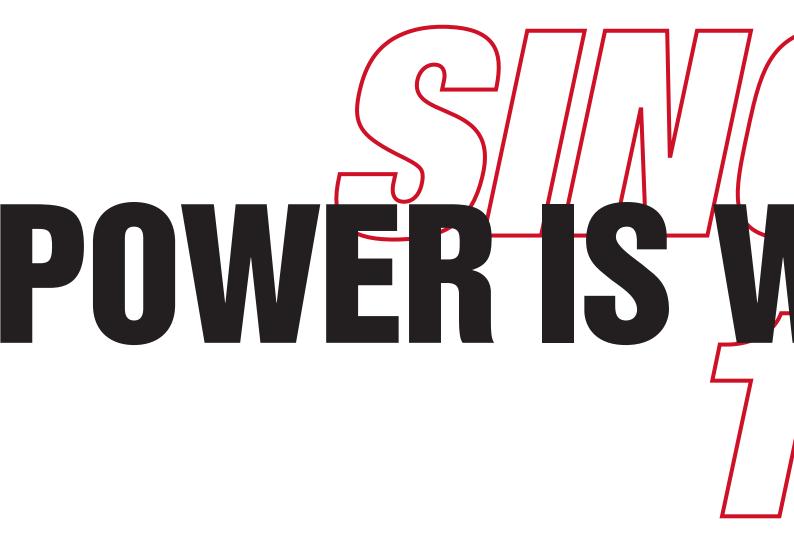
ELECTRONIL

CORPORATE CATALOG

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.



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 exist for one reason: to move you forward.

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.



لماذا 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.

نعمل بجهد لسبب واحد: للحفاظ على تقدمكم.

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 المتكاملة 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.

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.



TOTAL SYSTEM INTEGRATION

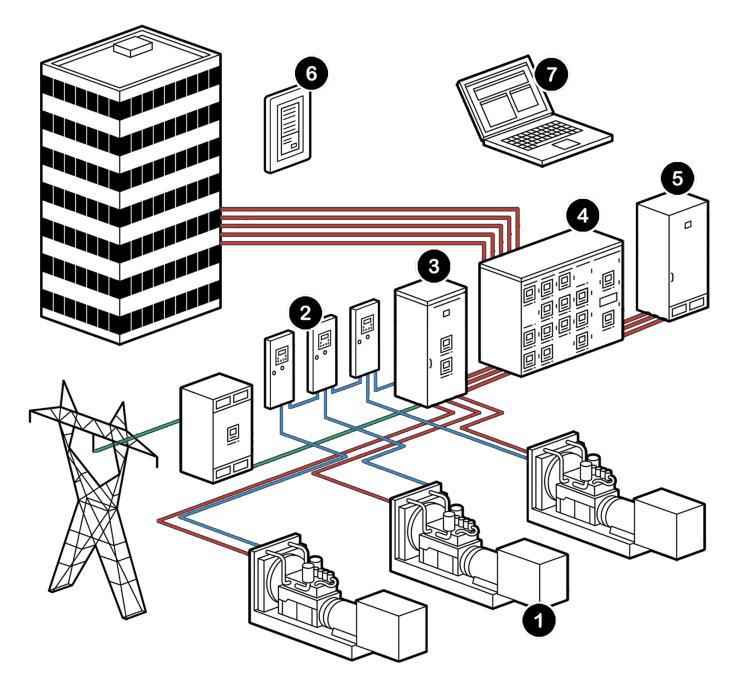
Everything works together, Just as it should.

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.

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.



TOTAL SYSTEM INTEGRATION

- The strict of t
- 2 ENCP™ 9.1 GENERATORS PARALLELING SYSTEM
 2-32 generator set can be paralleled with automatic power management and automatic engine run-hour balancing.
- **ENCP™ 9.3/ENCP™ 6.x POWER TRANSFER SWITCH**Dedicated for parallel control systems, standard, bypass-isolation and service-entrance switch configurations.
- **ELECTRONIL™ POWER DISTRIBUTION PANEL**Up to 6000 Amps.

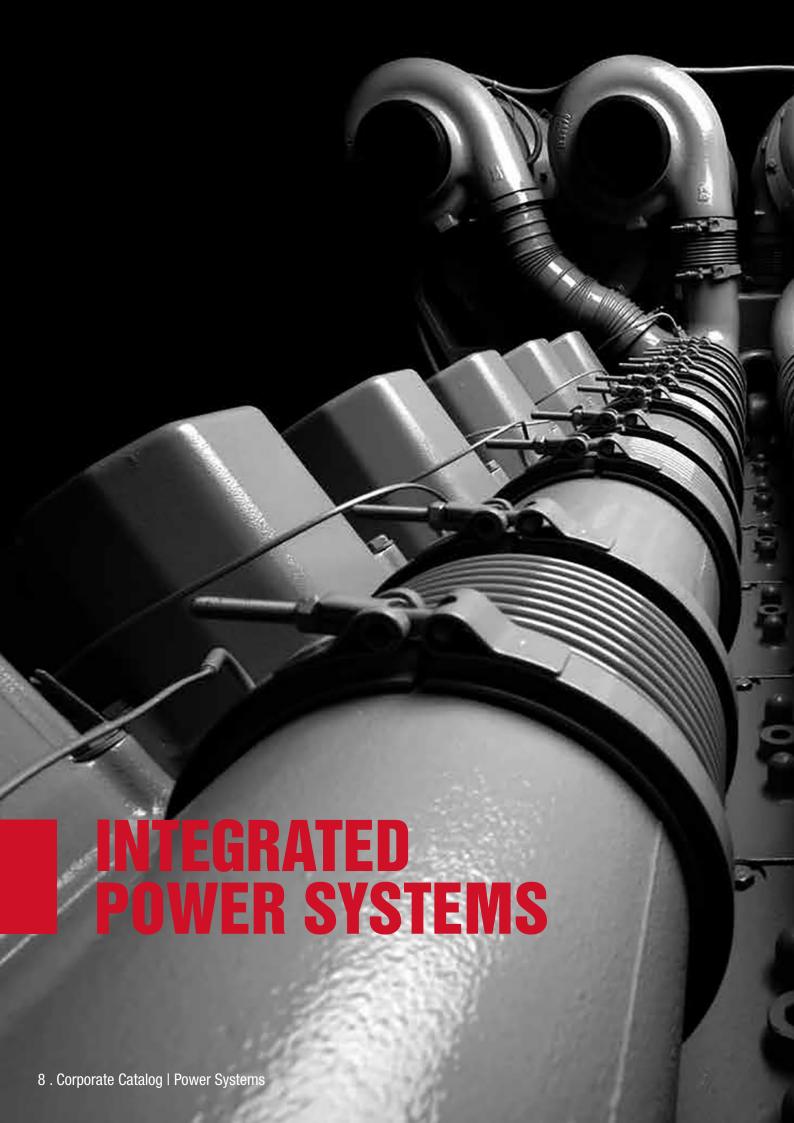
5 ELECTRONIL™ POWER FACTOR CORRECTION SYSTEMS

Up to 15 steps.

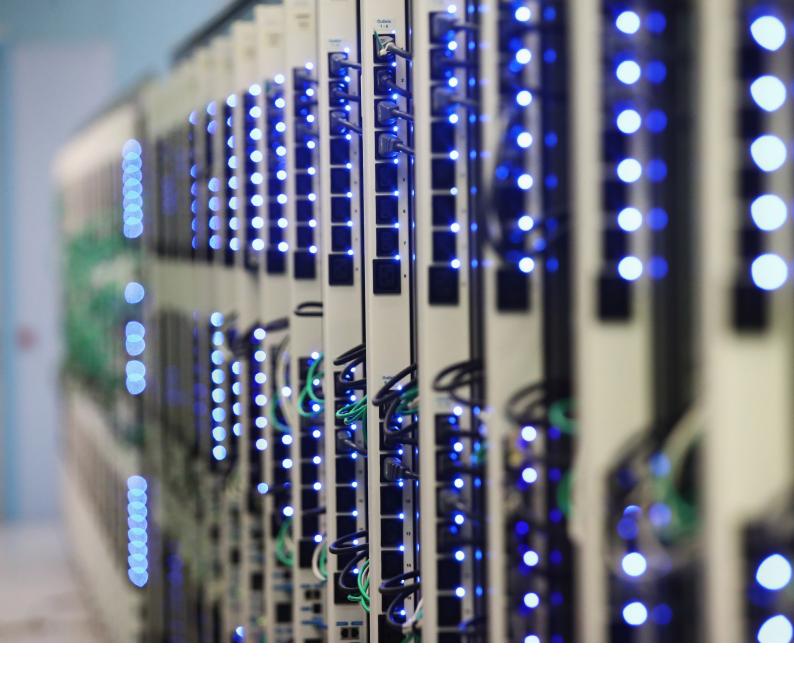
- REMOTE ANNUNCIATOR

 Optional remote system monitoring.
- MONITORING SOFTWARE

 Monitors generators and control systems from a PC and Smort Dhanes (Optional) Modeling or Ethernet
 - Smart Phones (Optional) Modbus or Ethernet.







INTEGRATED POWER SYSTEMS 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 SYSTEMSFOR 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.









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 SYSTEMS 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 SYSTEMS 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.



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 SYSTEMS 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.









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

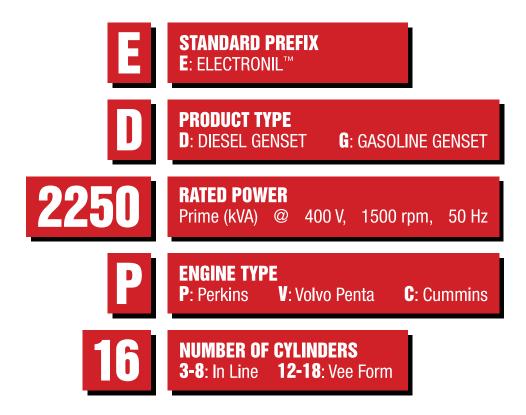
Redundancy is an essential design feature for sanitary and wastewater treatment facilities to ensure continuous operation of equipment and to keep communities supplied with fresh, safe water. Though technology has improved, the desalinization process requires a great deal of energy to purify brackish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



KEY FOR READING CODES



RATINGS DEFINITIONS

PRIME POWER RATING

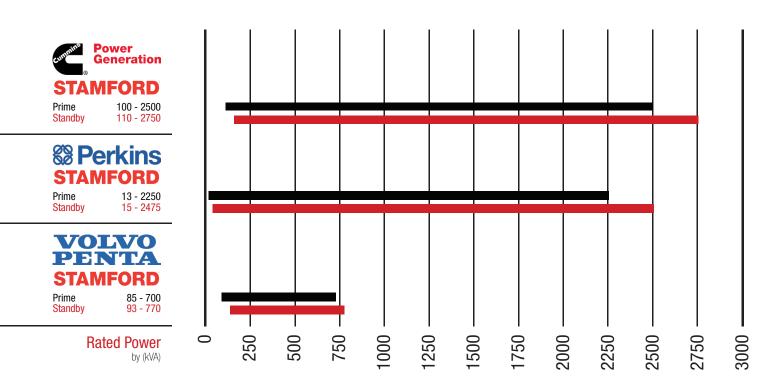
Output available with varying loads for an unlimited time. Average power output is 70% of the prime power rating. Typical peak demand is 100% of prime rated kWe with 10% overload capability for emergency use for a maximum of 1 hour in 12 hours. Overload operation cannot exceed 25 hours per year.

