Residential Standby Backup Power Solutions

Revision notes

Volume 1—Residential and Light Commercial, CA08100002E

Tab 3—Residential Standby Backup Power Solutions

Revision date	Section	Change page(s)	Description
01/24/2017	3.1	V1-T3-3	Content edits
01/24/2017	3.1	V1-T3-4	Content edits
01/24/2017	3.2	V1-T3-13	Content edits

Powering Business Worldwide

Standby Generator Systems

EGENA20

EGENX27

Contents

Product Description

A standby generator system is a package of equipment specifically designed to provide substitute electrical power to a residence in the event of a utility power outage. These systems are comprised of a generator, transfer switch and the connections necessary for installation. Eaton's standby generator line consists of air-cooled and liquid-cooled models ranging from 9000 watts up to 150,000 watts.

Air-Cooled Standby

Eaton's air-cooled generators range from 9 to 22 kW and these units are perfect for automatically backing up every circuit within a home such as air conditioner units, refrigerators, lighting, furnace fans, sump pumps and water pumps.

Eaton's air-cooled standby generators offer fully automatic operation and provide most homeowners with enough power for complete whole house comfort. These units all operate at ultra quiet 66 dB, or less, sound level.

Liquid-Cooled Standby

Eaton's liquid-cooled generators feature automotive style engines that range from 22 to 150 kW of power output. These units run so quietly that you'll forget that you own a generator until you need it. These units are available in steel or aluminum enclosures and are available in single- and three-phase in four voltages: 120/240 V, single-phase; 120/208 V, three-phase; 240 V, three-phase; and 277/480 V, three-phase.

Application Description

Standby generator systems are most often used in residential, agricultural and light commercial applications. Comfort and safety are key concerns of many homeowners who are dependent on an uninterrupted supply of electricity.

The increase in our dependence on power is due in part to the popularity of home offices and in-home health care. Many regions of the United States experience periodic power outages due to extreme weather conditions such as ice and snowstorms, heat waves, tornadoes or hurricanes.

Eaton highly recommends that any generator system be installed by a qualified electrician and/or generator installer.

Features, Benefits and Functions

Eaton's generator systems offer a wide range of features. All systems feature:

- Powerful engines
- Reliable Eaton transfer switches and control systems using switching duty rated circuit breakers
- Weekly exercise function
- Automatic transfer systems feature automatic start/stop

Standards and Certifications

- CSA®, cUL® and UL 2200 listed and approved
- SCAQMD (selected models only)
- All transfer switches are UL® 67 and UL 1008 listed as "Transfer Switches"
- All generators are UL 2200 listed

Listed Listed

Catalog Number Selection

Air-Cooled Generators

EGEN A 11

Type	Rated Power (LP/NG)
A = Aluminum	**9** = 9/8 kW **11** = 11/10 kW **16** = 16/16 kW **20** = 20/18 kW **22** = 22/19.5 kW

Liquid-Cooled Generators

EGEN X 27 A N A N

kW Rating EGENX Series		kW Rating EGEN Series	Voltage Required	Fuel Type	Enclosure	SCAQMD Compliance
22	36	70	**A** = Single-phase 120/240 V	**N** = Natural gas	**A** = Aluminum	**N** = No
25	38	80	**G** = Three-phase 208 V	**L** = Liquid propane		**Y** = Yes
27	45	100	**J** = Three-phase 240 V			
30	48	130	**K** = Three-phase 480 V			
32	60	150				

Product Selection

EGENA_

Air-Cooled Generators

Rated Power kW (LP/NG)	Maximum Rated Amperes at 240 Vac (LP/NG)	Main Line Circuit Breaker Amperes	Enclosure Material	Engine Size	Number of Cylinders	Fuel Type	SCAQMD Compliant	Sound Emissions (dB at 7 m)	Limited Warranty (yrs)	Catalog Number ①
9/8	37.5/33.3	40	Aluminum	426 cc	1	Liquid propane/ natural gas	Yes	66	5	**EGENA9**
11/10	45.8/41.7	50	Aluminum	530 cc	2	Liquid propane/ natural gas	Yes	63	5	**EGENA11**
16/16	66.6/66.6	65/55	Aluminum	999 cc	2	Liquid propane/ natural gas	Yes	66	5	**EGENA16**
20/18	83.3/75.0	90	Aluminum	999 cc	2	Liquid propane/ natural gas	Yes	66	5	**EGENA20** ②
22/19.5	91.7/81.2	100	Aluminum	999 cc	2	Liquid propane/ natural gas	Yes	67	5	**EGENA22** ②

Notes

① Battery to be furnished by others. Recommended size: Group 26R, 12 V, 225 CCA min.

② Includes base fascia (No. EGENFASCIA) as standard.

EGENX27ANAN

Liquid-Cooled Generators ①②

Catalog Number Prefix	kW Rating	Voltages Available	Fuel Type ③	Enclosure	SCAQMD Compliance ④
EGENX22	22	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX25	25	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX27	27	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX30	30	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX32	32	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX36	36	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**Y**—Yes **N**—No
EGENX38	38	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**N**—No
EGENX45	45	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**Y**—Yes **N**—No
EGENX48	48	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—NG/LP field convertible (Default set up for NG)	**A**—Aluminum	**Y**—Yes **N**—No
EGENX60	60	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**N**—No
EGEN70	70	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**Y**—Yes **N**—No
EGEN80	80	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**N**—No
EGEN100	100	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**Y**—Yes
EGEN130	130	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**Y**—Yes
EGEN150	150	**A**—120/240 V, single-phase **G**—208 V, three-phase **J**—240 V, three-phase **K**—480 V, three-phase	**N**—Natural gas **L**—Liquid propane	**A**—Aluminum	**Y**—Yes

Notes

① All liquid-cooled models suitable for "optional" standby backup power only, as dictated by NEC Article 702/NFPA 70. Not suitable for neither "emergency" nor "legally required" applications as dictated by NEC Article 700/701 and NFPA 110.

