



**POWER** Gen

PREMIUM SERIES GENERATORS

# Generator Specification Sheet

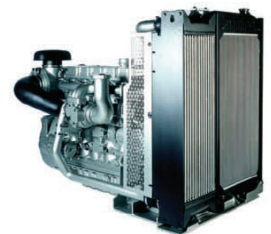
**MODEL PG 180 AP**



Powered by:

 **Perkins®**

**STAMFORD**



GENERATING SET PERFORMANCE	50Hz	60Hz
VOLTAGE	V400	
PHASES	Three	
PRIME RATED POWER	180.0kVA	
STANDBY RATED POWER	200.0kVA	
POWER FACTOR	0.80 PF	
FUEL USAGE @ 75%	31.0 L/hr	

The POWERGen Group Ltd:



**POWER**Gen



**POWERServ**



**POWERPump**



**POWERGenHire**



**POWERGen Group Ltd**

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#### STREET ADDRESS

49 Whiore Avenue

Tauriko

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3143 New Zealand

ENGINE	PERKINS	1106C-E66TAG4
PERFORMANCE	50Hz	60Hz
BASELOAD RATED POWER	TBA	
PRIME RATED POWER	158KWm	
STANDBY RATED POWER	175KWm	
FUEL CONSUMPTION	206g/KWh @ 100% 212g/KWh @ 75% 211g/KWh @ 50%	
TYPE	Diesel 4 stroke	
ASPIRATION	Turbocharged air to air charged cooled	
INJECTION TYPE	Direct injection	
ENGINE GOVERNOR	Electronic governor	
CYLINDERS AND ARRANGEMENT	Six in line	
BORE AND STROKE	105mm x 127mm	
COMPRESSION RATIO	16.2 : 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	UCI274H	
BASELOAD RATED POWER 40 deg C	182kVA	
PRIME RATED POWER 40 deg C	200kVA	
STANDBY RATED POWER 40 deg C	212kVA	
STANDBY RATED POWER 27 deg C	220kVA	
EFFICIENCY	93%	
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

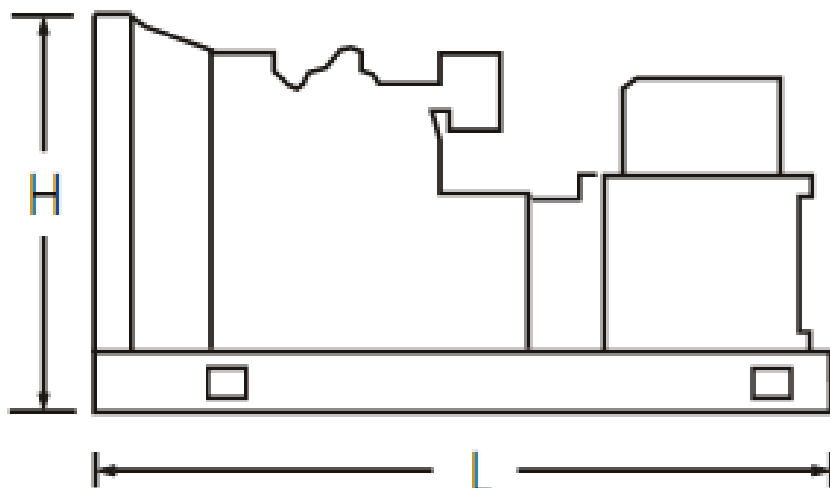
### STANDARD MODELS

	INTEGRATED FUEL TANK CAPACITY		WEIGHT	DIMENSIONS		
	STANDARD	OPTIONAL	KG	LENGTH	WIDTH	HEIGHT
OPEN SKID TYPE	170	TBA	1644kg	2645mm	730mm	1630mm

## 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

## 1106C-E66TAG4

### Diesel Engine - ElectropaK

175.5 kWm @ 1500 rev/min  
196.3 kWm @ 1800 rev/min

#### Power to Meet your Needs

Hitting the key power nodes required by the market, the 1106C-E66TAG4 ElectropaK has been developed to provide a clean and cost effective power solution.

#### State of the Art Design

The 1106C-E66TAG4 incorporates the latest common-rail fuel system technologies with a closely optimised air-management system which is overseen by the latest generation of electronic engine control. This allows the 1106C ElectropaK range to deliver high power density, low exhaust emissions with the minimum of heat rejection and excellent fuel economy.

#### Worldwide Power Solution

The 1106C has been designed to be worldwide fuel tolerant, including kerosene, jet aviation fuel and 5% biofuel (RME). Options are available to meet local market needs.