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.



ED SERIES GENERATORS

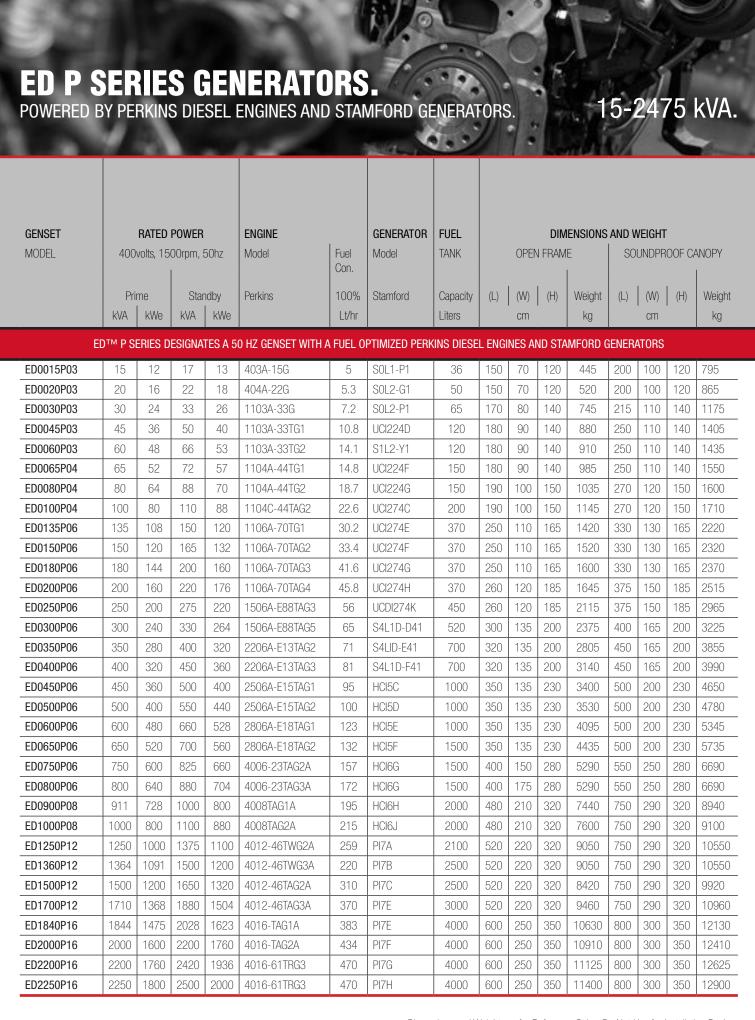
Built for the most critical jobs on earth.

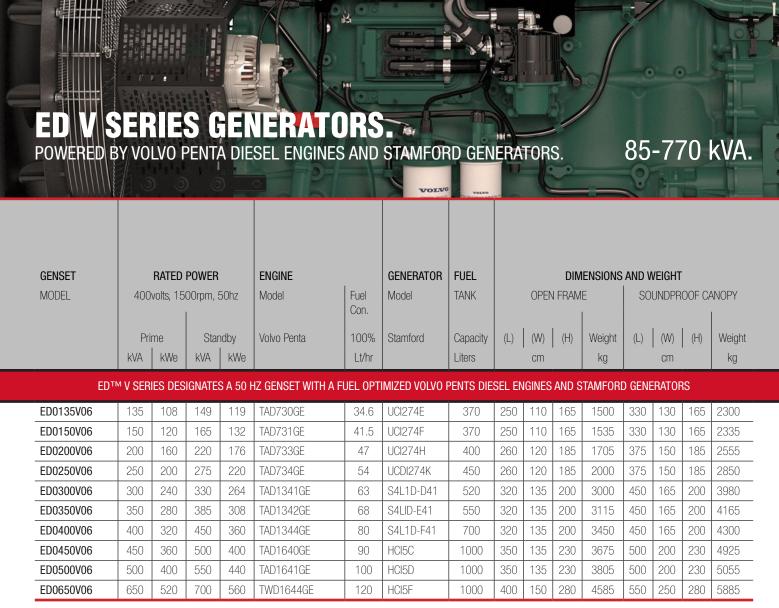
Think about the most important places in the world:

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. ELECTRONIL Diesel generators and 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.







Dimensions and Weight are for Reference Only - Do Not Use for Installation Design.

Contact our Technical Department for the Exact Dimensions and Weight.

P	D C S	ER EY CU	RIE:	S G	ESEL	NERATO Engines an	RS D ST/	AMFORD C	SENER/	ATOF	RS.		10	0-2	275	50	kVA.			
G	ENSET		RATED	POWER		ENGINE		GENERATOR	FUEL			DIM	ENSIONS	AND V	VEIGHT					
N	MODEL 40		400volts, 1500rpm, 50hz			Model	Fuel Con.	Model	TANK		OPEN	I FRAM	E	SO	UNDPR	00F C/				
		Pri	me	Star	ndby	Cummins G Drive	100%	Stamford	Capacity	(L)	(W)	(H)	Weight	(L)	(W)	(H)	Weight			
		kVA	kWe	kVA	kWe		Lt/hr		Liters		cm	, ,	kg		cm	1 ' '	kg			
,	ED™ (SERIES	S DESIG	NATES A	\ 50 HZ	GENSET WITH A FUE	L OPTIM	ized cummins	G DRIVE [DIESEL	ENGIN	ES ANI) STAMF(ORD GE	NERAT	ORS	'			
Е	D0100C06	100	80	110	88	6BTA5.9-G5	25	UCI274C	200	250	110	165	1100	330	130	165	1665			
E	D0135C06	135	108	150	120	6BTAA5.9-G6	35.16	UCI274E	370	250	110	165	1450	330	130	165	2250			
E	D0150C06	150	120	175	140	QSB7-G3	38	UCI274F	370	260	120	185	1315	375	150	185	2115			
E	D0200C06	200	160	220	176	QSB7-G5	45	UCI274H	370	260	120	185	1465	375	150	185	2315			
Е	D0250C06	250	200	275	220	QSL9-G3	59	UCDI274K	500	260	120	185	1840	375	150	185	2690			
E	D0300C06	300	240	330	264	QSL9-G5	63	S4L1D-D41	520	300	135	200	2075	400	165	200	3055			
_E	D0400C06	400	320	450	360	QSX15-G4	85.7	S4L1D-F41	700	350	135	230	3320	500	200	230	4170			
_	D0500C06	500	400	550	440	QSX15-G8	103	HCI5D	1000	350	135	230	3555	500	200	230	4805			
E	D0600C12	600	480	660	528	VTA28-G5	140	HCI5E	1500	400	150	280	5260	550	250	280	6510			
E	D0630C12	636	509	700	560	VTA28-G5	140	HCI5F	1500	400	150	280	5600	550	250	280	6900			
_	D0800C06	800	640	880	704	QSK23-G3	161	HCI6G	1500	480	210	320	5950	750	290	320	7350			
E	D1000C06	1000	800	1100	880	KTA38-G5	209	HCI6J	2000	480	210	320	8270	750	290	320	9770			

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ED1250C16

ED1400C16

ED1500C16

ED1850C16

ED2000C16

ED2500C16

ED2000C16

ED2750C18

KTA50-G3

QSK50-G3

QSK50-G4

QSK60-G3

QSK60-G4

QSK78-G9

QSK60-G4

QSK78-G9

PI7A

PI7C

PI7E

PI7F

PI7F

LV1804S

LVSI804S

PI734B

ED B SERIES GENERATORS. POWERED BY BAUDOUIN DIESEL ENGINES AND LEROY-SOMER GENERATORS. 15-1100 kVA.

GENSET RATED POWER		ENGINE GENERATOR			FUEL	DIMENSIONS AND WEIGHT											
MODEL	MODEL 400volts, 1500rpm, 50hz		Model	Fuel Con.	Model	TANK		OPEN	I FRAM I	E	SO	UNDPR	00F C#	ANOPY 			
		Priı	ne	Star	ndby	Baudouin	100%	Leroy Somer	Capacity	(L)	(W)	(H)	Weight	(L)	(W)	(H)	Weight
		kVA	kWe	kVA	kWe		Lt/hr		Liters	,	cm	,	kg		cm	, ,	kg
ED™ B SERIES DESIGNATES A 50				S A 50 H	IZ GENSET WITH A F	UEL OPT	imized Baudoi	JIN DIESEI	ENGI	IES AN	D LER	OY SOME	R GENE	RATOR	RS		
ED0015B0)4	15	12	17	13	4M06G17/5	4.8	TAL040D	40	180	90	140	550	250	110	140	1075
ED0020B0)4	20	16	22	18	4M06G22/5	6.2	TAL040F	50	180	90	140	600	250	110	140	1100
ED0030B0)4	30	24	33	26	4M06G33/5	7.6	TAL042C	65	190	100	150	650	270	120	150	1175
ED0045B0)4	45	36	50	40	4M06G50/5	10.7	TAL042F	120	190	100	150	700	270	120	150	1250
ED0050B0)4	50	40	55	44	3M10G55/5	11.6	TAL042G	120	190	100	150	720	270	120	150	1300
ED0065B0)4	65	52	72	57	4M11G70/5	14.6	TAL044A	120	250	110	165	1100	330	130	165	2000
ED0080B0)4	80	64	88	70	4M11G90/5	18.6	TAL044B	150	250	110	165	1100	330	130	165	2000
ED0100B0)4	100	80	110	88	4M11G110/5	23.3	TAL044D	200	250	110	165	1200	330	130	165	2100
ED0135B0	06	135	108	150	120	6M11G150/5	30.4	TAL044H	250	260	120	185	1400	375	150	185	2220
ED0150B0	06	150	120	165	132	6M11G165/5	32.7	TAL044J	300	260	120	185	1450	375	150	185	2320
ED0200B0	06	200	160	220	176	6M16G220/5	42.1	TAL046B	350	320	135	200	2000	450	165	200	3100
ED0225B0	06	225	180	250	200	6M16G250/5	51	TAL046C	450	320	135	200	2100	450	165	200	3200
ED0250B0	06	250	200	275	220	6M16G275/5	57	TAL046E	500	320	135	200	2375	450	165	200	3225
ED0330B0	06^	300	240	330	264	6M16G330/5	78.2	TAL046G	700	320	135	200	2500	500	200	200	3800
ED0350B0	06	350	280	385	308	6M21G385/5	82.1	TAL046H	700	350	150	230	2700	500	200	230	4000
ED0400B0	06	400	320	440	352	6M21G440/5	85	TAL047B	700	350	150	230	2900	500	200	230	4100
ED0450B0	06	450	360	500	400	6M26G500/5	94.8	TAL047C	1000	480	210	320	4100	750	290	320	5500
ED0500B0	06	500	400	550	440	6M26G550/5	105	TAL047D	1000	480	210	320	4600	750	290	320	6100
ED0600B0	06	600	480	660	528	6M33G660/5	122.7	TAL047F	1000	480	210	320	5100	750	290	320	6600
ED0640B0	06	645	516	710	568	6M33G715/5	135.1	TAL047F	1500	480	210	320	5200	750	290	320	6700
ED0730B1	12	730	584	803	642	12M26G825/5	163	TAL049B	1500	600	250	350	6500	800	300	350	9000
ED0800B1	12	800	640	900	720	12M26G900/5	172.5	TAL049C	1500	600	250	350	7000	800	300	350	8500
ED0900B1	12	900	720	1000	800	12M26G1000/5	196.8	TAL049D	2000	600	250	350	7200	800	300	350	8700
ED1000B1	12	1000	800	1100	880	12M26G1100/5	205.2	TAL049E	2000	600	250	350	7500	800	300	350	9000

