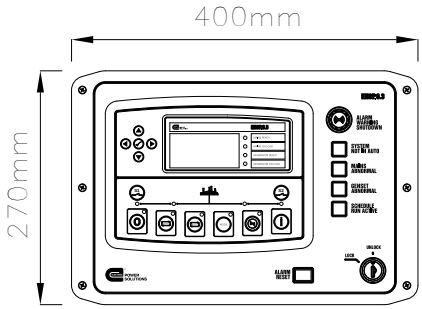
- Automatic switch-over between supplies.
- Source 1 / Source 2 control.
- LED Indicators.
- Not in Auto warning LED.
- S2 Start Request Indication LED.
- Self powered.
- Manual restore to S1.
- Configurable timers.
- Manual & automatic return.
- Rotary ATS configuration.
- True RMS Voltage and Current measurements.
- Frequency and On-Hours measurements.

Full list of features available at
electronil.com/encp_6.2

ENCP 6.3

POWER TRANSFER SWITCH CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Configurable for RS232 or RS485.
- 3-phase monitoring of S1 and S2.
- Source 1 / source 2 control.
- Manual restore to S1.
- Load switching (load shedding outputs).
- Check sync feature.
- Power monitoring (kWh, kVAr, kVAh, kVArh).
- Start and load inhibit.
- Manual and automatic return.
- Supports multiple topologies.
- Rotary ATS configuration.
- Configurable timers and alarms.
- Multiple date and time scheduler.
- PLC editor.
- Real-time clock.
- SMS messaging.
- Configurable GenComm pages.

Full list of features available at
electronil.com/encp_6.3

ADVANCED FEATURES

INPUTS/OUTPUTS

- (12) Configurable inputs.
- (6) Configurable Volt-free outputs.
- (6) Configurable DC outputs.

COMMUNICATIONS

- Configurable for RS232 or RS485
- USB for PC configuration

CONFIGURATION

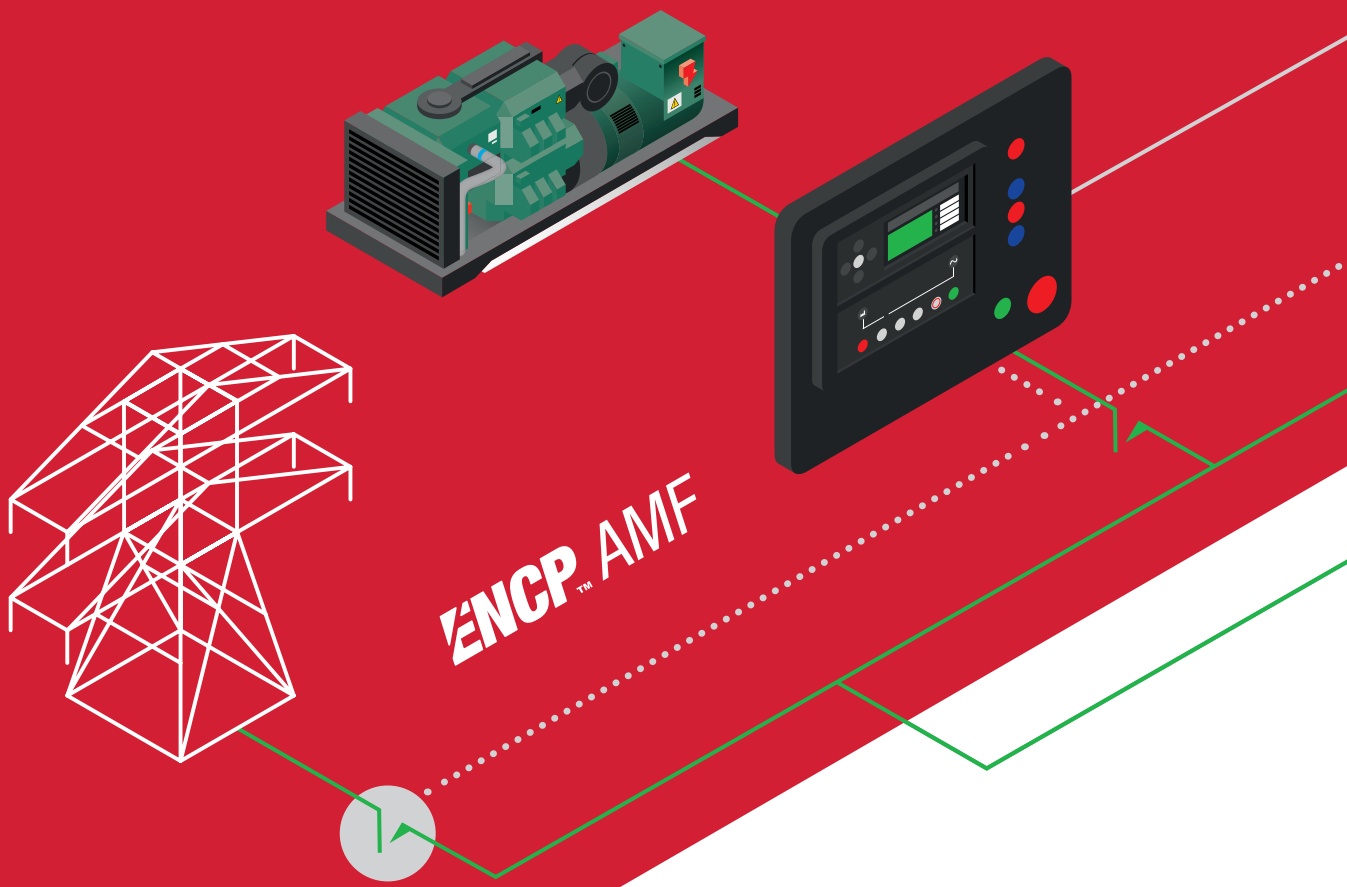
- Configuration Suite PC software
- Front panel (PIN protected)

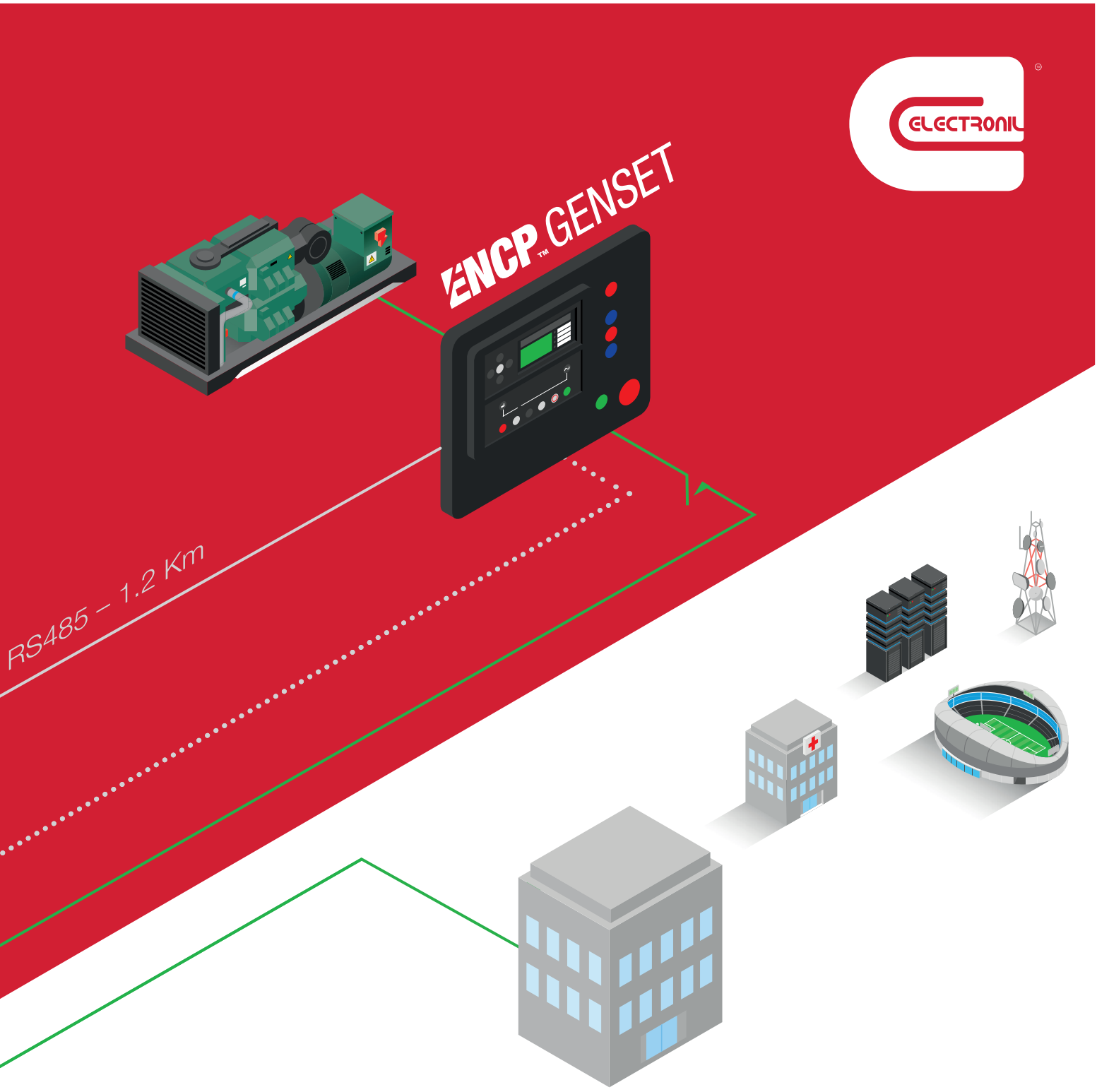
THREE-SOURCE SYSTEM.