② Models 70–150 kW include battery. For all other liquid-cooled models, battery must be furnished by others.

③ IMPORTANT: All models 60 to 150 kW are not field convertible. Must be pre-ordered fuel specific.

④ South Coast Air Quality Management District (CA and MA). Check your local requirements.

⑤ For all three-phase ATS requirements, please contact EatonCare.

Accessories

Generator Accessories—Air and Liquid-Cooled Generators

Description	Catalog Number
General Accessories	
Air-cooled transportation cart	**EGENCART**
Bisque paint kit	**EGENPAINT**
Display shell—bisque color	**EGENSHELL**
Generator fascia for air-cooled models. Bisque color (included as standard on EGENA20 and EGENA22 models)	**EGENFASCIA**
Wireless Remote Monitoring	
Advanced wireless remote monitor w/smart device connectivity. Air-cooled/liquid-cooled generators. 2009 models or newer	**EGENMOBILE**
Adapter wire harness kit for EGENMOBILE. Required for liquid-cooled generators only 22–150 kW. 2009 models or newer	**EGENKIT**
Basic in-house remote wireless monitor. Compatible with air/liquid-cooled models. 2009 models or newer	**EGENinHOME**
Adapter wire harness kit for EGENinHOME. Required for liquid-cooled units only 22–150 kW. 2009 models or newer	**EGENinHOMEKIT**
Cold Weather Kits	
9–22 kW air-cooled battery heater kit	**7101CH**
9–22 kW air-cooled oil heater kit	**7102CH**
9–22 kW air-cooled breather heater kit	**7103CH**
22, 27, 32, 36, 38, 45 and 60 kW (2.4 L engine) cold weather kit	**5630CH**
25 and 30 kW (1.5 L engine) cold weather kit	**6175CH**
100 and 130 kW (6.8 L engine) cold weather kit	**5633CH**
48 (5.4 L engine), 80 (4.6 L engine) and 70 and 150 kW (6.8 L engine) cold weather kit	**5632CH**
Extreme Cold Weather Kits	
25 kW and 30 kW (1.5 L engine)	**5615CH**
22 kW, 27 kW, 36 kW, 45 kW and 60 kW (2.4 L engine)	**5616CH**
48 kW (5.4 L engine)	**5618CH**
80 kW (5.4 L engine)	**5619CH**
70 kW, 100 kW and 130 kW (6.8 L engine)	**5620CH**
150 kW (6.8 L engine)	**5667CH**
Maintenance Kits	
9 kW generator maintenance kit 426 cc engine. For EGENA9 model only	**6482CH**
11 kW generator maintenance kit 530 cc engine. For EGENA11 model only	**6483CH**
16 kW generator maintenance kit, 999 cc engine. For EGENA16 model only	**6484CH**
20 kW and 22 kW generator maintenance kit, 999 cc engine. For EGENA20 and EGENA22 models only	**6485CH**
22 kW and 27 kW liquid-cooled generator maintenance kit (2.4 L engine)	**5656CH**
25 kW and 30 kW liquid-cooled generator maintenance kit (1.5 L engine)	**6176CH**
32 kW, 36 kW and 38 kW liquid-cooled generator maintenance kit (2.4 L engine)	**5984CH**
45 kW liquid-cooled generator maintenance kit (2.4 L engine)	**6172CH**
48 kW liquid-cooled generator maintenance kit (4.2 L engine)	**5658CH**
60 kW liquid-cooled generator maintenance kit (2.4 L engine)	**6171CH**
80 kW liquid-cooled generator maintenance kit (4.6 L engine)	**5985CH**
70 kW, 100 kW, 130 kW and 150 kW liquid-cooled generator maintenance kit (6.8 L engine)	**5660CH**

EGENMOBILE

Cold Weather Kits

Extreme Cold Weather Kits

Maintenance Kits

Sizing Guidelines

In order to properly size a generator, you must account for each of the essential circuits that will be designated to be switched in the event of a utility power outage by calculating the sum of the wattage of each individual circuit. This sum must NOT exceed the listed wattage capacity of the generator.

For your convenience, a list of commonly used devices has been provided below with the approximate industry-standard for each device's running wattage. Refer to the Eaton Generator Sizing Guide (TD00405018E) and consult with a trained professional before selecting the correct generator for your application.