 $^{^{\}wedge}$ These engines are designed for emergency standby power (ESP) applications only. The indicated PRP Power is for reference only.

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Contact our Technical Department for the Exact Dimensions and Weight.

ELECTRONIL POWER TRANSFER SWITCHES

PEACE OF MIND STARTS HERE.

Bridging the gap between loss of utility and standby power is no small task. ELECTRONILTM 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. ELECTRONILTM 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 25 to 4000 amps.

Seamless System Integration

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

Advanced Communications

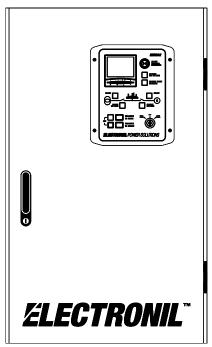
Every Power Transfer Switch comes fully loaded with the technology to do the job. Ethernet and Modbus communications capabilities are available.

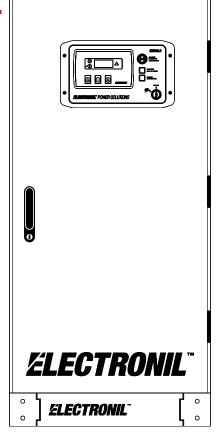


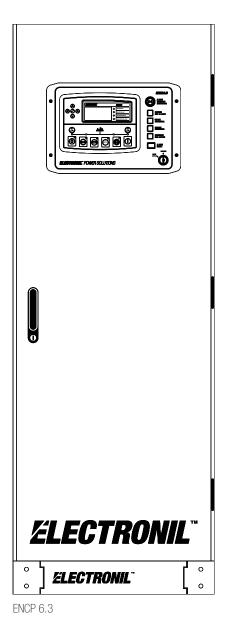
POWER TRANSFER SWITCHES.

Thay Protect Your Power.

And Your Business.







ENCP 6.1

ENCP 6.2

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/O, load management and other advanced functionality.

HEAVY-DUTY CONTACTOR

Choices from ABB or Schneider Electric transfer devises; 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.

CUSTOM CONFIGURATION.

THE CHART TELLS THE STORY.

You can custom configure your power transfer switch by choosing the exact components needed. This standard process allow us 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 Power Transfer Switch.

ELECTRONIL™ CONTROL POINT | IMANSPER | SWITCH | SERIES | SOURCE | CHANGEOVER

TRANSFER SWITCH RATED CURRENT

| 그와 | DEGREE OF | PROTECTION

Here's an example.

ENCP

5.1 SN

1600 L

ENCP 6.1 Power Transfer Switch Controller.

S | Motorized Changeover Switch.

N | 3 Phase, 4 Wires with Switched Neutral.

1600 | Rated at 1600 Amps.

L | IP4x Enclosure.

TRANSFER SWITCH CONTROLLER	SOURCE CHANGEOVER	NUMBER OF CONDUCTORS	TRANSFER SWITCH RATED CURRENT	DEGREE OF PROTECTION
ENCP™ 6.1 ENCP™ 6.2 ENCP™ 6.3	C Contactors. (25-580Amps) M Molded Case Circuit Breakers (200-1600 Amps)	C I 3Phase, 4Wires with Solid Neutral. (3Pole) N I 3Phase, 4Wires with Switched Neutral. (4Pole)	25 to 4000 Amps.	L 1 IP4x M 1 IP5x
	A I Air Circuit Breakers (630-4000 Amps) S I Changeover Switch (40-2500 Amps)	S I Single Phase, TwoWires with Switched Neutral. (2Pole)		H I IP6x

MECHANISM TYPES.

OPTIONS FOR EVERY APPLICATION.

STANDARD TRANSFER SWITCH

A standard transfer switch has a single mechanism that transfers the load from one power source to another power source. It's the most common type of application.

- Available in contactors, molded case circuit breakers, air circuit breakers or changeover switches.
- Available in standard/open, delayed/programmed and closed transition.

Standard MCCB ATS

Standard COS ATS (Wall Mount)

BYPASS TRANSFER SWITCH

A bypass transfer switch bundles an automatic and a manual transfer switch into a single unit. Bypass is used to transfer power by the manual switch in case of the primary automatic transfer switch failure.

Bypass transfer switches is commonly used in hospitals, data centers and other critical applications where interruption of power in case of control system failure can't be tolerated.

- One source changeover serves as the day-to-day automatic transfer switch and a manual transfer switch that bypasses the automatic switching function.
- Available in standard/open and delayed/programmed transition.



A bypass-isolation transfer switch bundles an automatic and a manual transfer switch into a single unit.

Bypass isolation is used to transfer power to the manual switch to allow servicing of the ATS while maintaining power to the facility. When the primary automatic transfer switch is in test or isolate position, the manual transfer switch is powering the loads.

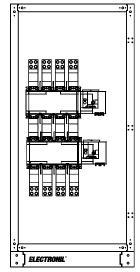
Bypass isolation is commonly used in hospitals, data centers and other critical applications where interruption of power for service or maintenance can't be tolerated.

- One source changeover serves as the day-to-day automatic transfer switch.
- One source changeover serves as a manual transfer switch that bypasses and isolates the automatic switch.
- Available in standard/open and delayed/programmed transition.

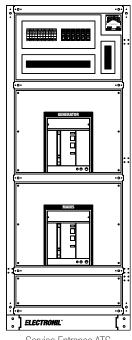
SERVICE ENTRANCE TRANSFER SWITCH

A service entrance transfer switch serves as both the automatic transfer switch and the utility disconnect, with circuit breakers and motor operators utilized as the transfer switch mechanisms.

- The breaker on the norma/Vutility source serves as the main entrance point for the utility.
- The emergency/generator source serves as the main entrance point for the standby generator.
- Available in standard/open and delayed/programmed transition.



Bypass-Isolation ATS



Service Entrance ATS

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

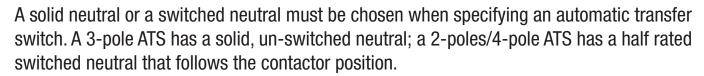
MAKE BEFORE BREAK

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.



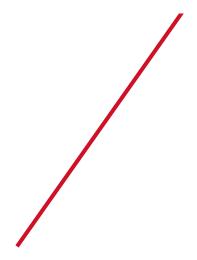
The emergency system grounding and ground-fault protection method determine the use of a 2-pole/4-pole or 3-pole transfer switch.

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 Transler 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 Transler Switches

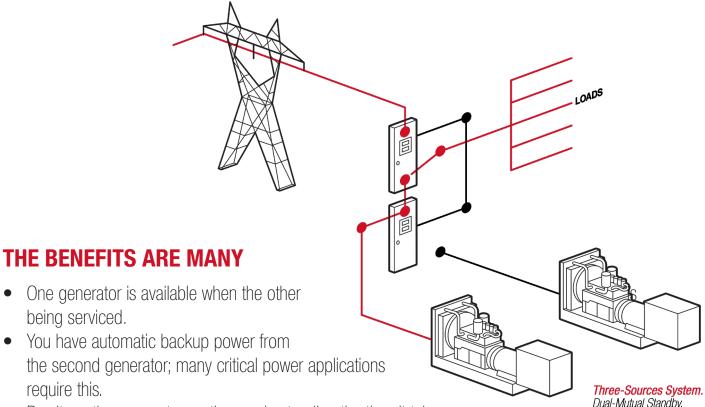
In order for the generator's current-based ground fault sensor to detect the ground fault and trip the generator unit-mounted circuit breaker, a 2-pole/4-pole transfer switch is needed. Because the neutral is switched and not continuous, the generator is a separately derived source that needs a neutral-to-ground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

THE ELECTRONIL DIFFERENCE. SIMPLE SOLUTIONS FOR COMPLEX PROBLEMS.

Three-Source System, Backup to Your Backup (DUAL-MUTUAL)

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 and two automatic transfer switches.

- The first ATS determines if the load is powered by utility or generator.
- The second ATS determines which generator is powering the load.



- 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.





RESISTIVE LOAD BANK RW. RESISTIVE LOAD BANK R



ELECTRONIL CONTROLLERS



*

The Smart Choice in Backup Power.

Controllers 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 ENCPTM Series Controllers 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. GENSET ENCP. ATS ENCP. AMF ENCP. SYNC

CONTROLLERS

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

GENSET CONTROLLERS

- ENCPTM 3 Series I single genset controller with remote start functionality.
- ENCPTM 7 Series I single genset controller with automatic mains failure functionality.
- ENCPTM 9 Series I single/multiple genset controllers with synchronizing and load sharing functionality.

