

The logo features a stylized white 'E' symbol inside a white-outlined square, followed by the letters 'SDMO' in a bold, white, sans-serif font. A registered trademark symbol (®) is positioned to the upper right of the 'O'.

SDMO[®]

POWER PRODUCTS

50Hz

650kVA - 3025kVA

ENGLISH

PPR50e/GB-2005/1



**Global Power
Solution[™]**

POWER PRODUCTS

50Hz



Since its creation in 1966, SDMO® Industries has chosen to specialize exclusively in generating sets, so as to concentrate on the competitiveness and quality of its services. From this specialization, SDMO® has acquired skills recognized by all of its customers. SDMO® is now one of the world's leading companies in the generating set market and is committed to supplying you with impeccable products.



Specializing in the manufacture of generating sets, SDMO® offers you a wide range of standard sets, from 1 to 3000 kVA. Its teams, spread over 3 production sites, have skills at the leading edge of the new technologies and of manufacturing processes. Each team works on a common data base, and specializes in a range of standard products, thus increasing its efficiency. SDMO® undertakes to supply you with a reliable, innovative and quality electrical energy source, to accompany you in each of your projects.



the generating set specialist



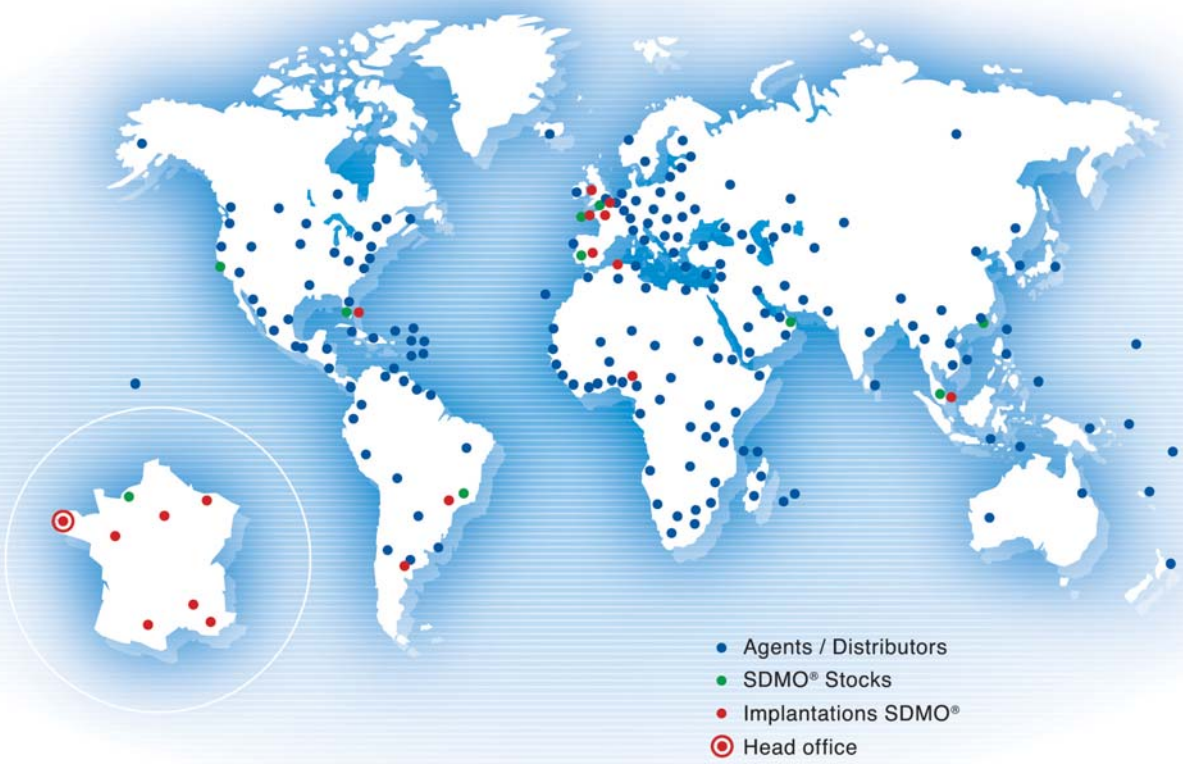
In order to provide you with proof of reliability, **SDMO®** has introduced a quality procedure. Its careful compliance with this commitment has made it possible to obtain ISO 9001 certification. For you this is the guarantee that delivery will take place on time, with the best possible monitoring of your order. The reputation for service quality acquired by **SDMO®** all over the world is the result of this continuous search for improvement.



Now **SDMO®** is represented in over 150 countries, through a network of agents, distributors, 8 subsidiaries all established in Great Britain, Spain, Belgium, Singapore, Argentina, the United States, Brazil, Nigeria and a liaison office in Algeria. **SDMO®** devotes its energy to accompanying you in the successful completion of each of your projects all over the world.