#### Product Support

- Perkins actively pursues product support excellence by ensuring our distribution network invest in their territory - strengthening relationships and providing more value to you, our customer
- Through an experienced global network of distributors and dealers, fully trained engine experts deliver total service support around the clock, 365 days a year. They have a comprehensive suite of web based tools at their fingertips covering technical information, parts identification and ordering systems, all dedicated to maximising the productivity of your engine
- Throughout the entire life of a Perkins engine, we provide access to genuine OE specification parts and service. We give 100% reassurance that you receive the very best in terms of quality for lowest possible cost .. wherever your Perkins powered machine is operating in the world

#### Long-term Power Solution

The 1106C-E66TAG ElectropaK range has been designed to fully comply with EU Stage II emissions regulations, providing an emissions compliant power solution for the future.

The 1106C-E66TAG ElectropaKs are the latest addition to Perkins 1100 Series Electric Power line-up. Offering improved power density from a compact package, these ElectropaK's build on Perkins reputation within the Power Generation Industry.

These ultra clean engines are assembled on a new high technology production line. Frequent computerised checks during the production process ensure high build quality is maintained throughout.

Hitting the key power nodes required by the market, the 1106C-E66TAG product line-up consists of three models offering a power solution for both Prime and Standby applications, in 50 Hz and 60 Hz territories.

*Certified against the requirements of EU2007 legislation for non-road mobile machinery, powered by constant speed engines (EU97/68/EC Stage II).*

Engine speed (rev/min)	Type of Operation	Typical generator output (net)		Engine power			
				Gross		Net	
		kVA	kWe	kWm	bhp	kWm	bhp
1500	Prime	180.0	144.0	163.3	218.9	158.4	212.4
	Standby (maximum)	200.0	160.0	180.4	242.0	175.5	235.3
1800	Prime	200.0	160.0	185.3	248.4	177.3	237.7
	Standby (maximum)	219.0	175.0	204.3	274.0	196.3	263.2

The above ratings represent the engine performance capabilities to conditions specified in ISO 8528/5  
Derating may be required for conditions outside the test conditions; consult Perkins Engines Company Limited  
Generator powers are typical and are based on typical alternator efficiencies and a power factor  
Fuel specification: Consult Perkins Engines Company Limited (various fuel specifications are available)  
Lubricating oil: multi-grade oil conforming to API-CH4/CJ4 must be used

#### Rating Definitions

Prime Power: Power available at variable load in lieu of a main power network. Overload of 10% is 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

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# 1100 Series

## 1106C-E66TAG4

### Standard ElectropaK Specification

#### Air inlet

- Mounted air filter and turbocharger

#### Cooling system

- 27" belt-driven pusher fan and guards
- Radiator (incorporating air-to-air charge cooler + fuel cooler)
- Water pump

#### Electric system

- 12 volt starter motor
- 12 volt, 100 amp alternator with DC output

#### Flywheel and housing

- High inertia flywheel
- SAE2 flywheel housing

#### Fuel system

- Electronic governing (confirms to Class G3 ISO 8528-5)
- Fuel filter

#### Literature

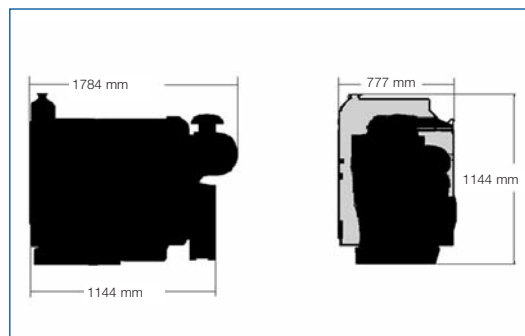
- User's Handbook

#### Lubrication system

- Flat-bottomed isolated aluminium sump
- Oil filter

#### Start aids

- Glow plugs



Engine Speed	Fuel Consumption			
	1500 rev/min		1800 rev/min	
	g/kWh	l/hr	g/kWh	l/hr
Standby	204.9	44.0	207.5	50.5
Prime power	206.9	40.2	211.1	41.3
110% of prime power	205.1	43.8	208.0	50.4
75% of prime power	212.7	31.0	222.7	36.8
50% of prime power	211.6	20.5	231.6	25.5

### General Data

Number of cylinders	6 in-line
Bore and stroke	105 mm x 127 mm
Displacement	6.6 litres
Aspiration	Turbocharged air-to-air charge cooled
Cycle	4 stroke
Combustion system	Direct injection
Compression ratio	16.2:1
Rotation	Anti-clockwise viewed on flywheel
Cooling system	Water
Dimensions	Length 1784 mm* Width 777 mm Height 1144 mm
Dry weight	714 kg
Wet weight	757 kg

\* Length includes air cleaner  
Final weight and dimensions will depend on completed specification



