



Spécifications du générateur

Service	PRP(1)	ESP(2)
Puissance (KVA)	100	110
Puissance (KW)	80	88
Vitesse nominale (r.p.m)	1500	
Tension standard (V)	400/230	
Facture de puissance (cos Phi)	0.8	

RP (Puissance principale):

Selon la norme ISO 8528-1, la puissance principale est la puissance maximale disponible pendant une période de charge variable. Cette puissance est disponible pendant un nombre illimité d'heures par an, entre les intervalles de maintenance indiqués. La puissance de sortie moyenne autorisée sur une durée de 24 heures ne doit pas dépasser 80% de la puissance principale. Surcharge de 10% disponible ponctuellement.

ESP (Puissance de secours):

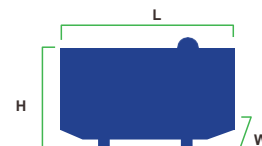
Selon la norme ISO 8528-1, la puissance secours est la puissance maximale disponible dans les conditions de fonctionnement standard, pour laquelle le groupe électrogène peut fonctionner jusqu'à 500 heures par an (dont un maximum de 300 heures en continu), entre les intervalles de maintenance et procédures effectuées conformément aux recommandations du fabricant. Aucune capacité de surcharge n'est disponible.

Power Voltage	ESP		PRP		Standby Amps
	KVA	KW	KVA	KW	
415/240	110	88	100	80	153
400/230	110	88	100	80	159
380/220	110	88	100	80	167

Données de Performance		
Modèle	DY110DE	
Marque du moteur	Deutz	
Modèle du moteur	BF4M1013EC G1	
Type de régulation	Mecanique	
Nombre de phases	3	
Système de contrôle	Digital	
Tension de démarrage	12V/24V	
Fréquence	50HZ	
Vitesse moteur (RPM)	1500	
Consommation de carburant (L/H)	100% puissance de secours	-
	100% puissance principale	24.2
	75% puissance principale	18.0
	50% puissance principale	12.2

Conditions de référence standard

Remarque: Condition de référence standard 25 ° C [77 ° F] température d'entrée d'air, 1000 m (328 ft) A.S.L 30% d'humidité relative. Données de consommation de carburant avec du diesel avec une densité de 0,85 et conforme à BS 2869: 1998, Classe A2



Noise level 50Hz: 65dB (A) @ 7 m

Données de Performance	
Type	Silent
Longeur (L)	2970mm
Largeur (W)	1080mm
Hauteur (H)	1400mm
Poids net	1521KG
Réservoir de carburant (L)	180L

Note: This Parameters Allow for some acceptable Deviations

Engine Specification : BF4MM1013EC G1 (110kVA)

Engine	Type	
Speed	[min-1]	1500
Net frequency	[Hz]	50
Power standard		LTP
Power level		
Exhaust emission standard		COM II
Aspiration		Turbo CAC
No of cylinders		4
Configuration		in-line
Injection system		single injection pumps
Displacement	[L]	4,76
Bore	[mm]	108
Stroke	[mm]	130
Compression ratio		17.1
Mean effective pressure	[bar]	19,5
Piston speed	[m/s]	6,30
Rotation (looking at flywheel)		Ccw
No of teeth on flywheel ring gear		129
Governor performance	Type	
Speed droop (static) mech. gov.	[%]	4-5
Speed droop (static) electr. gov. (EMR/DDE)	[%]	0-3
Governing standards to ISO 8528 Parts 1 and 5		G2
Moment of inertia	Type	
Engine without flywheel	[kg m²]	0,23
Flywheel (standard genset spec.)	[kg m²]	2,6
Max. step load acceptance, 1st step	[%]	
Weight	Type	
Engine dry, w/o cooling system	[kg]	526
Engine with cooling system	[kg]	560
Oil specification		TR0199-99-3002/6
Oil consumption	(as % of fuel consumption)	0,3
Oil capacity	(sump)	11
Min. oil pressure (shut down)	[bar]	2,7
Max. permissible oil temperature(oil pan)	[°C]	130
StandBy Power	[kVA]	110
Fan Reduction	[kW]	5,9
Net flywheel	[kW]	96,1
Prime Power	[kVA]	100

