DYNAMIS
POWER SOLUTIONS

Model DY50P

Powered by PERKINS

Perkins®

LEROY SOMER

DSE

Generator Specification

Service	PRP(1)	ESP(2)
Power (KVA)	45	50
Power (KW)	36	40
Rated speed (r.p.m)	1500	
Standard voltage (V)	400/230 V	
Rated at power factor (cos Phi)	0,8	

(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):

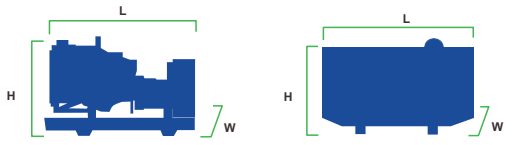
According to ISO 8528-1, It is defined as the maximum power available, under the agreed operating conditions, for which the generating set is capable of delivering for up to 500 hours of operation per year (of which no more than 300 hours for continuative use) with the maintenance intervals and procedures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

Power Voltage	ESP		PRP		Standy Amps
	KVA	KW	KVA	KW	
415/240	50	40	45	36	69.5
400/230	50	40	45	36	72
380/220	50	40	45	36	76

Performance Data		
Model		DY50P
Engine		Perkins
Engine model		1103A-33TG1
Speed control type		Mechanical
Phase		3
Control sytem		Digital
Starter motor voltage		12V
Frequency		50Hz
Engine speed (RPM)		1500
Fuel Consumption (L/H)	100% standby power	11.77
	100% prime power	10.58
	75% prime power	7.98
	50% prime power	5.58

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



Dimension and Weight		
Dimension	74 dB(A)@1m- 65 dB(A)@7m	Silent
Length (L)		2300 mm
Width (W)		955 mm
Height (H)		1250 mm
Net Weight	-	1060 KG
Fuel Tank (L)		100L

DYNAMIS
POWER SOLUTIONS

Engine Specification : 1103A-33TG1

Basic technical data		
Engine brand		Perkins
Engine ref.		1103A-33TG1
Engine type		4 stroke diesel
Governor type		mech
Injection		Direct
Aspiration		Turbocharged
Nb. of cylinders & arrangement		3L
Bore and stroke	mm	105*127
Displacement	L	3.3
Cooling system		Water-cooled

Cooling system	
Total coolant capacity -with radiator	14L
Maximum top tank temp	112°C
Thermostat operation range	82-95°C
Radiator face area	0.147m²
Rows and material	2 rows aluminium
Pressure cap setting	90kPa

Exhaust system		
Maximum exhaut temperature	°C	492
Exhaust gas flow	L/s	116
Maximum allowed back pressure	kPa	10

Induction system	
Clean filter	3.0kpa
Dirty filter	6.4kpa
Air filter type	Dry

Lubrication system		
Lube oil consumption with full load		0.5%-1% of fuel consumption
Compression Ratio		17.25:1
Engine oil capacity	L	7.8
Total coolant capacity	L	14.6

Electrical system Type	
Type	Negative ground
Alternator voltage	12 volts
Alternator output	65 amps
Starter motor voltage	12 volts
Starter motor power	3KW

DYNAMIS
POWER SOLUTIONS

ALTERNATOR SPECIFICATION : LEROY SOMER TAL-A42G

The best of performance

The Leroy-Somer™ TAL 042 alternator has been designed to offer you the best power generation performances. With its meticulous design and optimized architecture, the TAL 042 strikes the perfect balance between compactness, reliability, performance and longevity.
Whatever your application, the Leroy-Somer™ TAL 042 alternator will meet your needs and will adapt to all situations.





Standards

The Leroy-Somer™ TAL 042 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 042 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)	PMG (option)	$UL_{C/US}$	Remote voltage potentiometer
Three-phase 6-wire	R120	Standard				
	R150	Option				√
	R180		Standard	Standard		√
	D350	Option	Option	Option	√	√
Three-phase 12-wire	R120	Standard				
	R220	Option			√	√
	R180		Standard	Standard		√
	D350	Option	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+ or PMG 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): derating according to the following table

	50 Hz			60 Hz
Type	380V	400V	415V	All voltages
TAL 042	0.97	1 except 0.97 for TAL 042 G	1 except 0.97 for TAL 042 G	1 except 0.97 for TAL 042 G