SDMO® is committed to supplying you with the energy source which suits you, where you need it



SDMO® Power Products from 650 kVA to 3025 kVA

POWER PRODUCTS

50Hz

mtu
FRIEDRICHSHAFEN



X 1100 K



EXEL® VOE RANGE (Version optimised exhaust emission)

GENERAL SPECIFICATIONS

Range	Genset type	Genset specifications 400/230 V ⁽¹⁾						Engine specifications						Alternator		Compact version ⁽³⁾	
		kVA Cos φ 0,8		kWe		Engine		Engine type	Cyl.	Bore (mm)	Stroke (mm)	Cyl. (L)	Brand	Type	Dimensions ⁽⁴⁾ LxWxH (m)	Weight (kg)	
		PRP ⁽⁵⁾	ESP ⁽⁶⁾	PRP ⁽⁵⁾	ESP ⁽⁶⁾	kW _m net ⁽²⁾	Cons 75% load (L/h)										
EXEL 1	X 715 K	650	715	520	572	565	108	12V2000G23	12 V	130	150	23,9	LS	491 M5	3,89x1,63x1,95	5200	
	X 800 K	727	800	582	640	599	119	12V2000G63	12V	130	150	23,9	LS	491 M7A	3,89x1,63x1,95	5460	
	X 910 K	827	910	662	728	720	133,5	16V2000G23	16 V	130	150	31,9	LS	491 L9A	4,33x1,77x1,95	6150	
	X 1000 K	910	1001	728	801	805	150,6	16V2000G63	16 V	130	150	31,9	LS	491 L10	4,37x1,77x2,19	6250	
	X 1100 K	1000	1100	800	880	895	165	18V2000G63	18 V	130	150	35,8	LS	501 S4	4,57x2,02x2,2	7160	
EXEL 2	X 1540 K	1400	1540	1120	1232	1205	223	12V4000G21	12 V	165	190	48,8	LS	501 L8	3,87x1,84x2,21	9442	
	X 1700 K	1545	1700	1236	1360	1330	249	12V4000G61	12 V	165	190	48,8	LS	501 VL10	3,96x1,84x2,21	9742	
	X 2035 K	1850	2035	1480	1628	1600	297	16V4000G21	16 V	165	190	65,0	LS	512 S55	4,32x1,84x2,21	11727	
	X 2200 K	2000	2200	1600	1760	1760	324	16V4000G61	16 V	165	190	65,0	LS	512 M60	4,42x1,84x2,21	12022	
	X 2750 K	2500	2750	2000	2200	2200	442	20V4000G22	20 V	165	210	89,8	LS	53 S75	6,0x2,2x2,5	17500	
	X 3025K	2750	3025	2200	2400	2420	475	20V4000G62	20 V	165	210	89,8	LS	54 S7	6,5x2,2x2,5	18000	

(1) Available in the following voltages : 415/240 V - 400/230 V - 380/220 V - 240 V - 230 V - 220 V - 220/127 V - 200/115 V - 240/120V - 230/115 V - 220/110 V (2) Prime Power (PRP) (3) Generating sets equipped with TA LUFT certified engines (Nox<4000 mg/Nm³, CO<650 mg/Nm³, HC<150mg/Nm³, PM<130mg/Nm³) (4) The dimensions and weights are given for a defined generator according to the price list excluding options. Version with canopy, see page 9) (5) Dry weight, without fuel (6) ESP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1 (6) ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

SDMO® Power Products from 1350 kVA to 3025 kVA



POWER PRODUCTS

50Hz

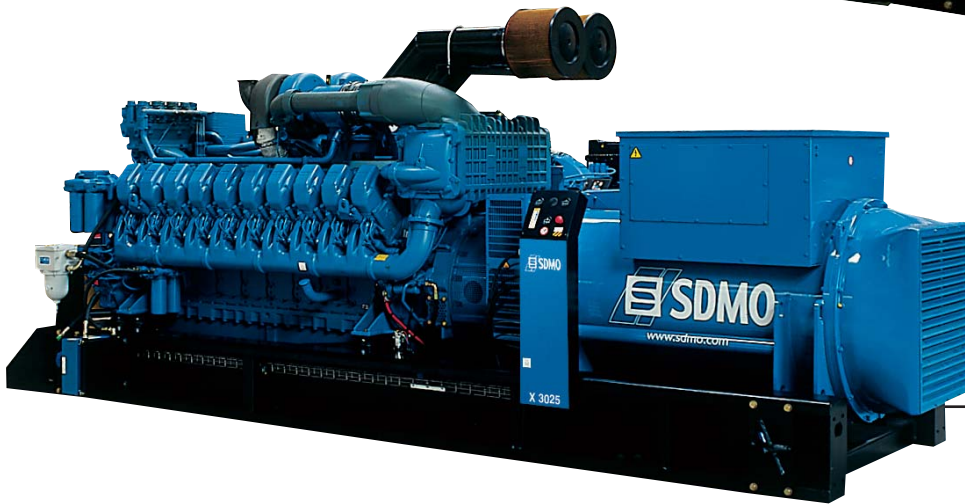
mtu
FRIEDRICHSHAFEN



X 1650 F



X 2200 F



X 3025 F

EXEL® VOC RANGE (Version for minimum fuel consumption)