POWER TRANSFER SWITCH CONTROLLERS

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

HUMAN MACHINE INTERFACE

- **ENCPTM** iX | 2-3 genset paralleling control system with load sharing functionality.
- ENCPTM X I up to 20 genset paralleling control system with load sharing functionality.







PARALLELING SWITCHGEAR CONTROLLERS

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

CONTROLLER TERMINOLOGY

Advanced Technology Made Simple.

Generator power systems, and controllers specifically, involve highly complex interactions between mechanical, electrical and electronic systems. As you evaluate your needs and consider your options, use this glossary of useful terms to enhance your controllers research.

POWER MANAGEMENT

Power Management optimizes the number of online generators based on the load's kW demand, starting and stopping them as required. Generators are sequenced on in order of operator-assigned priority (or based on runtime) and taken off in reverse priority. custom-defined setpoints determine the load level percentage at which the genset will be brought on or taken offline.

LOAD MANAGEMENT

Load management allows you to prioritize loads and remove noncritical loads when the power supply becomes unable to support the entire demand. If the load is low, 'dummy loads' (typically resistive load banks) are introduced to ensure the engine is not too lightly loaded. Conversely, as the load increases towards the maximum rating of the set, non-essential loads are shed to prevent overload of the generator.

SMS CONTROL

The SMS Control feature allows the user to send control commands to the module via SMS message.

PROGRAMMABLE I/O

Every job is unique and using a controller that allows for customization to support your needs is critical. Controllers offer programmable inputs and outputs to help with the customization.

Inputs are external signals the controller receives from various connected monitoring and management systems, which the controller can then process and respond to, based on its programming. Likewise, outputs are information about the generator and/or automatic transfer switch operating conditions that the controller provides to external systems.

- Analog Inputs and Outputs: These are typically used for sensors that show varying amounts of a given metric, such as fuel level in a diesel tank. Analog inputs and outputs identify a system state within a range of values, typically from 0% to 100%.
- Digital Inputs and Outputs: These are used for sensors that show a high or low state, such as an alarm, which is either active or inactive.
 As an example, a power system can be programmed to trigger a remote shutdown when an input reports a high state.



DUMMY LOAD CONTROL

The Dummy Load Control feature allows for a maximum of five dummy load steps. When the set is first started, all configured Dummy Load Control outputs are de-energized. Once the generator is placed onto load, the generator loading is monitored by the Dummy Load Control scheme.

If the generator loading falls below the Dummy Load Control Trip setting (kW), the Dummy Load Control Trip Delay begins. If the generator loading remains at this low level for the duration of the timer, the first Dummy Load Control output is energized. This is used to energies external circuits to switch in a resistive load bank.

The first dummy load has increased the generator loading. Again, the generator loading is monitored. This continues until all configured Dummy Load Control outputs are energized.

When the generator loading rises above the Dummy Load Return level, the Dummy Load Return Delay begins. If the generator loading remains at these levels after the completion of the timer, the 'highest' active Dummy Load Control output is de-energized. This continues until all Dummy Load Control outputs have been de-energized.

When the generator enters a stopping sequence for any reason, all the Dummy Load Control outputs de-energies at the same time as the generator load switch is signaled to open.

LOAD SHEDDING CONTROL

The Load Shedding Control feature allows for a maximum of five load shedding steps. When the generator is about to take load, the configured number of Load Shedding Control Outputs at Start will energies. This allows certain none-essential loads to be removed prior to the generator's load switch being closed. This is used to ensure the initial loading of the generator is kept to a minimum, below the Load Acceptance specification of the generator.

The generator is then placed on load. The Load Shedding Control scheme begins.

When the generator loading exceeds the Load Shedding Trip level the Trip Delay timer will start.

If the generator loading is still high when the timer expires, the first Load shedding Control output energizes. When the generator loading been above the trip level for the duration of the timer the 'next' Load Shedding Control output energizes and so on until all Load Shedding Control outputs are energized.

When the generator loading falls below the Load Shedding Return level, the Return Delay Time starts. If the generator load remains below the Load Shedding Return level when the timer has expired, the 'highest' Load Shedding Control output de-energizes. This process continues until all outputs have been de-energized.

When the generator enters a stopping sequence for any reason, all the Load Shedding Control outputs de-energies at the same time as the generator load switch is signaled to open.



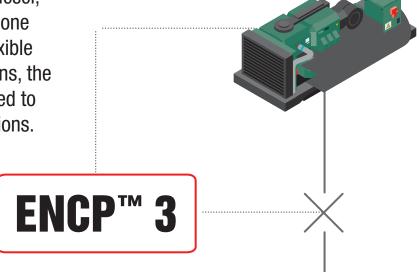
ENCP. GENSET

AUTO START GENERATOR CONTROLLERS.

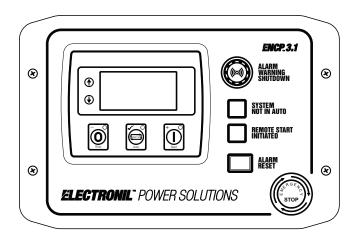
The ELECTRONIL™ CONTROL POINT, ENCP™ 3 Series combines engine and generator control and monitoring with a single, robust panel for quick key access to engine and generator controls, diagnostics, and operating information.

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 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.



INPUTS/OUTPUTS

- (4) Configurable digital inputs
- (3) Configurable analogue / digital inputs
- (4) Configurable DC outputs
- Independent fuel and crank outputs

COMMUNICATIONS

- USB for PC configuration
- WebNet[®] compatible

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- 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



The ENCP™ 3.1 Generator Control System is suitable for a wide variety of single gen-set applications.

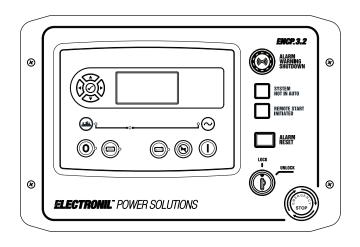
Whilst maintaining functions included within higher end controllers, such as generator or load power monitoring, the ENCPTM 3.1 is an especially compact controller provide the user with the ultimate size to feature ratio.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the systems will give comprehensive engine and alternator protection. This will be indicated on the largest back-lit LCD icon display in its class via an array of warning, electrical trip and shutdown alarms.

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

Through USB Communication the system can be easily configured using the Configuration Suite PC Software or can be fully configured through the system's front panel editor.

Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INPUTS/OUTPUTS

- (8) Configurable digital inputs
- (4) Configurable analogue / digital inputs
- (6) Configurable DC outputs
- Independent fuel and crank outputs

COMMUNICATIONS

- USB for PC configuration
- WebNet[®] compatible

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- 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



The ENCP™ 3.2 Generator Control System is suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the system will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs and remote PC.

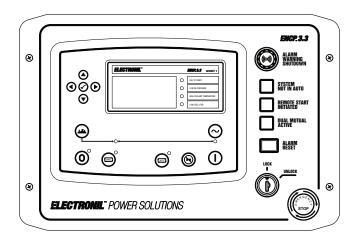
The ENCP[™] 3.2 include USB connection and dedicated terminals for system expansion.

The ENCP™ 3.2 is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality.

The system can be easily configured using the Configuration Suite PC software. Selected front panel editing is also available.

Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INPUTS/OUTPUTS

- (8) Configurable digital inputs
- (6) Configurable analogue / digital inputs
- (6) Configurable DC outputs
- Independent fuel and crank outputs
- (2) Configurable volt-free outputs

COMMUNICATIONS

USB for PC configuration

ENGINE COMPATIBILITY

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

COMMUNICATIONS

- Simultaneous use of RS485 & RS232 ports
- MODBUS RTU
- USB for PC configuration
- SCADA software
- WebNet® compatible

ADVANCED FEATURES

- 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
- Expansion compatible



The ENCP™ 3.3 Generator Control System is suitable for a wide variety of single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the system will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The ENCP™ 3.3 Include USB, RS232 and RS485 ports as well as dedicated terminals for system expansion.

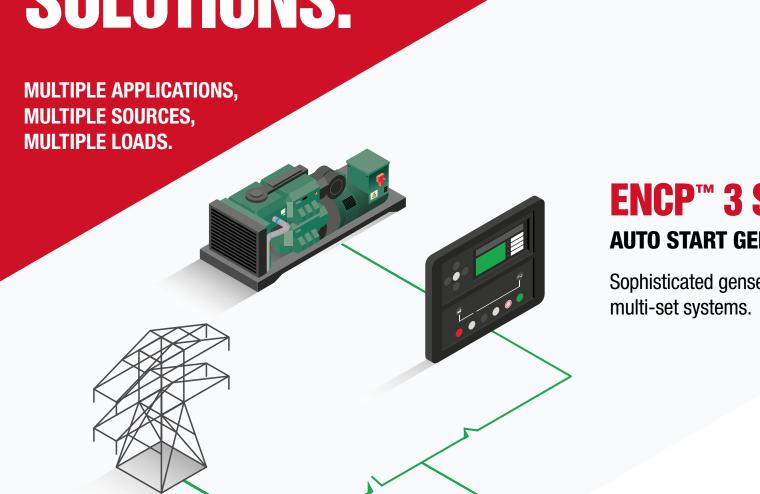
The ENCP™ 3.3 is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality.

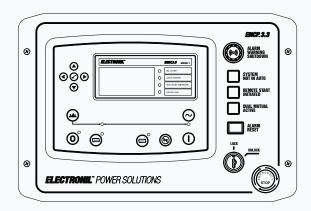
Dual mutual standby is now available on the ENCP™ 3.3 Using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing.

Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.

COMPLETE POWER MANAGEMENT SOLUTIONS.



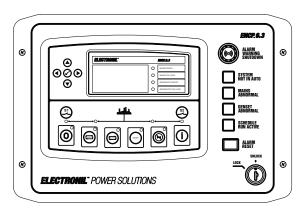




Series

NERATOR CONTROLLERS.

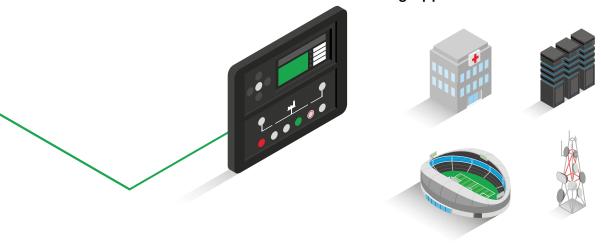
et controllers for single and



ENCP™ 6 Series

POWER TRANSFER SWITCH CONTROLLERS.

Dedicated auto power transfer switch controllers for demanding applications.