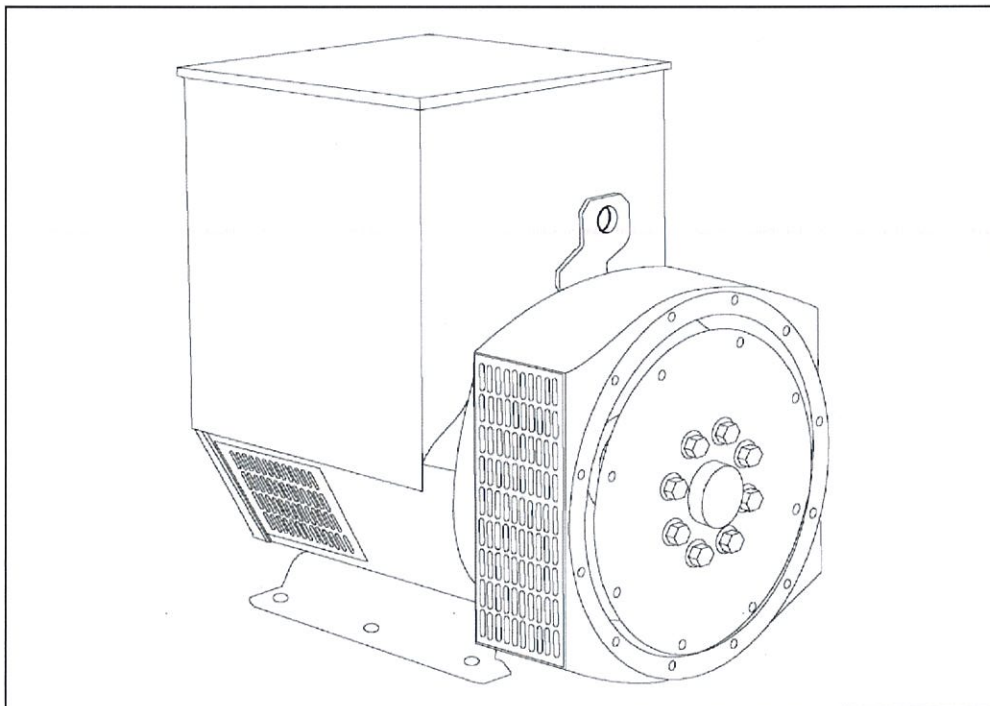
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## UCI274H - Technical Data Sheet





# UCI274H

## 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.*

*Front cover drawing typical of product range.*

## UCI274H

### 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	0.0155 Ohms PER PHASE AT 22°C SERIES STAR CONNECTED		
ROTOR WDG. RESISTANCE	1.82 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	626 kg	641 kg
WEIGHT WOUND STATOR	253 kg	253 kg
WEIGHT WOUND ROTOR	227.53 kg	216.57 kg
WR <sup>2</sup> INERTIA	1.9349 kgm <sup>2</sup>	1.8843 kgm <sup>2</sup>
SHIPPING WEIGHTS in a crate	659 kg	673 kg
PACKING CRATE SIZE	123 x 67 x 103 (cm)	123 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	200	200	200	n/a	237.5	245	245	255
Xd DIR. AXIS SYNCHRONOUS	2.11	1.91	1.77	-	2.50	2.31	2.11	2.02
X'd DIR. AXIS TRANSIENT	0.18	0.16	0.15	-	0.21	0.19	0.18	0.17
X" d DIR. AXIS SUBTRANSIENT	0.12	0.11	0.10	-	0.14	0.13	0.12	0.11
Xq QUAD. AXIS REACTANCE	1.28	1.15	1.07	-	1.53	1.41	1.29	1.23
X"q QUAD. AXIS SUBTRANSIENT	0.17	0.15	0.14	-	0.20	0.18	0.17	0.16
XL LEAKAGE REACTANCE	0.08	0.08	0.07	-	0.10	0.09	0.08	0.08
X2 NEGATIVE SEQUENCE	0.13	0.12	0.11	-	0.16	0.15	0.13	0.13
X0ZERO SEQUENCE	0.08	0.08	0.07	-	0.10	0.09	0.08	0.08

REACTANCES ARE SATURATED	VALUES ARE PER UNIT AT RATING AND VOLTAGE INDICATED
T <sub>d</sub> TRANSIENT TIME CONST.	0.042 s
T' <sub>d</sub> SUB-TRANSIENT TIME CONST.	0.012 s
T <sub>do</sub> O.C. FIELD TIME CONST.	1.1 s
T <sub>a</sub> ARMATURE TIME CONST.	0.012 s
SHORT CIRCUIT RATIO	1/X <sub>d</sub>



