Komatsu Power Generation Systems

Komatsu Air-to-Air aftercooled engine

Advanced Air-to-Air aftercooled Engines have been introduced. EGS Series Generators are mounted with Komatsu engines that have High Quality and proven Reliability & Durability.

Economical Operation
Komatsu Air-to-Air aftercooled engines ensure low consumption of Fuel and Lubricant oil.

Light Weight and Compact Design
The advanced design and high output make the engine light and compact enhancing its overall versatility.

Compact Engine Control Unit
EGS Generators have a compact engine control unit (1 box type) having printed microprocessor board for easy operation system.

Other Features
* Simple panel (Minimized control equipment and wiring)
* Easy setting and Maintenance (Programmed operation status)

1. Generator/Engine Control Module : DSE5220

1. built-in & Integrated Function

(1) Engine Control, Auto. Start/Stop etc.
(2) Guard / Detection of Commercial Line
(3) Guard of Generator Load, Emergency
(4) Display of Water temp. Oil pressure.
(5) Detection of High temp., Low pressure
(6) Display of Voltage, Frequency on Line
(7) Software and Terminal for Remote Monitoring
(8) Microprocessor System

2. Data on LCD Display Window

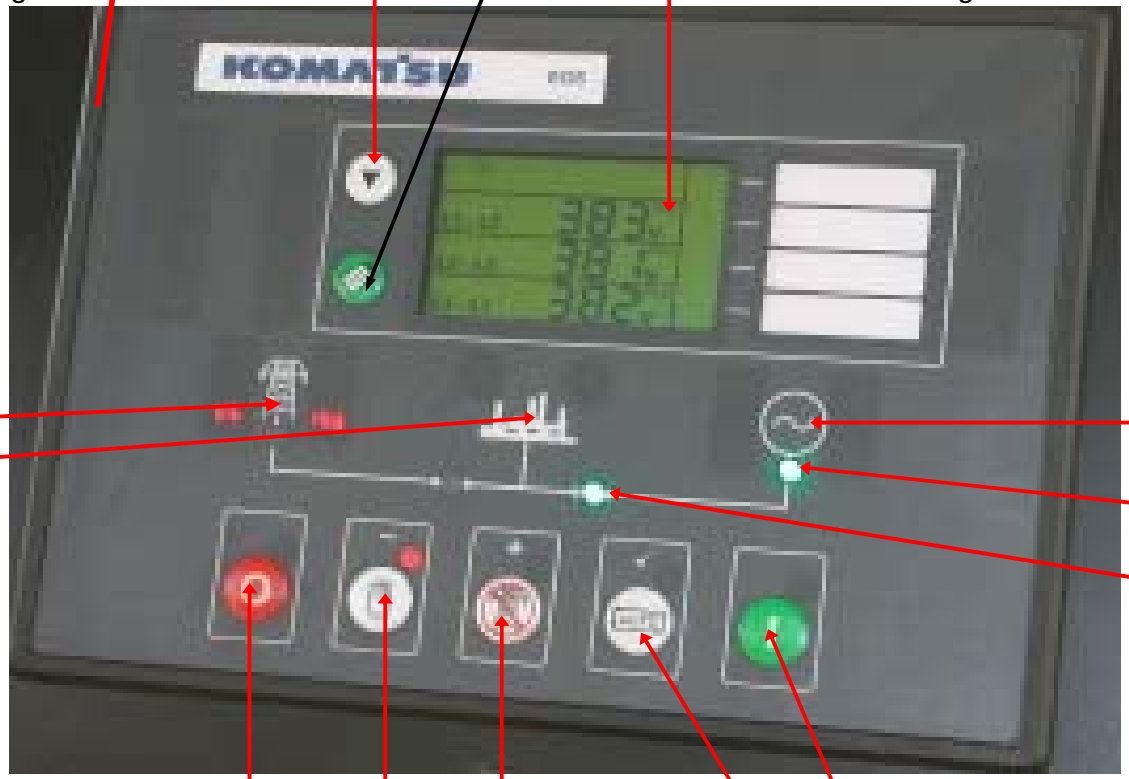
The following data are displayed by digital.
Picture can be selected by Scroll Button.
(1) Engine speed RPM, Frequency Hz
(2) Line -Neutral Voltage, L1-N,L2-N,L3-N
(3) Line -Line Voltage, L1-L2,L2-L3,L3-L1
(4) Lubricant Pressure (BAR, Psi, kPa)
(5) Coolant Temperature (Deg. C, F)
(6) Fuel level (%)
(7) Operating Hours, Hours
(8) Battery Voltage, DCV
(9) Generator Current, L1, L2, L3
(10) Generator Active Power, kW
(11) Generator Reactive Power, kVar
(12) Generator Power Factor, Cos
(13) Commercial Voltage, L1-N,L2-N,L3-N
(14) Commercial Voltage, L1-L2,L2-L3,L3-L1
(15) Commercial Frequency, Hz