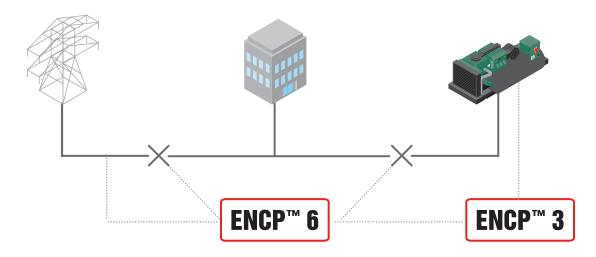
POWER TRANSFER SWITCH CONTROLLERS.

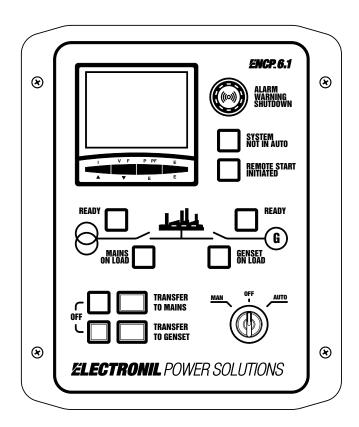
The ELECTRONIL™ CONTROL POINT, ENCP™ 6 Series Power Transfer Switches are designed for a variety of standby power applications. They provide flexibility, reliability and value in a compact package.

The open transition Power Transfer Switches will provide fully functioning transfer in applications where a momentary loss of power is acceptable on retransfer from emergency to normal power supply. The ENCP™ 6 Series Power Transfer Switches also permits periodic testing of the emergency source without interrupting power to the loads.

The 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 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. Circuit Breaker based Service Entrance Power Transfer Switches are available from 30A to 5000A.







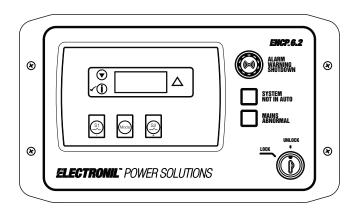
The ENCP™ 6.1 is a Power Transfer Switch Control System. Designed to ensure the automatic transfer of remotely controlled power transfer switches, changeover switches, contactors, circuit breakers or other motorized switches.

The integrated panel mounted digital meter displaying multi-measurement and energy values directly on its large backlit LCD display. It is designed for utilization on three-phase or single-phase networks and is suitable for applications of up to 6000 A. The product can be configured by the user via the keypad and the display.

PRODUCT HIGHLIGHTS

- Backlit LCD display.
- Direct access keys for currents, voltages, frequency and voltage THD.
- Pushbutton for active, reactive, and apparent power (instantaneous and max. values) and power factor.
- Direct access key for energies, hour meter and programming menu.
- 3 phase measurement on source 1 and single phase on source 2.
- 1 relay output for genset control.





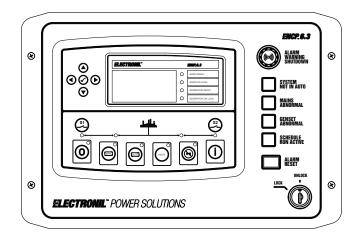
INPUTS/OUTPUTS

- (4) Configurable digital inputs
- (4) Configurable volt-free outputs
- (4) Configurable DC outputs

ADVANCED FEATURES

- Automatic switch-over between supplies
- Manual restore to S1
- Icon or text display
- Configurable timers
- Start inhibit & load inhibit
- Manual & automatic return
- Rotary ATS configuration
- 3-phase display

The ENCP™ 6.2 is a Power Transfer Switch Controller. The ENCP™ 6.2 will monitor the voltage and frequency of the incoming AC supply from two different sources, which could be from both generator or mains (utility), or a combination of both. The system will monitor S1 (source 1) and in the event of a failure will issue a start command to S2 (source 2).



INPUTS/OUTPUTS

- (12) Configurable digital inputs
- (6) Configurable volt-free outputs
- (6) Configurable DC outputs

COMMUNICATIONS

- USB for PC configuration
- Configurable for RS232 or RS485
- WebNet® compatible

CONFIGURATION

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

ADVANCED FEATURES

- 3-phase monitoring of 2 independent AC supplies (S1 and S2)
- Additional display screens to help with modem diagnostics
- 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

ENCP. 6.3

The ENCP™ 6.3 is a Power Transfer Switch Controller. The ENCP™ 6.3 will monitor the voltage and frequency of the incoming AC supply from two different sources, which could be from both generator or mains (utility), or a combination of both. The system will monitor S1 (source 1) and in the event of a failure will issue a start command to S2 (source 2).

The ENCP™ 6.3 supports many topologies and features include mains (utility) rated volt-free relays, a clear back-lit LCD 4-line text display, showing system status and warnings and red and green LEDs indicating operational status.

The system includes USB, RS232 and RS485 ports as well as dedicated terminals for system expansion, this gives features such as remote PC monitoring and SMS text alerts (with external modem).

The system can be easily configured using the Configuration Suite PC Software. Selected front panel editing is also available. Configurable inputs and outputs make the ENCP™ 6.3 fully flexible to suit a wide variety of applications.

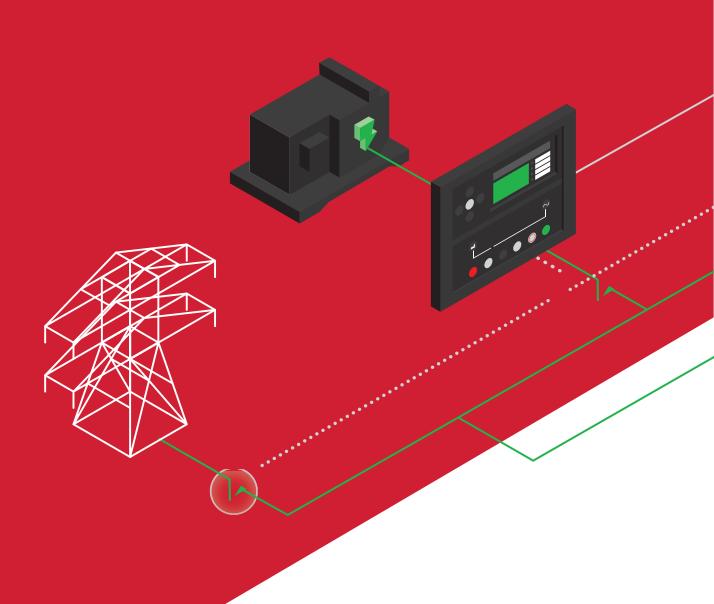
When there is no DC supply an optional self-seeking power supply is required.

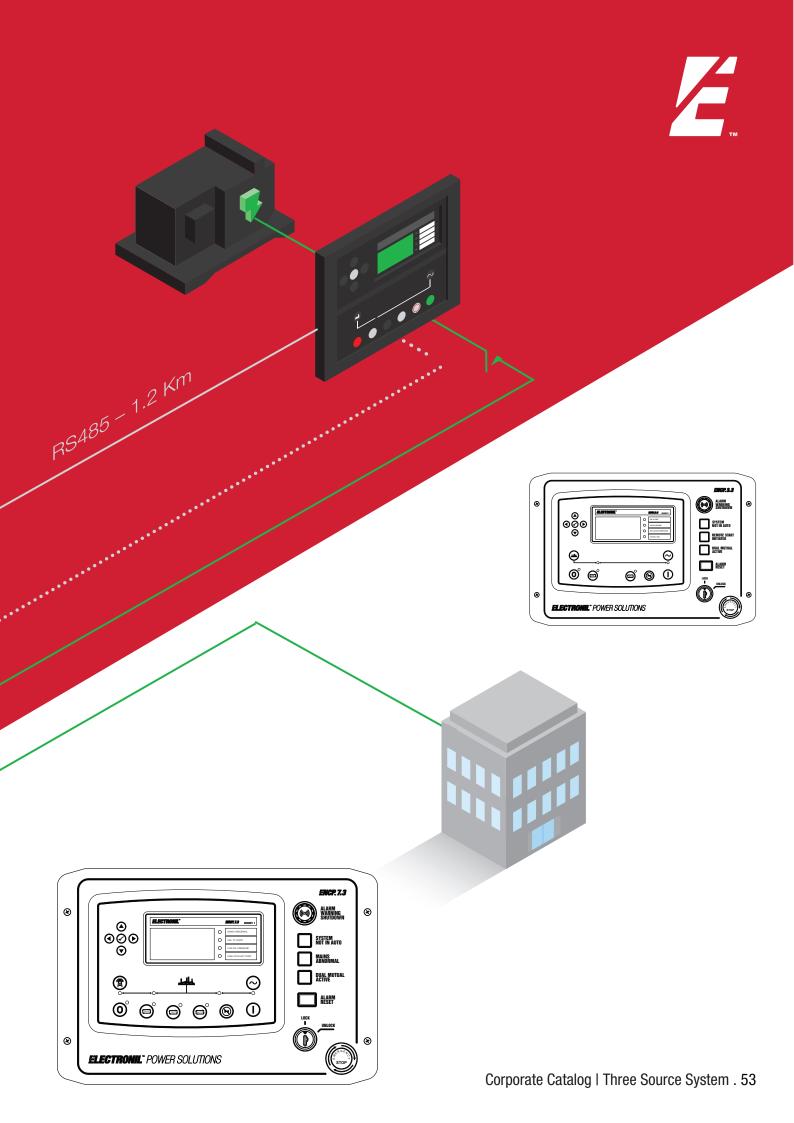
Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.

THREE-SOURCE SYSTEM.

Backup to Your Backup (DUAL-MUTUAL-STANDBY).

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 ENCPTM 3.3/ENCPTM 7.3 Control Systems Automatically run the correct generator, ensuring equal run times are maintained and engine downtime is reduced.







AUTO MAINS FAILURE CONTROLLERS.

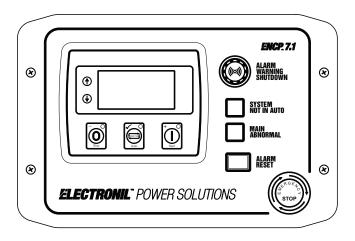
The ELECTRONIL™ CONTROL POINT, ENCP™ 7 Series combines engine and generator control and monitoring with a single, robust panel for quick key access to engine and generator controls, diagnostics, and operating information.

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.





INPUTS/OUTPUTS

- (4) Configurable digital inputs
- (3) Configurable analogue / digital inputs
- (4) Configurable DC outputs
- Independent fuel and crank outputs

COMMUNICATIONS

- USB for PC configuration
- WebNet[®] compatible

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- 3-phase mains (utility) sensing
- Automatic transfer between mains (utility) & generator
- Configurable for use as an auto start or auto mains (utility) failure controller
- 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
- Alternator frequency & CAN speed sensing
- Generator / load power & current monitoring and protection



The ENCP[™] 7.1 Automatic Mains Failure Generator Control System is suitable for a wide variety of standby single gen-set applications.