Circuit Selection ①②③

Device	Common Running Watts
Air conditioner (12,000 btu)	1700
Air conditioner (24,000 btu)	3800
Air Conditioner (40,000 btu)	6000
Battery charger (20 amp)	500
Circular saw (6-1/2-inch)	800–1000
Clothes dryer (electric)	5750
Clothes dryer (gas)	700
Clothes washer	1150
Coffee maker	1750
Compressor (1 hp)	2000
Compressor (1/2 hp)	1400
Compressor (3/4 hp)	1800
Curling iron	700
Dehumidifier	650
Electric blanket	400
Electric range (per element)	1500
Electric skillet	1250
Freezer	700
Furnace fan (3/5 hp)	875
Garage door opener	500–750
Hair dryer	1200
Hand drill	250–1100
Iron	1200
Jet pump	800
Light bulb	100
Microwave oven	700–1000
Milk cooler	1100
Oil burner on furnace	300
Oil fired space heater (140,000 btu)	400
Oil fired space heater (30,000 btu)	150
Oil fired space heater (85,000 btu)	225
Radio	50–200
Refrigerator	700
Slow cooker	200
Submersible pump (1 hp)	2000
Submersible pump (1/2 hp)	1500
Submersible pump (1-1/2 hp)	2800
Sump pump	800–1050
Table saw (10-inch)	1750–2000
Television	200–500
Toaster	1000–1650

Dimensions

Approximate Dimensions in Inches (mm)

Air-Cooled Standby

Catalog Number	Length	Width	Height	Weight in Lbs (kg)
EGENA9	48.00 (1219.2)	25.00 (635.0)	29.00 (736.6)	340 (154.0)
EGENA11	48.00 (1219.2)	25.00 (635.0)	29.00 (736.6)	373 (169.2)
EGENA16	48.00 (1219.2)	25.00 (635.0)	29.00 (736.6)	437 (198.2)
EGENA20	48.00 (1219.2)	25.00 (635.0)	29.00 (736.6)	451 (204.6)
EGENA22	48.00 (1219.2)	25.00 (635.0)	29.00 (736.6)	476 (216.0)

Liquid-Cooled Standby

Catalog Number	Length	Width	Height	Weight in Lbs (kg)
EGENX22	62.00 (1574.8)	29.00 (736.6)	34.00 (863.6)	895 (406.3)
EGENX25	63.00 (1600.2)	30.00 (762.0)	35.00 (889.0)	875 (397.3)
EGENX27	64.00 (1625.6)	31.00 (787.4)	36.00 (914.4)	891 (404.5)
EGENX30	60.00 (1651.0)	32.00 (812.8)	37.00 (939.8)	935 (424.5)
EGENX32	76.80 (1950.0)	35.00 (889.0)	46.10 (1171.0)	600 (1333.0)
EGENX36	77.00 (1955.8)	34.00 (863.6)	45.00 (1143.0)	1683 (764.1)
EGENX38	76.80 (1950.0)	35.00 (889.0)	46.10 (1171.0)	600 (1333.0)
EGENX45	78.00 (1981.2)	35.00 (889.0)	46.00 (1168.4)	1414 (642.0)
EGENX48	79.00 (2006.6)	36.00 (914.4)	47.00 (1193.8)	1703 (773.2)
EGENX60 ④	80.00 (2032.0)	37.00 (939.8)	48.00 (1219.2)	1650 (749.1)
EGEN70 ④	97.00 (2463.8)	37.00 (939.8)	48.00 (1219.2)	2185 (992.0)
EGEN80 ④	115.00 (2921.0)	36.80 (934.7)	79.00 (2006.6)	2010 (912.5)
EGEN100 ④	116.00 (2946.4)	36.80 (934.7)	80.00 (2032.0)	2705 (1228.1)
EGEN130 ④	117.00 (2971.8)	36.80 (934.7)	81.00 (2057.4)	2873 (1304.3)
EGEN150 ④	118.00 (2997.2)	36.80 (934.7)	82.00 (2082.8)	2666 (1210.4)

Notes

① The rated wattage of a light can be found on the light bulb. The rated wattage of tools, appliances and motors can usually be found on a decal affixed to the device.

② If the appliance, tool or motor does not give wattage, multiply 120 volts times the ampere rating to determine watts (volts x amps = watts) for single-phase only.

③ Induction motors require about three times more power (in watts) to start up than to run. This surge lasts for only a few seconds. Be sure to take this into account when calculating the total capacity of the load that will be energized by the backup power system. To correctly configure the desired wattage, add the amperage of the inrush of the largest motor to the total running wattage of all other connected loads.
Figure the watts required to start the largest motor.
Add that to the total running watts of all other connected loads.

④ All weights provided for steel enclosures only, if applicable.

EGENP8000EX

Contents

Product Description

Whereas permanently installed standby systems are designed for larger homes, small businesses or secondary residences, portable generators are primarily used for smaller homes, essential loads, construction sites, camping, tailgating and wherever portable temporary power is required.

Application Description

Portable generator systems are primarily used for smaller homes or for construction sites where temporary power is required. Permanently installed standby systems are designed for larger homes, small businesses or secondary residences, such as vacation homes and cabins, that require uninterrupted power for critical loads.

As the name indicates and due to physical size and weight, portable generators can easily be transported from one location to another.

Designed for outdoor use only, common applications vary from homes to camping to construction sites, providing backup power everywhere electrical power is needed.

