



THE RANGE
10kVA - 4376kVA

Engineering Excellence Built on Experience

With more than forty years of expertise in the design and manufacture of diesel generating sets our management team ensures every AJ Power generating set will provide reliable power and peace of mind.

Whether used daily or in an emergency, you can be assured our expert team has created a power solution with you and your needs in mind.

AJ Power headquarters are based at modern facilities in Northern Ireland, UK with a subsidiary office South Africa and regional offices in England and Dubai.

This network of offices enables us to continue to provide service and support to customers worldwide.

AJ Power generating sets are made in the UK at our headquarters since the inception of the company in 2003.

All of our generators up to 7 Series are produced on powered automotive style assembly tracks by skilled operatives prior to load and functional testing in advanced test cells.

The largest machines are assembled in an ultra-modern high bay assembly plant with the most advanced testing facilities available for multiple units up to 4376kVA capacity (low or high voltage).

As the company continues to grow so do the services/ capabilities we offer to our customers.

AJ Power is proud of its origins and strives to continue to bring superior products, manufactured in the United Kingdom, to world markets.

Over 38,000 AJ Power generating sets have been designed, manufactured and distributed to over 90 countries worldwide.





3 SERIES

Power:
10kVA - 110kVA

Overview:
Our smallest range offering you desirable power in a compact package.

Sectors Served:
Telecommunications, Construction, Residential, Retail.



5 SERIES

Power:
33kVA - 275kVA

Overview:
Setting standards for others to follow. Offering a complete array of additional options.

Sectors Served:
Construction, Residential, Agriculture, Industrial, Commercial.



AJ POWER ENGINES AND ALTERNATORS



To ensure world-class quality our major components such as engines, alternators and steel are all produced or sourced in the United Kingdom, Europe, United States of America or Japan. Investment in class-leading technology and processes ensure that each AJ Power generating set meets and exceeds your expectations time after time.

We offer a range of engine choices and two alternator choices - Mecc Alte or Newage Stamford.

For over 60 years Cummins has provided durable and reliable power solutions to construction and industrial equipment across the globe.

Mitsubishi industrial engines have a worldwide reputation for reliability, fuel economy and long life.

Their long stroke and low compression design reduces engine stress. Service friendly design reduces maintenance costs and shortens machine downtime.

Mecc Alte are a world leading producer and supplier of synchronous alternators.

As a totally independent company they are focused fully on producing world class alternators.



AJ POWER ENGINES AND ALTERNATORS



For over 80 years Perkins have worked with generator set manufacturers to bring light, warmth, protection and of course peace of mind to thousands of people.

Manufactured in Europe and have nearly 100 years experience in building electrical machines, widely known throughout the world of power generation for reliability.

The demand for prime power and standby power generation is constantly growing.

In either case - wherever there is a critical need for dependable, class-leading fuel efficient workhorses that require a minimum of service and maintenance - the answer is Scania engines for power generation.





AJ POWER CANOPIES FEATURES

AJ Power's weather protective and sound attenuated enclosures deliver durability and security for your generating set. Manufactured from pretreated galvanised steel and coated with highly durable polyester powder paint, the canopies are designed with low velocity airflow to minimise the ingress of water, sand and dust.

A range of options are available to tailor your generating set to meet your needs, including optional canopy offering low noise level - perfect for urban locations. The ingress of water, sand and dust this is extremely advantageous to the operational life of the engine and alternator and will ensure your AJ Power sound attenuated generating set will operate in even the harshest conditions.

High Specifications:

- Maximised service access
- Digital control system
- High ambient cooling capabilities
- Extensive range of options
- Gas spring assisted side doors (3 Series)
- Galvanised canopies
- Our sound attenuated enclosures are fabricated from 1.5/2.0mm hot dipped galvanised steel and pre- treated before powder coated using polyester powder to a thickness between 60-100µm.
- They are designed to minimise noise and maximise ambient clearance with air velocity below 2.5m/s.
- This minimises the risk of dust and moisture ingress.

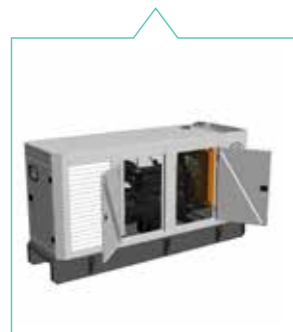


AJ POWER CANOPIES FEATURES



NOISE ABSORBENT MATERIALS

Enclosure is fully lined with noise absorbent material, as standard, to ensure low noise levels.