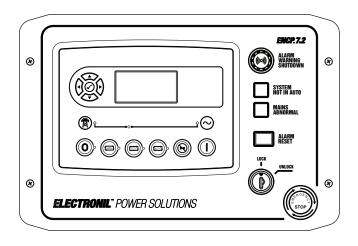
Whilst maintaining functions included within higher end controllers, such as generator or load power monitoring, the ENCPTM 7.1 is an especially compact controller provide the user with the ultimate size to feature ratio.

Monitoring engine speed, oil pressure, coolant temperature, frequency, voltage, current, power and fuel level, the modules will give comprehensive engine and alternator protection. This will be indicated on the largest back-lit LCD icon display in its class via an array of warning, electrical trip and shutdown alarms.

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

Through USB Communication the system can be easily configured using the Configuration Suite PC Software or can be fully configured through the system's front panel editor.

Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INPUTS/OUTPUTS

- (8) Configurable digital inputs
- (4) Configurable analogue / digital inputs
- (6) Configurable DC outputs
- Independent fuel and crank outputs

COMMUNICATIONS

- USB for PC configuration
- WebNet[®] compatible

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- Mains (utility) supply monitoring
- Automatic transfer between mains (utility) & generator
- 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



The ENCP™ 7.2 Automatic Mains Failure Generator Control System is suitable for a wide variety of standby single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the modules will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs and remote PC.

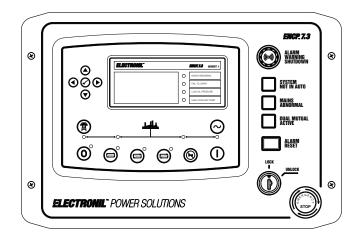
The ENCP™ 7.2 will also monitor the mains (utility) supply. The systems include USB connection and dedicated terminals for system expansions.

The ENCP™ 7.2 is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality.

The system can be easily configured using the Configuration Suite PC software. Selected front panel editing is also available.

Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INPUTS/OUTPUTS

- (8) Configurable digital inputs
- (6) Configurable analogue / digital inputs
- (6) Configurable DC outputs
- Independent fuel and crank outputs
- (2) Configurable volt-free outputs

COMMUNICATIONS

- USB for PC configuration
- WebNet[®] compatible

ENGINE COMPATIBILITY

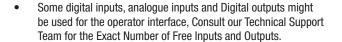
- Conventional engine support (MPU & Hz)
- CAN engine support (Tier 4F / Stage 5)

COMMUNICATIONS

- Simultaneous use of RS485 & RS232 ports
- MODBUS RTU
- USB for PC configuration
- SCADA software

ADVANCED FEATURES

- Mains (utility) supply monitoring
- Automatic transfer between mains (utility) & generator
- 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
- Expansion compatible





The ENCP™ 7.3 Automatic Mains Failure Generator Control System is suitable for a wide variety of standby single, diesel or gas, gen-set applications.

Monitoring an extensive number of engine parameters, the systems will display warnings, shutdown and engine status information on the back-lit LCD screen, illuminated LEDs, remote PC and via SMS text alerts (with external modem).

The ENCP™ 7.3 will also monitor the mains (utility) supply. The systems include USB, RS232 and RS485 ports as well as dedicated terminals for system expansions.

The ENCP™ 7.3 is compatible with electronic (CAN) and non-electronic (magnetic pick-up/alternator sensing) engines and offer an extensive number of flexible inputs, outputs and extensive engine protections so the system can be easily adapted to meet the most demanding industry requirements.

The extensive list of features includes enhanced event and performance monitoring, remote communications & PLC functionality. Dual mutual standby is now available on the ENCP™ 7.3 using RS232 or RS485 communications. This provides for a simpler and more convenient installation with more advanced features such as true engine hours balancing.

ELECTRONIL™ PARALLELED POWER SYSTEMS – ENPPS™

TOTAL INTEGRATION, From Top To Bottom.

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

Our ELECTRONIL™ Paralleled Power Systems - ENPPS™ Designed, Engineered and Factory-Tested as a complete system, rather than built from parts from multiple manufacturers like some competitive products.

Comprised of our EDTM Series Generators, ENCPTM Control Systems and Switchboards, the ENPPSTM 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.**







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.

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 ENCPTM 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.



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.

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.

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.

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

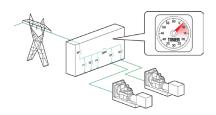
How it works.

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

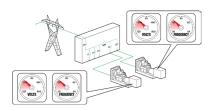
A timer starts when there is a loss of utility. If utility returns before the timer expires, the system does not start. If the utility outage is long enough for the timer to expire, the system will commit to transferring to generator power.



2 | START-UP / LOAD SHED

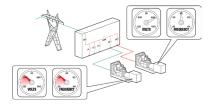
All available generators start. If the system is designed to supply power to loads as soon as one generator is online (typical for systems serving critical and life-safety loads), low-priority loads are shed or are inhibited from transferring.

This prevents the first-on generator from being overloaded.



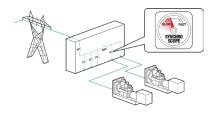
3 | FIRST GENERATOR BREAKER CLOSES

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.



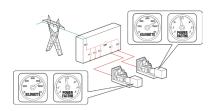
4 | SYNCHRONIZATION

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.



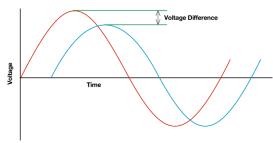
SYNCHRONIZATION

Let's take a detailed look at the synchronization process. Our ENCPTM 9 Series Generators Paralleling System's and the ENCPTM 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.

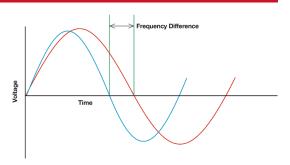




FREQUENCY MATCH

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

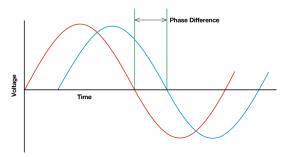




PHASE MATCH

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.



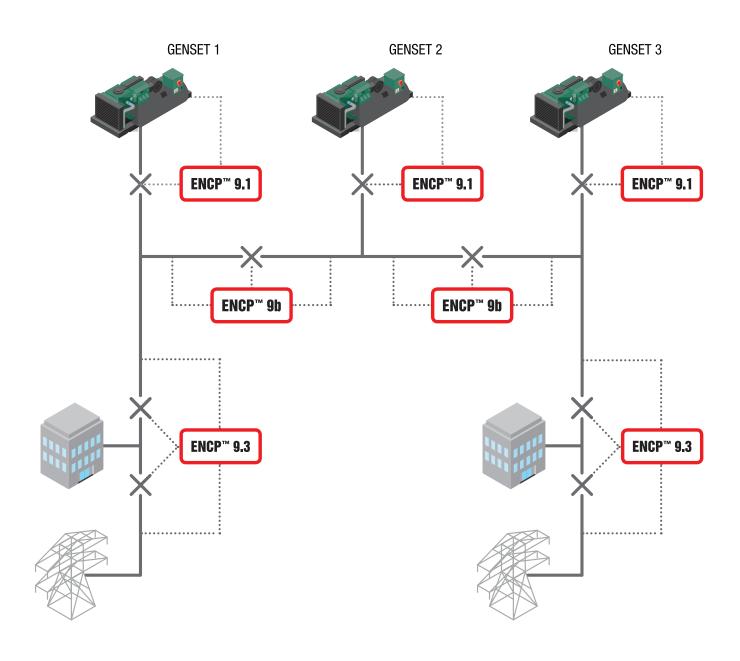


PARALLELING SYSTEMS (SYNCHRONIZING AND LOAD SHARING)

(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

ENCP™ 9.3

ENCP™ 9b

Auto Start GENSET/GENSET Paralleling Controller.

ENCP. SYNC

GENERATOR PARALLELING CONTROLLERS.

The ELECTRONIL™ CONTROL POINT, 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.

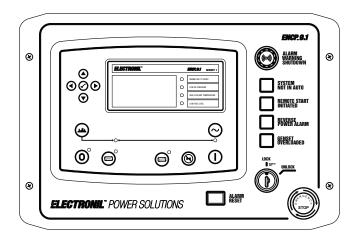
System alarms are annunciated on the LCD screen (multiple language options available), illuminated LED and audible sounder.

The event log will record 250 events to facilitate easy maintenance, and an extensive number of fixed and flexible monitoring, metering and protection features are included.

Designed to offer increased built in support for active sensors for 0 V to 10 V & 4 mA to 20 mA. Comprehensive communication and system expansion options are available.

With all communication ports capable of being active at the same time, the ENCPTM 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.



INPUTS/OUTPUTS

- (12) Configurable digital inputs
- (4) Configurable analogue / digital inputs
- (2) Configurable flexible sender inputs
- (8) Configurable DC outputs
- (2) Configurable volt-free outputs
- Configurable 5 stage dummy load and load shedding outputs

COMMUNICATIONS

- Independent ports for RS485, RS232, CAN, USB and Ethernet
- MODBUS RTU / TCP IP
- SNMP
- SCADA software
- WebNet[®] compatible

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- · 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
- Multiple configurable maintenance alarms
- Advanced SMS messaging
- Advanced PLC editor
- Support for worldwide languages
- Extensive data logging & trending
- Start & stop via SMS messaging



The ENCP™ 9.1 is an easy to use Auto Start Generator Paralleling 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[™] 9.1 Monitors the generator and indicates operational status and fault conditions, automatically starting or stopping the engine on load demand or fault condition.

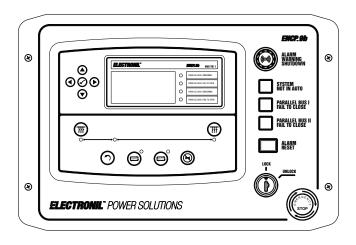
System alarms are annunciated on the LCD screen (multiple language options available), illuminated LED and audible sounder.

The event log will record 250 events to facilitate easy maintenance, and an extensive number of fixed and flexible monitoring, metering and protection features are included.

Designed to offer increased built in support for active sensors for 0 V to 10 V & 4 mA to 20 mA. Comprehensive communication and system expansion options are available.

Using the PC Configuration Suite Software allows easy alteration of the operational sequences, timers and alarms. With all communication ports capable of being active at the same time, the ENCP™ 9.1 is ideal for a wide variety of demanding load share applications.

 Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



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

ADVANCED FEATURES

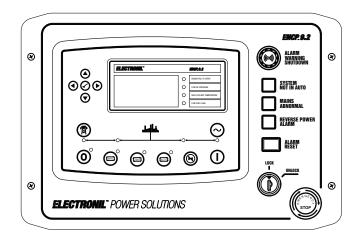
- Enhanced bus sensing of 2 buses for improved synchronising functionality
- Multiple ENCPTM 9b's can be used within one synchronising system
- Advanced PLC editor
- Instrumentation shows the status and measurements of both buses
- Advanced SMS control and fault messaging
- Supports multiple global languages
- Easy access diagnostic pages including modem diagnostic pages
- Advanced data logging and trending
- Eliminates the need for costly PLC systems



The ENCP™ 9b is designed to control a generators bus-tie breaker. The system manages the synchronizing and check-sync across the breaker automatically, when opening or closing the bus-tie breaker.

The ENCPTM 9b has been designed to work with the ENCPTM 9.1 and ENCPTM 9.3 Load Share control modules which support up to sixteen ENCPTM 9bs with no ENCPTM 9.3 or up to two ENCPTM 9bs with one to fourteen ENCPTM 9.3s. This provides a standalone, fully integrated solution, without the need for PLC.

With all communication ports capable of being active at the same time, the ENCPTM 9b is ideal for a wide variety of demanding load share applications.



INPUTS/OUTPUTS

- (12) Configurable digital inputs
- (4) Configurable analogue / digital inputs
- (2) Configurable flexible sender inputs
- (8) Configurable DC outputs
- (2) Configurable volt-free outputs
- Independent fuel and crank outputs
- Configurable 5 stage dummy load and load shedding outputs

COMMUNICATIONS

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

ENGINE COMPATIBILITY

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

ADVANCED FEATURES

- 3-phase mains (utility) & generator 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 nobreak return
- Positive & negative kVAr export control
- Volts and frequency matching
- Sophisticated fuel monitoring and alarms
- Direct governor and AVR control
- Multiple configurable maintenance alarms
- Advanced SMS messaging
- Advanced PLC editor
- Support for worldwide languages
- Extensive data logging & trending
- Start & stop capability via SMS messaging



The ENCP™ 9.2 is an easy to use Synchronizing Auto Mains (Utility) Failure Control System suitable for paralleling single gensets (diesel or gas) with the mains (utility) supply.

The controller can be configured for use as an ENCP[™] 9.1 Auto Start Generator Paralleling Control System. When converted for use as an ENCP[™] 9.1 the system provides generator to generator load share.

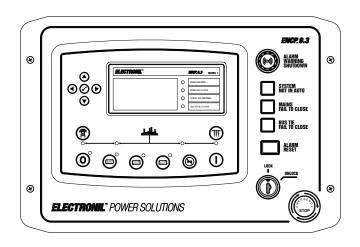
Designed to synchronize a single genset with a single mains (utility) supply the ENCP™ 9.2 will automatically control the change over from mains (utility) to generator supply or run the generator in parallel with the mains (utility) to provide no break, peak lopping and peak shaving power solutions.

Comprehensive communications are also available via RS232, RS485 and Ethernet for remote PC control and monitoring and integration into building management systems

Designed to offer increased built in support for active sensors for 0 V to 10 V & 4 mA to 20 mA. Comprehensive communication and system expansion options are available.

Using the PC Configuration Suite Software allows easy alteration of the operational sequences, timers and alarms. With all communication ports capable of being active at the same time, the ENCPTM 9.2 is ideal for a wide variety of demanding load share applications.

 Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INPUTS/OUTPUTS

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

COMMUNICATIONS

- Independent ports for RS485, RS232, CAN, USB and Ethernet
- MODBUS RTU / TCP IP
- SCADA software
- WebNet[®] compatible

ADVANCED FEATURES

- 3-phase mains 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 nobreak return
- Generator load demand
- Advanced SMS messaging
- Advanced PLC editor
- Multiple event scheduler

ENCP. 9.3

The ENCP™ 9.3 is an easy-to-use single or multi-mains controller with automatic transfer switch capability. Designed to synchronize single or multiple ENCP™ 9.1 and ENCP™ 9b with single or multiple mains (utility) supplies, the ENCP™ 9.3 will automatically control the change over from mains (utility) to generator supply or run generators in parallel with the mains (utility) to provide no-break, peak lopping and peak shaving power solutions.

The system can indicate operational status and fault conditions on the LCD screen (multiple languages available), by illuminated LED, audible sounder and SMS messaging.

Comprehensive communications are also available via RS232, RS485 & Ethernet for remote PC control and monitoring, and integration into building management systems.

The comprehensive event log will record up to 250 events to facilitate maintenance.

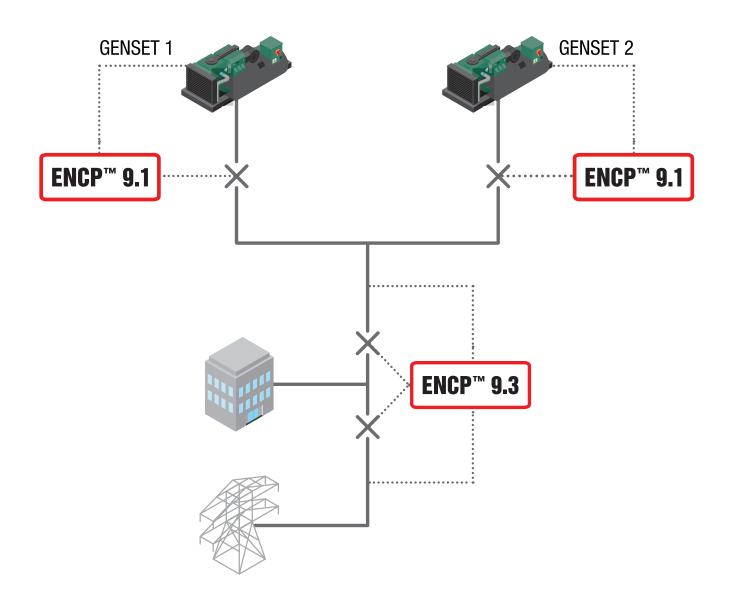
An extensive number of fixed and flexible monitoring and protection features are included. Easy alteration of the sequences, timers and alarms can be made using the PC Configuration Suite Software. Selected configuration is also available via the system's front panel.

With all communication ports capable of being active at the same time, the ENCPTM 9.3 is ideal for a wide variety of demanding load share applications.

PARALLELING SYSTEMS (SYNCHRONIZING AND LOAD SHARING)

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.

AUTO START GENERATOR PARALLELING SYSTEM WITH 10 INCH COLORED TOUCH SCREEN INTERFACE.



PRODUCT HIGHLIGHTS

COMMUNICATIONS

RS232, RS485 and Ethernet

ADVANCED FEATURES

- High definition 10" screen presenting graphs, charts, metering, power and engine status information in full colour
- Configurable graphical user interface with software widgets
- High screen resolution for optimum clarity
- Touchscreen enabled
- Trend analysis
- Connects via a data communication link up to a maximum distance of 1.2 km



COMPATIBLE CONTROLLERS

- ENCPTM 9 Series
- WebNet® compatible

AUTO START GENERATOR PARALLELING SYSTEM WITH 7 INCH COLORED TOUCH SCREEN INTERFACE.



PRODUCT HIGHLIGHTS

COMMUNICATIONS

RS232, RS485 and Ethernet

ADVANCED FEATURES

- 7" LCD display presenting graphs, charts, metering, power and engine status information in full colour
- High screen resolution for optimum clarity
- Touchscreen enabled
- Connects via a data communication link up to a maximum distance of 1.2 km
- Enhanced graphical user interface
- Powerful processor for fast operating response times
- Configurable as a single-set remote overview display



COMPATIBLE CONTROLLERS

- ENCP™ 9 Series
- WebNet® compatible

 Some digital inputs, analogue inputs and Digital outputs might be used for the operator interface, Consult our Technical Support Team for the Exact Number of Free Inputs and Outputs.



INTEGRATED BATTERY CHARGERS

EBC. 105 12 VDC, 5A at 13.7 VDC **EBC 205** 24 VDC, 5A at 27.4 VDC **EBC210**

24 VDC, 10A at 27.4 VDC

PRODUCT HIGHLIGHTS

ADVANCED FEATURES

MULTI-STAGE CHARGING

- Constant current maximum current available during charge recovery phase.
- Constant voltage.
- Chargers automatically return to float mode when charging is complete.

LOW OUTPUT RIPPLE

Makes the chargers ideal for all battery types.

FULL PROTECTION

- Reverse polarity protection, short circuit protection and current limiting.
- Automatic recovery after the removal of fault conditions.

BOOST MODE

- Boosts and equalizes cell charge improving battery performance and life.
- Simple boost connection using on-board terminals.

POWER SAVE MODE

Once the battery is fully charged the chargers switch to Eco-Power to save energy.

KEY BENEFITS

- Suitable for a wide range of battery types.
- No moving parts for longer battery charger life.
- Switched mode design.
- Minimum 80% efficiency throughout full operating range.

PARALLEL ING FFATURE

Multiple chargers can be linked together to provide larger current output.



The EBC[™] Series Battery Chargers have been designed to be permanently connected to a battery, keeping it charged to maximum capacity.

The EBC™ Series Battery Chargers stylish design includes two LED indicators on the front, one to show when the charger is ON and the other is to show if the charger FAILS TO CHARGE the battery.

The charger will continue to operate during cranking and running. And can accept multiple AC voltage connections.

The EBC[™] Series Battery Chargers are expertly designed using high-grade components and capacitors allowing the units to function more efficiently, providing a longer and more reliable life-span than other chargers in their class. Their inbuilt robustness makes them ideal for the rigors of a wide variety of markets including heavy and light industrial environments.

WebNet®

ADVANCED COMMUNICATIONS SOLUTION



ADVANCED REMOTE MONITORING OF GENSETS, PUMPS & COMPRESSORS.

WebNet® is an online management tool for remote control and monitoring of generators, pumps and compressors.

Allows 24/7 access to multiple applications from anywhere in the world, and offers a range of outstanding features suitable for multiple applications. Available in desktop and mobile versions, the WebNet® Software is both powerful and versatile.



KEY INDUSTRIES





User Configurable Access

Allocate different user privileges, giving admin users the ability to provide full control or read only access, to prevent accidental system changes.



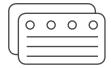
Single User or Organisational Accounts

Operate as a single user with full control or create an organisational account allowing access to multiple users with flexible permissions.