Backup to Your Backup (DUAL-MUTUAL STANDBY).

A three-source system offers redundancy without the complexity or cost of a paralleling system. Available with a microprocessor-based controller, the system is based on two generators, two controllers and a two out of three power transfer switches.

Balancing engine run hours and instructing a second back-up generator to safeguard against the loss of power is essential for power critical applications. The Integrated dual mutual standby functionality simplifies the process of balancing engine run hours, whilst maintaining a back-up if the running generator fails. Connected via RS232 or RS485 the ENCP 3.3/ENCP 7.3 Control Systems Automatically run the correct generator, ensuring equal run times are maintained and engine downtime is reduced.





THE BENEFITS ARE MANY

- One generator is available when the other is being serviced.
- You have automatic backup power from the second generator; many critical power applications require this.
- By alternating generator runtime and extending the time it takes to accumulate engine hours, you extend time between maintenance and overhauls.
- You lengthen the time between refueling, because you have two fuel sources one for each generator.
- You have peace of mind knowing that if one generator fails, the other is automatic _ ***IT'S BACKUP TO YOUR BACKUP.***

ENCP AMF

AUTO MAINS FAILURE GENSET CONTROLLERS.

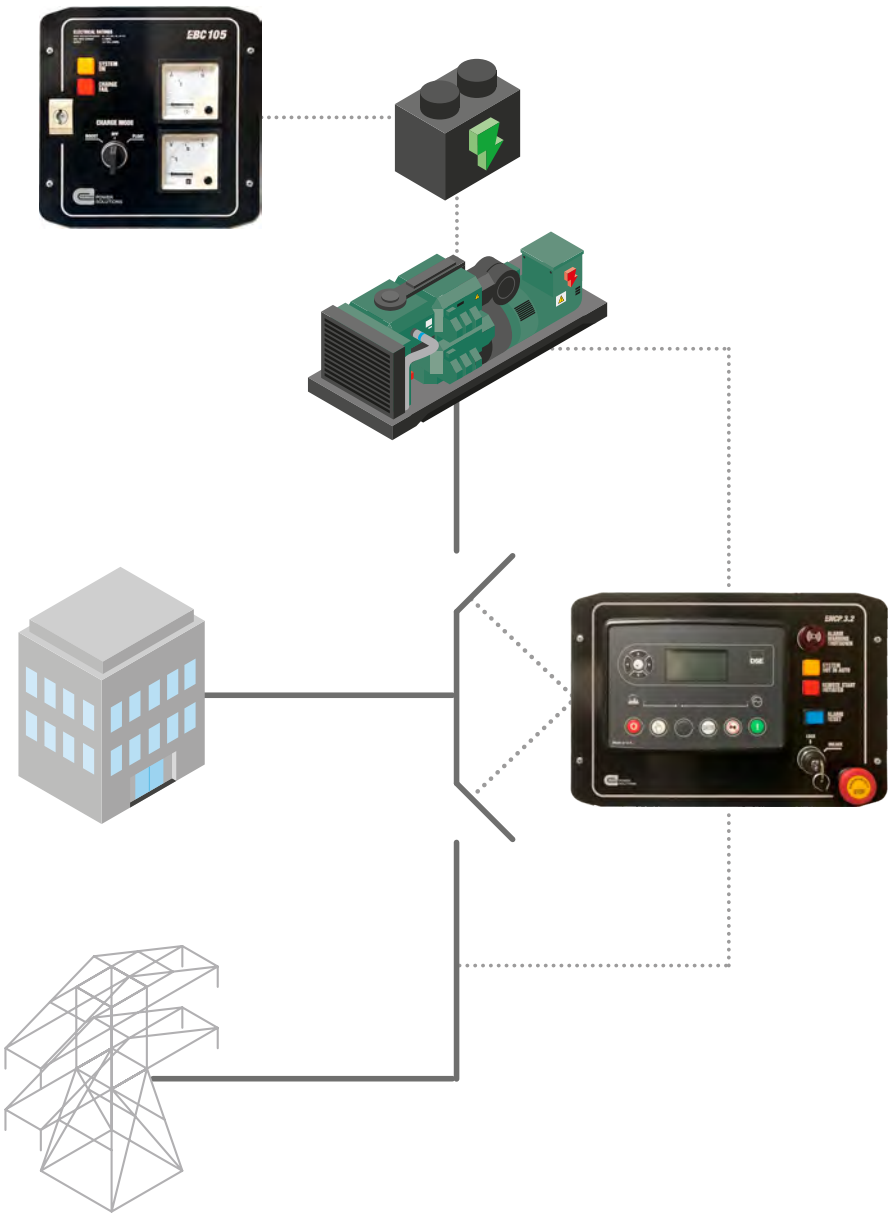
The ENCP 7 Series combines engine and generator control and monitoring with a single, robust panel for quick key access to engine and generator controls, diagnostics, and operating information.

Monitoring engine speed, oil pressure, coolant temperature, generator/mains frequency, generator/mains voltage, load current, power and engine fuel level, the systems give comprehensive engine and alternator protection. This is indicated on a large back-lit LCD text display via an array of warning, electrical trip and shutdown alarms in multiple languages.

Electronic J1939 (CAN) and non electronic MPU and alternator sensing engine support for diesel, gas and petrol engines all in one variant. With a number of flexible inputs, outputs and protections, the systems can be easily adapted to suit a wide range of applications.

The ENCP 7 Series features a graphical display with an adjustable backlight as well as an advanced engine monitoring system. These features add to the sense of value and dependability that comes with your purchase of ELECTRONIL Products.

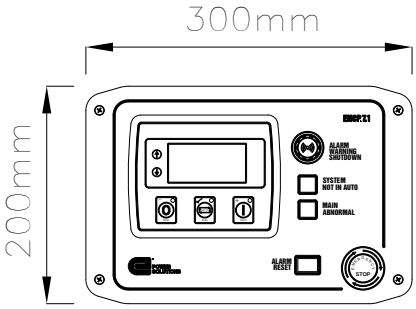
Full list of features available at
electronil.com/encp_amf



ENCP 7.1

AUTO MAINS FAILURE GENSET CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 300x200mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- CAN engine support (Tier 4F / Stage 5).
- Conventional engine support (Hz).
- 3-phase mains (utility) sensing.
- Automatic transfer between mains & generator.
- Sophisticated alarms including water in fuel & tank bund.
- ECU periodic wake up for information retrieval.
- Comprehensive engine and alternator protections.
- Alternator frequency & CAN speed sensing.
- Generator / load power & current monitoring and protection.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (4) Configurable inputs.
- (3) Configurable analog/digital inputs.
- (4) Configurable DC outputs.