GENERAL SPECIFICATIONS

Range	Genset type	Genset specifications 400/230 V ⁽¹⁾						Engine specifications					Alternator		Compact version ⁽³⁾	
		kVA Cos φ 0,8		kWe		Engine		Engine type	Cyl.	Bore (mm)	Stroke (mm)	Cyl. (L)	Brand	Type	Dimensions ⁽⁴⁾ LxWxH (m)	Weight (kg)
PRP ⁽⁵⁾	ESP ⁽⁶⁾	PRP ⁽⁵⁾	ESP ⁽⁶⁾	kW _{net} ⁽²⁾	Cons 75% load (L/h)											
EXEL 2	X 1485 F	1350	1485	1080	1188	1205	206	12V4000G21	12 V	165	190	48,8	LS	501 L 8	3,87x1,84x2,21	9442
	X 1650 F	1500	1650	1200	1320	1330	227	12V4000G61	12 V	165	190	48,8	LS	501 VL 10	3,96x1,84x2,21	9742
	X 2000 F	1818	2000	1455	1600	1600	272	16V4000G21	16 V	165	190	65,0	LS	512 S 55	4,32x1,84x2,21	11727
	X 2200 F	2000	2200	1600	1760	1760	296	16V4000G61	16 V	165	190	65,0	LS	512 M 60	4,42x1,84x2,21	12022
	X 2750 F	2500	2750	2000	2200	2200	405	20V4000G22	20 V	165	210	89,8	LS	53 S 75	6,0x2,2x2,5	17500
	X 3025 F	2750	3025	2200	2400	2420	444	20V4000G62	20 V	165	210	89,8	LS	54 S 7	6,5x2,2x2,5	18000

(1) Available in the following voltages : 415/240 V - 400/230 V - 380/220 V - 240 V - 230 V - 220 V - 220/127 V - 200/115 V - 240/120 V - 230/115 V - 220/110 V (2) Prime Power (PRP) (3) Generating sets equipped with TA LUFT certified engines (NOx<4000 mg/Nm³, CO<650 mg/Nm³, HC<150mg/Nm³, PM<130mg/Nm³) (4) The dimensions and weights are given for a defined generator according to the price list excluding options. Version with canopy, see page 9) (5) Dry weight, without fuel (6) ESP : Prime Power is available for an unlimited number of annual operating hours in variable load applications, in accordance with ISO 8528-1. A 10% overload capability is available for a period of 1 hour within 12-hour period of operation, in accordance with ISO 3046-1

(6) ESP : The standby power rating is applicable for supplying emergency power in variable load applications in accordance with ISO 8528-1. Overload is not allowed.