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-A42G

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	0.10 m³/s	Total Harmonic Distortion THD (***) in linear load	< 5 %
Air flow 60 Hz	0.13 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 042 A	kVA	25	**25**	25	24.5	15	23	**23**	23	22.5	13.5	26.5	**26.5**	26.5	26	16	27.5	**27.5**	27.5	27	16.5
	kW	*20*	***20***	*20*	*19.5*	*12*	*18.5*	***18.5***	*18.5*	*18*	*11*	*21*	***21***	*21*	*21*	*13*	*22*	***22***	*22*	*21.5*	*13*
TAL 042 B	kVA	27	**27**	27	26	16	24.5	**24.5**	24.5	23.5	14.5	28.5	**28.5**	28.5	27.5	17	30	**30**	30	28.5	17.5
	kW	*21.5*	***21.5***	*21.5*	*21*	*13*	*19.5*	***19.5***	*19.5*	*19*	*11.5*	*23*	***23***	*23*	*22*	*13.5*	*24*	***24***	*24*	*23*	*14*
TAL 042 C	kVA	31	**32**	32	30	19	28	**29**	29	27.5	17.5	33	**34**	34	32	20	34	**35**	35	33	21
	kW	*25*	***25.5***	*25.5*	*24*	*15*	*22.5*	***23***	*23*	*22*	*14*	*26.5*	***27***	*27*	*25.5*	*16*	*27*	***28***	*28*	*26.5*	*17*
TAL 042 D	kVA	35	**35**	35	30.5	22	32	**32**	32	28	20	37	**37**	37	32.5	23.5	38.5	**38.5**	38.5	33.5	24
	kW	*28*	***28***	*28*	*24.5*	*17.5*	*25.5*	***25.5***	*25.5*	*22.5*	*16*	*29.5*	***29.5***	*29.5*	*26*	*19*	*31*	***31***	*31*	*27*	*19*
TAL 042 E	kVA	39.5	**40**	40	35	25	36	**36.5**	36.5	32	23	42	**42.5**	42.5	37	26.5	43.5	**45**	45	38.5	27.5
	kW	*31.5*	***32***	*32*	*28*	*20*	*29*	***29***	*29*	*25.5*	*18.5*	*33.5*	***34***	*34*	*29.5*	*21*	*35*	***36***	*36*	*31*	*22*
TAL 042 F	kVA	43	**45**	45	39	27	39	**41**	41	35.5	24.5	45.5	**47.5**	47.5	41.5	28.5	47.5	**50**	50	43	29.5
	kW	*34.5*	***36***	*36*	*31*	*21.5*	*31*	***33***	*33*	*28.5*	*19.5*	*36.5*	***38***	*38*	*33*	*23*	*38*	***40***	*40*	*34.5*	*23.5*
TAL 042 G	kVA	47.5	**50**	50	43	30	43	**45.5**	45.5	39	27.5	50	**53**	53	45.5	32	52	**55**	55	47.5	33
	kW	*38*	***40***	*40*	*34.5*	*24*	*34.5*	***36.5***	*36.5*	*31*	*22*	*40*	***42***	*42*	*36.5*	*25.5*	*42*	***44***	*44*	*38*	*26.5*
TAL 042 H	kVA	58	**60**	60	52	36	53	**55**	55	47	33	61	**64**	64	55	38	64	**66**	66	57	39.5
	kW	*46*	***48***	*48*	*42*	*29*	*42*	***44***	*44*	*37.5*	*26.5*	*49*	***51***	*51*	*44*	*30.5*	*51*	***53***	*53*	*46*	*31.5*
TAL 042 J	kVA	58	**63**	63	52	36	53	**58**	58	47	33	61	**67**	67	55	38	64	**70**	70	57	39.5
	kW	*46*	***50***	*50*	*42*	*29*	*42*	***46***	*46*	*37.5*	*26.5*	*49*	***54***	*54*	*44*	*30.5*	*51*	***56***	*56*	*46*	*31.5*

DYNAMIS
POWER SOLUTIONS

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

DYNAMIS
POWER SOLUTIONS

Dynamis Power Solutions by NETIS

NETIS Group

www.dynamispower.com

Distributed by

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.

Distributed by

Dynamis Power Solutions by NETIS

NETIS Group

www.dynamispower.com

DYNAMIS
POWER SOLUTIONS

Extended tanks– 200-500-600-1000l

22kVA 1000l

33kVA 1000l antitheft

55kVA 600l

DYNAMIS
POWER SOLUTIONS

info.dynamis@netisgroup.net

Follow us @facebook.com/NETISGroup

Follow us @linkedin.com/company/netis-group

All information in the document is substantially correct a the time of printing but may be subsequently altered by the company.

Distributed by