



POWER Gen

PREMIUM SERIES GENERATORS

Generator Specification Sheet

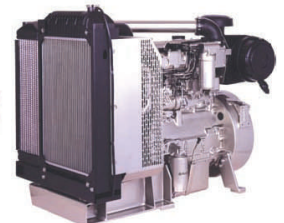
MODEL PG 100 AP



Powered by:

 **Perkins®**

STAMFORD



GENERATING SET PERFORMANCE	50Hz	60Hz
VOLTAGE	V400	
PHASES	Three	
PRIME RATED POWER	100.0kVA	
STANDBY RATED POWER	110.0kVA	
POWER FACTOR	0.80 PF	
FUEL USAGE @ 75%	17.1 L/hr	

The POWERGen Group Ltd:



POWERGen



POWERServ



POWERPump



POWERGenHire



POWERGen Group Ltd

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ENGINE	PERKINS	1104C-44TAG2
PERFORMANCE	50Hz	60Hz
BASELOAD RATED POWER	TBA	
PRIME RATED POWER	89.0KWm	
STANDBY RATED POWER	98.0KWm	
FUEL CONSUMPTION	205g/KWh @ 100% 207g/KWh @ 75% 204g/KWh @ 50%	
TYPE	Diesel 4 stroke	
ASPIRATION	Turbocharged air to air	
INJECTION TYPE	Direct injection	
ENGINE GOVERNOR	Electronic governor	
CYLINDERS AND ARRANGEMENT	Four in line	
BORE AND STROKE	105mm x 127mm	
COMPRESSION RATIO	18.2 : 1	
ELECTRICAL SYSTEM VOLTAGE	12 volt	
BATTERY TYPE	Lead acid, 12V	
DERATING FOR TEMPERATURE	40deg C	
DERATING FOR ALTITUDE	1000m	
DERATING FOR HUMIDITY	90%	

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ALTERNATOR**STAMFORD**

PERFORMANCE	50Hz	60Hz
MODEL	UCI274C	
BASELOAD RATED POWER 40 deg C	84kVA	
PRIME RATED POWER 40 deg C	100kVA	
STANDBY RATED POWER 40 deg C	106kVA	
STANDBY RATED POWER 27 deg C	110kVA	
EFFICIENCY	90%	
STANDARD WING CONNECTIONS	Star Delta	
EXCITER	Self excited	
POLES	4 poles	
PHASES	Three phases	
WIRES	12 leads	
VOLTAGE REGULATION	+/- 1.5%	
INSULATION CLASS	Class H	
ENCLOSURE	IP23	
MAXIMUM OVERSPEED	150%	
STANDARD AVR MODEL	SX460	
OPTIONAL AVR MODEL	MX341 & P.M.G	
DERATING FOR TEMPERATURE	40 deg C	
DERATING FOR ALTITUDE	1000mm	

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DIMENSIONS AND CAPACITY

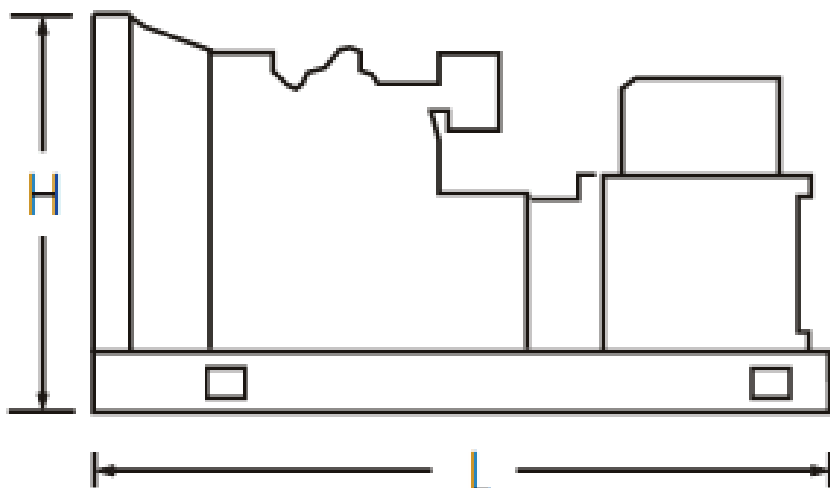
STANDARD MODELS

	INTEGRATED FUEL TANK CAPACITY		WEIGHT	DIMENSIONS		
	STANDARD	OPTIONAL	KG	LENGTH	WIDTH	HEIGHT
OPEN SKID TYPE	140	TBA	1090kg	2235mm	730mm	1595mm

GENERATOR SET EQUIPMENT

STANDARD MODELS

- Heavy duty steel base frame
- Pad type anti- vibration dampers
- Integrated fuel tank, base mounted
- 12V battery
- Key start switch
- Emergency stop button
- Silencer industrial type (open skid type)



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InteliLite® AMF 20/AMF 25 Automatic Mains Failure Controller



AUTOMATIC MODELS- EQUIPMENT

4 poles ABB circuit breaker, electronic control unit ComAp AMF25, control panel box key, emergency stop button, water jacket heater,

AUTOMATIC MODELS- PROTECTORS

Low oil pressure, low fuel level, overload, over/ under frequency, low voltage, over/ under battery voltage belt breakage

AUTOMATIC MODELS- INSTRUMENTATION

Voltmeter, ammeter (3 phases), frequency meter, hour meter, battery voltage meter, fuel level

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1100 Series

1104C-44TAG2

Diesel Engine - ElectropaK

98 kWm 1500 rev/min
112 kWm 1800 rev/min

Compact and Efficient Power

The Perkins 1100 Series family was developed following an intensive period of customer research. The 3.3 and 4.4 litre engines feature new cylinder blocks which ensure bore roundness is maintained under the pressures of operation, as well as significantly reducing mechanical and combustion noise. A new cross-flow cylinder head design optimises combustion control, and combines with turbocharger and charge cooler technology to achieve the best combination of power delivery and low exhaust emissions.

Cleaner and Quieter Power

The refined structure of the 1100C range leads to an exceptionally low noise signature. To meet environmental needs swirl conditioned air is delivered through the new cross-flow cylinder head, and burns cleanly with the high pressure fuel from an advanced technology rotary pump.

Quality by Design

Class A manufacturing improvements ensure that product reliability meets the high standards demanded by customers. Product design is focused on maintaining Perkins' legendary reputation for durability.

Cost Effective Power

The compact packaging and low noise performance of the 1100C range bring clear benefits to the Genset packager. Low cost of operation is assured by lower fuel and oil consumption, 500 hour service intervals, and the two year warranty.

Product Support

Total worldwide service is provided through a network of 4,000 distributors and dealers. TIPSS - The Integrated Parts and Support System enables customers to specify and order parts electronically as well as service engines with on-line guides and service tools.

