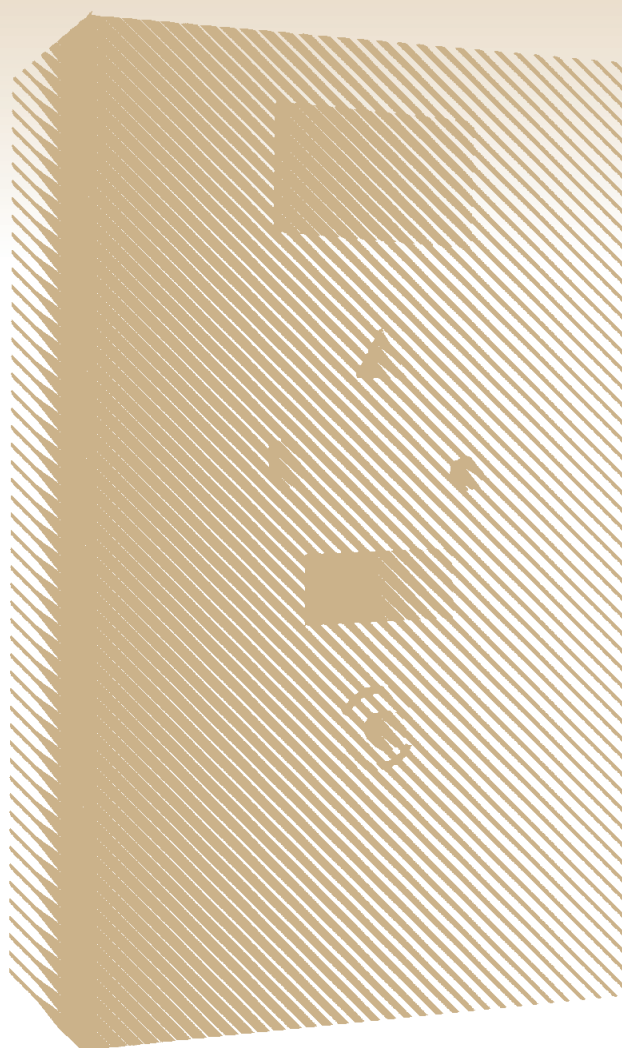


CONTROL

PANELS



CONTROL PANELS

DEFINITIONS

Prewired Genset

The Generating Set is supplied without a control panel. All the controls and alarms coming from the engine and the alternator are wired to a terminal board, for an easy external control panel connection. This is the ideal solution for markets and applications that require special controls (such as synchronising panels).

MCP (Manual Control Panel)

The generating set is supplied with a manual control panel, mounted on the genset. The panel on the base frame (open set version) or in the canopy (soundproof version), includes a manual control unit (push button / key start type), main circuit breaker, differential protection and all auxiliary controls and alarms. Power cables between generator and circuit breaker are included.

ACP (Automatic Control Panel)

The generating set is supplied with an automatic control panel, mounted on the genset. The panel on the base frame (open set version) or in the canopy (soundproof version), includes an automatic control unit that starts the genset in case of mains failure (it can be started manually too), main circuit breaker, differential protection and all auxiliary controls and alarms. Power cables between generator and circuit breaker are included. All controls are wired to a plinth row installed in the control panel for an easy external Load Transfer Switch (LTS).

AMF (Automatic Mains Failure Start Control Panel)

This panel is built in a metal cabinet and supplied separate of the genset (free standing, for wall mounting). It is an option of the genset prewired. It includes an automatic control unit that starts the genset in case of mains failure (it can be started manually too), two change over contactors electrically and mechanically interlocked (for transferring the load between mains and generating set) and all auxiliary controls and alarms. All these controls and alarms are wired to a plinth row installed in the control panel for an easy connection to the genset pre-wired.

