DYNAMIS
POWER SOLUTIONS

Model DY165P-S12

Power by PERKINS

Perkins®

LEROY SOMER

DSE

Generator Specification

Model	DY165P-S12	ESP(2)
Rated prime power	kva	150
Rated standard power	kva	165
Rated voltage line to line	V	400/230
Rated current	A	217

(1) PRP (Prime Power):

According to ISO8528-1, prime power is the maximum power available during a variable power sequence, which may be run for an unlimited number of hours per year, between stated maintenance intervals. The permissible average power output during at 24 hours period shall not exceed 80% of the prime power. 10% overload available for governing purposes only.

(2) ESP (Standby Power):

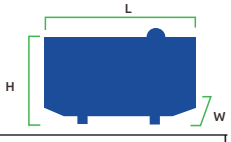
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures being carried out as prescribed by the manufacturers. No overload capability is available.

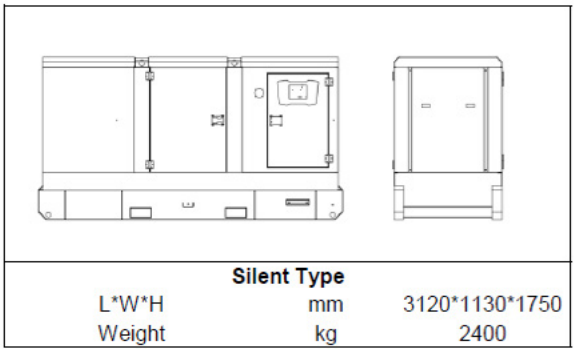
Engine-PERKINS		
Model		1106A-70TAG2
Air intake system		Turbocharged
Fuel injection system		Direct Injection
No. cylinders		6
Displacement	Liquid	7.01
Bore*Stroke	mm	105*135
Compression ratio		18.2
Rated speed	r/min	1500
Rated net power (with fan)	Kw	136
Governor Type		Mechanical
Start Motor	V	24

Standard reference Conditions

Note: Standard reference condition 25 °C[77° F] air inlet temp, 1000m(328ft) A.S.L 30% relative humidity. Fuel consumption dat with diesel fuel with specific gravity of 0.85 and conforming to BS 2869: 1998 Class A2

Noise level 50HZ: 74bD (A) @ 1 m





Silent Type		
L*W*H	mm	3120*1130*1750
Weight	kg	2400

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Engine Specification : 1106A-70TAG2 (165kVA)

Exhaust System		
Exhaust gas flow	m3/min	23.78
Exhaust gas temp	° C	484
Max back pressure	kPa	15

Air intake System		
Max intake restriction	kPa	5
Air filter type		Paper element
Air flow	m^3/min	10.2

Fuel System		
100% load (prime power)	L/h	33.4
75% load (prime power)	L/h	24.7
50% load (prime power)	L/h	16.4
Fuel tank capacity	L	350

Lubrication System		
Total system oil capacity	L	18
Oil temp	°C	125
Oil pressure	kPa	520

Cooling System		
Total coolant capacity	L	21
Thermostat	°C	82-93
Max top tank temperature	°C	110

Standard Features
Engine(Perkins) Radiator 50°C max, fahs are driven by be 24V charge alternator Alternator: single bearing alternator IP23, insulation class H/H Standard auto control system One set of air filter, fuel filter, oil filter Main line circuit breaker/MCCB Base fuel tank Two 12V batteries, rac and cable Exhaust system(Ripple flex exhaust pipe, exhaust siphon, flange, muffler User manual

Alternator		
Model	Learoy Somer	TAL-A47-J
Phase		3
Voltage	V	400/230
Wirning		3 Phase 4 Wire, Y type
Bearning		1
Power factor		0.8
Frequency	Hz	50
Prime power	kVA	150
Exciter Type		Brushless, self-excitation
Voltage regulation	%	+-0.5
Protection Grade		IP23
Insultation grade		H/H
Altitude	m	<=1000

Controller-DEEPSEA	
Model	DSE6120MKII
Protective functions : • Low oil pressureHigh water temperature • High/low voltage • High Engine Temperature and Over-speed. • Voltage regulator frequency regulator • Emergency stop • Start failure	