Certified against the requirements of EU 2007 (EU 97/68/EC Stage II) legislation for non-road mobile machinery, powered by constant speed engines.

Building upon Perkins proven reputation within the power generation industry, the newly introduced 1100 Series range of ElectropaK engines now fit even closer to the needs of their customers.

In the world of power generation success is greeted for those providing more for even less. Therefore with this new 1104C-44TAG2 unit, Perkins has engineered for its customers even higher levels of reliability, yet lowered the cost of ownership. And with six cylinder capability from a four cylinder package performance increases, but crucially, bare engine noise is lower than ever before. Rapid starting and pick-up are naturally built-in especially for cold operation, but where legislation or local markets demand an emissions capability, then the 1104C-44TAG2 satisfies EU 2007 Stage II mobile off-highway legislation; and also complies to TA Luft (1986) regulations.

1100 Series see the marriage of technology to customer need. A 4.4 litre unit very quietly setting a new standard in prime power supply and standby for the power generation industry.

Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime power Standby (maximum)	100.0	80.0	93.5	125.5	89.0	119.0
		110.0	88.0	103.0	138.0	98.0	131.5
1800	Prime power Standby (maximum)	112.5	90.0	105.0	141.0	100.0	134.0
		125.0	100.0	118.0	158.0	112.0	150.0

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/1, ISO 3046/1:1986, BS 5514/1.

Derating may be required for conditions outside these; consult Perkins Engines Company Limited.

Fuel specification: BS 2869 Class 2 or ASTM D975 D2. Lubricating oil: API CH4/ACEA E5.

Generator powers are typical and are based on typical alternator efficiencies and a power factor and a power factor (cos θ) of 0.8.

Rating Definitions

Prime power – Power available for variable load in lieu of a main power network. Overload of 10% permitted for 1 hour in every 12 hours operation.

Standby (maximum) – Power available at variable load in the event of a main power network failure. No overload is permitted.

All information in this document is substantially correct at time of printing and may be altered subsequently

Publication No. 1714/10/06 Produced in England ©2005 Perkins Engines Company Limited

1100 Series

1104C-44TAG2

Engine Specification

Air inlet

- Mounted air filter

Fuel system

- Rotary type pump
- Ecoplus fuel filter

Lubrication system

- Wet cast iron sump with filler and dipstick
- Spin-on oil filter

Cooling system

- Thermostatically-controlled system with gear-driven circulation pump and belt-driven pusher fan
- Mounted radiator and piping incorporating air-to-air charge cooler

Electrical equipment

- 12 volt starter motor and 12 volt 65 amp alternator with DC output
- 12 volt shutdown solenoid energised to run
- Glow plug cold start aid

Flywheel and housing

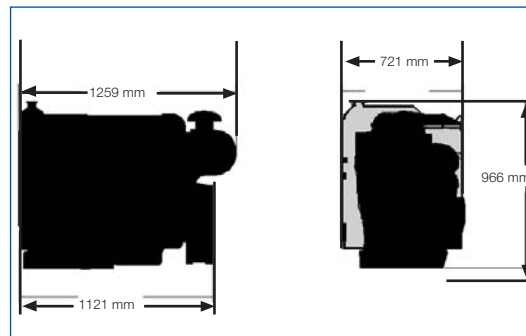
- Flywheel to SAE J620 size 10/11 $\frac{1}{2}$
- SAE 3 flywheel housing

Literature

- User's Handbook

Optional equipment

- 24 volt alternator
- 24 volt starter motor
- Workshop manual
- Parts book



Engine Speed	Fuel Consumption			
	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	205	24.9	214	29.7
Prime power	205	22.6	218	26.9
75% of prime power	207	17.1	218	20.2
50% of prime power	204	11.2	228	14.1

General Data

Number of cylinders	4 vertical in-line
Bore and stroke	105 x 127 mm
Displacement	4.41 litres
Aspiration	Turbocharged, air to air
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	18.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water-cooled
Total lubrication system capacity	8.0 litres
Total coolant capacity	12.6 litres
Dimensions	Length 1259 mm
	Width 721 mm
	Height 966 mm
Dry Weight (ElectropaK)	550 kg

Final weight and dimensions will depend on completed specification.



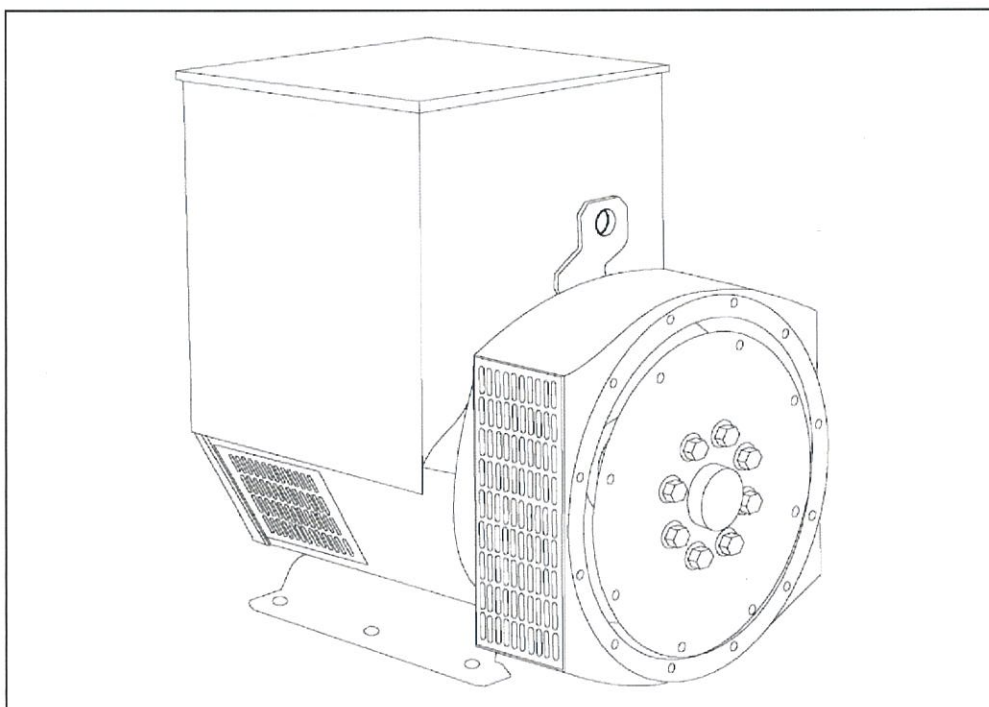
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UCI274C - Technical Data Sheet



UCI274C

SPECIFICATIONS & OPTIONS



STANDARDS

Newage Stamford industrial generators meet the requirements of BS EN 60034 and the relevant section of other international standards such as BS5000, VDE 0530, NEMA MG1-32, IEC34, CSA C22.2-100, AS1359. Other standards and certifications can be considered on request.