3. Micro-Processor

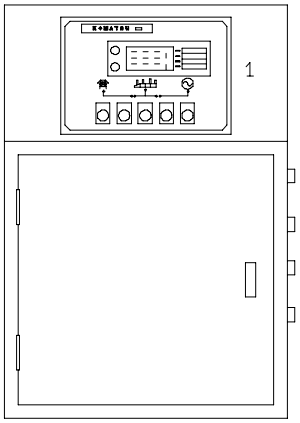
Set Data, value and time are stored micro-processor

Size 240 mm × 172 mm

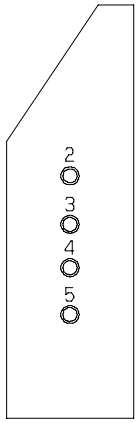
3. Panel Configuration of DSE5220



2. Function of Engine Control Panel



Front View



Side View

NO	MAIN COMPONENTS
1	DSE 5220 Gen Control Module
2	Emergency Stop Button
3	Panel Lock Key Switch
4	Buzzer Cancel Button
5	Buzzer

The control module provides indication of operational status and fault conditions, automatically shutdown the gen-set and indicating failures by means of an LCD display, and appropriate flashing LED on the front panel.
This module can be used to monitor a mains power supply and automatically start a standby gen-set if mains failure is occurred.

DC Measurements **(Digital display)**

(1) Engine RPM, (2) Engine Oil Pressure, (3) Engine Water Temp, (4) Battery Voltage and
(5) Engine Run Hours

Optional digital display of Fuel Level measurement if supplied with Skid Base Fuel Tank.

AC Measurements **(Digital display)**

(1) Gen Voltage (L1-N, L2-N, L3-N), (2) Gen Voltage (L1-L2, L2-L3, L3-L1),
(3) Gen Current (L1, L2, L3), (4) Gen Frequency Hz, (5) Gen kVA, (6) Gen kW and (7) Gen Power Factor

Optional digital display of Mains Voltage (L1-N, L2-N, L3-N), Mains Voltage (L1-L2, L2-L3, L3-L1), and Mains Frequency Hz measurements if connected to Mains power.

3. Function of Engine Control Panel

Built-In Functions :

1. Panel Lock Key Switch
   To lock the operation of all push buttons except Emergency Stop button so that unauthorized personnel not able to make adjustment. It is useful for AMF operation when gen-set is on standby.
2. Visual and Audible Alarm
   A clear icon based language free display provides access to full gen-set instrumentation, which combined with a buzzer for any alarm.
3. Event Logging of Shutdown Alarms
   Capable of storing 15 shutdown events along with date and time for reference.

Safety Protections :

1. Low Oil Pressure Shutdown
2. High Water Temp Shutdown
3. Fail to Start
4. Fail to Charge
5. Under / Over Speed
6. Under / Over Voltage
7. Under / Over Frequency
8. Over Current
9. Under / Over Battery Voltage

Optional Items :

1. RS485 'Modbus' output allows full system integration into building management and control schemes.
2. RS232 Modem link to PC via either PSTN line or GSM network. The module can also signal Engineers via their cell phones using the GSM SMS messaging system to advise of system alarm.