Standards and Certifications

- UL Listed

Listed

Catalog Number Selection

Portable Generators

EGEN P 8000 E X

Type	Power Output	Startup Method	Model
P = Portable	**5500** = 5.5 kW **6500** = 6.5 kW **7000** = 7.5 kW **8000** = 8 kW **15000** = 15 kW **17500** = 17.5 kW	**Blank** = Manual/recoil only **E** = Electric and/or manual/recoil	**Blank** = General purpose **CA** = General purpose "CARB" compliant (CA only) **X** = XG Series

Product Selection

Portable Generators

	Running Watts	Starting Watts	Engine Displacement/ Type	Startup Method	Fuel Tank Capacity (gal) ①	Approx. Running Time at 1/2 load (hrs)	Battery Included	Outlets Configuration	Warranty Residential/ Commercial (yrs)	Catalog Number
General Purpose (49-State)										
EGENP5500 	5500	6875	389 cc/OHV	Manual	7.2	10	No	1 x 30 A L14-30R (twist lock), 2 x 20 A 5-20R duplex	2/1 Ltd	**EGENP5500**
EGENP6500 	6500	8125	389 cc/OHV	Manual	7.2	10	No	1 x 30 A L14-30R (twist lock), 2 x 20 A 5-20R duplex	2/1 Ltd	**EGENP6500**
EGENP6500E 	6500	8125	389 cc/OHV	Manual/ electric	7.2	10	Yes	1 x 30 A L14-30R (twist lock), 2 x 120 A 5-20R duplex	2/1 Ltd	**EGENP6500E**
EGENP7500E 	7500	9375	420 cc/OHV	Manual/ electric	8.0	12	Yes	1 x 30 A L14-30R (twist lock), 2 x 20 A 5-20R duplex	2/1 Ltd	**EGENP7500E**

Note

① Requires gasoline as fuel to operate.

Portable Generators, continued

	Running Watts	Starting Watts	Engine Displacement/ Type	Startup Method	Fuel Tank Capacity (gal) ①	Approx. Running Time at 1/2 load (hrs)	Battery Included	Outlets Configuration	Warranty Residential/ Commercial (yrs)	Catalog Number
General Purpose (49-State), continued										
EGENP15000E 	15000	22500	992 cc/OHVI	Manual/ electric	16.0	12	Yes	1 x 50 A 14-50R, 1 x 30 A L14-30R (twist lock), 2 x 30 A L5-30R (twist lock), 1 x 20 A 5-20R duplex, 1 x 20 A GFCI 5-20R duplex	2/1 Ltd	**EGENP15000E**
EGENP17500E 	17500	26250	992 cc/OHVI	Manual/ electric	16.0	10	Yes	1 x 50 A 14-50R, 1 x 30 A L14-30R (twist lock), 1 x 30 A L5-30R (twist lock),1 x 20 A 5-20R duplex, 1 x 20 A 5-20R GFCI duplex	2/1 Ltd	**EGENP17500E**
XG Series										
EGENP7000EX 	7000	8750	407 cc/OHVI	Manual/ electric	9	10	Yes	1 x 30 A L14-30R (twist lock), 2 x 20 A GFCI 5-20R duplex	2/1 Ltd	**EGENP7000EX**
EGENP8000EX 	8000	10000	407 cc/OHVI	Manual/ electric	10	10	Yes	1 x 30 A L14-30R (twist lock), 2 x 20 A GFCI 5-20R duplex	2/1 Ltd	**EGENP8000EX**
EGENP10000EX 	10000	12500	530 cc/OHVI	Manual/ electric	10	10	Yes	1 x 50 A 14-50R, 1 x 30 A L14-30R (twist lock), 1 x 30 A L5-30R (twist Lock), 2 x 20 A GFCI 5-20R duplex	2/1 Ltd	**EGENP10000EX**
CARB ② Compliant (Required in California Only)										
EGENP5500CA 	5500	6875	389 cc/OHV	Manual	7.2	10	No	1 x 30 A L14-30R (twist lock), 2 x 20 A GFCI 5-20R duplex	2/1 Ltd	**EGENP5500CA**
EGENP6500CA 	6500	8125	389 cc/OHV	Manual	7.2	10	No	1 x 30 A L14-30R (twist lock), 2 x 120 A 5-20R duplex	2/1 Ltd	**EGENP6500CA**

Notes

① Requires gasoline as fuel to operate.
② California Air Resources Board.

Dimensions

Approximate Dimensions in Inches (mm)

Portable Generators

Catalog Number	Length	Width	Height	Weight Lbs (kg)
EGENP5500	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	171.0 (77.6)
EGENP5500CA	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	170.9 (77.6)
EGENP6500	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	175.0 (79.5)
EGENP6500E	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	186.0 (84.4)
EGENP6500CA	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	177.0 (80.3)
EGENP7000EX	31.00 (787.4)	25.50 (647.7)	28.00 (711.2)	245.0 (111.2)
EGENP7500E	27.25 (692.2)	27.00 (685.8)	25.00 (635.0)	191.5 (86.9)
EGENP8000EX	31.00 (787.4)	25.50 (647.7)	28.00 (711.2)	235.0 (106.7)
EGENP10000EX	30.00 (762.0)	29.50 (749.3)	31.00 (787.4)	300.0 (136.2)
EGENP15000E	48.50 (1231.9)	31.00 (787.4)	39.50 (1003.3)	363.0 (164.8)
EGENP17500E	48.50 (1231.9)	31.00 (787.4)	39.50 (1003.3)	390.0 (177.1)

Residential Automatic Transfer Switches

Contents

Product Description

50, 100, 150, 200 and 400 A Fully Automatic

All Eaton automatic transfer switches (ATS) monitor utility and generator voltages and will automatically connect to the appropriate source of power. Eaton offers two types of automatic transfer switches to suit your personal backup power needs—the standard ATS EGSX series with load shedding capabilities and the Green ATS EGSU series that provides a truly active load management solution.