LTS panel

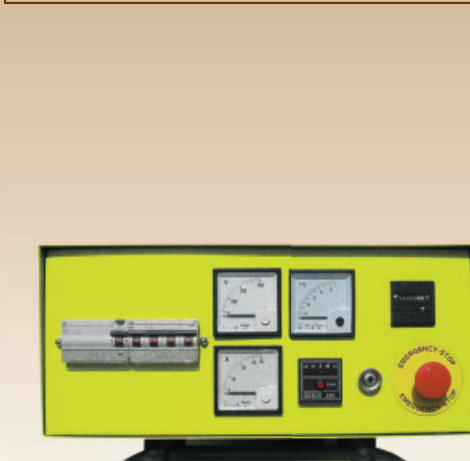
The LTS panel is built in a metal cabinet and supplied separate of the genset (free standing, for wall mounting). It is an option of the ACP panel. The panel includes two change over contactors electrically and mechanically interlocked (for transferring the load between mains and generating set) and all auxiliary controls. All these controls are wired to a plinth row installed in the panel for an easy connection to the ACP panel (that is mounted on the genset).

MANUAL CONTROL PANELS

GBA12L / GBA6D-17D
OPEN SET



GSA12L
OPEN SET



GSA 22D-65D / GSL 22D-42D
GSW 65D-170D / GSW195D-220D OP. SET
GSA 65D / GSW 65D-80D SOUNDPROOF



GSL22D-42D / GSW15P-22P
GSW110D-170D / GSW195D-220D
SOUNDPROOF



GBL22D-42D
SOUNDPROOF



GSA22D-65D / GSL22D-42D
GSW15P-22P / GSW65D-170D
OPEN SET + SOUNDPROOF (OPTION)



Sockets availability and characteristics can be modified according to the different markets.

MANUAL CONTROL PANELS

MANUAL CONTROL PANELS EQUIPMENT, THREE PHASE, 400/230V, 50HZ

SERIES	GBA12L (GBA6D-17D)	GSA12L	GSA22D-65D (OPEN)		GSA65D (SP)		GSL22D-42D GSW65D-170D (OPEN)		GSL22D-42D GSW15P- 22P GSW65D-170D (SP)		GBL 22D-42D (SP)	GSW195D 220D (OPEN)	GSW195D 220D (SP)
Analogue/Digital instrumentation	A	A	D	A	D	A	D	A	D	A	A	D	D
Generating set voltage (1 or 3 phases)	1	1	3	3	3	3	3	3	3	3	1	3	3
Generating set ammeter (1 or 3 phases)	-	1	3	3	3	3	3	3	3	3	1	3	3
Frequency meter	-	•	•	•	•	•	•	•	•	•	-	•	•
Hourmeter	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery voltage	-	-	•	-	•	-	•	-	•	-	-	•	•
Power (kVA, kW, kVAR, cos phi)	-	-	•	-	•	-	•	-	•	-	-	•	•
Fuel level	-	-	•	•	•	•	•	•	•	•	-	•	•
Oil pressure	-	-	-	•	-	•	-	•	-	•	-	•	•
Engine temperature	-	-	-	•	-	•	•	•	•	•	-	•	•
ALARMS													
Over-frequency	-	-	•	-	•	-	•	-	•	-	-	•	•
Battery charger failure	•	•	-	•	-	•	-	•	-	•	•	-	-
Battery voltage out of limits	-	-	•	-	•	-	•	-	•	-	-	•	•
Low fuel level	-	-	•	•	•	•	•	•	•	•	-	•	•
Low oil pressure	•	•	•	•	•	•	•	•	•	•	•	•	•
High engine temperature	-	-	•	•	•	•	•	•	•	•	•	•	•
External shutdown	-	•	•	-	•	-	•	-	•	-	-	•	•
SHUTDOWN PROTECTIONS													
Generator voltage out of limits	-	-	•	-	•	-	•	-	•	-	-	•	•
Over-load	-	-	•	-	•	-	•	-	•	-	-	•	•
Frequency out of limits	-	-	•	-	•	-	•	-	•	-	-	•	•
Battery charger failure	-	•	-	•	-	•	-	•	-	•	•	-	-
Low fuel level	-	-	•	•	•	•	•	•	•	•	-	•	•
Low oil pressure	-	•	•	•	•	•	•	•	•	•	•	•	•
High temperature	-	-	•	•	•	•	•	•	•	•	•	•	•
Circuit breaker	•	•	•	•	•	•	•	•	•	•	•	•	•
Differential protection	-	•	•	•	•	•	•	•	•	•	•	•	•
SOCKETS													
Shuko socket	-	1	-	-	○	○	-	-	○	○	1	-	○
Single phase CE socket	1	1	-	-	○	○	-	-	○	○	2	-	○
Three phase CE socket	1	1	-	-	○	○	-	-	○	○	2	-	○
OTHER FEATURES													
Emergency stop button	-	•	•	•	•	•	•	•	•	•	•	•	•
Terminal board	-	-	-	-	-	-	-	-	• □	• □	-	•	•
External start capability	-	-	•	○	•	○	•	○	○	○ △	-	•	•