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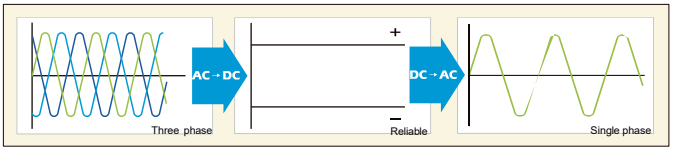
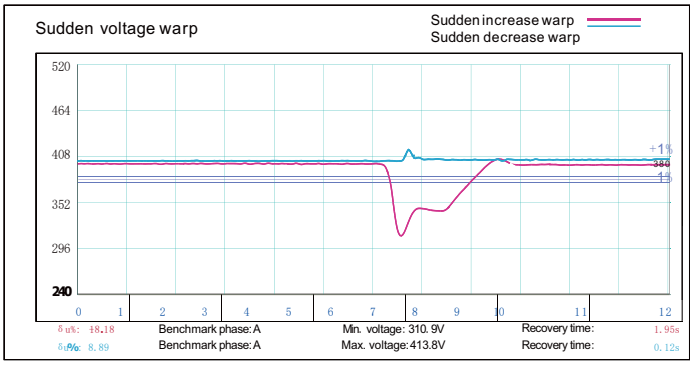
ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A44-J

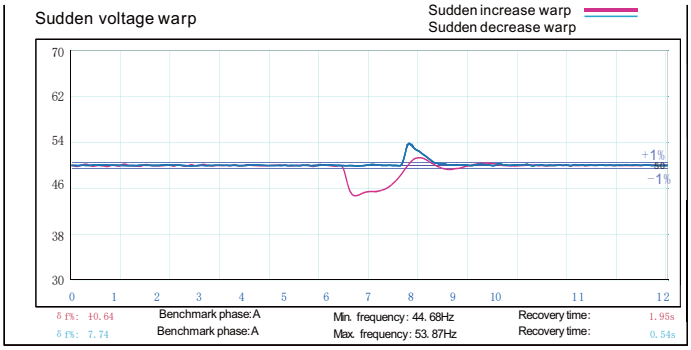
Alternator	
Number of phase	3
Power factor (Cos Phi)	0.8
Poles	4
Winding Connections (standard)	Star-serie
Terminals	12
Insulation type	H class
Winding Pitch	2/3
IP rating	IP23
Excitation system	Self-excited
Bearing	Single bearing
Coating	Vacuum impregnation
Voltage regulator	A.V.R
Couping	Flexible disc



Emergency voltage curve



Emergency frequency curve



OPTIONS

Engine	Alternator	Generator Sets	Fuel System
• Water Jacket Pre heater • Fuel heater	• Winding Temp measuring Instrument • Alternator Pre heater • PMG • Anti-damp and anti corrosion treatment • Anti-condensation heater • Winding and bearing RTD	• Tools with the machine • Extended range fuel tank • Bunded fuel tank	• Low fuel level alarm • Automatic fuel feeding system • Fuel T-valves
Canopy	**Lub Oil System**	**Cooling System**	**Control Panel**
• Rental type Canopy • Trailer	• Oil Pre-heater • Oil temp sensor	• Front heat protection	• Remote control panel • ATS • Synchronizing controller • Adjustable earth leakage relay

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Control Panel: DEEPSEA 6120MKII

DSE6110/20 MKIII

AUTO START & AUTO MAINS (UTILITY) FAILURE CONTROL MODULES

DSE6110 MKIII

DSE6120 MKIII

KEY FEATURES

- 4-line back-lit LCD text display
- Multiple display languages
- Five-key menu navigation
- LCD alarm indication
- Customisable power-up text and screen images.
- DSENet® expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB communications
- Front panel configuration with PIN protection
- Power save mode
- 3-phase generator sensing and protection
- 3-phase mains (utility) sensing and protection (DSE6120 MKIII only)
- Automatic load transfer control (DSE6120 MKIII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains (utility) current and power monitoring (kW, kvar, kVA, pf) (DSE6120 MKIII only)
- kW overload alarm
- Over current protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 4 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- 8 configurable digital inputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel level alarms
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including Tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with optional gasket) offers increased resistance to water ingress
- Configurable CAN read & transmitted information.
- 1 alternative configuration.

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE6120 MKIII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements.