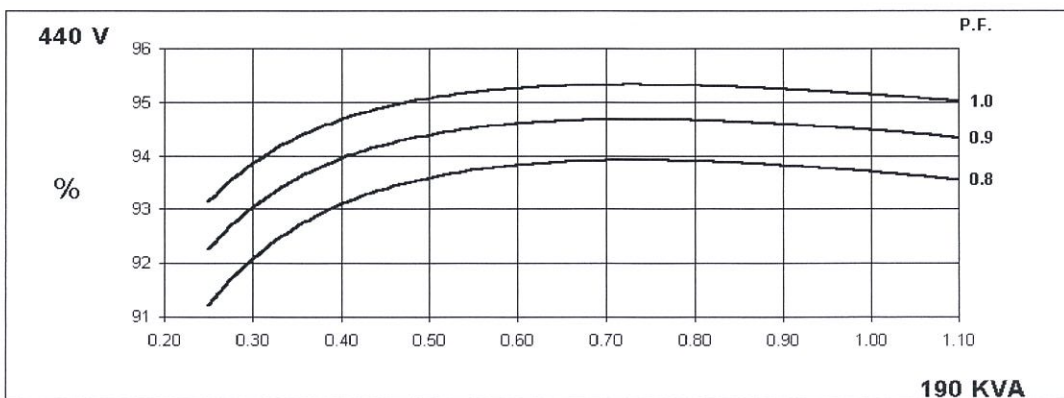
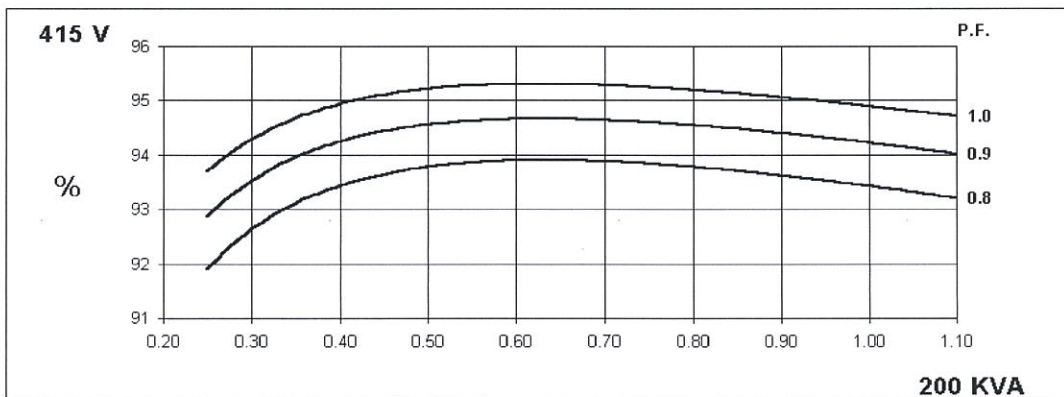
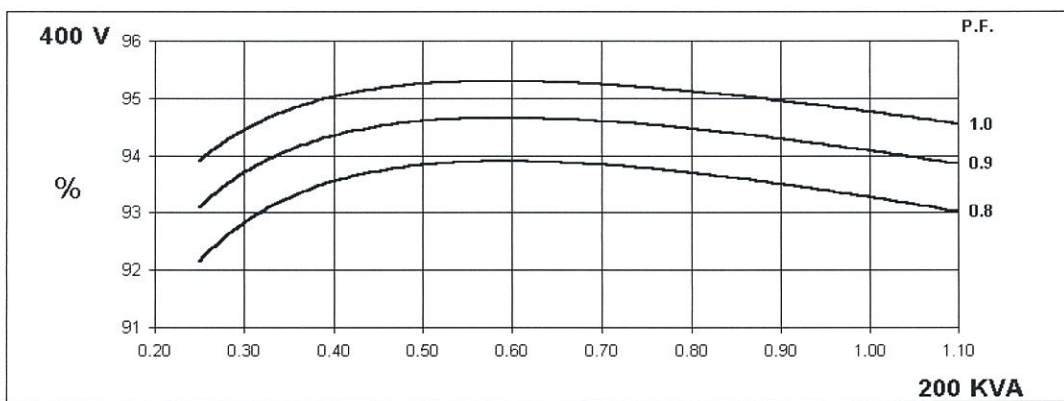
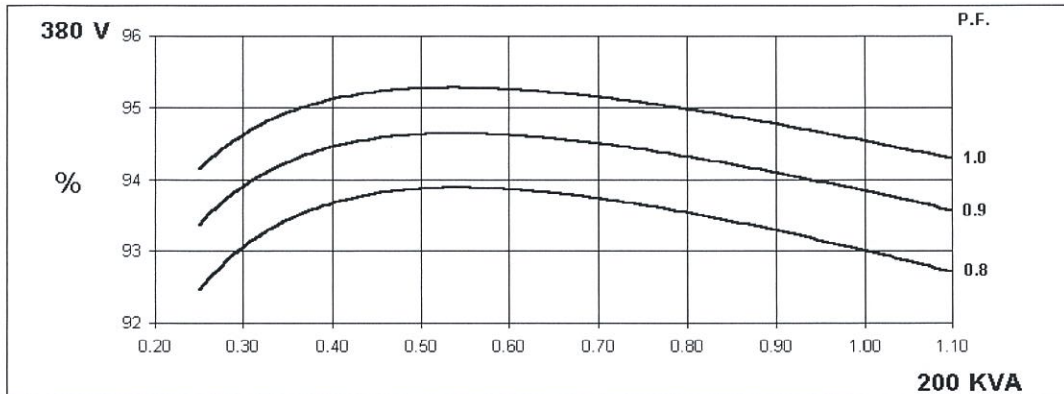
**50  
Hz**