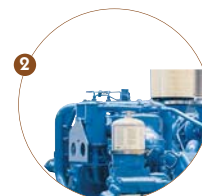
EQUIPMENTS

Standard and Options

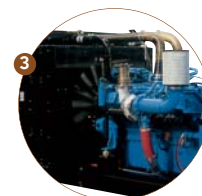
		EXEL 1 MTU 2000 series	EXEL 2 MTU 4000 series	
			VOE	VOC
Motor	4-stroke liquid-cooled diesel engine	●	●	●
	Electronic governor	●	●	●
	Standard air-filter	●	●	●
	Air filter with replaceable cartridge	EN 02	EN 02	EN 02
	Coolant heater 220/240 V (without relay)	EN 20	EN 20	EN 20
	Optimisation Emission ⁽¹⁾	●	●	X
	Optimisation fuel consumption	X	X	●
	Double starter Air/Elec ⁽²⁾	SO 005	SO 005	SO 005
Double starter Elec/Elec ⁽²⁾	SO 007	SO 007	SO 007	
Alternator	IP 23 single-bearing alternator class H insulation	●	●	●
	Anti condensation heater	AL 01	AL 01	AL 01
	Tropical impregnation	AL 05 ⁽¹⁰⁾	●	●
	Isolation and finishing work reinforced	AL 06	AL 06	AL 06
	CTP Stator Pick Up	AL 07	AL 07	AL 07
	CTP bearing pick up	AL 08	AL 08	AL 08
	PT 100 stator pick up	AL 09	AL 09	AL 09
	PT 100 bearing pick up	AL 10	AL 10	AL 10
	Droop kit + 3 function regulator	O ⁽³⁾	O ⁽³⁾	O ⁽³⁾
	Alternator oversizing type	AO 001B	AO 001B	AO 001B
Genset	CE Electric panel compliance	●	●	●
	Fabricated all welded baseplate with anti-vibration mountings	●	●	●
	standard colour RAL 9005/5007 (black/blue), delivered in shrinkwrap	●	●	●
Available voltages	415-240 V@50 Hz	T51 A1	T51 A1	T51 A1
	400-230 V@50 Hz	●	●	●
	380-220 V@50 Hz	T51 A3	T51 A3	T51 A3
	240-120 V@50 Hz	T51 C1 ⁽⁴⁾	X	X
	230-115 V@50 Hz	T51 C2 ⁽⁴⁾	X	X
	220-110 V@50 HZ	T51 C3 ⁽⁴⁾	X	X
Oil	Supplied with oil and coolant (-30°C)	●	●	●
	Automatic filling up oil system ⁽¹⁾	EN 18	EN 18	EN 18
	Oil centrifuge filter ⁽²⁾	X	EN 19	EN 19
	Lub oil drain pump	●	●	●
Cooling	Radiator for "air on" temp. 46°C maxi with air cooler ⁽⁵⁾	● ⁽⁵⁾	X	X
	Radiator for "air on" temp. 50°C maxi with air cooler ⁽⁵⁾	● ⁽⁴⁾	X	X
	Mounted radiator for "air on" temperature 40°C (depending on version) with drain cock ⁽⁶⁾	X	●	X
	Mounted radiator for "air on" temperature 50°C (depending on version) with drain cock ⁽⁶⁾	X	X	●
	Electrical louvres	X	CS 003	CS 003
	Supplied without coolant	FD 11	FD 11	FD 11
	Protection mesh for fan and revolving parts	●	●	●
Front rad protection	EN 14	X	X	
Exhaust	Stainless steel bellows	●	●	●
	Silencer 9 dB(A) supplied separately	EN 07	EN 07	EN 07
	Silencer 29 dB(A) supplied separately	EN 08	EN 08	EN 08
	Silencer 40 dB(A) supplied separately	EN 09	EN 09	EN 09
	Heat hand protection	CEL 02	X	X
Starting	Starter and charge alternator 24V	●	●	●
	Non-supply charge alternator	X	EN 17	EN 17
	Batteries with cables and battery tray ⁽⁴⁾	SO 001	SO 001	SO 001
	Non-supply of batteries and tray (cables still supplied)	●	●	●
	Battery isolator	EN 16	EN 16	EN 16
Fuel	Generator without tank	●	●	●
	Tank with retent. Bund 500L	FD 06	FD 06	FD 06
	Tank with retent. Bund 1000L ⁽⁵⁾	FD 07	FD 07	FD 07
	Retention bund alarm	FD 14	FD 14	FD 14
	Automatic fuel fill kit (1pump 1m3/H)	FD 08	FD 08	FD 08
	Automatic fuel fill kit (2 pump 1m3/H)	FD 09	FD 09	FD 09
	Automatic fuel fill kit (2 pump 4m3/H)	FD 10	FD 10	FD 10
W separator fuel prefilter	●	●	●	
Fuel cooling radiator	X	EO 006	EO 006	
Miscellaneous	Multilingual documentation ⁽⁷⁾ level A (8) (1 copy)	●	●	●
	Multilingual documentation ⁽⁷⁾ level A (8) (extra copy)	AD 23	AD 23	AD 23
	English version level B ⁽⁸⁾	AD 31	AD 31	AD 31
	English version level C ⁽⁹⁾	AD 41	AD 41	AD 41
	GENSERVICE Spare parts	O	O	O



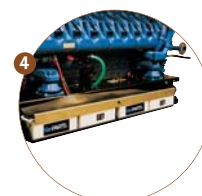
automatic oil top-up



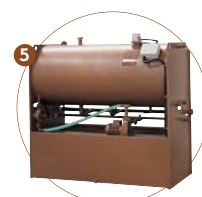
centrifuge filter
(doubles the interval
between oil
changes)



radiator with mechanical
fan
for XS 650 K to XS 1000 K



batteries mounted



1000L daily tank
with auto pump



documentation level C

● Standard X Not available O Different options available EN 01 Option code FD 01 Free option

(1) In compliance with TA Luft Requirements (2) No control panel available for this option (3) Coupling Current transformer not necessary with Mics Keys (4) Only on X715, 800 and 910 (5) Not available on X 715, 800 et 910 (6) Outdoor ambient temperature, reduce of 7°C approximately (7) French or English (8) Level A documentation including: maintenance manual and diagrams + genset user manual and description of switchboard + genset installation guide (9) Level B documentation including: level A + list of engines and alternator parts (english only) (10) Level C documentation including: level B + workshop manual (english only) (11) Standard for X1100K

Contenergy®

The CONTENERGY containers can be installed on a concrete slab (fitted with ducts for the cabling and piping) or simply on a hard surface. This CONTENERGY concept is very simple and economical, thanks to its integrated cooling system, silencer and sound traps.



You have many installation requirements and SDMO knows it. It is for this reason that our containers are designed, in particular, to withstand difficult climatic conditions. Whether your installation needs to withstand extreme cold conditions or has to operate in a tropical climate, tell us what you need, we probably have the solution to your problem.

International standards-compliant trailers are also available, thus enabling you to transform your generator set into a mobile unit (contact us for further details).

50Hz

Contenergy®

The ISO Contenergy® are designed in accordance with dimensions defined by the ISO/TC104⁽¹⁾ standards. This design enables during transport to endure without damage high pressures and big loads and to travel by boat without specific constraints.

Two sizes are available : 20 and 40 feet High Cube.



CIR 20

The CIR version is built on an ISO 20' Contenergy® base. This very compact model is more specifically suited for rental and mobile applications thanks to its high capacity and its low sound level. Compliance with the ISO/TC104⁽¹⁾ standard upon request.