COMMUNICATIONS

- USB for PC configuration

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

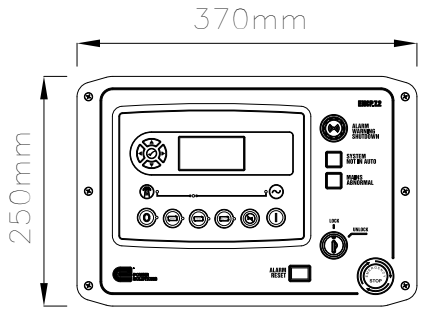
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_7.1

ENCP 7.2

AUTO MAINS FAILURE GENSET CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 370x250mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- CAN engine support (Tier 4F / Stage 5).
- Conventional engine support (MPU & Hz).
- Mains (utility) supply monitoring.
- Automatic transfer between mains & generator.
- PLC editor.
- Generator/mains current & power monitoring.
- 0-10 V & 4-20 mA oil pressure sensor support.
- Fuel level alarms.
- 1 alternative configuration.
- 3-phase generator sensing & protection.
- 5-key menu navigation / front panel breaker control buttons.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (8) Configurable inputs.
- (4) Configurable analog/digital inputs.
- (6) Configurable DC outputs.

COMMUNICATIONS

- USB for PC configuration

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

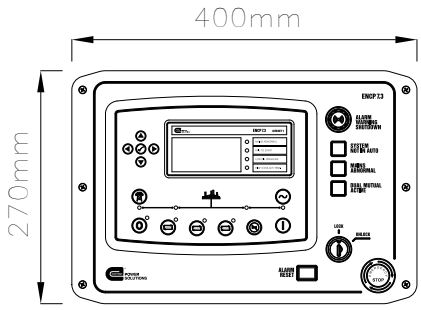
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_7.2

ENCP 7.3

AUTO MAINS FAILURE GENSET CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Independent fuel and start outputs.
- Simultaneous use of RS485 & RS232 ports.
- MODBUS RTU.
- SCADA software.
- Conventional engine support (MPU & Hz).
- CAN engine support (Tier 4F / Stage 5).
- Mains (utility) supply monitoring.
- Automatic transfer between mains & generator.
- Supports 7 languages.
- Crank disconnect on generator voltage.
- Oil pressure disconnect delay.
- Configurable icon screens.
- Charge alternator disable functionality.
- Dedicated inputs for ECU specific operations.
- Advanced PLC editor.
- SMS alerts & control.
- Dual mutual standby.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (8) Configurable inputs.
- (6) Configurable analog/digital inputs.
- (6) Configurable DC outputs.
- (2) Configurable Volt-free outputs.

COMMUNICATIONS

- Simultaneous use of RS485 & RS23
- MODBUS RTU
- USB for PC configuration
- SCADA software

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_7.3

ELECTRONIL PARALLELED POWER SYSTEMS

TOTAL INTEGRATION,
From Top To Bottom.

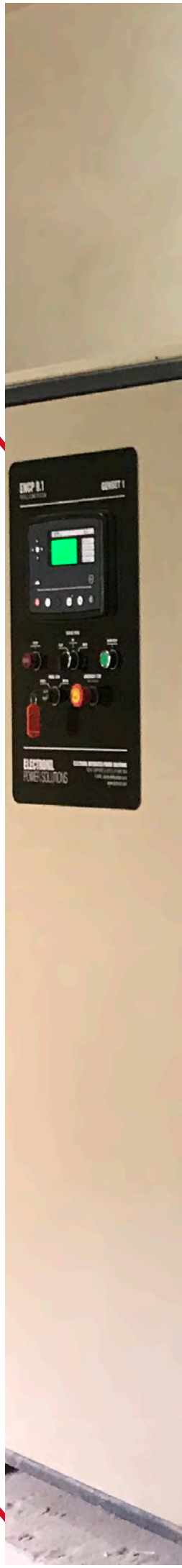
When it comes to paralleling systems, we offer 100% integration.

Our **ELECTRONIL PARALLELED POWER SYSTEMS** Designed, Engineered and Factory-Tested as a complete system, rather than built from parts from multiple manufacturers like some competitive products.

Comprised of our **ED SERIES GENERATORS**, **ENCP 9 SERIES PARALLELING SYSTEMS** and **SWITCHGEARS**, and **EBC SERIES BATTERY CHARGERS.** The **ELECTRONIL PARALLELED POWER SYSTEMS** delivers dependable power across multiple applications. Combine that with our extensive network of sales and service technicians, and you've got what everyone wants:

peace of mind.

Discover more at
electronil.com/paralleled_power_systems




ENCP 9.1
GENSET 2
ELECTRONIL
POWER SOLUTIONS
4
HUMAN MACHINE INTERFACE
ENCP X
MASTER CONTROLS
ELECTRONIL
POWER SOLUTIONS
5
ENCP 9.1
PARALLELING SYSTEM
GENSET 3
CHARGE MODE
PANEL LOCK
EMERGENCY STOP
ELECTRONIL
POWER SOLUTIONS
ELECTRONIL INTEGRATED POWER SOLUTIONS

THE BENEFITS OF PARALLELING GENE

Maximize Your System's Flexibility.

While it may be common for a facility to install a single large generator to meet its power needs, paralleling two or more generators offers a number of practical benefits and advantages over a single-generator system.

REDUNDANCY

The redundancy provided by the paralleling of two or more generators delivers greater reliability and flexibility than a single generator can provide. In critical applications, having more than one generator connected to the bus at all times ensures continuous generator power in the unlikely event that a generator fails.

Discover more at
electronil.com/paralleled_power_systems

EFFICIENCY

Instead of one large generator that might operate at an inefficiently low kW, several small generators can be paralleled together and turned on and off as necessary to efficiently support the varying demands of the load.

In situations where your load needs require one genset, you'll run more efficiently. And that kind of efficiency can result in big savings. Because our **ENCP 9 Series** control systems automatically turns off any generators in your system when needs are low, you'll benefit from immediate fuel savings and reduce running time for greater generator longevity.

ERATORS.

ENCP SYNC

COST-EFFECTIVE

In many cases, paralleling two or more gensets to produce the same output as a larger single unit results in significant cost savings.

For example: you can **save up to 20%** when **paralleling three 500 kW units** compared to one 1500 kW unit.

SPACE CONSTRAINTS

By using gensets with smaller footprints instead of one larger unit, the Paralleled Generators System provides greater location flexibility. The multiple units can be placed where a single genset won't fit, so space is used more efficiently. And because the weight of multiple units can be distributed, rooftop installation is even possible - something you simply can't do with many large single-generator sets.

POWER REQUIREMENTS

If the largest available generator is too small to meet your power requirements, two or more generators can be paralleled to provide the necessary power.

FUTURE GROWTH

A Paralleled Generators System can be designed to add additional generators as your facility's load requirements expand.

Purchase the Paralleled Generators System that fits your budget today. And, in the future, it can easily expand as your needs and budget allow. That way, you'll never have to worry about replacing a system you've outgrown.

THE ELECTRONIL DIFFERENCE.
OUR PROVEN PROCESS.

We carefully consider your requirements and develops a solution that meets your needs. Every design starts with our proven, time-tested process that builds your system to your exact requirements.

Our experienced engineering team helps you every step of the way, determining and specifying your requirements, designing the system and providing easy-to-read drawings and documentation. ELECTRONIL's rigorous testing and careful commissioning ensure that your paralleling switchgear is always ready to supply generator power when needed.

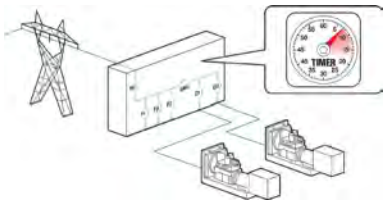
PARALLELING GENERATORS

How it works.

Let's look at a typical response to loss of utility power. When a loss of utility power occurs, almost every system responds with the basic sequence shown here.