**UCI274H**

**Winding 311**

**STAMFORD**  
power generation

**THREE PHASE EFFICIENCY CURVES**



# UCI274H

Winding 311

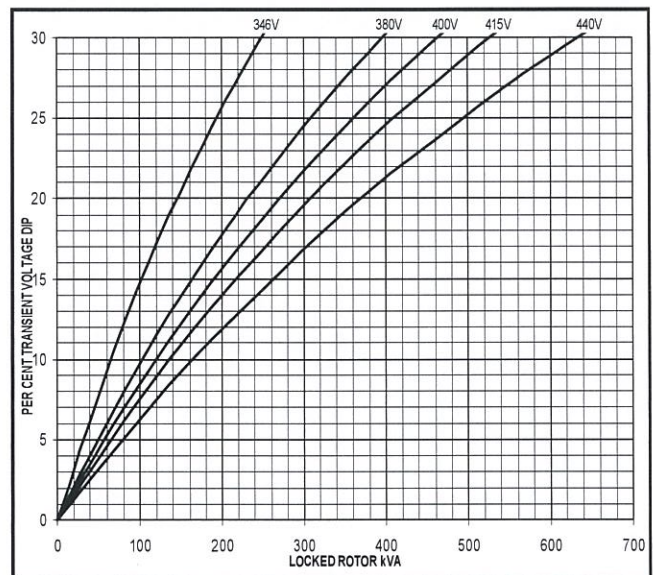
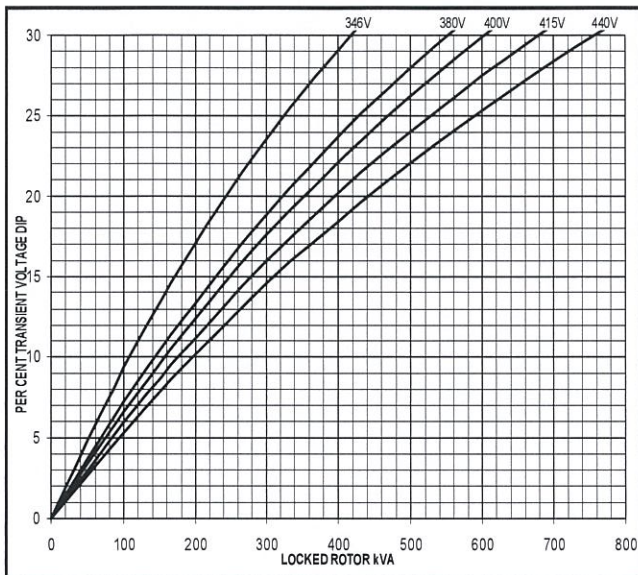


## Locked Rotor Motor Starting Curve

50  
Hz

MX

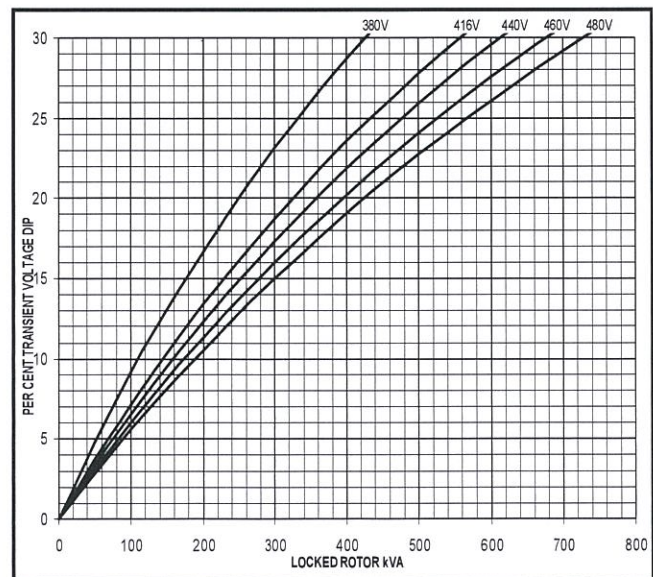
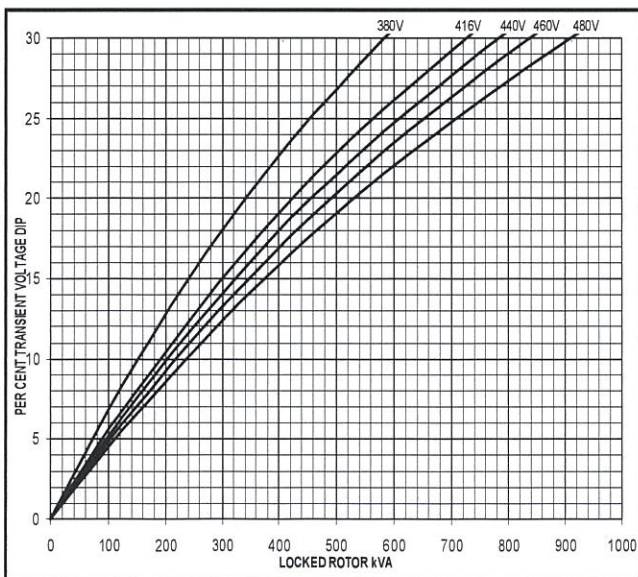
SX