VOLTAGE REGULATORS

SX460 AVR - STANDARD

With this self excited control system the main stator supplies power via the Automatic Voltage Regulator (AVR) to the exciter stator. The high efficiency semiconductors of the AVR ensure positive build-up from initial low levels of residual voltage.

The exciter rotor output is fed to the main rotor through a three phase full wave bridge rectifier. This rectifier is protected by a surge suppressor against surges caused, for example, by short circuit.

SX440 AVR

With this self-excited system the main stator provides power via the AVR to the exciter stator. The high efficiency semi-conductors of the AVR ensure positive build-up from initial low levels of residual voltage.

The exciter rotor output is fed to the main rotor through a three-phase full-wave bridge rectifier. The rectifier is protected by a surge suppressor against surges caused, for example, by short circuit or out-of-phase paralleling.

The SX440 will support a range of electronic accessories, including a 'droop' Current Transformer (CT) to permit parallel operation with other ac generators.

If 3-phase sensing is required with the self-excited system, the SX421 AVR must be used.

SX421AVR

This AVR also operates in a self-excited system. It combines all the features of the SX440 with, additionally, three-phase rms sensing for improved regulation and performance. Over voltage protection is provided via a separate circuit breaker. An engine relief load acceptance feature is built in as standard.

MX341 AVR

This sophisticated AVR is incorporated into the Stamford Permanent Magnet Generator (PMG) control system.

The PMG provides power via the AVR to the main exciter, giving a source of constant excitation power independent of generator output. The main exciter output is then fed to the main rotor, through a full wave bridge, protected by a surge suppressor. The AVR has in-built protection against sustained over-excitation, caused by internal or external faults. This de-excites the machine after a minimum of 5 seconds.

An engine relief load acceptance feature can enable full load to be applied to the generator in a single step.

If three-phase sensing is required with the PMG system the MX321 AVR must be used.

We recommend three-phase sensing for applications with greatly unbalanced or highly non-linear loads.

MX321 AVR

The most sophisticated of all our AVRs combines all the features of the MX341 with, additionally, three-phase rms sensing, for improved regulation and performance. Over voltage protection is built-in and short circuit current level adjustments is an optional facility.

WINDINGS & ELECTRICAL PERFORMANCE

All generator stators are wound to 2/3 pitch. This eliminates triplen (3rd, 9th, 15th ...) harmonics on the voltage waveform and is found to be the optimum design for trouble-free supply of non-linear loads. The 2/3 pitch design avoids excessive neutral currents sometimes seen with higher winding pitches, when in parallel with the mains. A fully connected damper winding reduces oscillations during paralleling. This winding, with the 2/3 pitch and carefully selected pole and tooth designs, ensures very low waveform distortion.

TERMINALS & TERMINAL BOX

Standard generators are 3-phase reconnectable with 12 ends brought out to the terminals, which are mounted on a cover at the non-drive end of the generator. A sheet steel terminal box contains the AVR and provides ample space for the customers' wiring and gland arrangements. It has removable panels for easy access.

SHAFT & KEYS

All generator rotors are dynamically balanced to better than BS6861:Part 1 Grade 2.5 for minimum vibration in operation. Two bearing generators are balanced with a half key.

INSULATION/IMPREGNATION

The insulation system is class 'H'.

All wound components are impregnated with materials and processes designed specifically to provide the high build required for static windings and the high mechanical strength required for rotating components.

QUALITY ASSURANCE

Generators are manufactured using production procedures having a quality assurance level to BS EN ISO 9001.

The stated voltage regulation may not be maintained in the presence of certain radio transmitted signals. Any change in performance will fall within the limits of Criteria 'B' of EN 61000-6-2:2001. At no time will the steady-state voltage regulation exceed 2%.

NB Continuous development of our products entitles us to change specification details without notice, therefore they must not be regarded as binding.

UCI274C

WINDING 311

CONTROL SYSTEM	SEPARATELY EXCITED BY P.M.G.							
A.V.R.	MX321	MX341						
VOLTAGE REGULATION	± 0.5 %	± 1.0 %	With 4% ENGINE GOVERNING					
SUSTAINED SHORT CIRCUIT	REFER TO SHORT CIRCUIT DECREMENT CURVES (page 7)							

CONTROL SYSTEM	SELF EXCITED				
A.V.R.	SX460	SX440	SX421		
VOLTAGE REGULATION	± 1.5 %	± 1.0 %	± 0.5 %	With 4% ENGINE GOVERNING	
SUSTAINED SHORT CIRCUIT	SERIES 4 CONTROL DOES NOT SUSTAIN A SHORT CIRCUIT CURRENT				

INSULATION SYSTEM	CLASS H							
PROTECTION	IP23							
RATED POWER FACTOR	0.8							
STATOR WINDING	DOUBLE LAYER CONCENTRIC							
WINDING PITCH	TWO THIRDS							
WINDING LEADS	12							
STATOR WDG. RESISTANCE	0.059 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED							
ROTOR WDG. RESISTANCE	1.12 Ohms at 22°C							
R.F.I. SUPPRESSION	BS EN 61000-6-2 & BS EN 61000-6-4,VDE 0875G, VDE 0875N. refer to factory for others							
WAVEFORM DISTORTION	NO LOAD < 1.5% NON-DISTORTING BALANCED LINEAR LOAD < 5.0%							
MAXIMUM OVERSPEED	2250 Rev/Min							
BEARING DRIVE END	BALL. 6315-2RS (ISO)							
BEARING NON-DRIVE END	BALL. 6310-2RS (ISO)							

	1 BEARING				2 BEARING			
WEIGHT COMP. GENERATOR	406 kg				420 kg			
WEIGHT WOUND STATOR	131 kg				131 kg			
WEIGHT WOUND ROTOR	133.78 kg				122.82 kg			
WR² INERTIA	1.0288 kgm²				0.9781 kgm²			
SHIPPING WEIGHTS in a crate	439 kg				452 kg			
PACKING CRATE SIZE	105 x 67 x 103(cm)				105 x 67 x 103(cm)			
	50 Hz				60 Hz			
TELEPHONE INTERFERENCE	THF<2%				TIF<50			
COOLING AIR	0.514 m³/sec 1090 cfm				0.617 m³/sec 1308 cfm			