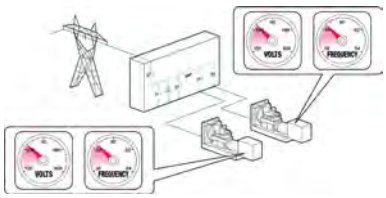
1 | ENGINE START DELAY

A timer starts when there is a loss of utility. If utility returns before the timer expires, the system does not start. If the utility outage is long enough for the timer to expire, the system will commit to transferring to generator power.



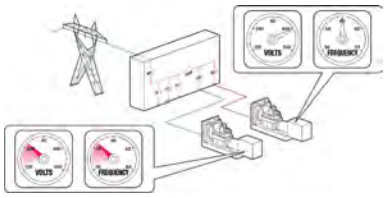
2 | START-UP / LOAD SHED

All available generators start. If the system is designed to supply power to loads as soon as one generator is online (typical for systems serving critical and life-safety loads), low-priority loads are shed or are inhibited from transferring. This prevents the first-on generator from being overloaded.



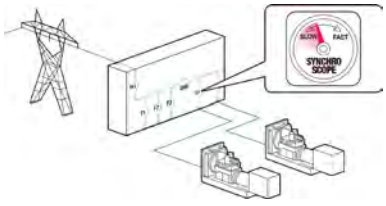
3 | FIRST GENERATOR BREAKER CLOSES

The first generator to reach the rated voltage and frequency closes to the bus. First-on logic prevents multiple generators from simultaneously closing to the bus. The bus is now energized, and power is available to the load. Low-priority loads remain shed with F2 and F3 still open.



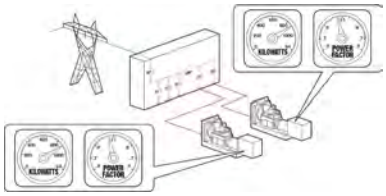
4 | SYNCHRONIZATION

The incoming generator's voltage, frequency and phase are matched to the running bus. When matched, the generator-paralleling breaker closes.



5 | SECOND GENERATOR BREAKER CLOSES / LOAD SHARING

Additional generator power is available to the load. The system's load-sharing controls actively control the kW and kVAr output of each generator in order to proportionally share the load (according to the power ratio of each generator) and maintain rated frequency and voltage.

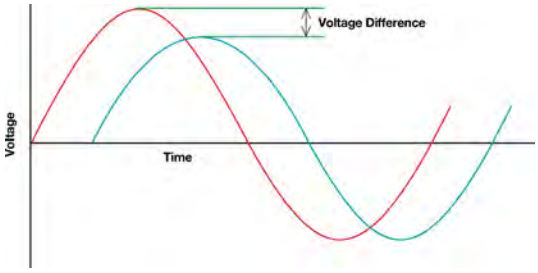


SYNCHRONIZATION

Let's take a detailed look at the synchronization process. Our ENCP 9 Series Generators Paralleling System's and the ENCP X Generators Paralleling Switchgears, matches the incoming generator's output (waveform) to the running bus. When the voltage, frequency and phase are all matched, the automatic synchronizer will close the incoming generator's circuit breaker.

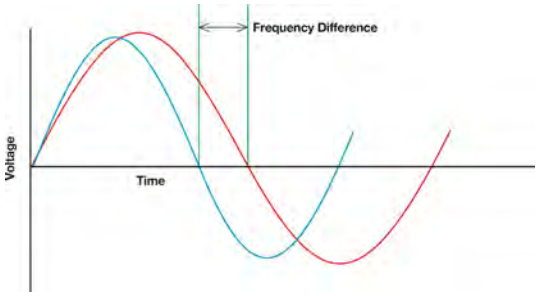
VOLTAGE MATCH

The synchronizer adjusts the incoming generator's voltage to match the running bus.



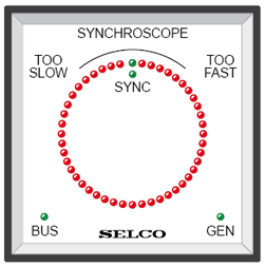
FREQUENCY MATCH

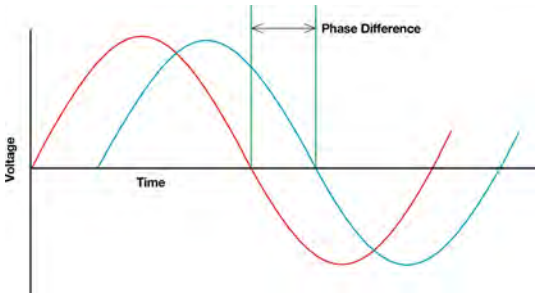
The synchronizer adjusts the incoming generator's speed to match the frequency of the running bus.



PHASE MATCH

The synchronizer adjusts the incoming generator's speed to match the phase of the running bus. When matched, the two sine waves will be the same.



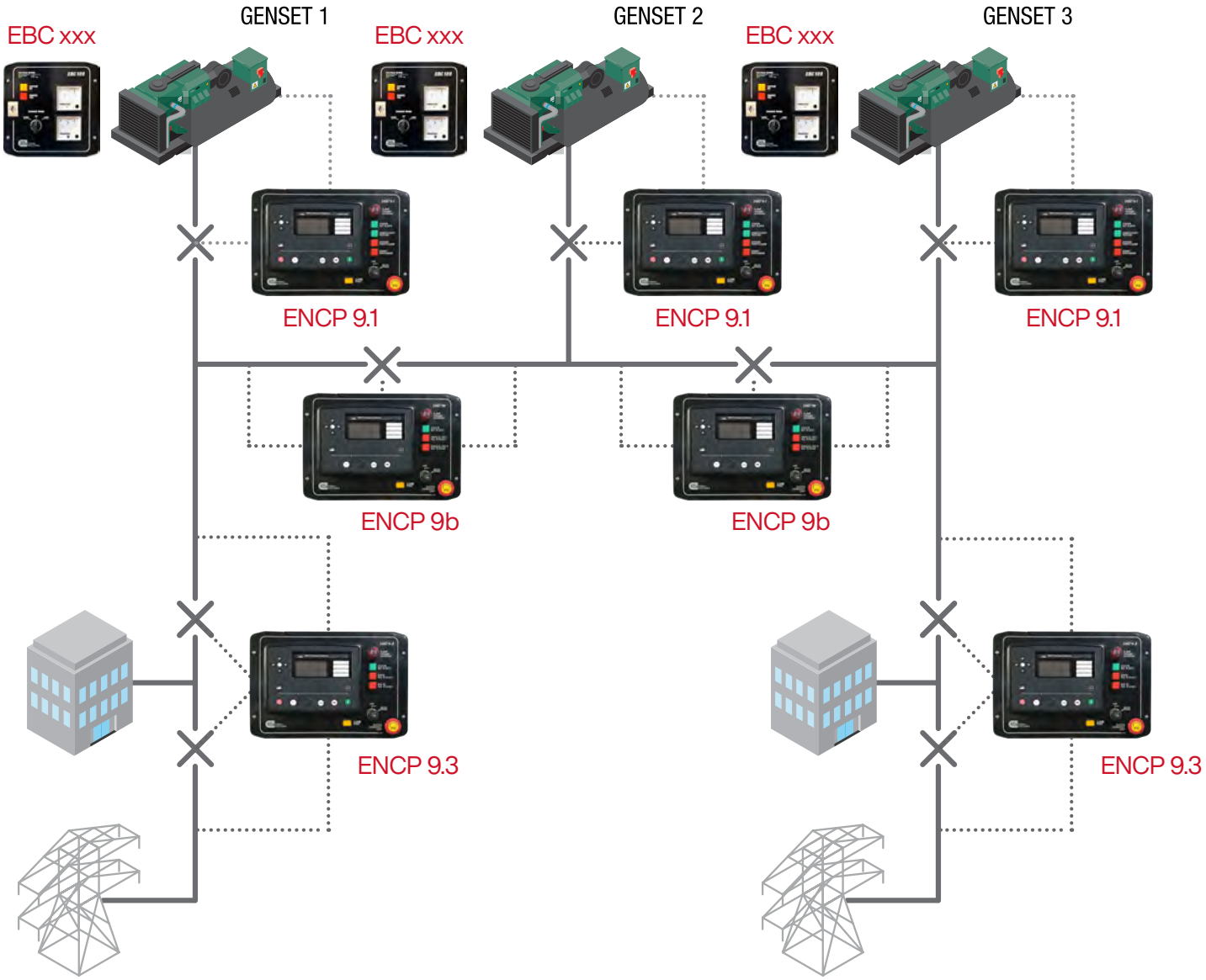


PARALLELING SYSTEMS (Synchronizing and Load Sharing)

(Hospital Application Example)

ENCP 9 Series Paralleling Controllers offer a range of highly sophisticated features & functions in a simple, user-friendly format.