60  
Hz

MX

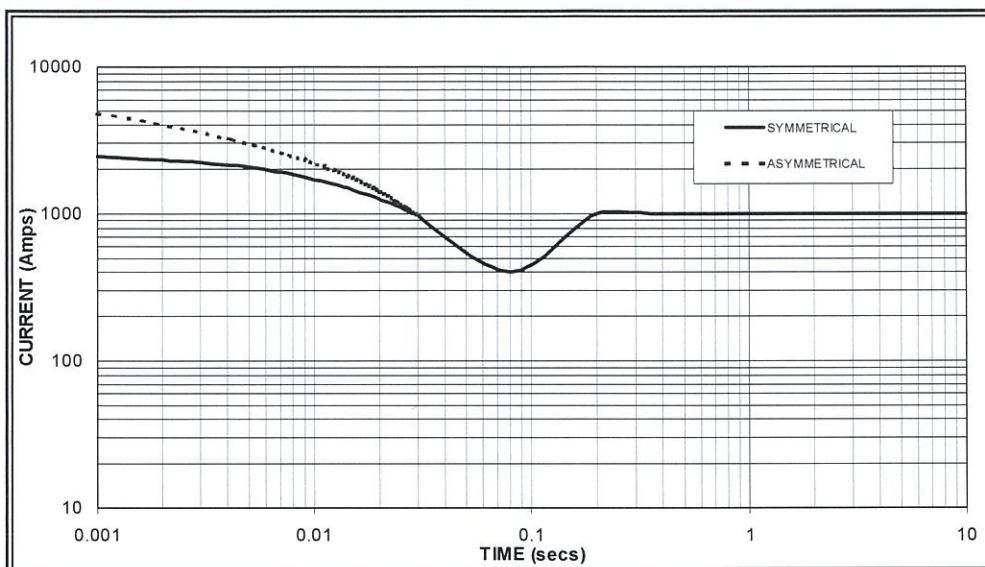
SX





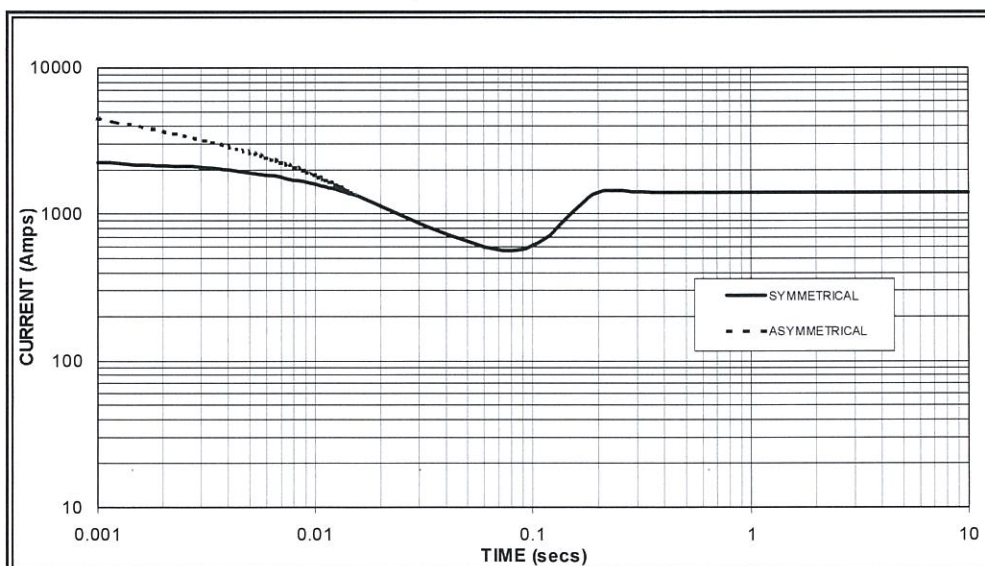
**Three-phase Short Circuit Decrement Curve. No-load Excitation at Rated Speed  
Based on star (wye) connection.**