VOLTAGE SERIES STAR	380/220	400/231	415/240	440/254	416/240	440/254	460/266	480/277
VOLTAGE PARALLEL STAR	190/110	200/115	208/120	220/127	208/120	220/127	230/133	240/138
VOLTAGE SERIES DELTA	220/110	230/115	240/120	254/127	240/120	254/127	266/133	277/138

kVA BASE RATING FOR REACTANCE VALUES	100	100	100	n/a	112.5	117.5	117.5	125
Xd DIR. AXIS SYNCHRONOUS	2.45	2.21	2.05	-	2.76	2.58	2.36	2.30
X'd DIR. AXIS TRANSIENT	0.20	0.18	0.17	-	0.24	0.22	0.21	0.20
X''d DIR. AXIS SUBTRANSIENT	0.14	0.13	0.12	-	0.16	0.15	0.14	0.13
Xq QUAD. AXIS REACTANCE	1.59	1.43	1.33	-	1.58	1.48	1.35	1.32
X''q QUAD. AXIS SUBTRANSIENT	0.18	0.16	0.15	-	0.23	0.21	0.20	0.19
XL LEAKAGE REACTANCE	0.07	0.06	0.06	-	0.08	0.07	0.07	0.07
X2 NEGATIVE SEQUENCE	0.16	0.14	0.13	-	0.19	0.18	0.16	0.16
XoZERO SEQUENCE	0.10	0.09	0.08	-	0.12	0.11	0.10	0.10

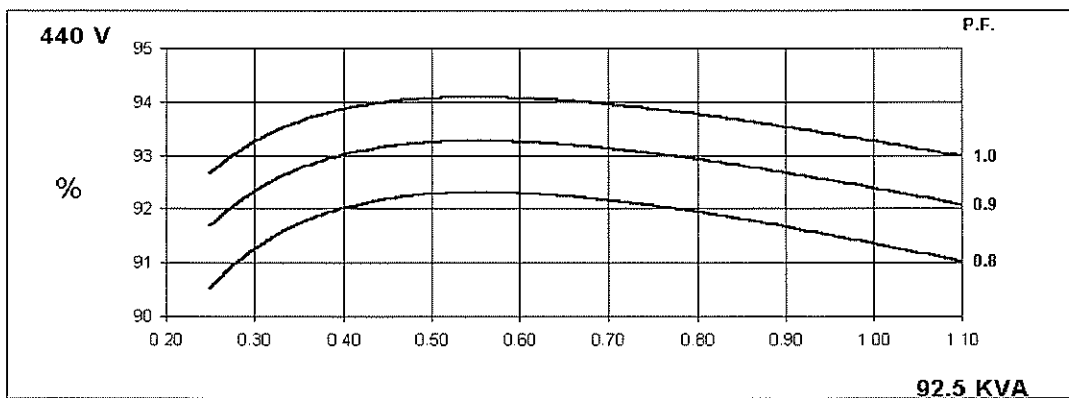
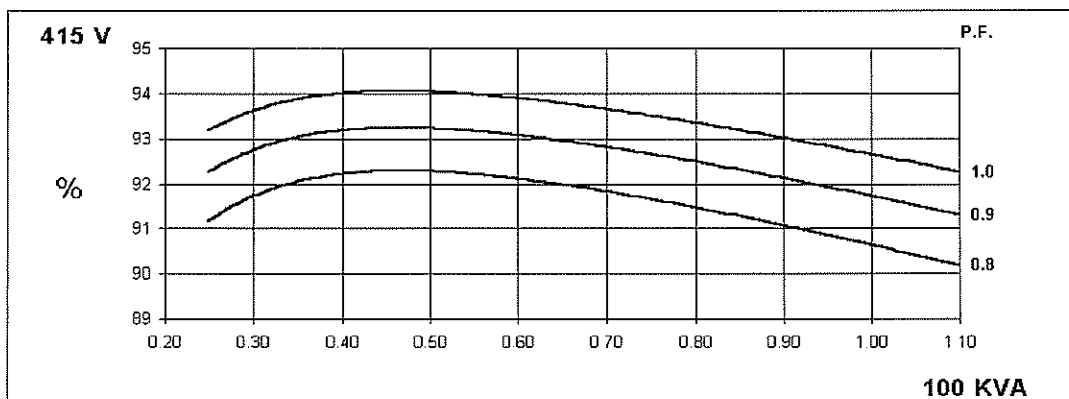
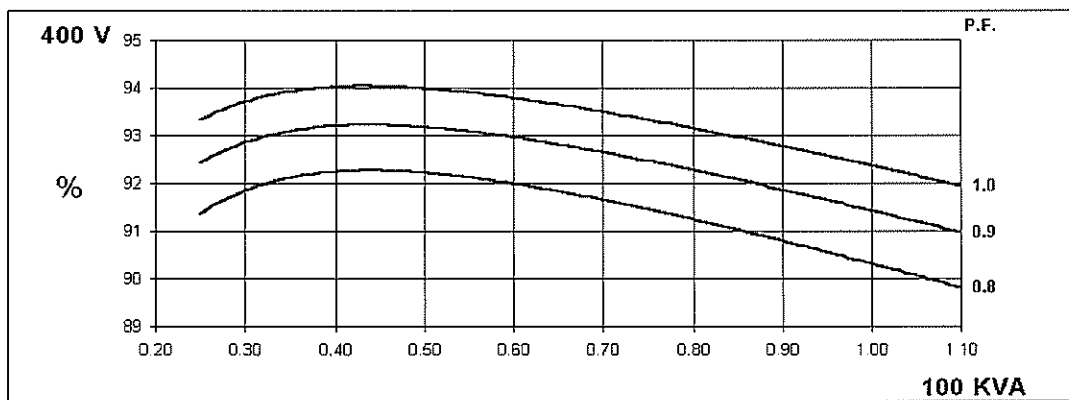
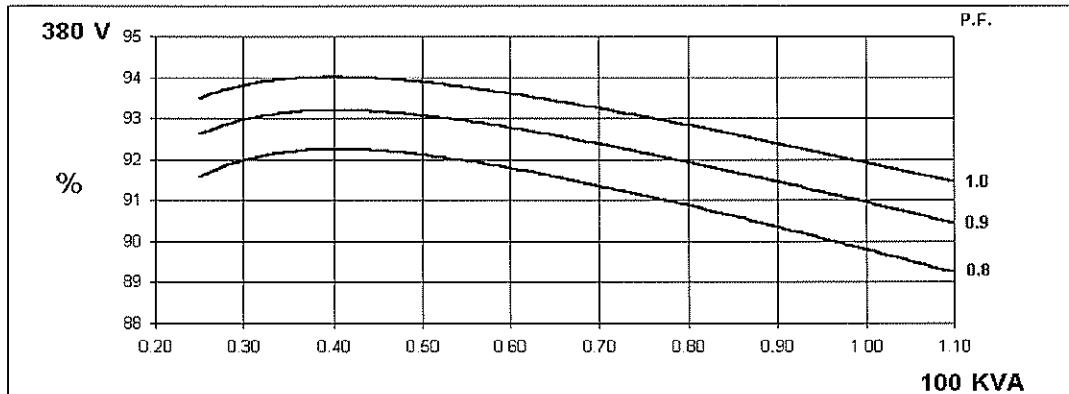
REACTANCES ARE SATURATED		VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED						
T'd TRANSIENT TIME CONST.	0.028 s							
T''d SUB-TRANSTIME CONST.	0.001 s							
T'do O.C. FIELD TIME CONST.	0.8 s							
Ta ARMATURE TIME CONST.	0.007 s							
SHORT CIRCUIT RATIO	1/Xd							