•: Standard

○: Optional

(-): Not available

□: Not available on GSW65D/80D

△: Not available on GSW15P/22P

AUTOMATIC CONTROL PANELS

GSA12L
OPEN SET



GBL22D-42D
SOUNDPROOF



GSA22D-65D/GSL22D-42D/GSW65D-170D / 195D-220D OP. SET
GSA65D/GSW65D-80D SOUNDPROOF



GSL22D-42D/GSW15P-22P/GSW65D-170D
195D-220D SOUNDPROOF



GSW530D-GSW560D OPEN SET + SOUNDPROOF
GSW275V-GSW590V OPEN SET + SOUNDPROOF



LOAD TRANSFER SWITCH PANELS



AUTOMATIC MAINS FAILURE PANELS

GSA12L OPEN SET
GBL22D-42D SOUNDPROOF



GSA22D-65D/GSL22D-42D/GSW65D-560D
GSW195V-560V OPEN SET
GSA65D/GSL22-42D/GSW15P-22P/GSW65D-170D
GSW330D-560D/GSW195V-560V SOUNDPROOF



Sockets availability and characteristics can be modified according to the different markets.

ACP - AMF PANELS

AUTOMATIC CONTROL PANELS EQUIPMENT, THREE PHASE, 400/230V, 50HZ

SERIES	GSA12L		GSA22D-65D (OPEN)		GSA65D (SP)		GSL22D-42D GSW65D-170D 195D-220D (OP)		GSL22D-42D GSW15P-22P GSW65D-170D GSW195D-220D (SP)		GBL22D-42D		GSW530D-560D (OP) (SP)		GSW275D-590D (OP) (SP)	
	ACP	AMF	ACP	AMF	ACP	AMF	ACP	AMF	ACP	AMF	ACP	AMF	ACP	AMF	ACP	AMF
Analogue/Digital instrumentation	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D	D
Generating set voltage (1 or 3 phases)	1	1	3	3	3	3	3	3	3	3	1	1	3	3	3	3
Mains voltage	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Generating set ammeter (1 or 3 phaseS)	1	1	3	3	3	3	3	3	3	3	1	1	3	3	3	3
Generator frequency	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Hourmeter	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery voltage	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Speed	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
Power (kVA, kW, kVAR, cos phi)	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
Fuel level	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
Oil pressure	-	-	-	-	-	-	-	-	-	-	-	-	•	•	•	•
Engine temperature	-	-	-	-	-	-	•	•	•	•	-	-	•	•	•	•
ALARMS																
Generator voltage out of limits	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Over-load	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery charger failure	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery voltage out of limits	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Frequency out of limits	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Low fuel level	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
Low oil pressure	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
High temperature	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Fail to start	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
External shutdown	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
SHUTDOWN PROTECTIONS																
Generator voltage out of limits	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Over-load	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Frequency out of limits	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery charger failure	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Low fuel level	-	-	•	•	•	•	•	•	•	•	-	-	•	•	•	•
Low oil pressure	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
High temperature	-	-	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Circuit breaker	•	-	•	-	•	-	•	-	•	-	•	-	•	-	•	-
Differential protection	•	-	•	-	•	-	•	-	•	-	•	-	•	-	•	-
SOCKETS																
Shuko socket	-	-	-	-	○	-	-	-	○	-	-	-	-	-	○	-
Single phase CE socket	-	-	-	-	○	-	-	-	○	-	-	-	-	-	○	-
Three phase CE socket	-	-	-	-	○	-	-	-	○	-	1	1	-	-	○	-
OTHER FEATURES																
Emergency stop button	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Acoustic alarm	-	-	•	•	•	•	•	•	•	•	-	•	•	•	•	•
Phases detector	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Battery charger	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Terminals for an external panel connexion. (LTS)	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•
Load Transfer Switch (LTS) panel	○	-	○	-	○	-	○	-	○	-	○	-	○	-	○	-
External start capability	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•	•

- : Standard
- : Optional
- (-): Not available

Sockets availability and characteristics can be modified according to the different markets.