The ENCP 9.1 Generator Paralleling Controller can be equipped with a range of battery chargers to ensure optimal battery performance and maximum battery life.



ENCP 9.1 Auto Start GENSET/GENSET Paralleling Controller.
ENCP 9.3 Auto Transfer Switch/Mains Controller.
ENCP 9b Synchronized Generators Bus-Tie Controller.
EBC xxx Automatic Enclosed Genset Battery Chargers

ENCP SYNC

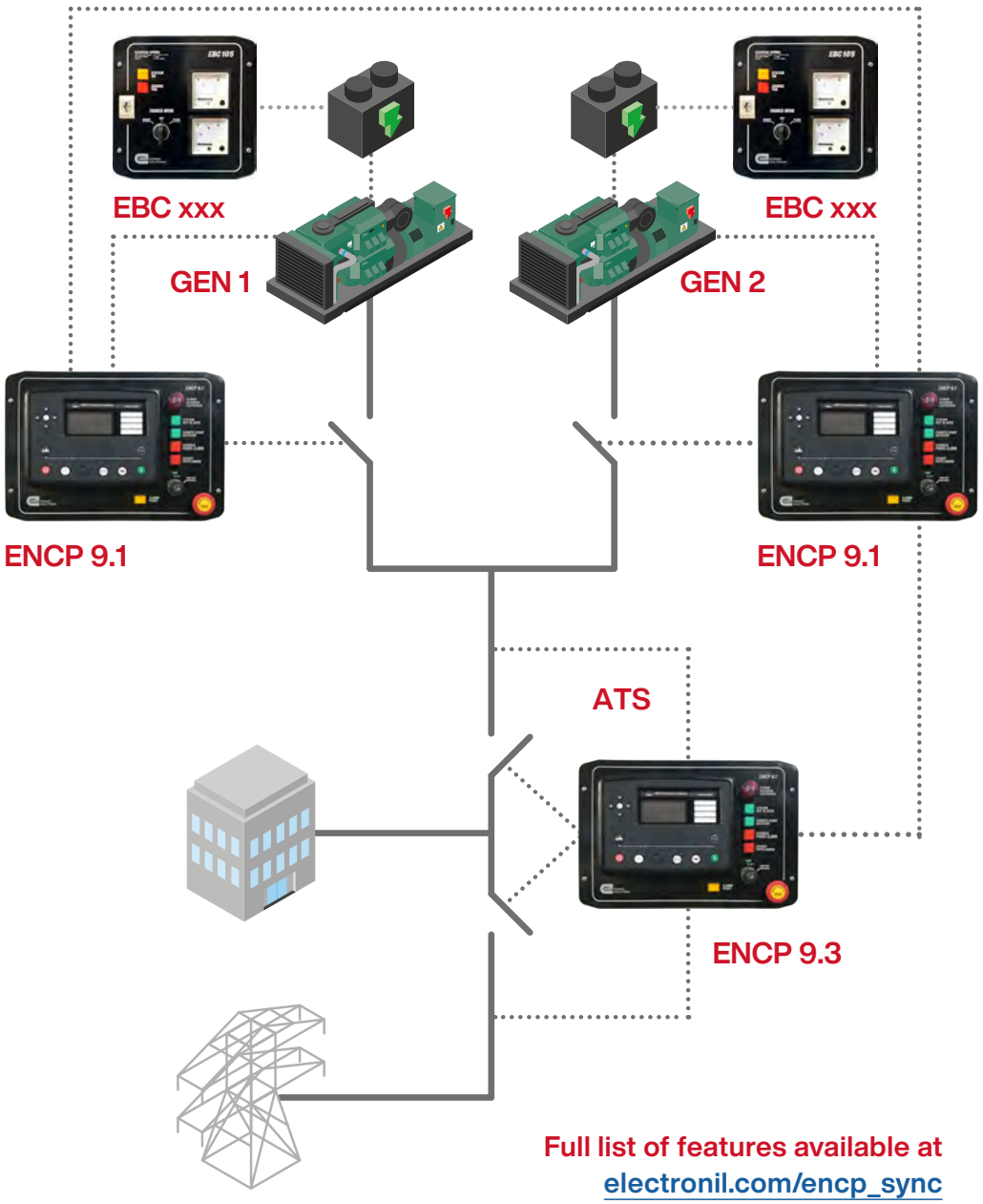
GENERATOR PARALLELING CONTROLLERS.

The ENCP 9 Series is an easy to use Synchronizing Auto Start Control System suitable for use in a multi-generator load share system, designed to synchronize up to 32 generators including electronic and non-electronic engines.

The ENCP 9 Series Monitors the generator and indicates operational status and fault conditions, automatically starting or stopping the engine on load demand or fault condition.

With all communication ports capable of being active at the same time, the ENCP 9 Series is ideal for a wide variety of demanding load share applications, from a single module to the paralleling and load sharing of multiple units. The systems can be further customized to meet your needs through programming and expansion modules.

The ENCP 9 Series features a graphical display with an adjustable backlight as well as an advanced engine monitoring system. These features add to the sense of value and dependability that comes with your purchase of ELECTRONIL Products.

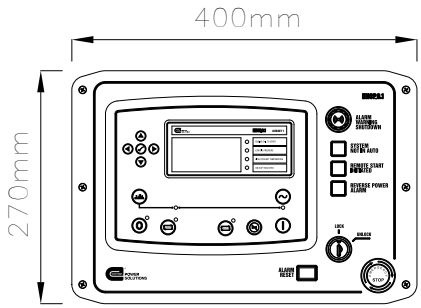


Full list of features available at
electronil.com/encp_sync

ENCP 9.1

GENSET / GENSET PARALLELING CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- 5 stage dummy load and load shedding outputs.
- Independent RS485, RS232, CAN, USB and Ethernet.
- MODBUS RTU / TCP IP.
- SNMP.
- SCADA software.
- Conventional engine support (MPU & Hz).
- CAN engine support (Tier 4F / Stage 5).
- Generator load demand with sequential set start.
- 0-10 V & 4-20 mA oil pressure sensor support.
- Power monitoring.
- RoCoF and vector shift monitoring.
- Automatic hours run balancing.
- Sophisticated fuel monitoring and alarms.
- 3-phase generator voltage and current sensing.
- Sophisticated bus sensing (3-phase).
- Direct governor and AVR control.
- Advanced SMS messaging.
- Advanced PLC editor.
- Support for worldwide languages.
- Extensive data logging & trending.
- Start & stop via SMS messaging.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (12) Configurable digital inputs.
- (4) Configurable analog/digital inputs.
- (8) Configurable DC outputs.
- (2) Configurable flexible sender inputs.
- (2) Configurable Volt-free outputs.

COMMUNICATIONS

- Independent ports for RS485, RS232,
- CAN, USB and Ethernet
- MODBUS RTU
- USB for PC configuration
- SCADA software

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

CONFIGURATION

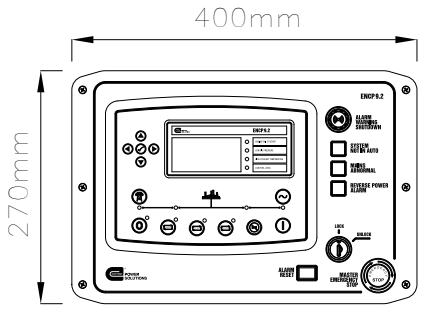
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_9.1

ENCP 9.2

SINGLE GENSET / MAINS PARALLELING CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Independent fuel and crank outputs.
- 5 stage dummy load and load shedding outputs.
- Independent RS485, RS232, CAN, USB and Ethernet.
- MODBUS RTU / TCP IP.
- SNMP.
- SCADA software.
- Conventional engine support (MPU & Hz).
- CAN engine support (Tier 4F / Stage 5).
- 3-phase mains & genset voltage and current sensing.
- 0-10 V & 4-20 mA oil pressure sensor support.
- Peak lopping and peak shaving functionality.
- kW & kV Ar load sharing.
- RoCoF and vector shift protection.
- Automatic mains (utility) decoupling with no-break return.
- Positive & negative kVAr export control.
- Volts and frequency matching.
- Sophisticated fuel monitoring and alarms.
- Direct governor and AVR control.
- Advanced SMS messaging.
- Advanced PLC editor.
- Support for worldwide languages.
- Extensive data logging & trending.
- Start & stop capability via SMS messaging.