**50
Hz**

UCI274C
Winding 311

STAMFORD
power generation

THREE PHASE EFFICIENCY CURVES



UCI274C

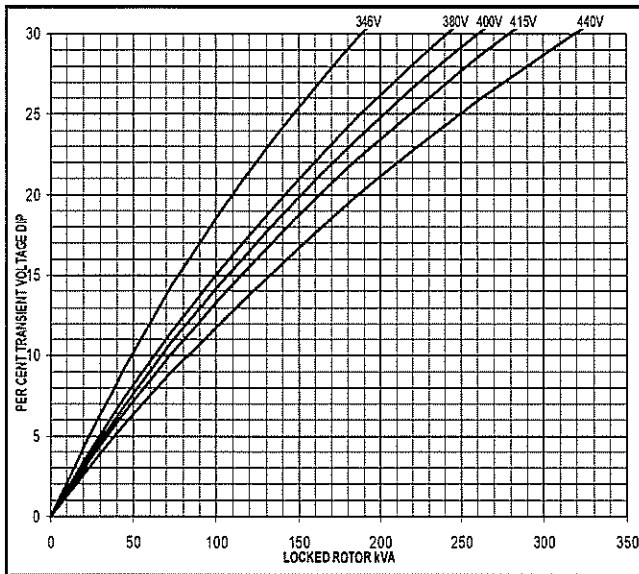
Winding 311



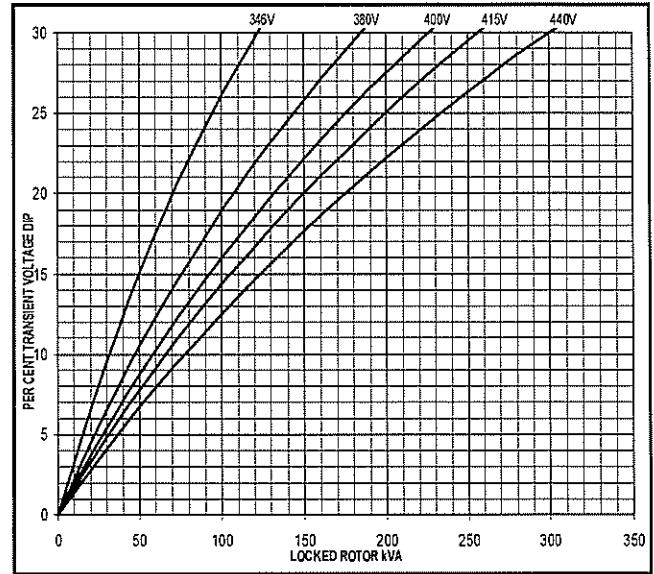
Locked Rotor Motor Starting Curve

50
Hz

MX

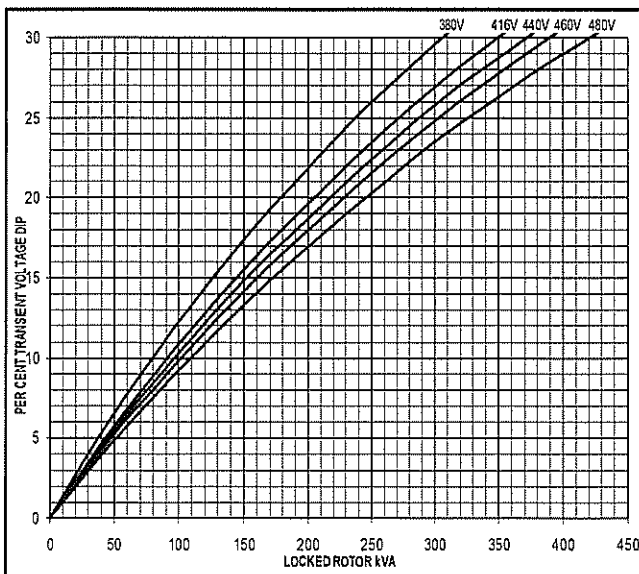


SX

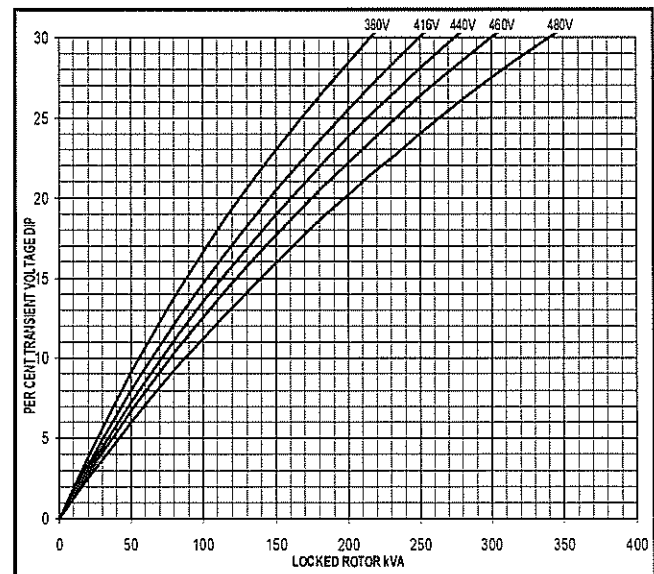


60
Hz

MX

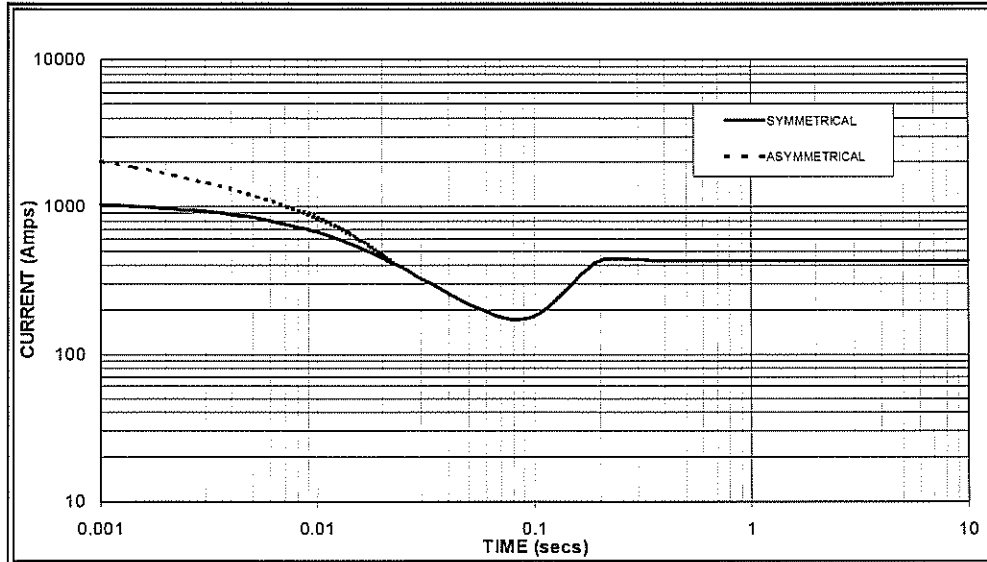


SX



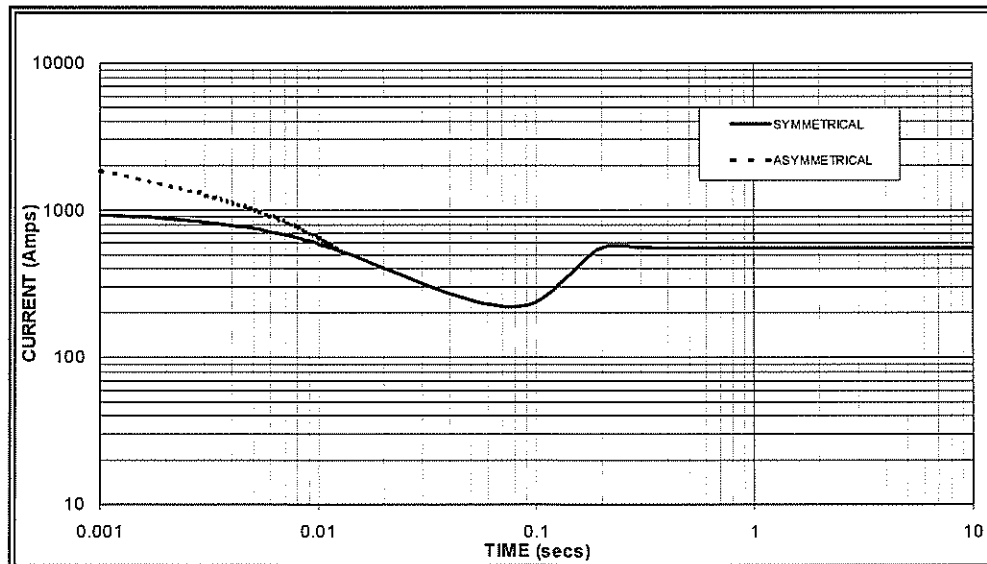
**Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed
Based on star (wye) connection.**

**50
Hz**



Sustained Short Circuit = 430 Amps

**60
Hz**



Sustained Short Circuit = 550 Amps

Note 1

The following multiplication factors should be used to adjust the values from curve between time 0.001 seconds and the minimum current point in respect of nominal operating voltage :

50Hz		60Hz	
Voltage	Factor	Voltage	Factor
380v	X 1.00	416v	X 1.00
400v	X 1.07	440v	X 1.06
415v	X 1.12	460v	X 1.12
440v	X 1.18	480v	X 1.17

The sustained current value is constant irrespective of voltage level

Note 2

The following multiplication factor should be used to convert the values calculated in accordance with NOTE 1 to those applicable to the various types of short circuit :

	3-phase	2-phase L-L	1-phase L-N
Instantaneous	x 1.00	x 0.87	x 1.30
Minimum	x 1.00	x 1.80	x 3.20
Sustained	x 1.00	x 1.50	x 2.50
Max. sustained duration	10 sec.	5 sec.	2 sec.

All other times are unchanged

Note 3

Curves are drawn for Star (Wye) connected machines. For other connection the following multipliers should be applied to current values as shown :