**50  
Hz**



Sustained Short Circuit = 1,000 Amps

**60  
Hz**



Sustained Short Circuit = 1,400 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

# UCI274H

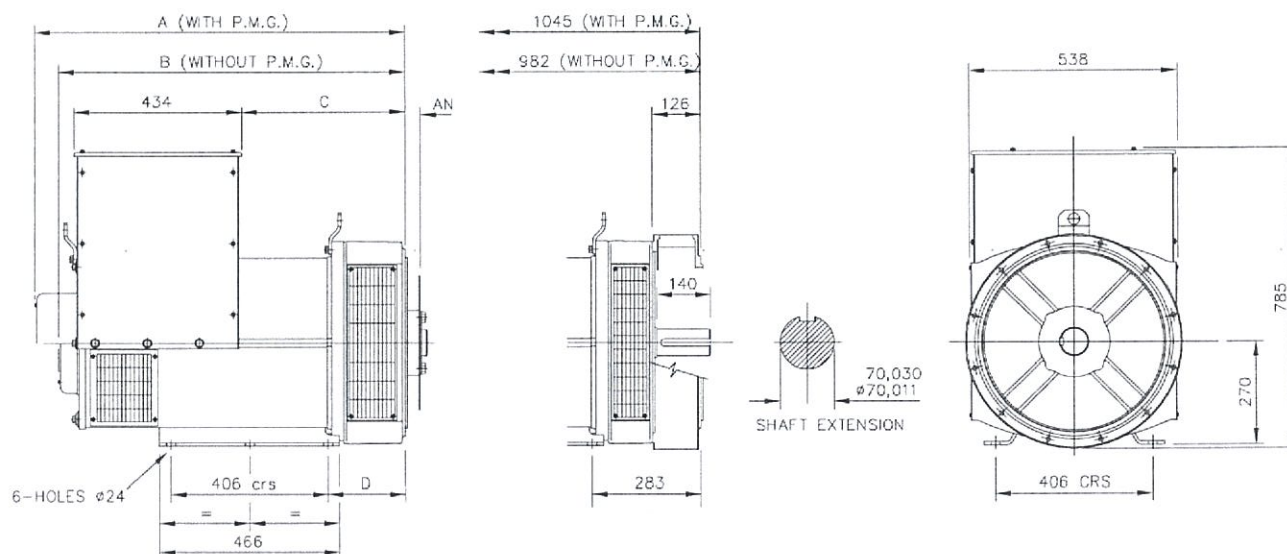
Winding 311 / 0.8 Power Factor



## RATINGS

Class - Temp Rise		Cont. F - 105/40°C				Cont. H - 125/40°C				Standby - 150/40°C				Standby - 163/27°C			
<b>50 Hz</b>	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	182.0	182.0	182.0	n/a	200.0	200.0	200.0	n/a	212.0	212.0	212.0	n/a	220.0	220.0	220.0	n/a
	kW	145.6	145.6	145.6	n/a	160.0	160.0	160.0	n/a	169.6	169.6	169.6	n/a	176.0	176.0	176.0	n/a
	Efficiency (%)	93.3	93.5	93.6	n/a	93.0	93.3	93.4	n/a	92.8	93.1	93.3	n/a	92.7	93.0	93.2	n/a
	kW Input	156.1	155.7	155.6	n/a	172.0	171.5	171.3	n/a	182.8	182.2	181.8	n/a	189.9	189.2	188.8	n/a
<b>60 Hz</b>	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
	kVA	218.8	225.0	225.0	235.0	237.5	245.0	245.0	255.0	250.0	258.8	258.8	275.0	256.3	265.0	265.0	280.0
	kW	175.0	180.0	180.0	188.0	190.0	196.0	196.0	204.0	200.0	207.0	207.0	220.0	205.0	212.0	212.0	224.0
	Efficiency (%)	93.2	93.4	93.6	93.7	93.0	93.2	93.5	93.6	92.8	93.1	93.3	93.4	92.7	93.0	93.3	93.3
	kW Input	187.8	192.7	192.3	200.6	204.3	210.3	209.6	217.9	215.5	222.4	221.9	235.5	221.2	228.0	227.2	240.1

## DIMENSIONS



SINGLE BEARING ADAPTORS				
ADAPTOR	A	B	C	D
SAE 1	978,3	915,3	439,3	216,3
SAE 2	964	901	425	202
SAE 3	964	901	425	202

COUPLING DISCS	
DISC	AN
SAE 10	53,98
SAE 11,5	39,68
SAE 14	25,40



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# New IntelliLite<sup>NT</sup>