Engine	Type	
Gros output (continous Power)1b	[kW]	92
Fuel Consumption		
25% load	[l/h]	6,7
50% load	[l/h]	12,2
75% load	[l/h]	18
100% load	[l/h]	24,2
General engine cooling data		
Max. perm. coolant outlet temperature	[°C]	105
Max. perm. flow resistance (cool. syst. and piping)	[bar]	0.25
Max. temperature of coolant (warning)	[°C]	108
Max. temperature of coolant (shut-down)	[°C]	110
Temperature at which thermostat starts to open	[°C]	83
Temperature at which thermostat is fully open	[°C]	98
Delivery of coolant pump	[m³/h]	10.2
Min. pressure before coolant pump	[bar]	0,3
Coolant capacity (engine)	[l]	7.4
Temperature at CAC outlet at standard conditions	[°C]	40
Coolant capacity (incl. cooling unit)	[l]	19,7
Fan power consumption	kW	5.9
Air to boil (max. permissible cool. air temp. at fan)	°C	54
Air pressure loss, external	[mbar]	1.5
Cooling air flow	[m³/h]	6100
Heat Balance		
Heat dissipation (engine radiator)6	[kW]	52 .5
Heat dissipation (convection)	[kW]	10.0
Heat dissipation (CAC)6	[kW]	13.1
Inlet / Exhaust Data Max. intake depression (Switch Setting)	[bar]	25
Combustion air volume	[m³/h]	365
Max. exhaust back pressure	[mbar]	30
Max. exhaust gas temperature	[°C]	560
Exhaust gas flow (at above temp)	[m³/h]	1102

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ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A44D

The best of performance

The Leroy-Somer™ TAL 044 alternator has been designed to offer you the best power generation performances. With its meticulous design and optimized architecture, the TAL 044 strikes the perfect balance between compactness, reliability, performance and longevity. Whatever your application, the Leroy-Somer™ TAL 044 alternator will meet your needs and will adapt to all situations.

Standards

The Leroy-Somer™ TAL 044 alternator meets all key international standards and regulations, including IEC 60034, NEMA MG 1.32-33, ISO 8528-3, CSA C22.2 n°100-14 and UL 1446 (UL 1004 on request). Also compliant with IEC 61000-6-2, IEC 61000-6-3, IEC 61000-6-4, VDE 0875G, VDE 0875N and EN 55011, group 1 class A for European zone. The Leroy-Somer™ TAL 044 alternator can be integrated in EC marked generator set, and bears EC, UKCA and CMIM markings. It is designed, manufactured and marketed in an ISO 9001 and ISO 14001 quality assurance environment.

Electrical characteristics and performances

- Class H insulation
- Shunt excitation
- Low voltage winding:
 - Three-phase 50 Hz: 220V - 240V and 380V - 415V (440V) 60 Hz: 208V - 240V and 380V - 480V
 - Single-phase 50 Hz: 230V 60 Hz: 240V
- 4-terminal plates in 6-wire version
- Optimized performance

Excitation and regulation system

	Excitation system				Regulation options		
	AVR	SHUNT	AREP+ (option)	PMG (option)	ULC/us	Remote voltage potentiometer	C.T. Current transformer for paralleling
Three-phase 6-wire	R120	Standard					
	R150	Option				√	
	R180		Standard	Standard		√	√
	D350	Option	Option	Option	√	√	√*
Three-phase 12-wire	R120	Standard					
	R250	Option			√	√	
	R180		Standard	Standard		√	√
	D350	Option	Option	Option	√	√	√*
Single-phase	R121	Standard				√	
	R251	Option			√	√	

*: only with AREP+ or PMG

Protection system and options

- Degree of protection: IP 23
- Complete winding protection for non-harsh environment with relative humidity ≤ 95%
- Options:
 - Three-phase 12-wire with 8-terminal plates
 - AREP+ or PMG excitation
 - ULC/us
 - Customized painting (unpainted machine as standard)
 - Space heater
 - Flying leads
 - Droop kit for alternator paralleling
 - Dedicated single-phase
 - Stator sensors
 - Winding 8 optimized for three-phase 380V / 416V - 60Hz
 - Reinforced winding protection for harsh environments and relative humidity greater than 95% (system 2 - 4): for TAL 044 K apply a derating coefficient of 0.97

Mechanical construction

- Compact and rugged assembly to withstand engine vibrations
- Steel frame
- Aluminum flanges and shields
- Single-bearing design compatible with most diesel engines
- Greased for life bearings
- Direction of rotation: clockwise and counterclockwise without derating

Terminal box design

- Easy access to AVR and terminals
- Possibility of current transformer for parallel operation



ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A44D

General characteristics

Insulation class	H	Excitation system 6-wire	SHUNT	AREP+ / PMG
Winding pitch	2/3 (wind.6S - 6-wire / wind.6 - 12-wire)	AVR type	R120	R180
Number of wires	6 (12 option)	Excitation system 12-wire (option)	SHUNT	AREP+ / PMG
Protection	IP 23	AVR type	R120	R180
Altitude	≤ 1000 m	Voltage regulation (**)	± 1 %	± 0.5 %
Overspeed	2250 R.P.M.	Total Harmonic Distortion THD (***) in no-load	< 2 %	
Air flow 50 Hz	0.29 m³/s	Total Harmonic Distortion THD (***) in linear load	< 5 %	
Air flow 60 Hz	0.34 m³/s	Waveform: NEMA = TIF (***)	< 50	
AREP+/PMG Short-circuit current = 2.7 In : 5 seconds (*)		Waveform: I.E.C. = FHT (***)	< 2%	