SERVICING MADE EASY

Large hinged doors provide access to all necessary components during installation and servicing. Lift-off hinges also available.



CONVENIENT CABLE ACCESS

Large aperture cable gland plate positioned below circuit breaker for ease of cable installation.



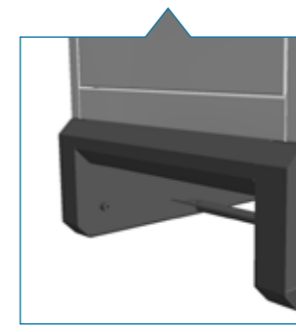
SINGLE POINT LIFT FRAME

Eye hook fitted to the top centre of canopy provides a means of lifting genset and is useful during installation.



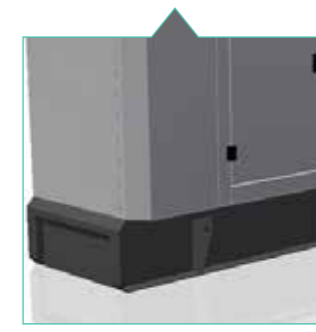
INTERNAL EXHAUST SILENCER SYSTEM

The exhaust silencer system is safely enclosed in the outlet of the enclosure.



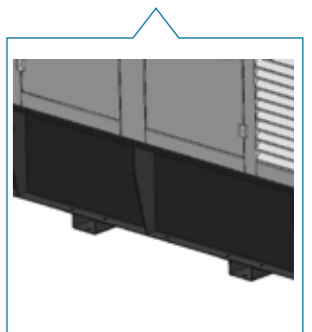
INNOVATIVE DESIGN

Design decisions are evaluated at each stage to ensure a machine has low noise levels, high ambient clearance, low intake velocity whilst having a compact modern style.



CORROSION & DAMAGE RESISTANT

Fully galvanised steel enclosure coated in highly durable polyester powder paint.



FORK POCKETS

An opening in the base frame for insertion of the prongs of a forklift.

3 Series - 10kVA - 110kVA

The attention to detail and high standards of engineering can be seen immediately in the AJ Power 3 Series.

OVERVIEW

The smallest range from AJ Power, the 3 Series, offers reliable power in an ultra compact solution.

A range of options are available to tailor your generating set to meet your needs, including optional canopy offering low noise level - perfect for urban locations.

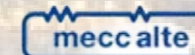
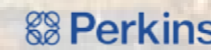
STANDARD FEATURES

- Emergency Stop Push Button
- Battery
- InSight3100 Control Panel
- Base Tank
- Fuel Tank Level Gauge
- IP23 Protection
- Standard Coolant Solution
- Radio Frequency Interference Suppression Kit (RFi)

3 Series - 10kVA - 110kVA

SECTORS SERVED INCLUDE:

Telecommunications - Construction - Residential - Retail



3 Phase

Model	50Hz				60Hz			
	Prime		Standby		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW
AJ10	9.0	7.2	10.0	8.0	11.3	9.0	12.5	10.0
AJ14	13.0	10.4	14.3	11.4	15.6	12.5	17.4	13.9
AJ17	15.0	12.0	16.5	13.2	-	-	-	-
AJ22	20.0	16.0	22.0	17.6	22.5	18.0	25.0	20.0
AJ33	30.0	24.0	33.0	26.4	33.8	27.0	37.5	30.0
AJ50	45.0	36.0	50.0	40.0	56.3	45.0	62.5	50.0
AJ66	60.0	48.0	66.0	52.8	70.0	56.0	77.5	62.0
AJ88	80.0	36.0	88.0	40.0	95.0	76.0	105.0	84.0
AJ110	100.0	48.0	110.0	52.8	118.8	95.0	131.3	105.0



Single Phase

Model	50Hz				60Hz			
	Prime		Standby		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW
AJ10	8.3	6.6	9.1	7.3	10.4	8.3	11.5	9.2
AJ14	11.9	9.5	13.1	10.5	14.6	11.7	16.3	13.0
AJ17	13.1	10.5	14.3	11.4	-	-	-	-
AJ22	18.9	15.1	20.7	16.6	22.5	18.0	25.0	20.0
AJ33	28.1	22.5	31.1	25.0	33.8	27.0	37.5	30.0
AJ50	43.8	35.0	47.5	38.0	-	-	-	-
AJ66	56.2	45.0	62.5	50.0	-	-	-	-



Ratings based on 3ph, 400/230 Volt, 0.8pf, 50 Hz and 3 ph, 480/277 Volt, 0.8pf, 60 Hz, 1 phase 220/110 Volt 0.8pf, Refer to factory for further information.