EUR 40

Dedicated to generator sets fitted with MTU-DDC Series 4000 motor, the EUR Contenergy® offers, for a single base, two noise level variations : Silent and Super Silent®.

This soundproofed version also offers features such as side doors or a daily tank.



(1) The ISO/TC104 standard includes the :

ISO 668, ISO 1496-1, ISO 830, ISO 1161, ISO 3874, ISO 6346 standards and ensures the CSC certification.

Standard containers

MODELS

Range	Genset type	Engine	SILENT	SILENT	SUPER SILENT	SUPER SILENT
			85 - 87 dB(A)@1 m	84 - 86 dB(A)@1 m	78 - 80 dB(A)@1 m	82 - 84 dB(A)@1 m
EXEL	X 715 - X 800	12V2000	ISO 20 Si	X	CIR 20 SSi	X
	X 910 - X 1000	16V2000	ISO 20 Si	X	CIR 20 SSi	X
	X 1100	18V2000	ISO 20 Si	X	CIR 20 SSi	X
	X 1540 - X 1700	12V4000	ISO 40 Si	X	EUR 40 SSi	CIR 20 SSi
	X 2000 - X 2200	16V4000	X	EUR 40 Si	EUR 40 SSi	X

For X 2750 K and X 3000 K, contact us

EQUIPMENTS

Standards and Options

	SILENT			SUPER SILENT		
	ISO 20 SI	ISO 40 SI	EUR 40 SI	CIR 20 SSI	EUR 40 SSI	
Base	Base girder	●	●	●	●	
	Starter, charging alternator 24V	●	●	●	●	
	Batteries with electrolyte	SO001	SO001	SO002	SO001	SO001
	Standard air-filter	●	●	●	●	●
Specifications	Lub oil drain pump	●	●	●	●	
	Sound-proofing type	SI	SI	SI	SSI	SSI
	Highly efficient silencer built in-attenuation 30dB(A)	●	●	●	●	●
	Floor	Wood	Wood	Wood	Waterlight Steel	Wood
	Number of doors	1	1	2	2	2
	Air outlet galvanized steel rain guard grid	CT 005	CT 005	●	●	●
	Emergency light and emergency fuel valve	CT 007	CT 007	CT 007	CT 007	CT 007
	Exhaust exit on flanges	CT 011	CT 011	CT 011	CT 011	CT 011
	White paint finishing (RAL 9010)	●	●	●	●	●
	Fuel	Catch pit under the whole of the container	CT 014	CT 014	CT 014	CT 014
Tank without retent bund 500L		●	X	X	●	X
Tank with retent bund 500L		X	●	●	X	●
Tank with retent. Bund 2347L + client connection terminal strip		X	X	X	CT 003	X
Auto. fuel fill kit (1 pump 1m3/H ^o)		CT 008	CT 008	CT 008	CT 008	CT 008
Auto. fuel fill kit (2 pumps 1m3/H)		X	CT 009	CT 009	X	CT 009
Panels	Auto. fuel fill kit (2 pumps 4m3/H)	X	CT 010	CT 010	X	CT 010
	Electric panel EC compliance	●	●	●	●	●
	Panel Mics TELYS	CM 40	CM 40	CM 40	CM 40	CM 40
Dimensions	Panel Mics KERYS	CA 600	CA 600	CA 600	CA 600	CA 600
	Length (mm)	6058	12192	12192	6058	12192
	Width (mm)	2438	2438	2438	2438	2438
	Height (mm)	2896	2896	2896	2896	2591

● Standard X Impossible EN 01 Option code **FD 01** Free option



M 427

PRESENTATION

SDMO now offers a sound-proof hood for your EXEL generator set fitted with an MTU 12V2000 or 16V2000 motor.

You thus optimise your installation's footprint and can even fit the assembly into a 40' High Cube container in order to facilitate transport.

CHARACTERISTICS

Genset type	Canopy	Tank (L)	Dimensions L x w x h (m)	Weight ⁽¹⁾ (kg)	Sound level - 50 Hz	
					dB(A)@1m	dB(A)@7m
X 715 K	427	930	6,40x2,17x2,72	7876	85,5	76
X 800 K	427	930	6,40x2,17x2,72	8011	85,9	76
X 910 K	427	930	6,40x2,17x2,72	8579	85	76
X 1000 K	427	930	6,40x2,17x2,72	8709	83,5	74

(1) Dry weight, without fuel

POWER PRODUCTS

50Hz

Three control cabinets are available in our 650 to 3,000 kVA range : the M80, the Mics TELYS and the Mics KERYS. In order to guarantee a high degree of modularity and standardisation, each optional peripheral device (aero, RJ, oil top-up) possesses its own protection.

For plants, an auxiliary cabinet containing the mains detection and preheating controls can be fitted, along with separate cabinets.

M 80

PRESENTATION

The M80 cabinet is a direct display control panel. Its various dials provide a global overview of our generator set's basic parameters.