Green Line of Automatic Transfer Switches

With the rising cost of commodities and fuel in today's economy, consumers are concerned with maximizing the value of their purchases.

Electrical loads are now intelligently managed with Eaton's Green Line of automatic transfer switches. The active load management inside each Green ATS allows the consumer to use 100% of the power rated output of the generator and/or use a smaller generator, reducing upfront installation costs and saving on ongoing fuel consumption costs.

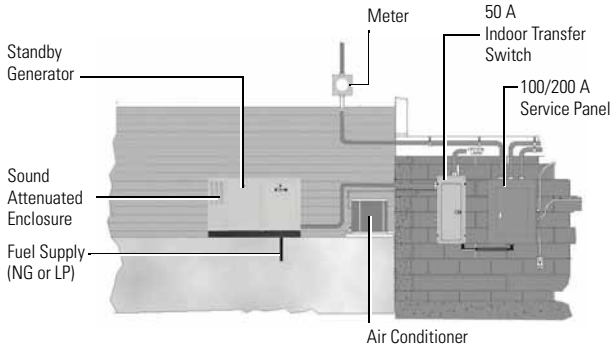
As a part of Eaton's commitment to quality, every Green ATS, at no extra cost, will ship with a CHSPT2ULTRA whole surge protector, which will help prevent potential damage to valued electronics caused by power surges in the utility line.

Application Description

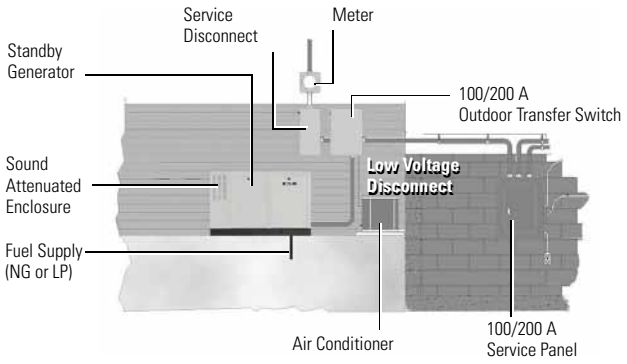
50, 100, 150, 200 and 400 A Switches

100, 200 and 400 A switches are capable of "whole house" power transfer in residential/ small business applications.

50 A—Indoor Installation—Selected Load Pre-Wired



100/200 A—Outdoor Installation—Whole House Pre-Wired



Standards and Certifications

- UL 1008 listed
- UL 67 listed

Listed

Catalog Number Selection

Standard Automatic Transfer Switches—EGSX Series

EGSX 200 __ NSEA

Type	Ampere Rating	Loadcenter (CH Type, Integral)	Service Entrance Rated
EGSX = Eaton EGSX transfer switch series	**50** = 50 A **100** = 100 A **150** = 150 A **200** = 200 A **400** = 400 A	**Blank** = None **L12** = 12 circuits N1 **L12R** = 12 circuits N3R **L24R** = 24 circuits N3R	**NSEA** = Service entrance (normal source only) **A** = Non-service entrance

Green Automatic Transfer Switches—EGSU Series

EGSU 200 __ NSE ACA

Type	Ampere Rating	Loadcenter (CH Type, Integral)	Service Entrance Rated	Load Management
EGSU = Eaton EGSU "Green" universal transfer switch series	**100** = 100 A **150** = 150 A **200** = 200 A **400** = 400 A	**Blank** = None **L24** = 24 circuits	**NSE** = Service entrance (normal source only) **Blank** = Non-service entrance	**ACA** = Active load management

Product Selection

EGSX50L12R

Standard Automatic Transfer Switches ①

Ampere Rating	Voltage	Service Entrance Rated	No. of Load Shed Contacts	Contactor Wire Size Range(s)	No. of Cables per Phase	Withstand Current (rms) at 240 Vac	No. of Circuits Included ②	Frequency (Hz)	Enclosure Type	Most Common Generator Sizes (kW) ②	Catalog Number
50	120/240	No	2	#14–#6	1	5000	12	50/60	NEMA 1 (indoor)	9, 11	**EGSX50L12**
50	120/240	No	2	#14–#6	1	5000	12	50/60	NEMA 3R (outdoor)	9, 11	**EGSX50L12R**
100	120/240	No	2	#14–#2/0	1	10,000	—	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSX100A**
100	120/240	Yes	2	#14–#2/0	1	10,000	—	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSX100NSEA**
100	120/240	No	2	#14–#2/0	1	10,000	24	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSX100L24RA**
150	120/240	Yes	2	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSX150NSEA**
200	120/240	No	2	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSX200A**
200	120/240	Yes	2	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSX200NSEA**
400	120/240	Yes	2	750 kcmil–2 300 kcmil–1/0	1/2	35,000	—	50/60	NEMA 3R (outdoor)	>22	**EGSX400NSEA**