Parallel Star = Curve current value X 2

Series Delta = Curve current value X 1.732

UCI274C

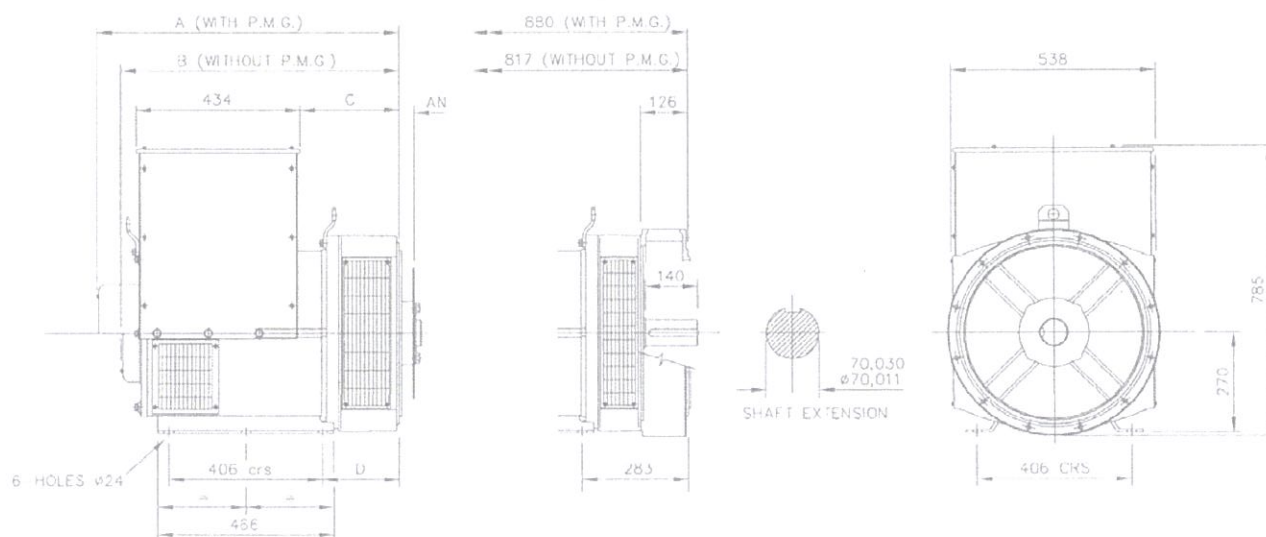
Winding 311 / 0.8 Power Factor



RATINGS

Class - Temp Rise		Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
50 Hz	Series Star (V)	380	400	415	440	380	400	415	440	380	400	415	440	380	400	415	440
	Parallel Star (V)	190	200	208	220	190	200	208	220	190	200	208	220	190	200	208	220
	Series Delta (V)	220	230	240	254	220	230	240	254	220	230	240	254	220	230	240	254
	kVA	84.0	84.0	84.0	n/a	100.0	100.0	100.0	n/a	106.0	106.0	106.0	n/a	110.0	110.0	110.0	n/a
	kW	67.2	67.2	67.2	n/a	80.0	80.0	80.0	n/a	84.8	84.8	84.8	n/a	88.0	88.0	88.0	n/a
	Efficiency (%)	90.7	91.1	91.3	n/a	89.8	90.3	90.6	n/a	89.5	90.0	90.4	n/a	89.2	89.8	90.2	n/a
	kW Input	74.1	73.8	73.6	n/a	89.1	88.6	88.3	n/a	94.7	94.2	93.8	n/a	98.7	98.0	97.6	n/a
	Series Star (V)	416	440	460	480	416	440	460	480	416	440	460	480	416	440	460	480
	Parallel Star (V)	208	220	230	240	208	220	230	240	208	220	230	240	208	220	230	240
	Series Delta (V)	240	254	266	277	240	254	266	277	240	254	266	277	240	254	266	277
60 Hz	kVA	97.5	106.3	106.3	112.5	112.5	117.5	117.5	125.0	116.3	125.0	125.0	132.5	120.0	127.5	127.5	137.5
	kW	78.0	85.0	85.0	90.0	90.0	94.0	94.0	100.0	93.0	100.0	100.0	106.0	96.0	102.0	102.0	110.0
	Efficiency (%)	90.9	91.0	91.4	91.5	90.2	90.6	91.0	91.1	90.0	90.2	90.7	90.8	89.8	90.1	90.6	90.6
	kW Input	85.8	93.5	93.0	98.4	99.8	103.8	103.3	109.8	103.4	110.9	110.3	116.7	106.9	113.2	112.6	121.4

DIMENSIONS



SINGLE BEARING ADAPTORS					COUPLING DISCS	
ADAPTOR	A	B	C	D	DISC	AN
SAE 1	813,3	750,5	274,3	216,3	SAE 10	53,98
SAE 2	799	736	260	202	SAE 11,5	39,68
SAE 3	799	736	260	202	SAE 14	25,40



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Website: www.newage-avkseg.com

New IntelliLite^{NT}



SINGLE SET GEN-SET CONTROLLER

Description

IntelliLite^{NT} models are the new integrated controllers for gen-sets operating in single standby mode. Based on the field proven IntelliLite architecture, the new controllers fulfill every requirement needed for AMF and MRS applications – including modem and Internet control, user configuration and complete gen-set monitoring and protection.

IntelliLite^{NT} controllers are easy to use and feature an intuitive user interface with graphic display. The built-in event and performance log with backed-up real time clock makes troubleshooting even simpler.

The new design brings seamless integration with the latest breed of EFI diesel engines from all major manufacturers. This offers a higher level of functionality with users able to display a full range of values from the EFI engine on standard analog gauges and true RMS measurement of electric values.

Benefits

- ▷ Less wiring and components
- ▷ Less engineering and programming
- ▷ History log – easy troubleshooting and warranty claim handling
- ▷ Remote monitoring reduced call-out costs of service engineers
- ▷ Analog gauge (VDO, Datcon, ...) outputs – operator friendly
- ▷ Perfect price/performance ratio



ComAp is a member of AMPS
(The Association of Manufacturers
of Power generating Systems).



ComAp products meet the highest standards, with every stage of production undertaken in accordance with the ISO certification obtained in 1998.

InteliLite^{NT}

Features

▷ 3 phase AMF function*

- Over/Under frequency
- Over/Under voltage
- Voltage asymmetry

▷ 3 phase generator protections

- Over/Under frequency
- Over/Under voltage
- Current/Voltage asymmetry
- Overcurrent/Overload

▷ True RMS Voltage measurement

- 3 phase generator and mains* voltages
- Voltage range 277 V p-n, 480 V p-p
- Maximal measured voltage 300 V p-n
- PT ratio range 0.1–500

▷ True RMS current measurements

- 3 generator phase currents
- Current range 5 A
- Maximal measured current 10 A
- CT ratio range 1–5000

▷ Power measurements

- Act / React Power and Power Factor per phase
- Active and Reactive Energy counter

▷ Event and performance log + RTC

- Event based history with 119 events*
Reason, Data and Time + all important values are stored
- Battery backed-up RTC
- Test Run scheduler

▷ User interface

- Graphic 128 × 64 pixels display
- Multiple language capability
- Setpoints adjustable via keyboard or PC
- Buttons with mechanical feedback

▷ Inputs and outputs

- 3 configurable analog inputs
- 6 or 7* Binary inputs
- 6 or 7* Binary outputs
- Magnetic pick-up input
- D+ preexcitation terminal
- Optional 8 analog gauge drive outputs, compatible with VDO, Datcon gauges

▷ EFI engine support

- Cummins MODBUS
- Engine specific J1939 for all major manufacturers
- Diagnostic messages in plain text

▷ Communication interfaces

- Optional USB and RS232 plug-in modules
- MODBUS RTU (requires RS232 module)
- Internet