5 Series - 33kVA - 275kVA

The 5 Series range from AJ Power is setting the standards for others to follow.

OVERVIEW

The 5 Series from AJ Power delivers exceptional performance, reliability, durability and low operating costs.

The 5 Series offers excellent fuel consumption and is well equipped to deal with even the most arduous of conditions.

STANDARD FEATURES

- Emergency Stop Push Button
- Battery
- InSight3100 Control Panel
- Base Tank
- Fuel Tank Level Gauge
- IP23 Protection
- Standard Coolant Solution
- Radio Frequency Interference Suppression Kit (RFi)

5 Series - 33kVA - 275kVA

SECTORS SERVED INCLUDE:

Construction - Residential - Agricultural - Industrial - Commercial



Fuel Optimised

Model	50Hz				60Hz			
	Prime		Standby		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW
AJ33	30.0	24.0	33.0	26.4	33.8	27.0	37.5	30.0
AJ50	45.0	36.0	50.0	40.0	56.3	45.0	62.5	50.0
AJ66	60.0	48.0	66.0	52.8	70.0	56.0	77.5	62.0
AJ88	80.0	64.0	88.0	70.4	95.0	76.0	105.0	84.0
AJ110	100.0	80.0	110.0	88.0	118.8	95.0	131.3	105.0
AJ150	135.0	108.0	150.0	120.0	--	--	--	--
AJ165	150.00	120.0	165.0	132.0	168.6	135.0	187.5	150.0
AJ200	180.0	144.0	200.0	160.0	200.0	160.0	218.8	175.0
AJ220	200.0	160.0	220.0	176.0	203.8	163.0	225.0	180.0
AJ250	230.0	160.0	250.0	176.0	230.0	184.0	250.0	200.0
AJ275	250.0	200.0	275.0	220.0	243.6	195.0	268.6	215.0

Ratings based on 3ph, 400/230 Volt, 0.8pf, 50 Hz and 3 ph, 480/277 Volt, 0.8pf, 60 Hz, 1 phase 220/110 Volt 0.8pf, Refer to factory for further information.

Single Phase

Model	50Hz				60Hz			
	Prime		Standby		Prime		Standby	
	kVA	kW	kVA	kW	kVA	kW	kVA	kW
AJ33	28.1	22.5	31.3	25.0	33.8	27.0	37.5	30.0
AJ50	43.8	35.0	47.5	38.0	52.5	42.0	57.5	46.0
AJ66	53.3	45.0	62.5	50.0	66.3	53.0	72.9	58.3



5 Series Project Overview:

Sector:
Commercial

Genset:
AJ275

Services:
Design and Install



Digital Control Systems

Operation made easy using the most up-to-date control systems. AJ Power can provide a control system to meet all your needs.

The modern range of digital control systems offers flexibility for the user, ease of use and optimises the performance of your generating set.



InSight3100 - The InSight3100 is a microcontroller based generator control unit that is used to start and stop the genset manually or via a remote start signal when in automatic mode. The device is designed to run and monitor system parameters to ensure fail-safe genset operation.



InSight3300 - The InSight3300 is an Advanced single Gen-set, Auto Start controller for stand-by and prime-power applications. All-in one intuitive & powerful PC tool for configuration/ monitoring/ control, locally or remotely.



InSight4100 - The InSight4100 is an advanced single Gen-set controller for AMF (Automatic Mains Failure) applications. This includes automatic Genset start on a mains failure detection and 'open transition' breaker control. All-in-one intuitive & powerful PC tool for configuration/ monitoring/control, locally or remotely.



InSight5200 - A comprehensive paralleling generator set controller capable of managing up to 32 generator sets. Direct communication is via the Engine Control Unit and the controller also offer the ability to monitor your generator set remotely.



InSight6000s- Combines all of the powerful original features of the previous generation InSight6000 with added functionality, new front fascia layout and hardware enhancements. The InSight6000s range can offer a solution for various synchronising applications from AMF, peak shaving and import/export control.



Remote Communications Solutions - Remote communications options are available with all AJ Power digital control systems. Remote communication can give many advantages including reducing the need for site visits, minimising downtime, prioritising maintenance and alarm notification.