EGSU200NSEACA

Green Automatic Transfer Switches ④—Featuring Active Load Management Technology

Ampere Rating	Voltage	Service Entrance Rated	Contactor Wire Size Range(s)	No. of Cables per Phase	Withstand Current (rms) at 240 Vac	No. of Circuits Included ②	Frequency (Hz)	Enclosure Type	Most Common Generator Sizes (kW) ③	Catalog Number ⑤
100	120/240	No	#14–#2/0	1	10,000	—	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSU100ACA**
100	120/240	Yes	#14–#2/0	1	10,000	—	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSU100NSEACA**
100	120/240	No	#14–#2/0	1	10,000	24	50/60	NEMA 3R (outdoor)	9, 11, 16	**EGSU100L24RACA**
150	120/240	Yes	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSU150NSEACA**
200	120/240	No	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSU200ACA**
200	120/240	Yes	#4–300 kcmil	1	10,000	—	50/60	NEMA 3R (outdoor)	16, 20, 22	**EGSU200NSEACA**
400	120/240	Yes	750 kcmil–2 300 kcmil–1/0	1/2	35,000	—	50/60	NEMA 3R (outdoor)	>22	**EGSU400NSEACA**

Notes

① Standard ATS "EGSX" Series compatible with Eaton generators only.
② Uses CH type circuit breakers.
③ For reference only. Generator size must be determined with proper/actual load calculations.
④ UNIVERSAL ATS: compatible with any single-phase, 120/240 V generator brand.
⑤ Whole house surge Cat. No. CHSPT2ULTRA included in every Green ATS "EGSU" Series.

ATS Ready Loadcenter

From the far-reaching power failures brought on by hurricanes and snow/ice storms, to the increasing power outage concerns and an aging electrical infrastructure, backup power is more important than ever. Eaton's ATS Ready loadcenter addresses future backup power needs by enabling a fast, efficient installation of an automatic transfer switch kit to convert from utility power to generator power.

The ATS Ready loadcenter gives homebuilders and electrical contractors the flexibility to install a generator ready system or to install a loadcenter and easily add an ATS in the future. Backup power had never been that versatile before.

ATS Ready Loadcenter Features

- CH Premium Type 200 A single-phase MCB 36-circuit loadcenter
- 50 A ATS "EGSX" type kit for factory or field installation (compatible with Eaton generators only)
- 22 circuits for non-essential loads and 14 circuits for essential backup power loads
- Versatile, space-saving design
- For use with 9 or 11 kW air-cooled generators
- CH cover included
- Lifetime warranty on CH loadcenter and breakers
- NEMA 1 design
- UL Listed

ATS Ready Loadcenter

	Description	Catalog Number
CH36B200EGP 	ATS Ready loadcenter Kit CHEGSX50KIT must be ordered separately Loadcenter only. Includes provision for ATS kit	**CH36B200EGP**
CHEGSX50KIT 	ATS "EGSX" kit for ATS Ready loadcenter Field-installable automatic transfer switch kit ATS Ready loadcenter CH36B200EGP must be ordered separately Intuitive, easy installation Compatible with Eaton generators only	**CHEGSX50KIT**
CH36B200EGPK 	ATS Ready LC with factory-installed ATS kit Factory assembled Compatible with Eaton generator only. Generator needed to complete backup power system Recommended Eaton generators models: 9/8 kW–Catalog #EGENA9 11/10 kW–Catalog #EGENA11	**CH36B200EGPK**

Dimensions

Approximate Dimensions in Inches (mm)

Automatic Transfer Switches

Catalog Number	Width	Height	Depth	Weight Lbs (kg)
EGSX50L12	14.25 (362.0)	21.00 (533.4)	4.00 (101.6)	25 (11.33)
EGSX50L12R	14.25 (362.0)	21.00 (533.4)	6.00 (152.4)	29 (13.15)
EGSX100A	14.46 (367.3)	16.87 (428.5)	5.32 (135.1)	25 (11.33)
EGSX100NSEA	14.46 (367.3)	16.87 (428.5)	5.32 (135.1)	28 (12.70)
EGSX100L24RA	14.46 (367.3)	29.33 (744.0)	5.32 (135.1)	38 (17.24)
EGSX200A	14.46 (367.3)	25.08 (637.0)	5.25 (133.4)	35 (15.87)
EGSX150NSEA	14.46 (367.3)	29.20 (741.7)	5.32 (135.1)	45 (20.41)
EGSX200NSEA	14.46 (367.3)	29.20 (741.7)	5.32 (135.1)	45 (20.41)
EGSU100L24RACA	14.46 (367.3)	29.33 (745.0)	5.32 (135.1)	38 (17.24)
EGSU100ACA	14.46 (367.3)	16.87 (428.5)	5.32 (135.1)	25 (11.33)
EGSU100NSEACA	14.46 (367.3)	16.87 (428.5)	5.32 (135.1)	28 (12.70)
EGSU150NSEACA	14.46 (367.3)	29.20 (741.7)	5.32 (135.1)	45 (20.41)
EGSU200ACA	14.46 (367.3)	25.08 (637.0)	5.25 (133.4)	35 (15.88)
EGSU200NSEACA	14.46 (367.3)	29.20 (741.7)	5.32 (135.1)	45 (20.41)
EGSU400NSEACA	23.14 (587.8)	35.55 (903.0)	10.00 (254.0)	120 (54.43)
CH36B200EGPK	14.31 (363.5)	47.50 (1206.5)	3.88 (98.6)	40 (18.14)

All Panels are Manufactured in the USA and Meet UL 1008

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Contents

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Product Description

A manual transfer switch is a device that is mounted next to the loadcenter (distribution panel) in the home or small business. The manual transfer switch is used in conjunction with a portable backup power generator and serves the purpose of turning selected circuits on and off during a power outage. The transfer switch panel allows the owner to start up a generator to restore power to critical circuits when utility power is not available.