Configurable Reporting

Choose the reports you want to see and send automatically by email or SMS to a maximum of 25 users.



Configurable User Interfaces

Create bespoke user interfaces using configurable widgets and templates to allow quick and easy access to key equipment and site data.



App for Mobile & Tablet

Available for iOS and Android devices.

The App can be linked to sites pre-configured using a desktop connection.



Geo-Fencing & Asset Tracking

Protect against theft or movement by creating a virtual geographic boundary around your equipment using GPS.



Maintenance Scheduling & Logging

Plan and customise essential maintenance schedules and keep logs of previous maintenance work for all users to view.



Event Triggers

Set up event triggers to email or message users when specific conditions occur, including active alarms, low fuel levels and genset status.

WORKS ACROSS MULTIPLE PLATFORMS

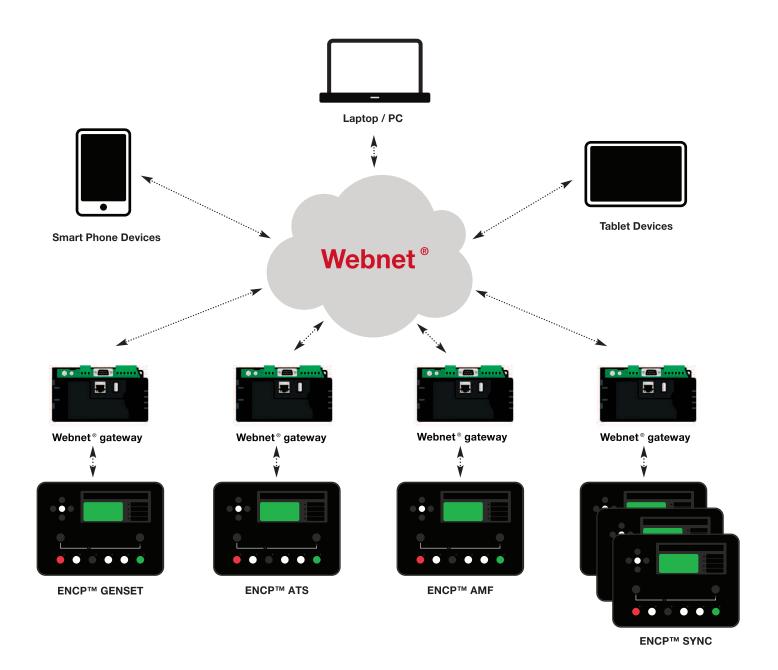












WEBNET® IS THE IDEAL SOLUTION FOR EFFICIENT GENSET MAINTENANCE, FLEET MANAGEMENT, ASSET TRACKING, REMOTE/PERIODIC GENSET TESTING. FUEL MANAGEMENT. FAULT ANALYSIS & MUCH MORE ...

The Webnet® system offers features including mapping with real-time location, instrumentation and control, event log tables and automatic system alerts which can be sent to multiple Webnet® users via email and SMS.

Comprehensive on-screen information is presented in clear, graphical and numerical formats which are easy to navigate and operate.

Webnet® can be utilized to maximize system up-time by offering the most effective remote management tool.

The Webnet® gateway device provides the user with full and instant access to the Webnet® system. A single Gateway device can be connected to a maximum of five supported controllers. This creates a vast and extensively featured remote control and monitoring solution.

An unlimited number of Webnet® users can access a single Gateway device. Additionally, a single user can access up to fifty Gateway devices. To gain access to either the Gateway device or Webnet® software, secure login information is required. This low-cost solution makes the system a secure and effective remote control and monitoring solution for multiple users and sites.

MULTIPLE AND CONFIGURABLE SCREENS ARE AVAILABLE TO SHOW A COMPREHENSIVE LIST OF ENGINE, GENERATOR, MAINS AND SYSTEM INFORMATION.

The WebNet® system requires one or more WebNet® gateway device connected to a supported controller to utilize all of the available features.

Screen examples show the following information:

- 1. Global mapping shows multiple site locations.
- 2. Aerial view of a single site location with multiple generators.
- 3. Multiple or single site generator event recording & monitoring.
- 4. Engine monitoring.
- 5. Generator & mains monitoring.
- 6. 6. Controller input & output state diagnostics.













WebNet®

SMART DEVICE APPLICATION





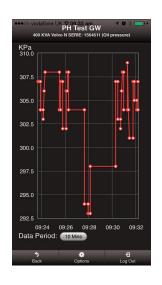
ADVANCED COMMUNICATIONS SOLUTION

WEB BASED CONTROL AND MONITORING SOLUTION FOR YOUR CONTROL SYSTEMS, NOW AVAILABLE IN A SMART DEVICE APPLICATION.

The WebNet Mobile Application is designed to give the ultimate remote access to your genset system – for busy engineers on the move this is a 'must have' tool!









Designed for use on smart phones and tablet devices, the software has a fast response time so that you are able to monitor and control your control system, anywhere in the world.

You are able to view and control all controllers that are connected to your WebNet account. Realtime instrumentation, alarms, notifications, input & output status and historic data graphs, provide the highest degree of engineering/maintenance flexibility.





ED SOUNDPROOF ENCLOSURES.

REDUCE THE RACKET. AND PUT MOTHER NATURE IN HER PLACE.

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 accessto 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.



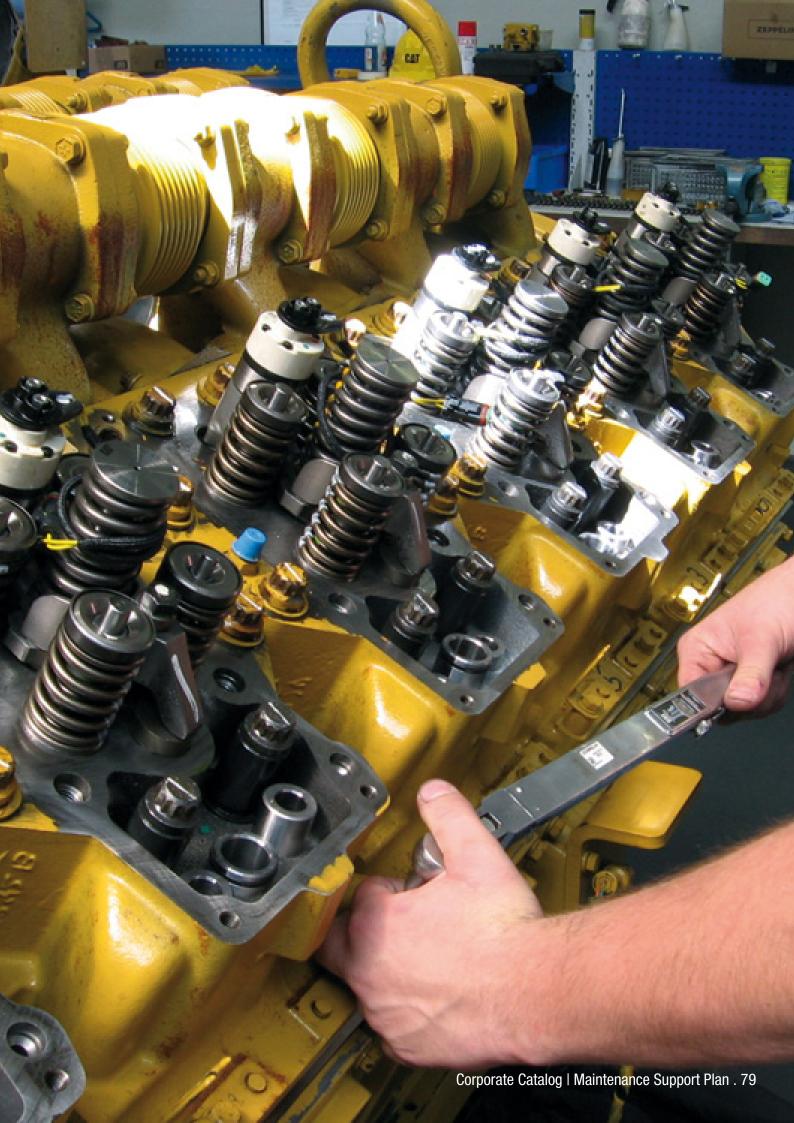




ELECTROCAREMAINTENANCE SUPPORT PLAN.

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 Maintenance Support Plan 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.
- ELECTRONILTM Highly Trained engineers and technicians providing specialist expertise.
- Maximize uptime and save costs.
- Total added value package.

ELECTROCARE Maintenance Support Plan.

SUMMARY

ELECTROCARE Maintenance Support Plan Options Menu

DESCRIPTION	ELECTROCARE			
	Standard	Extra	Premium	Premium +
FREQUENCY	Annual	Biannual	Quarterly	Monthly
Routine inspection and report (see details in Appendix 1 below)	[8]	[8]	[8]	[8]
Critical functions monitored (see details in Appendix 2 below)	[S]	[S]	[S]	[S]
Diagnostic analysis and recommendation reports	[8]	[S]	[S]	[S]
All work undertaken by highly trained and equipped technicians	[8]	[S]	[S]	[S]
Transport and travel expenses included on scheduled visits	[S]	[S]	[S]	[S]
Scheduled maintenance visits to meet your service requirements	[S]	[S]	[S]	[S]
Out of hours call out facility	[0]	[0]	[S]	[8]
Oil and filter change to meet your needs	[0]	[0]	[S]	[S]

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 tension and condition check.
- Battery voltage drop check.
- Static battery charge check.
- Functional control panel test (offline).
- Radiator matrix check and advise.

ALTERNATOR SECTION

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

[S] = Standard

[0] = Optional

Appendix 2

Critical Functions Monitored

CONTROL SECTION

- Alarm history/event log check (dependent on control system).
- Circuit breaker inspect and check.
- Switches and MCB check.
- Indication lamps and 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

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.
- ELECTRONILTM 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.



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 Aftermarket 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 Aftermarket Parts and Service 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 aftermarket 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



All data provided in this document is non-binding. This data serves informational purposes only and is especially not guaranteed in any way. Depending upon the subsequent specific individual projects, the relevant data may be subject to changes and will be assessed and determined individually for each project. This will depend on the particular characteristics of each individual project, especially specific site and operational conditions.

POWER GENERATORS | POWER TRANSFER SWITCHES | PARALLELING SYSTEMS | SWITCHGEARS | CONTROLS GENERATOR MAINTENANCE | SERVICE AGREEMENT | CONTROL SYSTEM UPGRADE | SPARE PARTS | CONSUMABLES

ENGINEERING THE FUTURE SINCE 1995.



ELECTRONIL INTEGRATED POWER SOLUTIONS

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