Automatic Transfer Switch

Operation made easy using the most up-to-date control systems. AJ Power can provide a control system to meet all your needs.

The modern range of digital control systems offers flexibility for the user, ease of use and optimises the performance of your generating set.



ATS2 - AJ Power's range of advanced automatic transfer panels offers automatic control of standby generating sets. The ATS2 panels are available from 40A - 4000A ratings and include a digital ATSc controller with '2 wire' control interface to the generator control panel. All intelligence is within the ATS2 controller.



ATS 3 - AJ Power Automatic Transfer Switch (ATS3) is designed to continually monitor the mains (Grid) AC power supply for under / over voltage and under / over frequency for both single and three phase systems. If a mains (Grid) AC failure is detected, a start request is issued to the generator. Available from 100 - 630amps.



5MW BACKUP SOLUTION
10 X AJ770 SCANIA



AJ POWER SPECIFICATIONS

- Standard
- Optional
- RTF Not available/ Not applicable
Refer to Factory

Our range of generating sets are packed with standard features including robust base frame, low lube oil pressure shutdown, over speed protection, high coolant temperature shutdown, low battery voltage alarm, battery charging system failure, industrial silencer (optional extra on 9 Series), 3 pole suitably rated circuit breaker (optional extra on 9 Series), fuel tank level gauge, emergency stop push button, base fuel tank (not applicable to 9 Series). Also available is a complete array of optional extras to ensure your AJ Power generating sets meet your needs entirely.

	3 Series	5 Series
Control System		
InSight3100	●	●
InSight3300 (Not on 3S AJ88/AJ110)	○	○
InSight4100 (Not on 3S AJ88/AJ110)	○	○
InSight5200 (Not on 3S AJ88/AJ110)	○	○
InSight6000S	-	○
Control panel heater	-	○
G59 / G10 main protection relay	-	RTF
Remote display panel (3300/4100/5200/6000s)	○	○
Protection alarms (various)	○	○
Automatic load transfer panels		
ATS (40 Amp - 6300 Amp)	○	○
Sound attenuated enclosure	○	○
Engine		
Electronic governor	-	○
Coolant drain	-	-
Coolant heater	○	○
Lube oil drain (standard on canopied sets)	○	○
Lube oil drain pump	○	○
Approaching low lube oil pressure alarm	○	○
High lube oil temperature shutdown	-	-
Alternator		
Anti- condensation heater	○	○
Permanent magnet generator (PMG)	○	○
Programming interface kit	○	○
Radio frequency interference suppression kit (RFI)	●	●
Upgrade AVR from 1-phase to 3-phase sensing	-	○
Total plus winding protection	○	○
IP23 protection	●	●
Radiator		
Transition mounting flange (open sets only)	○	○
Standard coolant solution (30% antifreeze)	●	●
Low ambient coolant solution (50% antifreeze)	○	○
Low coolant temperature alarm Added back in PL	○	○
Approaching high coolant temperature alarm	○	○
Low coolant level alarm	○	○

Please Note: Some options dependant on open/ canopied generating set and are model dependant.



AJ POWER SPECIFICATIONS

- Standard
- Optional
- RTF Not available/ Not applicable
Refer to Factory

	3 Series	5 Series
Baseframe / Handling		
Bunded fuel base tank	○	○
Bunded base tank with leak detection	-	○
Integral single skinned tank (600, 1000, 1300 litres - canopied sets only)	○	-
Extended bunded metal base tank	-	○
Single point lift (canopied sets only)	○	○
Captive anti-vibration mounts (required for trailer sets)	○	○
Fuel		
Base tank	● (100 litres)	●
Fuel tank level gauge	●	●
Fire valve kit	-	○
Low fuel level shutdown	○	○
Low fuel level alarm	○	○
Analogue fuel level measurement	○	○
4 Position fuel level switch	○	○
3 Way dual valve with single lever operation	○	○
Manual fuel transfer pump & hose	○	○
Automatic fuel transfer system	○	○
Exhaust		
Industrial silencer mounting kit	○	○
Residential silencer (loose) standard on canopy sets	○	○
Residential silencer mounting kit	○	○
Stainless steel bellows (standard on canopy sets)	○	○
AC Power Out (3 Phase)		
Upgrade to 4 pole circuit breaker	○	○
Auxiliary contact in circuit breaker	○	○
16A/32A/63A CEE Form Socket - 50Hz only	○	○
Motorised kit for circuit breaker	-	□
Earth leakage protection for main circuit breaker	○	○
Battery		
Battery isolator switch	○	○
Static battery charger incl. BC failure	○	○
Static battery charger incl. BC failure & boost	○	○
Other Accessories		
Sound attenuated container	○	○
Tool kit	○	○
Packing case (open set)	○	○
UKNI / CE certification	○	○
Additional operators manual	○	○

Please Note: Some options dependant on open/ canopied generating set and are model dependant.