The owner designates which circuits are critical, such as the refrigerator and certain lights. Sometimes called emergency power panels or emergency generator panels, manual transfer switch panels provide the homeowner or small business owner with a safe and easy way to continue using electrical appliances when the utility power is unavailable temporarily.

Application Description

Manual transfer switches are most often used in residential, agricultural and light commercial applications. Comfort and safety are key concerns of many homeowners who are dependent on an uninterrupted supply of electricity.

The increase in our dependence on power is due in part to the popularity of home offices and in-home health care. Various heavily populated regions of the United States experience periodic power outages due to extreme weather conditions, such as ice and snowstorms, heat waves, tornadoes or hurricanes. These regions that include the Pacific Northwest, Atlantic Coast and the Gulf Coast are the strongest markets for portable generators and manual transfer switches.

Features, Benefits and Functions

Eaton offers two manual transfer switch backup power solutions:

- Manual transfer switches
- Generator panels

Manual Transfer Switches

- Panel and components sold separately
- Hardwired generator connection
- Ideal for new construction/ larger loads
- Sturdy copper bus construction
- Uses CH and CHT circuit breaker types (sold separately)
- Mechanically interlocked main disconnects to prevent paralleling of normal and emergency power source
- Indoor and outdoor designs available

Manual Transfer Switch Indoor Design

Manual Transfer Switch Indoor/Outdoor Design

Generator Panels

- Mechanically interlocked main disconnects prevent paralleling of normal and emergency power source
- Panel and components sold separately
- Integral plug-in generator connection (power inlet box)
- All circuit breakers are included—switching duty rated
- Includes dual wattmeters for load balancing
- Indoor and outdoor designs available

Generator Panel Indoor Design

Generator Panel Outdoor Design

Standards and Certifications

- UL 67 listed
- UL 1008 listed

UL Listed

Reference Information

Cross-Reference

Watts	Number of Circuits	Ampere Rating	Catalog Number Eaton	Gen/Tran ①	EmerGen ①	Square D	Generac ②
5000	4–8	30	**CH48GEN3060R**	—	—	QO48M30DSGP	—
15,000	8–16	60	**CH816GEN6060**	—	—	QO48M60DSGP	—
5000	6	20	**CH6EGEN2060**	20216	6-5000	—	—
5000	6	20	**CH6EGEN2060R**	R20216	6-5000 + RTE657	—	—
5000	6	20	**CH6EGEN2060SU**	—	—	—	—
5000	6	20	**CH6EGEN2060RSU**	—	—	—	—
7500	10	30	**CH10EGEN3060**	302110-20	10-7500	—	—
7500	10	30	**CH10EGEN3060R**	R30211-20	10-7500 + RTE1075	—	—
7500	10	30	**CH10EGEN3060SUR**	—	—	—	—
7500	10	30	**CH10EGEN3060RSU**	—	—	—	—
7500	10	30	**CH10GEN5030SN**	—	—	—	—
7500	10	30	**CH10GEN5030RSN**	—	—	—	—
12,000	10	50	**CH10GEN5050SN**	—	—	—	—
12,000	10	50	**CH10GEN5050RSN**	—	—	—	—

Notes

① Gen/Trans device is not supplied with a power cord.

② Generac device is 7200 maximum watts on six-circuit device and 12,000 maximum watts on 10-circuit device.

Product Selection

Manual Transfer Switches and Generator Panels Selection

Enclosure Type	Watts	Number of Circuits	Ampere Rating	Main/ Emergency Ampere Rating	Feeder Breakers	Included Accessories	Catalog Number
Standard Manual Transfer Switch							
NEMA 3R	5000	4–8	30	Provision	Provision	None	**CH48GEN3060R**
NEMA 1	10,000	8–16	60	Provision	Provision	None	**CH816GEN6060**
Generator Panel							
NEMA 1	5000	6	20	60/20	5–1P151–1P20	None	**CH6EGEN2060**
NEMA 3R	5000	6	20	60/20	5–1P151–1P20	None	**CH6EGEN2060R**
NEMA 1	5000	6	20	60/20	5–1P151–1P20	Two-pole surge protector	**CH6EGEN2060SUR**
NEMA 3R	5000	6	20	60/20	5–1P151–1P20	Two-pole surge protector	**CH6EGEN2060RSU**
NEMA 1	7500	10	30	60/30	6–1P152–1P2012P30	None	**CH10EGEN3060**
NEMA 3R	7500	10	30	60/30	6–1P152–1P2012P30	None	**CH10EGEN3060R**
NEMA 1	7500	10	30	60/30	7–1P152–1P2012P30	Two-pole surge protector	**CH10EGEN3060SUR**
NEMA 3R	7500	10	30	60/30	7–1P152–1P2012P30	Two-pole surge protector	**CH10EGEN3060RSU**
Switched Neutral Manual Transfer Switch							
NEMA 1	7500	10	30	50/30	6–1P15, 2–1P20, 1–2P30	None	**CH10GEN5030SN**
NEMA 3R	7500	10	30	50/30	6–1P15, 2–1P20, 1–2P30	None	**CH10GEN5030RSN**
NEMA 1	12,000	10	50	50/50	6–1P15, 2–1P20, 1–2P30	None	**CH10GEN5050SN**
NEMA 3R	12,000	10	50	50/50	6–1P15, 2–1P20, 1–2P30	None	**CH10GEN5050RSN**