SPECIFICATIONS

DC SUPPLY

CONTINUOUS VOLTAGE RATING
8 V to 35 V Continuous
5 V for up to 1 minute

CRANKING DROPOUTS
Able to survive 0 V for 100 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

MAXIMUM OPERATING CURRENT
260 mA at 12 V, 150 mA at 24 V

MAXIMUM STANDBY CURRENT
145 mA at 12 V, 85 mA at 24 V

CHARGE FAIL/EXCITATION RANGE
0 V to 35 V

GENERATOR & MAINS (UTILITY)

VOLTAGE RANGE
15 V to 415 V AC (Ph to N)
26 V to 719 V AC (Ph to Ph)

FREQUENCY RANGE
3.5 Hz to 75 Hz

MAGNETIC PICKUP

VOLTAGE RANGE
+/- 0.5 V to 70 V

FREQUENCY RANGE
10,000 Hz (max)

INPUTS

DIGITAL INPUTS A TO H
Negative switching

ANALOGUE INPUTS A & D
Configurable as:
Negative switching digital input
0 V to 10 V sensor
4 mA to 20 mA sensor
Resistive sensor

ANALOGUE INPUTS B & C
Configurable as:
Negative switching digital input
Resistive sensor

OUTPUTS

OUTPUT A & B (FUEL & START)
10 A DC at supply voltage

AUXILIARY OUTPUTS C, D, E, F, G & H
2 A DC at supply voltage

DIMENSIONS

OVERALL
216 mm x 158 mm x 43 mm
8.5" x 6.2" x 1.5"

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Control Panel: DEEPSEA 7320MKII

DSE7310/20 MKII

AUTO START & AUTO MAINS FAILURE CONTROL MODULES

KEY FEATURES

- Configurable power-up mode
- MPU fail delay
- Enhanced graphical user interface
- Drag & drop advanced PLC editor
- MSC ID within PLC GenComm override
- 4-Line back-lit LCD text display
- Multiple Display Languages
- Five key menu navigation
- LCD alarm indication
- Heated display option available
- Customisable power-up text and images
- DSENet expansion compatibility
- Data logging facility
- Internal PLC editor
- Protections disable feature
- Fully configurable via PC using USB, RS232 & RS485 communication
- Front panel configuration with PIN protection
- Power save mode
- 3 phase generator sensing and protection
- 3 phase mains (utility) sensing and protection (DSE7320 MKII only)
- Automatic load transfer control (DSE7320 MKII only)
- Generator current and power monitoring (kW, kvar, kVA, pf)
- Mains current and power monitoring (kW, kvar, kVA, pf) (DSE7320 MKII only)
- kW and kvar overload and reverse power alarms
- Over current protection
- Unbalanced load protection
- Independent earth fault protection
- Breaker control via fascia buttons
- Fuel and start outputs configurable when using CAN
- 6 configurable DC outputs
- 2 configurable volt-free relay outputs
- 6 configurable analogue/digital inputs
- Support for 0 V to 10 V & 4 mA to 20 mA sensors
- 8 configurable digital inputs
- Configurable 5 stage dummy load and load shedding outputs
- CAN, MPU and alternator frequency speed sensing in one variant
- Real time clock
- Manual and automatic fuel pump control
- Engine pre-heat and post-heat functions
- Engine run-time scheduler
- Engine idle control for starting & stopping
- Fuel usage monitor and low fuel level alarms
- Simultaneous use of RS232 and RS485 communication ports
- True dual mutual standby using RS232 or RS485 for accurate engine hours balancing.
- MODBUS RTU support with configurable MODBUS pages.
- Advanced SMS messaging (additional external modem required)
- Start & stop capability via SMS messaging
- 3 configurable maintenance alarms
- Compatible with a wide range of CAN engines, including tier 4 engine support
- Uses DSE Configuration Suite PC Software for simplified configuration
- Licence-free PC software
- IP65 rating (with supplied gasket) offers increased resistance to water ingress
- Modules can be integrated into building management systems (BMS) using MODBUS RTU

KEY BENEFITS

- Automatically transfers between mains (utility) and generator (DSE7320 MKII only) for convenience.
- Hours counter provides accurate information for monitoring and maintenance periods
- User-friendly set-up and button layout for ease of use
- Multiple parameters are monitored & displayed simultaneously for full visibility
- The module can be configured to suit a wide range of applications for user flexibility
- PLC editor allows user configurable functions to meet user specific application requirements.