(*) D350: 10 seconds (**) Steady state (***) Total harmonic distortion between phases, no-load or on-load (non-distorting)

Ratings 50 Hz - 1500 R.P.M.

kVA / kW - P.F. = 0.8																					
Duty / T° C		Continuous / 40 °C					Continuous / 40 °C					Stand-by / 40 °C					Stand-by / 27 °C				
Class / T° K		H / 125° K					F / 105° K					H / 150° K					H / 163° K				
Phase		3 ph.			1 ph.	3 ph.			1 ph.	3 ph.			1 ph.	3 ph.			1 ph.				
Y		380V	400V	415V	440V		380V	400V	415V	440V		380V	400V	415V	440V		380V	400V	415V	440V	
Δ		220V	230V	240V		230V	220V	230V	240V		230V	220V	230V	240V		230V	220V	230V	240V		230V
YY (*)		200V			220V		200V			220V		200V			220V		200V			220V	
ΔΔ (*)						230V					230V					230V					230V
TAL 044 A	kVA	70	70	70	63	42	64	64	64	57	38	74	74	74	67	45	77	77	77	69	46
	kW	56	56	56	50	33.5	51	51	51	46	30.5	59	59	59	54	36	62	62	62	55	37
TAL 044 B	kVA	80	80	80	72	48	73	73	73	66	44	85	85	85	76	51	88	88	88	79	53
	kW	64	64	64	58	38.5	58	58	58	53	35	68	68	68	61	41	70	70	70	63	42
TAL 044 C	kVA	90	90	90	81	54	82	82	82	74	49	95	95	95	86	57	100	100	100	89	59
	kW	72	72	72	65	43	66	66	66	59	39	76	76	76	69	46	80	80	80	71	47
TAL 044 D	kVA	100	100	100	90	60	91	91	91	82	55	106	106	106	95	64	110	110	110	99	66
	kW	80	80	80	72	48	73	73	73	66	44	85	85	85	76	51	88	88	88	79	53
TAL 044 E	kVA	125	125	125	113	67	114	114	114	103	61	133	133	133	120	71	138	138	138	124	74
	kW	100	100	100	90	54	91	91	91	82	49	106	106	106	96	57	110	110	110	99	59
TAL 044 H	kVA	135	135	135	122	73	123	123	123	111	66	143	143	143	129	77	150	150	150	134	80
	kW	108	108	108	98	58	98	98	98	89	53	114	114	114	103	62	120	120	120	107	64
TAL 044 J	kVA	150	150	150	135	80	137	137	137	123	73	159	159	159	143	85	165	165	165	149	88
	kW	120	120	120	108	64	110	110	110	98	58	127	127	127	114	68	132	132	132	119	70
TAL 044 K	kVA	165	165	165	138	88	150	150	150	126	80	175	175	175	150	93	182	182	182	157	97
	kW	132	132	132	110	70	120	120	120	101	64	140	140	140	120	74	146	146	146	126	78
TAL 044 L	kVA	180	180	180	171	90	164	164	164	156	82	191	191	191	181	95	200	200	200	188	99
	kW	144	144	144	137	72	131	131	131	125	66	153	153	153	145	76	160	160	160	150	79
TAL 044 M	kVA	192	200	200	192	100	175	182	182	175	91	204	212	212	204	106	211	220	220	211	110
	kW	154	160	160	154	80	140	146	146	140	73	163	170	170	163	85	169	176	176	169	88



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 95 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

930 mA at 12 V, 160 mA at 24 V

CHARGE FAIL/EXCITATION RANGE

0 V to 95 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

5.5 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

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



MONITORING

Discover Dynamis Webnet

A remote generator management and control solution.

DYNAMIS WEBNET allows you to receive detailed reports including recommendations for corrective and preventive maintenance.

It also enables you to connect and access real-time data across a range of generator operating parameters.

The solution offers you real-time control of your generator.

- DSE890 MKII 4G gateway used with DSE controllers for remote monitoring and communication via DSEWebNet® or third-party MQTT brokers.
- Communicates with up to five connected DSE controllers to monitor instruments and operating states.

- Internally records data changes and transmits them to DSEWebNet® or to an MQTT broker (Amazon Web Services, Google, IBM, etc.).

- DSEWebNet® software is accessible via a web browser or a dedicated app.

- Supports multiple operations: equipment monitoring, alarm clearing, equipment start/stop, and fuel level monitoring.
- The IoT functionality of the DSE890 MKII supports MQTT V 3.1.1 (ISO/IEC 20922:2016).

- Connection to a third-party server running an MQTT broker is possible, while maintaining a connection to DSEWebNet®.

- For more information on DSEWebNet® software, refer to datasheet 055-192.

- The DSE890 MKII also supports 2G and 3G connectivity.



Extended tanks– 200-500-600-1000l



22kVA 1000l



33kVA 1000l antitheft



55kVA 600l