## SINGLE SET GEN-SET CONTROLLER

### Description

IntelliLite<sup>NT</sup> 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<sup>NT</sup> 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<sup>NT</sup>

## 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

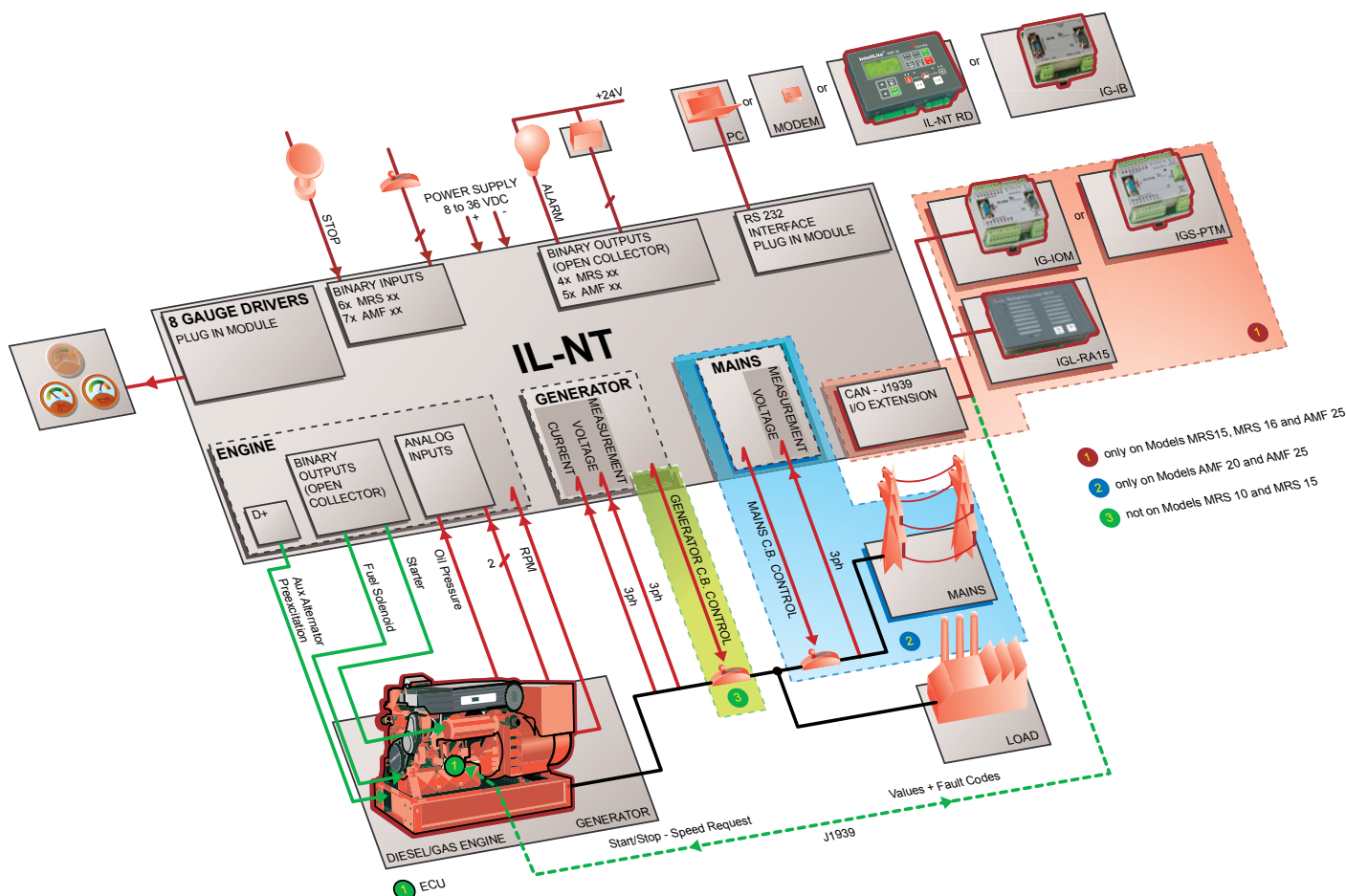
- Unit dimension 120 × 180 mm
- Sealed front face rated for IP65
- Hard plexiglass LCD cover
- Operation temperature  
-20°C – +70°C standard version  
-40°C – +70°C low temperature version
- Power supply voltage 8–36 V
- Voltage drops shorter than 50 ms do not affect operation

## 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<sup>NT</sup> 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	– <sup>1)</sup> / –	– <sup>1)</sup> / –	● <sup>2)</sup> / –	● <sup>2)</sup> / –	● / ●	● / ●
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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