GENSET CONTROLLER FEATURES



Application	Insight 3100	Insight 3300	Insight 4100	Insight 5200	Insight 6000s	Insight 6400s
Single unit	✓	✓	✓	✓	✓	✓
Standby	✓	✓	✓	✓	✓	✓
Remote start (2 wire)	✓	✓	✓	✓	✓	✓
Automatic mains failure	-	-	✓	✓	✓	✓
Multiple unit paralleling / Mains paralleling	-	-	-	✓	✓	✓
Display media						
Digital display of measured parameters	✓	✓	✓	✓	✓	✓
LCD graphical display	✓	✓	✓	✓	✓	✓
Genset parameter display						
AC voltage x 6 (V12, V23, V31, V1N, V2N, V3N)	✓	✓	✓	✓	✓	✓*
AC current (L1, L2, L3)	✓	✓	✓	✓	✓	✓
Frequency (Hz)	✓	✓	✓	✓	✓	✓
Operation hours	✓	✓	✓	✓	✓	✓
Battery voltage	✓	✓	✓	✓	✓	✓
Engine coolant temperature	✓	✓	✓	✓	✓	✓
Engine lube oil pressure	✓	✓	✓	✓	✓	✓
Start attempts	✓	✓	✓	✓	✓	✓
Tachometer	✓	✓	✓	✓	✓	✓
Power kVA/kVAR	✓	✓	✓	✓	✓	✓
Power kW	✓	✓	✓	✓	✓	✓
Power factor	✓	✓	✓	✓	✓	✓
Energy kWh/kVAh/kVAh	✓	✓**	✓**	✓**	✓**	✓**
Mains parameter display						
AC voltage x6 (V12, V23, V31, V1N, V2N, V3N)	-	-	✓	✓	✓	✓
AC current x 1 (L1)	-	-	-	✓	✓	✓
Frequency	-	-	✓	✓	✓	✓
Power (kW, kVA, kVar)	-	-	-	-	-	-
Measuring						
Mains or ground current (1 x true r.m.s; mains or ground current selectable)	-	-	-	✓	✓	✓
Mains/Busbar voltage (3-phase/4 wire)	-	-	-	✓	✓***	✓***
Operator controls						
Configuration via front panel	✓	✓	✓	✓	✓	✓
Emergency stop lockdown push button	✓	✓	✓	✓	✓	✓
Multilevel access via passwords	-	✓	✓	✓	✓	✓
Configuration via PC	✓	✓	✓	✓	✓	✓
Soft keys (with functions that depend on application and operation)	-	✓	✓	✓	✓	✓