▷ Mechanical and operation parameters

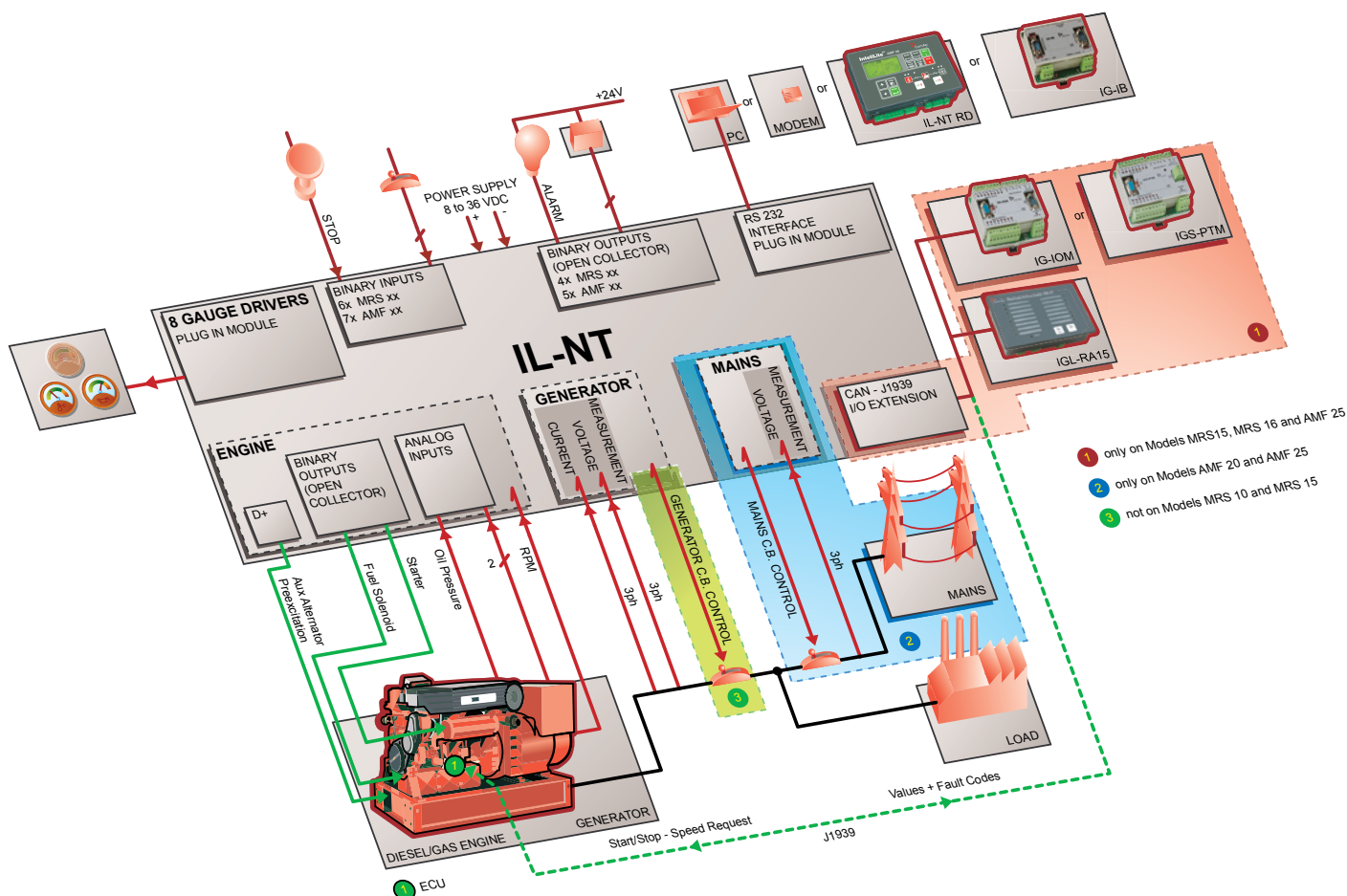
- Unit dimension 120 × 180 mm
- Sealed front face rated for IP65
- Hard plexiglass LCD cover
- Operation temperature
-20°C – +70°C standard version
-40°C – +70°C low temperature version
- Power supply voltage 8–36 V
- Voltage drops shorter than 50 ms do not affect operation

Extension modules

- ▷ IL-NT RS232 RS232 plug-in interface
- ▷ IL-NT USB USB plug-in interface
- ▷ IL-NT AOUT8 gauge plug-in interface
- ▷ IL-NT RD remote display
- ▷ IG-IB Internet module
- ▷ IGS-PTM** extension I/O module
- ▷ IGS-IOM** extension I/O module
- ▷ IGL-RA15** 15 LED remote annunciator

* Only for Models AMF 20 and AMF 25

** Only for Models MRS 15, MRS 16 and AMF 25



Available models

MRS 10

**MANUAL AND REMOTE
START CONTROLLER**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 6 binary inputs
- ▷ 6 binary outputs

MRS 11

**MANUAL AND REMOTE
START CONTROLLER**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 6 binary inputs
- ▷ 6 binary outputs
- ▷ GCB control

AMF 20

**AUTOMATIC MAINS FAILURE
START CONTROLLER**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 7 binary inputs
- ▷ 7 binary outputs
- ▷ GCB and MCB control

MRS 15

**MANUAL AND REMOTE
START CONTROLLER WITH
SUPPORT FOR EFI ENGINES**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 6 binary inputs
- ▷ 6 binary outputs
- ▷ CAN with J1939 support
- ▷ extension modules capability
- ▷ event and performance log

MRS 16

**MANUAL AND REMOTE
START CONTROLLER WITH
SUPPORT FOR EFI ENGINES**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 6 binary inputs
- ▷ 6 binary outputs
- ▷ GCB control
- ▷ CAN with J1939 support
- ▷ extension modules capability
- ▷ event and performance log

AMF 25

**AUTOMATIC MAINS FAILURE
START CONTROLLER WITH
SUPPORT FOR EFI ENGINE**



- ▷ 3 configurable analog inputs
- ▷ magnetic pickup input
- ▷ D+ preexcitation terminal
- ▷ 7 binary inputs
- ▷ 7 binary outputs
- ▷ GCB and MCB control
- ▷ CAN with J1939 support
- ▷ extension modules capability
- ▷ event and performance log

The Chart of Functions of IntelliLite^{NT} Controllers

FUNCTIONS/CONTROLLERS	IL-NT MRS 10	IL-NT MRS 15	IL-NT MRS 11	IL-NT MRS 16	IL-NT AMF 20	IL-NT AMF 25
Binary inputs/outputs	6 / 6	6 / 6	6 / 6	6 / 6	7 / 7	7 / 7
Analog inputs	3	3	3	3	3	3
Magnetic pick-up	●	●	●	●	●	●
AMF function	–	–	–	–	●	●
Input configuration	●	●	●	●	●	●
Output configuration	●	●	●	●	●	●
Voltage measurement Gen. / Mains	3 ph / –	3 ph / –	3 ph / –	3 ph / –	3 ph / 3 ph	3 ph / 3 ph
Current measurement	3 ph	3 ph, IDMT overcurrent	3 ph	3 ph, IDMT overcurrent	3 ph	3 ph, IDMT overcurrent
kW/kWh measurement	● / –	● / ●	● / –	● / ●	● / –	● / ●
History file	–	●	–	●	–	●
RTC with battery	●	●	●	●	●	●
GCB/MCB control with feedback	– ¹⁾ / –	– ¹⁾ / –	● ²⁾ / –	● ²⁾ / –	● / ●	● / ●
Battery charging alternator circuit	●	●	●	●	●	●
J1939 interface	–	●	–	●	–	●
Internet support	with IG-IB	with IG-IB	with IG-IB	with IG-IB	with IG-IB	with IG-IB
Extension modules	–	IGL-RA15, IG-IOM, IGS-PTM	–	IGL-RA15, IG-IOM, IGS-PTM	–	IGL-RA15, IG-IOM, IGS-PTM
8 analog gauge drivers	0	0	0	0	0	0
RS232 interface	0	0	0	0	0	0
Modem interface	0	0	0	0	0	0
MODBUS interface	0	0	0	0	0	0
Remote display	0	0	0	0	0	0
Cummins MODBUS	0	0	0	0	0	0

Key: ● included
 – excluded
 0 optional – plug-in module required
 1) Automatic GCB control without feedback
 2) Manual/Automatic GCB control, but without feedback

Legend: IG-IOM/IGS-PTM: I/O extension modules
 IGL-RA15: Remote annunciator
 GCB: Generator circuit breaker
 MCB: Mains circuit breaker

For more information about our products and solutions visit our web-page

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