Power Inlet Boxes

Description	Ampere Rating	Voltage	Catalog Number
Flush flange kit (for use with generator panel only)	—	120/240 V	**CHEGENFKIT**
Power inlet box	20	120/240 V	**EGSPIB20**
Power inlet box	30	120/240 V	**EGSPIB30**
Power inlet box	50	120/240 V	**EGSPIB50**

Warranty

Manual Transfer Switch

- 15-year loadcenter warranty
- Lifetime branch breaker warranty

Generator Panel

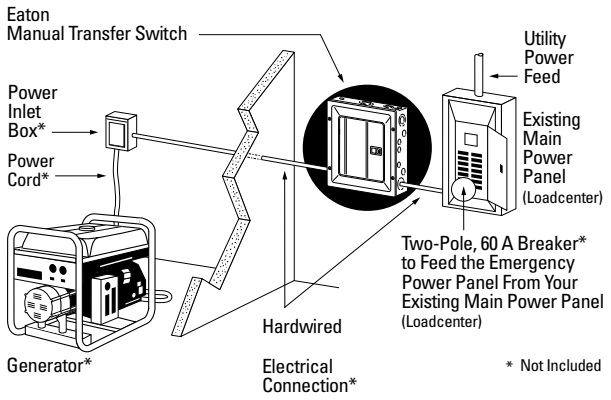
- 15-year loadcenter warranty
- Lifetime branch breaker warranty

Technical Data and Specifications

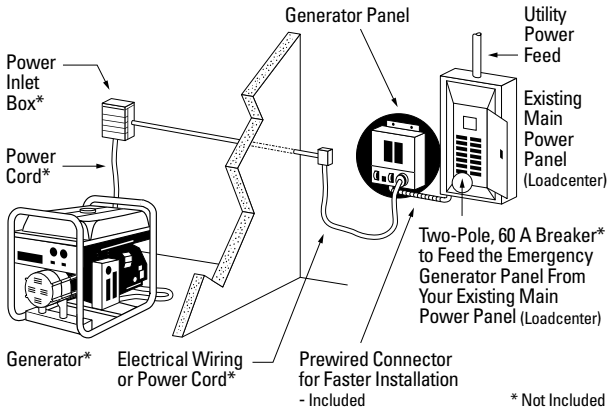
- 10,000 AIC rating
- Switching devices must be circuit breakers
- Manual transfer switch must be supplied with neutral and ground
- Power inlet box must be connected to a circuit breaker for generator protection

Installation Diagrams

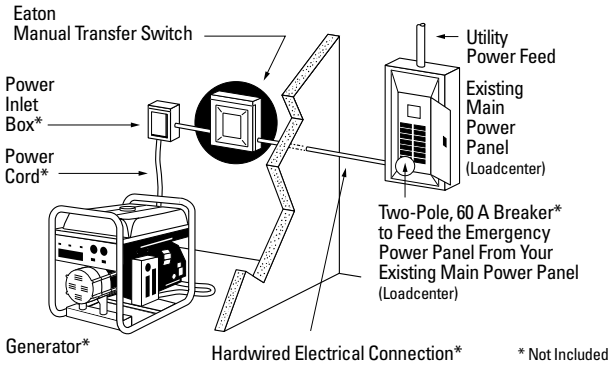
Manual Transfer Switches—Indoor Installation Diagram



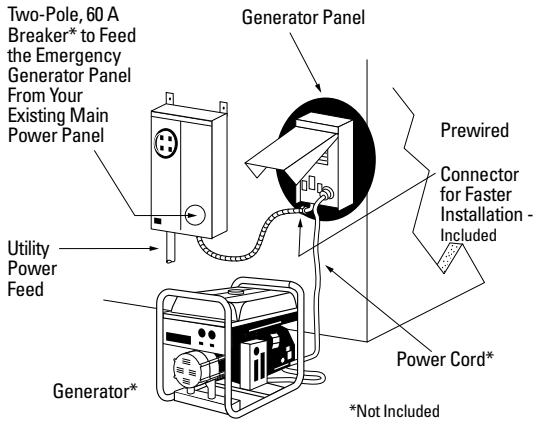
Generator Panels—Indoor Installation Diagram



Manual Transfer Switches—Outdoor Installation Diagram



Generator Panels—Outdoor Installation Diagram



Dimensions

Approximate Dimensions in Inches (mm)

Manual Transfer Switch

Enclosure Type	Height	Width	Depth	Weight Lbs (kg)
NEMA 1	16.75 (425.5)	14.31 (363.5)	3.88 (98.5)	25 (11)
NEMA 3R	13.00 (330.2)	11.00 (279.4)	3.56 (90.4)	14 (6)

Generator Panel

Enclosure Type	Height	Width	Depth	Weight Lbs (kg)	
				6-Circuit	10-Circuit
NEMA 1	13.23 (336.0)	11.41 (289.8)	4.10 (104.1)	24 (11)	26 (12)
NEMA 3R	17.12 (434.8)	9.45 (240.0)	7.16 (181.9)	29 (13)	31 (14)

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