Full list of features available at
electronil.com/encp_9.2

ADVANCED FEATURES

INPUTS/OUTPUTS

- (12) Configurable digital inputs.
- (4) Configurable analog/digital inputs.
- (8) Configurable DC outputs.
- (2) Configurable flexible sender inputs.
- (2) Configurable Volt-free outputs.

COMMUNICATIONS

- Independent ports for RS485, RS232,
- CAN, USB and Ethernet
- MODBUS RTU
- USB for PC configuration
- SCADA software

ENGINE COMPATIBILITY

- Conventional engine support (Hz)
- CAN engine support (Tier 4F / Stage 5)

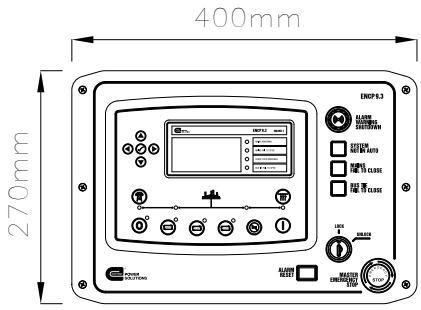
CONFIGURATION

- Configuration Suite PC software
- Front panel (PIN protected)

ENCP 9.3

MULTI-GENSET / MAINS PARALLELING CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Independent RS485, RS232, CAN, USB and Ethernet.
- MODBUS RTU / TCP IP.
- SCADA software.
- 3-phase mains (utility) voltage and current sensing.
- Peak lopping and peak shaving functionality.
- kW & kVAr load sharing.
- RoCoF and vector shift protection.
- Mains (utility) kW export protection.
- Automatic mains (utility) decoupling with no-break return.
- Generator load demand.
- Advanced SMS messaging.
- Advanced PLC editor.
- Support for worldwide languages.
- Data logging & trending.
- Multiple event scheduler.
- Native no bus breaker support for signal ATS applications.
- Separate ramp up and ramp down rates configurable via PLC.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (11) Configurable digital inputs.
- (2) Configurable Volt-free outputs.
- (6) Configurable DC outputs.

COMMUNICATIONS

- Independent ports for RS485, RS232, CAN, USB and Ethernet
- MODBUS RTU / TCP IP
- SCADA software
- USB for PC configuration

CONFIGURATION

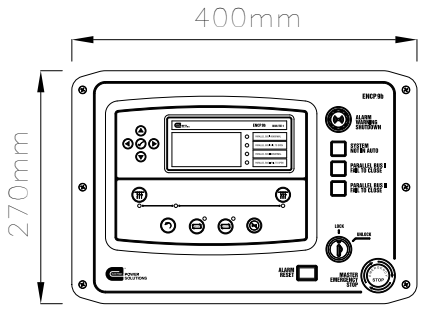
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_9.3

ENCP 9b

PARALLEL BUS / BUS PARALLELING CONTROLLER.

Image for illustration purposes only,
Depending on your application the actual product may vary.



User Interface Size: 400x270mm

PRODUCT HIGHLIGHTS

- Enhanced bus sensing of 2 buses for improved synchronizing functionality.
- Multiple controller's can be used within one synchronizing system.
- Advanced PLC editor.
- Instrumentation shows the status and measurements of both buses.
- Advanced SMS control and fault messaging.
- Supports multiple global languages.
- Easy access diagnostic pages including modem diagnostic pages.
- Advanced data logging and trending.
- Eliminates the need for costly PLC systems.

ADVANCED FEATURES

INPUTS/OUTPUTS

- (11) Configurable digital inputs.
- (2) Configurable Volt-free outputs.
- (6) Configurable DC outputs.

COMMUNICATIONS

- Independent ports for RS485, RS232, USB and Ethernet
- MODBUS RTU / TCP IP
- USB for PC configuration

CONFIGURATION

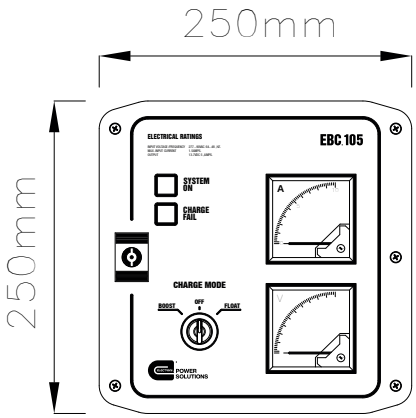
- Configuration Suite PC software
- Front panel (PIN protected)

Full list of features available at
electronil.com/encp_9b

EBC Series

AUTOMATIC ENCLOSED BATTERY CHARGERS.

Image for illustration purposes only,
Depending on your application the actual product may vary.