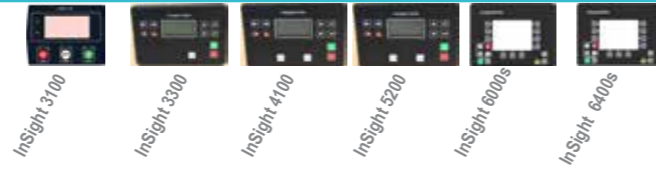
GENSET CONTROLLER FEATURES



System control functions	Insight 3100	Insight 3300	Insight 4100	Insight 5200	Insight 6000s	Insight 6400s
Manual genset starting	✓	✓	✓	✓	✓	✓
Remote genset starting	✓	✓	✓	✓	✓	✓
Start logic for engine (crank, rest and no. of cycles)	✓	✓	✓	✓	✓	✓
Stop logic for engine (run on / cool down sequence)	✓	✓	✓	✓	✓	✓
Auto on / off control of heaters if fitted	✓	✓	✓	✓	✓	✓
Automatic genset starting under mains failure condition	✓	✓	✓	✓	✓	✓
Communications						
Can interface / J1939	✓	✓	✓	✓	✓	✓
Ethernet	-	- ¹	- ¹	- ¹	✓	✓
RS485 Modbus	-	✓	✓	✓	✓	✓
USB	✓	✓	✓	✓	✓	✓
RS232	-	- ²	- ²	- ²	-	-
Protection						
Oil pressure	✓	✓	✓	✓	✓	✓
Coolant temperature	✓	✓	✓	✓	✓	✓
Fail to start	✓	✓	✓	✓	✓	✓
Emergency stop	✓	✓	✓	✓	✓	✓
Battery voltage over/under	✓	✓	✓	✓	✓	✓
Maintenance call	✓	✓	✓	✓	✓	✓
Generator: over / under voltage	✓	✓	✓	✓	✓	✓
Generator: over / under frequency	✓	✓	✓	✓	✓	✓
Generator: overload (kW)	✓	✓	✓	✓	✓	✓
Generator: reverse / reduced power	-	✓	✓	✓	✓	✓
Generator: unbalanced load	-	✓	✓	✓	✓	✓
Generator: instantaneous overcurrent	✓	✓	✓	✓	✓	✓
Generator: time-overcurrent (IEC 255 compliant)	✓	✓	✓	✓	✓	✓
Generator: IDMT-overcurrent	-	✓	✓	✓	✓	✓
Generator: ground fault (measure ground current)	-	- ³	- ³	✓	✓	✓
Generator: rotation field	-	✓	✓	✓	✓	✓
Generator: Pole slip	-	-	-	-	✓	✓
Engine: over / under speed	✓	✓	✓	✓	✓	✓
Engine: speed / frequency mismatch	-	-	-	-	✓	✓
Engine: cylinder temperature	-	-	-	-	✓	✓
Engine: D+ auxiliary excitation failure	✓	✓	✓	✓	✓	✓
Mains: voltage / frequency	-	-	✓	✓	✓	✓
Mains: phase shift / rotation field / ROCOF (df/dt)	-	-	-	✓	✓	✓
ECU Alarms / diagnostic fault codes	✓	✓	✓	✓	✓	✓



GENSET CONTROLLER FEATURES



Controls						
Breaker control logic (open transition)	2	1	2	2	2	3*
Mains parallel and multi-unit operation (up to 32 units)	-	-	-	✓	✓	✓
GCB and MCB synchronization	-	-	-	✓	✓	✓
Generator Group Breaker Control (GCB)	-	-	-	-	-	✓
Run-up Synchronization	-	-	-	-	-	✓
Import / export control / base load (kW and kVAr)	-	-	-	✓	✓	✓
Load-dependent start / stop	-	-	-	✓	✓	✓
n/f, V, P, Q and PF remote control via analogue input or interface	-	-	-	✓	✓	✓
Load / var sharing for up to 32 gensets	-	-	-	✓	✓	✓
Freely configurable PID controllers	-	-	-	-	3	3
I/Os						
Discrete inputs	4	8	8	8	12	12
Discrete outputs	6	8	8	8	12	12
Display and evaluation of J1939 analog values "supported SPNs" / ECO support	✓	✓	✓	✓	✓	✓
External discrete inputs / outputs	-	16/16 ^{#1}	16/16 ^{#1}	16/16 ^{#1}	32/32 ^{#1}	32/32 ^{#1}
Magnetic pickup	-	✓	✓	✓	✓	✓
Analog inputs	3	4	4	4	3	3
Analog outputs	-	-	-	2	2	2
External analog inputs / outputs	-	12/1 ^{#1}	12/1 ^{#1}	12/1 ^{#1}	16/4 ^{#1}	16/4 ^{#1}
Additional data						
Event recorder entries	50	350	350	350	1000	1000
Real time clock	-	✓	✓	✓	✓	✓
Internal PLC logics manager	-	✓	✓	✓	✓	✓
Expansion card available	-	✓*	✓*	✓*	✓	✓
Remote communication options	-	✓*2	✓*2	✓**	✓***	✓***
Remote display options	-	✓	✓	✓	✓	✓
LS5 support	-	-	-	-	-	✓

Note* Current and voltage designations are for 3-phase, 4-wire star configuration

* - 690V Available, ** - kVAh not Available, *** - 2 Phase Bus Sensing, #1 - Available with CM3-Ethernet plug-in extension module, #11 - Available with CM-Ethernet plug-in extension module #2 - Available with CM-RS232-485 plug-in extension module

#3 - Available with CM-RS232-485 plug-in extension module, * - Includes GGB control, #1 - External modules required, * - 2 of Plug in modules and CAN modules available, #2 - Available with CM2-4G-GPS or CM3-Ethernet plug-in extension module, ** - Available with CM-4G-GPS or CM-Ethernet plug-in extension module, *** - Netbeiter required



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