DYNAMIS
POWER SOLUTIONS

Model DY83DE

Powered by DEUTZ

Spécifications du générateur

Service	PRP(1)	ESP(2)
Puissance (KVA	75	83
Puissance (KW)	60	66
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):

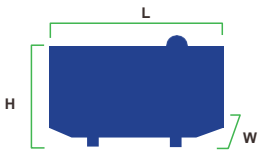
Selon la norme ISO 8528-1, la puissance secours est la puissance maximale disponible dans les conditions de fonctionnement standard, pour laquelle le groupe électrogène peut fonctionner jusqu'à 500 heures par an (dont un maximum de 300 heures en continu), entre les intervalles de maintenance et procédures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

Power Voltage	ESP		PRP		Standy Amps
	KVA	KW	KVA	KW	
415/240	83	66	75	60	122.4
400/230	83	66	75	60	127.0
380/220	83	66	75	60	133.7

Données de Performance		
Modèle		DY83DE
Marque du moteur		Deutz
Modèle du moteur		BF4M2012C G1
Type de régulation		Mecanique
Nombre de phases		3
Système de contrôle		Digital
Tension de démarrage		12V/24V
Fréquence		50HZ
Vitesse moteur (RPM)		1500
Consomation de carburant (L/H)	100% puissance de secours	-
	100% puissance principale	18.1
	75% puissance principale	13.3
	50% puissance principale	8.9

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: 64dB (A) @ 7m

Données de Performance	
Type	Capoté
Longeur (L)	2770mm
Largeur (W)	1080mm
Hauteur (H)	1250mm
Poids net	1365KG
Réservoir de carburant (L)	180L

Note: This Parameters Allow for some acceptable Deviations

DYNAMIS
POWER SOLUTIONS

Engine Specification : BF4M2012C G1

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]	4,04
Bore	mm]	101
Stroke	[mm]	126
Compression ratio		19
Mean effective pressure	[bar]	14,8
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]	0,16
Flywheel (standard genset spec.)	[kg m²]	1,2
Max. step load acceptance, 1st step	[%]	
Weight	Type	
Engine dry, w/o cooling system	[kg]	405
Engine with cooling system	[kg]	473
Oil specification		TR0199-99-3002/6
Oil consumption	(as % of fuel con-sump-tion)	0,15
Oil capacity	(sump)	8.5
Min. oil pressure (shut down)	[bar]	1,8
Max. permissible oil temperature(oil pan)	[°C]	125
StandBy Power	[kVA]	88
Fan Reduction	[kW]	4,9
Net flywheel	[kW]	70
Prime Power	[kVA]	80

Engine	Type	
Fuel Consumption		
25% load	[l/h]	5.0
50% load	[l/h]	8.9
75% load	[l/h]	13.3
100% load	[l/h]	18.1
General engine cooling data		
Max. perm. coolant outlet temperature	[°C]	105
Max. perm. flow resistance (cool. syst. and piping)	[bar]	0.22
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]	7.2
Min. pressure before coolant pump	[bar]	0,3
Coolant capacity (engine)	[l]	6.0
Temperature at CAC outlet at standard conditions	[°C]	40
Coolant capacity (incl. cooling unit)	[l]	15,9
Fan power consumption	kW	4.9
Air to boil (max. permissible cool. air temp. at fan)	°C	55
Air pressure loss, external	[mbar]	1.5
Cooling air flow	[m3/h]	5400
Heat Balance		
Heat dissipation (engine radiator)6	[kW]	43 .1
Heat dissipation (convection)	[kW]	7.5
Heat dissipation (CAC)6	[kW]	7.5
Inlet / Exhaust Data Max. intake de-pression (Switch Setting)	[bar]	25
Combustion air volume	[m3/h]	267,4
Max. exhaust back pressure	[mbar]	30
Max. exhaust gas temperature	[°C]	600
Exhaust gas flow (at above temp)	[m3/h]	829

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DEUTZ®

DYNAMIS
POWER SOLUTIONS

ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A44C

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)	$UL_{C/US}$	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

DYNAMIS
POWER SOLUTIONS

ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A44C

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 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
330 mA at 12 V, 160 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)

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.

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DYNAMIS
POWER SOLUTIONS

Extended tanks– 200-500-600-1000l

22kVA 1000l

33kVA 1000l antitheft

55kVA 600l

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POWER SOLUTIONS

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