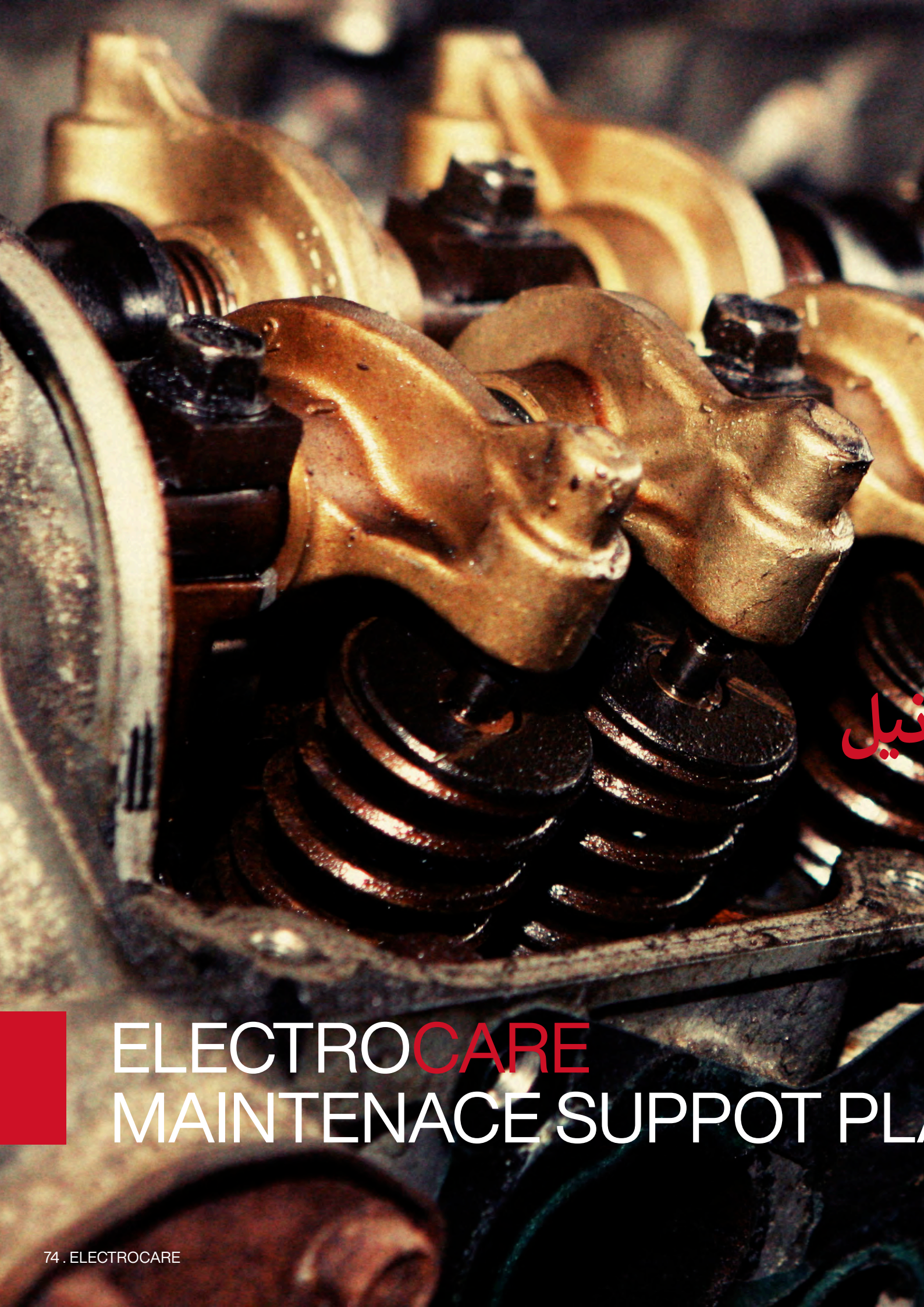
User Interface Size: 250x250mm

PRODUCT HIGHLIGHTS

FEATURES

- Constant current / constant voltage.
- Automatic float mode return.
- Low output ripple.
- 12VDC, 24VDC with 5 & 10Amps outputs.
- Reverse polarity, short-circuit and current limiting protection.
- Auto recovery on fault condition removal.
- Cell charge boost and equalizing.
- Power save mode.
- No moving parts – convection cooled.
- Power ON indicator.
- Charge fail indicator.
- Output voltage and current meters.
- 80% operating efficiency
- Manual Boost/Float Selection.
- Compatible with all common battery types.

Full list of features available at
electronil.com/ebc_series



ELECTROCARE MAINTENACE SUPPOT PL

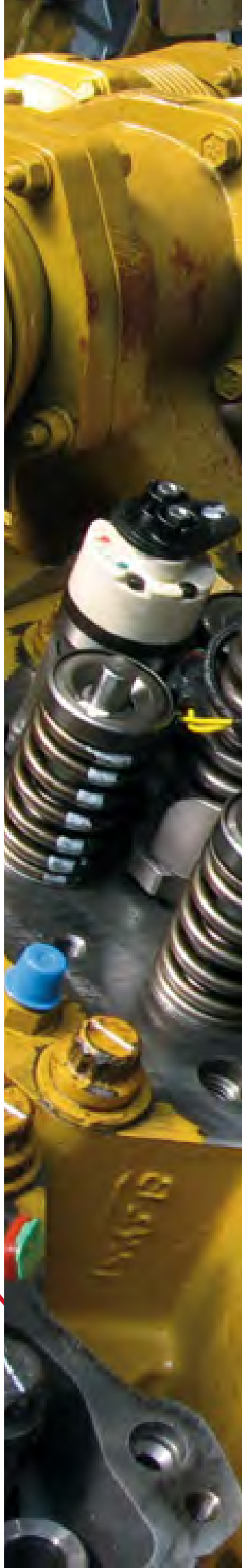
إليكتروكير
خطة دعم الصيـانة من إلكترو

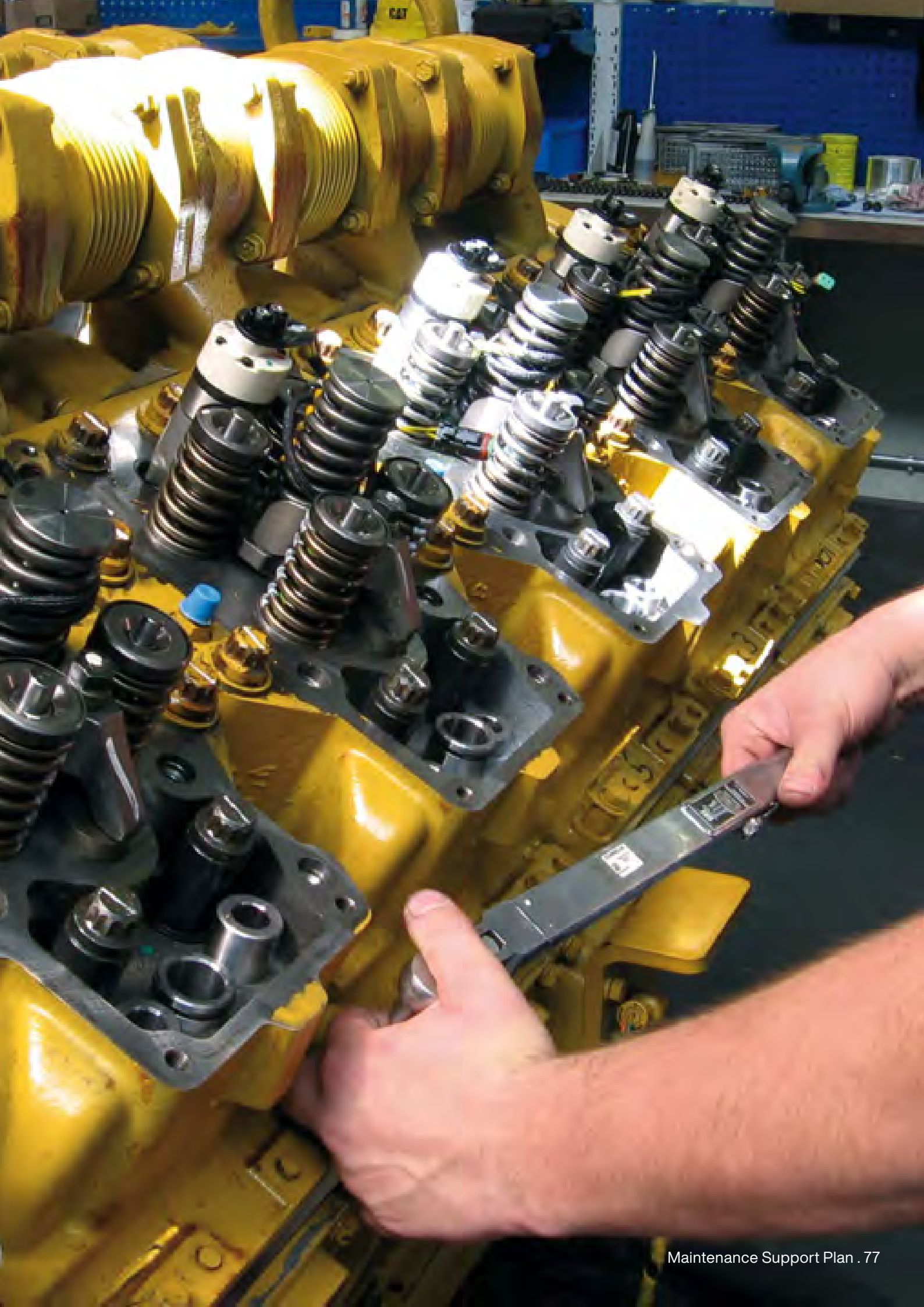
AN

ELECTROCARE
MAINTENANCE SUPPORT PLAN.

Ensure power is always there when you need it with the **ELECTROCARE** Maintenance Support Plan. Our service experts continually monitor and maintain your equipment through a comprehensive maintenance schedule which keeps your generator in peak working condition. We are always available to provide the level of service support you need.

Choose from one of four **ELECTROCARE** Maintenance Support Plans options to give your equipment the highest possible service care and maintenance cover, giving you total peace of mind.





ELECTROCARE
Maintenance Support Plan.

OVERVIEW

ELECTRONIL Will Perform an initial site survey, which will enable us to fully evaluate your generator and ensure that we offer you the correct service plan to suit your business needs.

The survey will cover the following:

- Initial assessment of set condition.
- Set type and serial number.
- Set location on site.
- Accessibility to and from the set and parking requirements.
- Set usage (Standby, Continuous, Prime Power / Peak Lop), etc.
- Any other site-specific factors we need to be aware of.

The **ELECTROCARE** Maintenance Support Plan is focused on providing onsite maintenance with an effective, high quality condition monitoring and scheduled maintenance service.