SPECIFICATIONS

DC SUPPLY

CONTINUOUS VOLTAGE RATING
8 V to 35 V Continuous
5 V for upto 1 minute

CRANKING DROPOUTS
Able to survive 0 V for 100 mS, providing supply was at least 10 V before dropout and supply recovers to 5 V. This is achieved without the need for internal batteries. LEDs and backlight will not be maintained during cranking.

MAXIMUM OPERATING CURRENT
510 mA at 12 V, 240 mA at 24 V

MAXIMUM STANDBY CURRENT
380 mA at 12 V, 180 mA at 24 V

CHARGE FAIL/EXCITATION RANGE
0 V to 35 V

GENERATOR & MAINS (UTILITY)

VOLTAGE RANGE
15 V to 415 V AC (Ph to N)
26 V to 719 V AC (Ph to Ph)

FREQUENCY RANGE
3.5 Hz to 75 Hz

MAGNETIC PICKUP

VOLTAGE RANGE
+/- 0.5 V to 70 V

FREQUENCY RANGE
10,000 Hz (max)

INPUTS

DIGITAL INPUTS A TO H
Negative switching

ANALOGUE INPUTS A & F
Configurable as:
Negative switching digital input
0 V to 10 V sensor
4 mA to 20 mA sensor
Resistive sensor

ANALOGUE INPUTS B, C, D & E
Configurable as:
Negative switching digital input
Resistive sensor

OUTPUTS

OUTPUT A & B (FUEL & START)
15 A DC at supply voltage

OUTPUTS C & D
8 A AC at 250 V AC (Volt-free)

AUXILIARY OUTPUTS E, F, G, H, I & J
2 A DC at supply voltage

DIMENSIONS

OVERALL
245 mm x 184 mm x 51 mm
9.6" x 7.2" x 2.0"

PANEL CUT-OUT
220 mm x 160 mm
8.7" x 6.3"

MAXIMUM PANEL THICKNESS
8 mm
0.3"

STORAGE TEMPERATURE RANGE
-40°C to +85°C
-40 °F to +185 °F

OPERATING TEMPERATURE RANGE
-30°C to +70°C
-22 °F to +158 °F

HEATED DISPLAY VARIANT
-40 °C to +70 °C

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Monitoring 3G/4G: DEEPSEA 890MKII (OPTIONAL)

DSEGenset®

DSE890 MKII
DSEWebNet® / IoT 4G Gateway (GSM/Ethernet)
Remote Communications Interface

The DSE**890 MKII** 4G gateway is used in conjunction with supported DSE controllers to provide remote monitoring and communications data via DSE**WebNet®** or third party MQTT brokers.

The DSE**890 MKII** gateway communicates with up to five connected DSE controllers, monitoring instrumentation and operating states. When this data changes, data is logged internally and transmitted from the gateway device to the DSE**WebNet®** or MQTT broker (Amazon Web Services, Google, IBM etc..).

DSE**WebNet®** software is accessed using an Internet browser or the dedicated app. Users are able to perform multiple tasks including: monitoring equipment, clearing alarm conditions, starting/stopping equipment and monitoring fuel levels.

The **IoT** feature of the DSE**890 MKII** supports MQTT V 3.1.1 (ISO/IEC 20922:2016). This enables connection to a third party server that is running an MQTT broker, whilst simultaneously supporting connection to the DSE**WebNet®** server.

For additional information on DSE**WebNet®** software refer to data sheet 055-192.

Note: The DSE**890 MKII** also supports 2G & 3G connections.

SPECIFICATIONS

DC SUPPLY
CONTINUOUS VOLTAGE RATING
8 V to 36 V continuous

CRANKING DROPOUTS
Able to survive 0 V for 100 mS, providing supply was at least 8 V before dropout and supply recovers to 8 V. This is achieved without the need for internal batteries

MAXIMUM OPERATING CURRENT

GSM	755 mA at 12 V 376 mA at 24 V
GSM & GPS	755 mA at 12 V 376 mA at 24 V

MAXIMUM STANDBY CURRENT

GSM	207 mA at 12 V 113 mA at 24 V
GSM & GPS	207 mA at 12 V 113 mA at 24 V

COMMUNICATIONS
USB (Single DSE Controller)
CAN* (Multiple DSE Controller)
RS485 (Multiple DSE Controllers)
Ethernet (Multiple DSE Controllers)

DIMENSIONS
85 mm x 149 mm x 51 mm

MOUNTING
DIN Rail
Chassis Mount

* Only active for third-party MQTT brokers.

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