SPECIFICATIONS


		M 80
Instruments	Tachometer (54 mm)	●
Engine parameters	Timer	●
	Oil pressure gauge	●
	Water temperature display	○
	Oil pressure display	○
Operation	Emergency stop	●
Miscellaneous	CE Compliance	●
	Client connection terminal strip	●

● Standard ○ Option code

MICS TELYS

PRESENTATION

A major component of our range of control units, the Mics TELYS is a standard addition to our generator sets from 200 kVA upwards its user-friendly interface and range of features allow careful monitoring of your installation.



1 "ON" KEY
with integrated LED
(after automatic extinction)

15 PROGRAMMING KEYS
NUMBER KEY PAD
(0 TO 9)

4 OPERATING MODE SELECTION KEYS
with integrated selection LEDs

2 ERROR RESET AND LED TEST KEYS

LCD SCREEN
incorporated back-lighting,
featuring 8 lines x 21 characters

4 electrical QUANTITIES AND ENGINE PARAMETERS KEYS

8 DISPLAY LEDs
alarms, faults, statuses

- 1 - Oil pressure fault (R)
- 2 - Water temperature fault (R)
- 3 - Failure to start fault (R)
- 4 - Overspeed fault (R)
- 5 - Set ready to output (G)
- 6 - Charging alternator fault (R)
- 7 - General alarm (Y)
- 8 - General fault (R)

(R = red, G = Green, Y = Yellow)

2 generating SET REGULATION OUTPUT KEYS (+/-)

SPECIFICATIONS

Measurements	Line voltages in Volts	● LCD
	Single voltages in Volts	● LCD
	Phase currents in Amps	● LCD
	Neutral current in Amps	● LCD
	Frequency in Hertz	● LCD
	All generating set states, all starter phases	● LCD
	Analogical indicator	○
Engine Parameters	Ammeter battery	○
	Indication of engine speed	● LCD
	Indication of battery voltage	● LCD
Operation	Elapsed hour meter	● LCD
	Powering up	●
	Fuel solenoid-operated valve control	●
	Starter control	●
	Plug preheating control	○
	Water preheating control	○
	Mains contactor control	○ (1)
Operation and/or safety lights	Generating set contactor control	○ (1)
	Oil pressure fault	●
	Water temperature fault	●
	Fail to start fault	●
	Overspeed fault	●
	Set ready for load	●
	Charging alternator fault	●
	General alarm	●
	General fault	●
	Panel lamp, 22 dia.	●
STOP/MANU/AUTO/TEST mode	●	
Miscellaneous	Generating set side contactor closed	○ (1)
	Mains side contactor closed	○ (1)
	Any faults or any alarms messages	● LCD

- Standard ○ Option code
● LCD Standard with LCD message

Safety devices	Oil pressure fault	●
	Water temperature fault	●
	Emergency stop fault	●
	Overload or short-circuit alarm or fault	● (2)
	Min/max battery voltage alarm or fault	● (2)
	Min/max alternator voltage alarm or fault	● (2)
	Min/max alternator frequency alarm or fault	● (2)
	Overspeed fault	●
	Differential relay present fault	○ (3)
	Differential triggering alarm or fault	○ (2+3)
Automation	Automatic standby	●
	Automatic extinction	●
	4 modes	●
	Engine stopping for cooling	●
	Voltage and speed stabilization	●
	Plug preheating	○
	ATS changeover presence choice	○ (1)
	Mains contactor position return	○ (1)
	Generating set and mains contactor position return	○ (1)
	Generating set contactor manual closing	○ (1)
	Generating set contactor manual opening	○ (1)
	Starting on clock	○ (1)
Miscellaneous	External starting order	○ (1)
	Mains sensing 3-ph	○ (4)
	Test LEDs	●
	Fault reset	●
	External AMF predisposition	○
	3-phase with or without neutral, 2-phase or single-phase use	● (5)
	12V battery charger	○
	GES Pack [®] fitted inside the genset ⁽⁷⁾	○
	Differential protection with time and sensitivity adjustment	○ (2)
	Alarm hooter	○

wintelys



(1) Control and automatisms installed, but necessity to have the option "External AMF predisposition" and the possible configuration of one parameter on the MICS Telys. (2) The choice Alarm or fault is programmed through the keyboard. (3) The earth fault protection is ensured by one external module connected to the CB12 card and through connecting of one tiny relay on the CB12 card. A local configuration is also needed. (4) MICS DS mains detection is proposed as a base in the source inverter. In the case whereby the source inverter is not chosen, the MICS DS module can be moulded in the panel. (5) Choice is revised through programming. The alternator's voltage reference connecting wire modification is necessary. (6) For details, please consult us. (7) NF E37312 standard.

This software developed by SDMO enables the user to set up the dialog between the Mics TELYS panel fitted on our gensets and the PC type computer on which it is installed in order to control from a distance the operating system. Depending on the configuration of your installation, you can select from 4 types of connection, the one that best suits your needs : local mode supervision, Switched Telephone Network remote management, Ethernet remote management or SGM electronic surveillance. For further information concerning Wintelys, please contact an SDMO reseller.