	OPEN TYPE	EGS240-6	EGS300-6	EGS380-6	EGS570-6
GENERATOR RATED OUTPUT	VOLTAGE/FREQUENCY (V/HZ)	400/50	400/50	400/50	400/50
	ROTATING SPEED (RPM)	1500	1500	1500	1500
	PRIME (KW/KVA)	160/200	221/276	280/350	360/450
	STANDBY (KW/KVA)	176/220	242/303	308/385	396/495
ENGINE		KOMATSU	KOMATSU	KOMATSU	KOMATSU
ENGINE MODEL		S6D125-1	SA6D125-1	SAA6D125-P400	SAA6D140-P510
ENGINE RATED OUTPUT	PRIME (KW/KVA)	172/230	238/319	298/400	387/519
	STANDBY (KW/KVA)	189/253	262/351	328/440	426/571
NUMBER OF CYLINDERS		6	6	6	6
BORE X STROKE (MM x MM)		125 X 150	125 X 150	125 X 150	140 X 165
DISPLACEMENT (L)		11.04	11.04	11.04	15.24
ASPIRATION		TURBOCHARGED	TURBOCHARGED AND AFTERCOOLED	TURBOCHARGED AND AIR TO AIR AFTERCOOLED	TURBOCHARGED AND AIR TO AIR AFTERCOOLED
ENGINE ELECTRICAL SYSTEM	STARTING MOTOR	24V - 5.5KW	24V - 5.5KW	24V - 7.5KW	24V - 7.5KW
	CHARGING ALTERNATOR	24V - 35A	24V - 35A	24V - 35A	24V - 35A
	BATTERY	12V - 150AH X 2	12V - 150AH X 2	12V - 150AH X 2	12V - 200AH X 2
GENERATOR SET					
	COOLANT (RADIATOR AND ENGINE)	60	61	31.6	59.5
CAPACITY (L)	LUB OIL	30	30	62	74
DRY WEIGHT (KG)	DIFFERENCE FROM ACTUAL	2100	2600	2800	3600
DIMENSIONS (MM) : LENGTH x WIDTH x HEIGHT	PRODUCTS MIGHT BE EXIST FOR INDIVIDUAL UNIT ARRANGEMENT	2850 X 1100 X 1535	3000 X 1100 X 1580	3300 X 1100 X 1590	3600 X 1405 X 1850

	OPEN TYPE	EGS630-6	EGS650-6	EGS850-6	EGS1200-6*
GENERATOR RATED OUTPUT	VOLTAGE/FREQUENCY (V/HZ)	400/50	400/50	400/50	400/50
	ROTATING SPEED (RPM)	1500	1500	1500	1500
	PRIME (KW/KVA)	400/500	448/560	564/705	800/1000
	STANDBY (KW/KVA)	440/550	493/616	620/776	880/1100
ENGINE		KOMATSU	KOMATSU	KOMATSU	KOMATSU
ENGINE MODEL		SAA6D140-P580	SA6D170-A-1	SAA6D170-P800	SAA12V140-P1150
ENGINE RATED OUTPUT	PRIME (KW/KVA)	430/577	472/633	597/800	861/1154
	STANDBY (KW/KVA)	474/635	520/697	656/880	947/1269
NUMBER OF CYLINDERS		6	6	6	12
BORE X STROKE (MM x MM)		140 X 165	170 X 170	170 X 170	140 X 165
DISPLACEMENT (L)		15.24	23.15	23.15	30.48
ASPIRATION		TURBOCHARGED AND AIR TO AIR AFTERCOOLED	TURBOCHARGED AND AIR TO AIR AFTERCOOLED	TURBOCHARGED AND AIR TO AIR AFTERCOOLED	TURBOCHARGED AND AIR TO AIR AFTERCOOLED
ENGINE ELECTRICAL SYSTEM	STARTING MOTOR	24V - 7.5KW	24V - 11KW	24V - 11KW	24V - 7.5KW x 2
	CHARGING ALTERNATOR	24V - 35A	24V - 35A	24V - 35A	24V - 35A
	BATTERY	12V - 200AH X 2	12V - 200AH X 2	12V - 200AH X 2	12V - 200AH X 4
GENERATOR SET					
	COOLANT (RADIATOR AND ENGINE)	77.5	125	101	222
CAPACITY (L)	LUB OIL	77	147	147	151
DRY WEIGHT (KG)	DIFFERENCE FROM ACTUAL PRODUCTS MIGHT BE EXIST FOR INDIVIDUAL UNIT ARRANGEMENT	3800	5200	5600	7100
DIMENSIONS (MM) : LENGTH x WIDTH x HEIGHT		3600 X 1410 X 1780	3800 X 1410 X 1955	4100 X 1450 X 1945	4250 X 2000 X 2500