DYNAMIS
POWER SOLUTIONS

Model DY22DE

Powered by DEUTZ

Spécifications du générateur

Service	PRP(1)	ESP(2)
Puissance (KVA	20	22
Puissance (KW)	16	18
Vitesse nominale (r.p.m)	1500	
Tension standard (V)	400/230 V	
Facture de puissance (cos Phi)	0,8	

PRP (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):

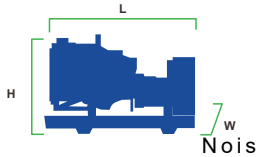
Selon la norme ISO 8529-1, la puissance secours est la puissance maximale disponible dans les conditions de fonctionnement standard, pour laquelle le groupe électrogène peut fonctionner jusqu'à 200 heures par an (dont un maximum de 25 heures en continu), entre les intervalles de maintenance et procédures effectuées conformément aux recommandations du fabricant. Aucune capacité de surcharge n'est disponible.

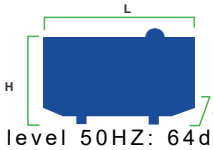
Power Voltage	ESP		PRP		Standy Amps
	KVA	KW	KVA	KW	
415/240	22	18	20	16	30.6
400/230	22	18	20	16	31.8
380/220	22	18	20	16	33.4

Données de Performance	
Modèle	DY22DE
Marque du moteur	DEUTZ
Modèle du moteur	BFM3G1
Type de régulation	Mécanique
Nombre de phases	3
Système de contrôle	Digital
Tension de démarrage	12V
Fréquence	50Hz
Vitesse moteur (RPM)	1500
Consomation de carburant (L/H) — 100% puissance de secours	-
Consomation de carburant (L/H) — 100% puissance principale	5,4
Consomation de carburant (L/H) — 75% puissance principale	4
Consomation de carburant (L/H) — 50% puissance principale	2,8

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		Insonorisé
Longeur (L)		2170 mm
Largeur (W)		850 mm
Hauteur (H)		1125 mm
Poids net		779 KG
Réservoir de carburant (L)		65

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Engine Specification : BFM3 G1

Engine	Type	BFM3 G1
Speed	[min-1]	1500
Net frequency	[Hz]	50
Power standard		PRP
Power level		G1
Gross output (LTP or Stand ByPower)[1]	[kW]	22
Fan reduction	[kW]	2
Electrical output1a	[kVA]	20
Gross output (PRP or Prime Power)[1a]	[kW]	20
Gross output (Continuous Power)[1b]	[kW]	19
Fuel consumption		
25% load[3]	[l/h]	1,6
50% load[3]	[l/h]	2,8
75% load[3]	[l/h]	4,0
100% load[3]	[l/h]	5,4
Aspiration		Natural
No of cylinders		4
Configuration		in-line
Injection system		
Displacement	[L]	3 168
Bore	mm]	98
Stroke	[mm]	105
Compression ratio		
Mean effective pressure	[bar]	5,6
Piston speed	[m/s]	5,25
Rotation (looking at flywheel)		ccw
No of teeth on flywheel ring gear		129
Governor performance	**Type**	
Speed droop (static) mech. gov.	[%]	4 - 6
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]	5,4
Flywheel (standard genset spec.)	[kg m²]	0,2
Max. step load acceptance, 1st step	[%]	-
Weight	**Type**	
Engine dry, w/o cooling system	[kg]	245
Oil specification		
Oil consumption	(as % of fuel con-sump-tion)	0,5
Oil capacity	(sump)	7,5
Min. oil pressure (warning)	[bar]	1,5
Min. oil pressure (shut down)	[bar]	1,0
Max. permissible oil temperature(oil pan)	[°C]	120
Cooling System (PRP)		
General engine cooling data		
Max. perm. coolant outlet tempera-ture	[°C]	103
Max. perm. flow resistance (cool. syst. and piping)	[bar]	0,5
Max. temperature of coolant (warn-ing)	[°C]	97
Max. temperature of coolant (shut-down)	[°C]	103
Temperature at which thermostat starts to open	[°C]	78
Temperature at which thermostat is fully open	[°C]	90
Delivery of coolant pump	[m³/h]	4,2
Min. pressure before coolant pump	[bar]	0,15