The Mics KERYS is a user-friendly and intuitive tool that possesses a very broad range of features. It is fitted as standard on all generator sets intended for synchronising applications and can be fitted as an option on all of our other applications. In order to meet all of the requirements of low or high voltage power plants, the Mics KERYS can be fitted into a control desk, directly onto the generator set, or in a separate cabinet. It complies with EC, UL and CSA standards.

Display screen
TFT LCD 7,4 in
Colour graphical display
Touch screen
Dimensions 154 x 86 mm

Configuration keypad
For configuration, navigation and direct access to screens



Control keypad
with display LEDs

- Manu mode selection
- Stop mode selection
- Auto mode selection
- Open/Close GE circuit breaker
- Activate/Deactivate test
- Open/Close network circuit breaker
- LED test
- Stop horn
- Erase anomalies

Directional keypad
with activity LED



The Mics KERYS is available in two versions. The basic GUI (Graphical User Interface) is made up of a monochrome LCD screen and a function keypad. The top of the range Mics KERYS tactil version possesses a TFT colour touch screen. Both of these versions provides a user-friendly configuration, operation or diagnostic interface.

SPECIFICATIONS

The Mics KERYS possesses all of the features of the Mics TELYS (cf. table page 13)

ADDITIONAL SPECIFICATIONS

Measurements

- Powers (active, reactive)
- Power factor in the various dials
- Active and reactive energies
- Synchronism (phase, voltage and frequency deviation)
- Voltage and current harmonics

Protective measures

- Overload, short-circuit
- Line current directive
- Neutral current
- Reverse component
- Voltage hold-back
- Thermal image
- Voltage max. and min.
- Presence and absence of voltage
- Frequency max. and Min.
- Active power maximum
- Active and reactive reverse power
- Homopolar current and homopolar current directive
- Homopolar voltage and restricted earth
- Vector jump, mini Z and dF/dt

Synchronisation

- Manual and automatic
- Frequency and voltage equalisation

Control

- Speed and voltage
- Frequency and voltage setpoint switching
- Frequency and voltage setpoint adjustment
- Active and reactive power setpoint adjustment
- Active and reactive power ramp-up
- Active and reactive power distribution
- Active and reactive power lock-out
- manual speed and voltage control

Communication

- Local or remote mode
- On board Web site
- RS485 link
- Ethernet (local mode) and Internet (remote mode)

Standard added benefits

- Failure troubleshooting assistance
- Maintenance assistance (logs, automatic Email, etc.)
- Electrical and mechanical parameter graphs and logs
- Load impact management
- Addition of extra logics with no external tools

Synchronising

- A612** : Generator set without grid
- A622** : Generator set with ATS and grid, no synchronising
- A633** : Production plant without grid
- A634** : Production plant with grid and ATS (no grid synchronising)
- A641** : Generator set with permanent grid synchronising, no ATS - grid synchronising + resale
- A642** : Generator set with permanent grid synchronising, no ATS - Grid synchronising + 0 kW power cap on grid
- A651** : Generator set with fading grid synchronising and INS
- A661** : Generator set with permanent grid synchronising and ATS

WEB SITE

The Mics Kerys and Kerys tactil are provided as standard with an on-board web site. This site and its 60 resident screens enables you to completely check your installation (operation and setup), whatever the distance.



Electrical variable display screen



CHARACTERISTICS

Each genset can be delivered with a protection panel.

This panel is fitted on the generating set frame with the connecting cables on to the alternator. Depending on the type and power of the engine, the panel AIPR can be positioned wether on the right or left hand side of the generating set.

AIPR		Rating	800 A	1000 A	1250 A	1600 A	2000 A	2500 A	3200 A
WITH A FRONT MANUAL COMMAND									
3 poles power circuit breaker Compact type			●	●	●	●	X	X	X
3 poles power circuit breaker Open type			X	X	X	X	●	●	●
4 poles power circuit breaker Compact type			○	○	○	○	X	X	X
4 poles power circuit breaker Open type			X	X	X	X	○	○	○
OPTION MOTORIZED CONTROL *									
With 3 or 4 poles circuit breaker Only open type			○	○	○	○	○	○	○
Voltage 208-440V			●	●	●	●	●	●	●
Option power auxiliaries panel (**)			○	○	○	○	○	○	○
Bus bars			●	●	●	●	●	●	●
Remote control terminal box			●	●	●	●	●	●	●
Protection index			IP207	IP207	IP207	IP207	IP207	IP207	IP207
Dimensions :	height (mm)		1260	1260	1260	1260	1260	1260	1260
	(without optional panel) width (mm)		665	665	665	665	665	665	665
	depth (mm)		360	360	360	360	360	360	360
Dimensions :	height (mm)		1664	1664	1664	1664	1664	1664	1664
	(with optional panel) width (mm)		665	665	665	665	665	665	665
	depth (mm)		360	360	360	360	360	360	360

(*) The motorized remote control includes : one XF coil, one MX coil, and one AC engine.