We offer a fixed menu of service giving our customer the opportunity of not only ensuring that their generator set is working to its potential, but also that faults are identified and corrected before they develop into component failures, which are costly and time consuming to repair. This is achieved by the inclusion in all our products of **ELECTROCARE** Maintenance Support Plan critical function monitoring.

Critical Functions Monitored by ELECTROCARE

Much like a human body, today's engines have critical systems that need monitoring to maintain their health. These include the lubrication, coolant, fuel, air and management control systems.

ELECTROCARE Measures the trends and vital signs of these systems, frequently monitoring for faults or other areas requiring additional attention.

The **ELECTROCARE** Report highlights any component changes we recommend and gives guidance on the optimum time to action possible faults and maximize uptime.

ELECTROCARE Benefits

- **Total support** - when you need it, giving you **total peace of mind.**
- **Confidence** that your generator will start when you need it.
- **Highest standards** of maintenance and quality assurance.
- **Scheduled servicing** provides validation of warranty coverage.
- **Cost-effective** solution.
- **ELECTRONIL Highly Trained engineers and technicians** providing specialist expertise.
- **Maximize** uptime and save costs.
- **Total added value** package.

ELECTROCARE
Maintenance Support Plan.

SUMMARY

ELECTROCARE Support Plan Options Menu

DESCRIPTION	ELECTROCARE			
	Standard	Extra	Premium	Premium +
Routine inspection and report (see details in Appendix 1 below)	[S]	[S]	[S]	[S]
Critical functions monitored (see details in Appendix 2 below)	[O]	[O]	[S]	[S]
Diagnostic analysis and recommendation reports	[O]	[O]	[S]	[S]
All work undertaken by highly trained and equipped technicians	[S]	[S]	[S]	[S]
Transport and travel expenses included on scheduled visits	[S]	[S]	[S]	[S]
Scheduled maintenance visits to meet your service requirements	[O]	[S]	[S]	[S]
Out of hours call out facility	[O]	[O]	[S]	[S]
Oil and filter change to meet your needs	[O]	[O]	[S]	[S]
PLAN FREQUENCY	Annual	Biannual	Quarterly	Monthly

Appendix 1

Routine Inspection and Report

ENGINE SECTION

- Air filter inspect and advise.
- Oil, coolant and fuel level check and advise.
- Intake and exhaust system check.
- Fuel, coolant and oil pipe work check.
- Drive-belt condition check.
- Battery voltage drop check.
- Static battery charge check.
- Functional control panel test (offload).
- Radiator matrix check and advise.

ALTERNATOR SECTION

- AVR check.
- AVR performance check off load.
- Condition of load cabling check.

Appendix 2

Critical Functions Monitored

CONTROL SECTION

- Alarm history/event log check (dependent on control system).
- Circuit breaker inspect and check.
- Switches, Fuses and MCB check.
- Indication lamps & sounder function check.
- Relays and bases check.
- Timing devices check.
- Control wiring inspection check.
- Engine protection check.

ANCILLARIES CHECK

- Block heater check.
- Battery charger check.
- Louvres and fans check.

[S] = Standard [O] = Optional

ELECTROCARE
Maintenance Support Plan.

OPTIONAL EXTRAS

Additional Options Available

The following additional options are available with each **ELECTROCARE** Maintenance Support Plan:

Standby Application

- Site load test attendance including documented results.
- Battery voltage drop test.
- Visits can be undertaken out of office hours.

Prime / Continuous

- Battery voltage drop test.
- Visits can be undertaken out of office hours.
- Oil and filter service every 200 hours or 6 months.
- Annual radiator clean and coolant replacement.

Optional Extras Benefits

- **Genuine Filters** and Spare Parts.
- **Engineers attendance** while site load testing is being carried out, load results from generator will be recorded.
- **Resistive load bank** test will be carried out with load results will be recorded and documented.
- **Visits can be undertaken out of normal hours** to suit your site requirements.
- **ELECTRONIL** Recommends 6 months or 200 hour service interval, this can be incorporated and worked round your site requirements.
- If **working in a harsh environment** regular cleaning will aid in cooling and performance.

PARTS
Genuine Parts.

We provide genuine/aftermarket parts and service support through a nationwide network of field-based service engineers and specialist service center workshops.

If you are a genset owner or operator, you have found the best place to get your genuine parts.

When you buy genuine parts, you buy peace of mind and the knowledge that the product you are getting is supported by our Service and Support team.

We want to provide you with the best parts for your genset, whether you own a new engine or an older one.

Our goal is to minimize your downtime and maximize your profits, with parts and service that deliver real value.

Service Support.

ELECTRONIL Provide Comprehensive Support on All Types of Generators, Low-voltage switchgears and switchboards Across Egypt.

SUPPORT

Our Support Team provide specialist advice, technical support and assistance for:

- Generator service enquiries.
- Maintenance (planned and unplanned).
- 24/7 service and repair – (subject to agreement).
- Parts and consumables.
- Customer service agreements.
- New equipment sales.
- Panel and system upgrades.

SERVICE

Our aim is to provide customers with service support that is fast and responsive, flexible and convenient, and minimizes equipment downtime and costs. We offer a range of services including:

- Generator service enquiries.
- Maintenance Scheduling – specifically designed to meet the service needs of your business.
- Rapid Response – 24hour emergency call out as required.
- General Servicing – all major makes and models of generator supported.

LOCAL SERVICE

With a national fleet of mobile service engineers, our highly trained and skilled power generation service professionals have the capability, expertise and experience to support you, wherever you may be.

SERVICE AGREEMENTS

Each service agreement is tailor made to your specific requirements. Once the optimized schedule of activities has been established, our engineers will visit you via a pre-arranged appointment to undertake the required servicing.

A service agreement, including regular testing, preventative maintenance and routine servicing, will ensure that your generator continues to provide you with the vital power you need.

For a quotation for a maintenance agreement or to arrange a service visit, contact our Service Team who will be happy to assist.

THE BEST WAY TO PROTECT YOUR POWER.

And Protect Your Team.

Our genuine parts are easily accessible, which can reduce customer downtime, improve your responsiveness and provide a competitive advantage.

Structured to help you deliver top-tier service and capture profits, our Parts and Service team provides the parts, people and performance you can count on.

PARTS

Designed to perform under the toughest environmental conditions, Our Genuine Parts are chosen specifically for your generator—and will be available when you need them. They undergo extensive lab and field testing as part of the overall power-system to ensure everything works as expected.

PEOPLE

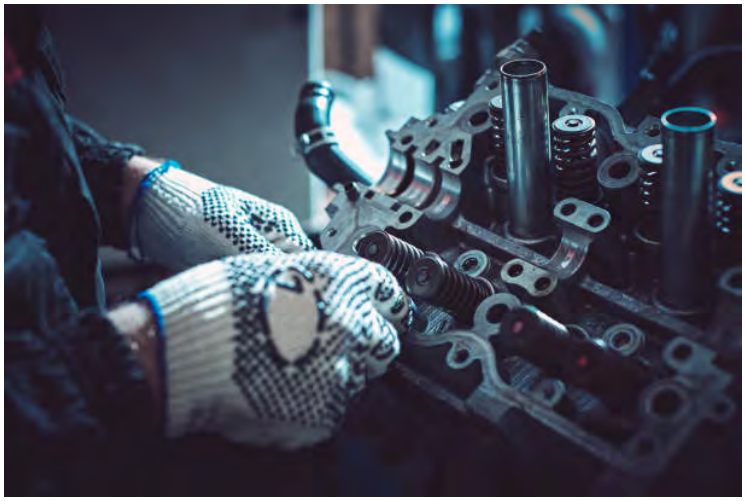
Our experienced Service and Support team is available to answer your questions. Choosing genuine parts provides you with comprehensive support, training and technical assistance straight from the factory.

- Factory training
- On-site technical support
- One point of contact for all your parts and service needs
- Dedicated after-sales channel support

PERFORMANCE

We continuously invest in better processes that make your job easier, and we're here to support you in decisions that affect your business.

- Inventory management
- Warranty management
- Lead-time strategy



ELECTRONIC POWER SOLUTIONS

Your Reliable source for advanced and integrated power solutions.

ELECTRONIL POWER SOLUTIONS

ENGINEERING THE FUTURE Since 1995.

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