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DEUTZ®

DYNAMIS
POWER SOLUTIONS

ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A40-F

The best of performance

The Leroy-Somer™ TAL 040 alternator has been designed to offer you the best power generation performances. With its meticulous design and optimized architecture, the TAL 040 strikes the perfect balance between compactness, reliability, performance and longevity.
Whatever your application, the Leroy-Somer™ TAL 040 alternator will meet your needs and will adapt to all situations.





Standards

The Leroy-Somer™ TAL 040 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 040 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: 115V - 230V
    60 Hz: 120V - 240V
- 4-terminal plates in 6-wire version
- Optimized performance

Excitation and regulation system

	Excitation system			Regulation options	
	AVR	SHUNT	AREP+ (option)	ULc/us	Remote voltage potentiometer
Three-phase 6-wire	R120	Standard			
	R150	Option			√
	R180		Standard		√
	D350	Option	Option	√	√
Three-phase 12-wire	R120	Standard			
	R220	Option		√	√
	R180		Standard		√
	D350	Option	Option	√	√
Single-phase	R121	Standard			√
	R221	Option		√	√

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+ excitation
  - ULc/us
  - Customized painting (unpainted machine as standard)
  - Space heater
  - Flying leads
  - Dedicated single-phase
  - Winding 8 optimized for three-phase 380V / 416V - 60Hz
  - Reinforced winding protection for harsh environments and relative humidity greater than 95% (system 2 - 4 without derating)

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

DYNAMIS
POWER SOLUTIONS

ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A40-F

TAL 040 - Three-phase 10 to 20 kVA - 50 Hz / 12.5 to 25 kVA - 60 Hz

General characteristics

Insulation class	H		Excitation system 6-wire	SHUNT	AREP+
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+
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	< 3.5 %	
Air flow 50 Hz	0.06 m³/s		Total Harmonic Distortion THD (***) in linear load	< 5 %	
Air flow 60 Hz	0.07 m³/s		Waveform: NEMA = TIF (***)	< 50	
AREP+ 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 040 B	kVA	10	10	10	9	7	9	9	9	8	6.5	10.5	10.5	10.5	9.5	7.5	11	11	11	10	7.5
	kW	8	8	8	7	5.5	7	7	7	6.5	5	8.5	8.5	8.5	7.5	6	9	9	9	8	6
TAL 040 C	kVA	12.5	12.5	12.5	11	9	11.5	11.5	11.5	10	8	13.5	13.5	13.5	11.5	9.5	14	14	14	12	10
	kW	10	10	10	9	7	9	9	9	8	6.5	11	11	11	9	7.5	11	11	11	9.5	8
TAL 040 D	kVA	15	15	15	13	10.5	14	14	14	12	9.5	16	16	16	14	11	16.5	16.5	16.5	14.5	11.5
	kW	12	12	12	10.5	8.5	11	11	11	9.5	7.5	13	13	13	11	9	13	13	13	11.5	9
TAL 040 E	kVA	17.5	17.5	17.5	16	12.5	16	16	16	14.5	11.5	18.5	18.5	18.5	17	13.5	19.5	19.5	19.5	17.5	14
	kW	14	14	14	13	10	13	13	13	11.5	9	15	15	15	13.5	11	15.5	15.5	15.5	14	11
TAL 040 F	kVA	20	20	20	18	14	18	18	18	16.5	13	21	21	21	19	15	22	22	22	20	15.5
	kW	16	16	16	14.5	11	14.5	14.5	14.5	13	10.5	17	17	17	15	12	17.5	17.5	17.5	16	12.5

(*) 12-wire option

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
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Extended tanks– 200-500-600-1000l

22kVA 1000l

33kVA 1000l antitheft

55kVA 600l

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POWER SOLUTIONS

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