(**) The optional panel "power auxiliary" is fitted above the main panel. It is used for the genset auxiliaries power connection, i.e :

- air cooler supply
- fuel pump supply





POWER PRODUCTS

50Hz

SDMO presents a complete range of separate NBIs (Normal Backup Inverters). This technical solution presents a large number of advantages, both in terms of cost and of ease of installation. The design of our boxes and cabinets allows extremely easy connection, even to high cable cross-sections. The box's front panel no longer opens on only one side, like a conventional box, but on three sides, thus providing full access to power equipment and terminal strip jumpers. All of our boxes are either three-pole or four-pole. The TSI module (Transfer Switch Intelligence) is fitted as standard to our whole range of Normal/Backup Inverters, whatever the rating of the inversion element (from 25 to 3200 A).

	NBI 25 A	NBI 32 A	NBI 45 A	NBI 63 A	NBI 110 A	NBI 140 A	NBI 200 A	NBI 250 A	NBI 400 A	NBI 630 A	NBI 800 A	NBI 1000 A	NBI 1600 A	NBI 2000 A ^(*)	NBI 2500 A ^(*)	NBI 3150 A ^(*)
Voltage	208-440 V															
Switch-over	By contactors	●	●	●	●	●	●	●	X	X	X	X	X	X	X	X
	By selector switches	X	X	X	X	X	X	X	●	●	●	●	●	●	●	●
Dimensions	Height (mm)	500	500	500	500	500	600	800	800	800	1000	1000	1000	1800*	1800*	1800*
	Width (mm)	430	430	430	430	430	600	600	600	600	800	800	800	1000	1000	1000
	Depth (mm)	200	200	200	200	200	250	400	400	400	500	500	500	800	800	800

(*) On a base, height = 200 mm, i.e. a cabinet height of 1600 + 200 (1) Integrated into a cabinet on the ground

THE TSI MODULE

PRESENTATION

Both innovative and original in its design, it is perfectly adapted to applications in which transfer of the main source to the replacement source is central to the correct operation of your facilities.

Intuitive and easy to use, this module is remarkable in that it is automatically configured in the presence of network-side voltage. By simply pressing the AUTO key, the following parameters are configured: Network voltage, type of use, min. and max. voltage threshold, min. and max. frequency threshold.

Electronic power source switching allows it to permanently self-power itself.

SCREEN

integrated backlight, with two 16-character rows

Validation key

NAVIGATION and SELECTION keys

used for browsing through the different electrical variable screens, or for complete module configuration to customer specifications.

Test

used to simulate generator set start-up, with possible complete switch-over sequence.

User defined key

Auto key: automatic module configuration for automatic operation on mains power cut or voltage drop

Key 1: Forced source 1 operation
Key 2: Forced source 2 operation

Lock-out key: used to lock inverter operation. Pressing this key prohibits the operation of either of the instruments

Padlock key: used to lock inverter operation. Pressing this key prohibits the operation of either of the instruments

ROTOPHASE LED

Indicates the direction of rotation of inverted phases.

Source Status LED

Three-colour LED symbolising the source's status:

- Off:** No voltage
- Green:** Voltage present
- Orange:** Alarm
- Red:** Fault

Position LED

LED indicating the contactor's closed position



PROPERTIES

2 screen lines for simultaneous network-side and generator-side voltage display. The same applies to the frequency.

The 6 LEDs provide instantaneous information concerning the position status of one or other of the 2 sources, along with any possible alarms or faults.

ADDITIONAL PROPERTIES

Communication

In addition to a wired link for remote dry contact start-up on all SDMO monitoring / control modules (Nexys, Telys, Keyrs), the TSI module possesses a CAN bus allowing it to communicate with the Keyrs MICS.

This link allows the TSI to send to the Keyrs all of the data concerning the network and the start-up order following a voltage variation.

Short Term Synchronising

An additional board, available as an option*, allows:

- Short Term Synchronising on network substitution request

- Short Term Synchronising on return to mains.

*As from June 2005



SERVICES

CHARACTERISTICS

In order to provide you with faultless products, SDMO has created a Services department with three major missions:

- Technical assistance
- Technician and agent training
- Spare parts

TECHNICAL ASSISTANCE

SDMO's technical assistance department is committed to providing an efficient and effective after-sales service program.

Through our mass network of distributor and agents, users are guided and supported towards the best answer to their questions.

Whether a user is directed towards a regional agent or if on-site maintenance is required, all situations are taken into account in order to provide the best possible service in the shortest time frame.



TRAINING

In order to optimise the performance levels of the SDMO generator sets, the Services Department possesses a training centre in Brest, near to our production plant, and designed for our customers' and agents' technicians who service our products.

Syllabus: "Generator set operation and maintenance", "Mechanical engineering", "Electricity", topped up with specific one-off courses performed on-site and on request.

Each year, 2200 man-days of training, dispensed by specialists, are dedicated to the acquisition and updating of SDMO product knowledge.



SPARE PARTS

The Spare Parts Department represents 25,000 references, of which 9,200 in stock, on 4.5 km of shelving.

In charge of managing stocks and procurements, the SPD is also responsible for service traceability and ensures the ongoing improvement of quality. It is with these points in mind that the Spare Parts Department created GENPARTS, an SDMO spare parts brand. The SPD also provides our customers with interactive computer assisted spare parts selection tools.

GenPARTS



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