








	Multi Differential Relay, MDR-2	Generator protection Unit, GPU-2	Paralleling and Protection Unit, PPU-2
			
Main function	Multi Differential Relay for protection against short circuits and currents	Engine and generator control and protection unit for single operation	Engine and generator control and protection unit for single and parallel operation
Auxiliary voltage	8-36V DC	8-36V DC	8-36V DC
Measuring voltage	–	100-690 V	100-690 V
Current transformer	-/1 A or -/5 A	-/1 A or -/5 A	-/1 A or -/5 A
Frequency	30-70 Hz	30-70 Hz	30-70 Hz
Remote mountable display	●	●	●
Approved by classification societies	●	●	●
BASE/DIN rail mounting	●	●	●
Start/stop relay output to next generator	–	○	●
Synchronising	–	○	●
Differential relay	●	–	–
Load sharing	–	–	●
Display/PC cables	○	○	○
IP54 protection of display	○	○	○
Loss of mains protection package	–	○	○
df/dt	–	○	○
Vector jump	–	○	○
Busbar and generator protection package	–	○	○
Generator add-on protection package	–	○	○
Zero + negative sequence	–	○	○
Voltage control	–	○	○
Analogue transducer output	–	○	○
Engine communication	–	○	○
Serial communication	–	○	○
Configurable ext. cards	–	○	○
Engine protection	–	○	○
VAR/cos phi control	–	–	○
Analogue controller output	–	–	○
Combination outputs	–	–	○

● = standard    ○ = optional    – = not possible



	Generator protection Unit, GPU-3	Paralleling and Protection Unit, PPU-3	
			
Main function	Engine and generator control and protection unit for single operation	Engine and generator control and protection unit for single and parallel operation	
Auxiliary voltage	8-36V DC	8-36V DC	
Measuring voltage	100-690 V	100-690 V	
Current transformer	-/1 A or -/5 A	-/1 A or -/5 A	
Frequency	30-70 Hz	30-70 Hz	
Remote mountable display	●	●	
Approved by classification societies	●	●	
BASE/DIN rail mounting	●	●	
Start/stop relay output to next generator	●	●	
Busbar and generator protection package	●	●	
M-Logic (micro PLC)	●	●	
Synchronising	○	●	
Load sharing	–	●	
IP54 protection of display	○	○	
Loss of mains protection package	○	○	
Additional displays (DU-2)	○	○	
Voltage control	○	○	
Generator add-on protection package	○	○	
Analogue transducer output	○	○	
Engine communication	○	○	
Serial communication	○	○	
Configurable ext. cards	○	○	
Engine protection	○	○	
Analogue controller output	○	○	
Combination outputs	○	○	
Additional Operator Panel (AOP-1/AOP-2)	○	○	
TCP/IP Modbus	○	○	
Class 0.5 measurement	○	○	
VAr/cos phi control	–	○	

● = standard    ○ = optional    – = not possible

	<b>PPU Power Management Unit, PPM-2</b> 	<b>Protection Power Management, PPM-3</b> 	
Main function	Engine and generator control, protection and power management unit for parallel operation	Engine and generator control, protection and power management unit for parallel operation	
Auxiliary voltage	8-36V DC	8-36V DC	
Measuring voltage	100-690 V	100-690 V	
Current transformer	-/1 A or -/5 A	-/1 A or -/5 A	
Frequency	30-70 Hz	30-70 Hz	
Busbar and generator protection package	●	●	
Generator add-on protection package	●	●	
Power management	●	●	
Synchronising	●	●	
Load sharing	●	●	
Remote mountable display	●	●	
Engine protection	●	●	
Approved by classification societies	●	●	
BASE mounting	●	●	
Additional displays	○	○	
Additional Operator Panel (AOP-1)	–	○	
Additional Operator Panel (AOP-2)	●	○	
Available without display	–	○	
Voltage control	○	○	
VAR/cos phi control	○	○	
Analogue controller output	○	○	
Analogue transducer output	○	○	
Combination outputs	○	○	
Engine communication	–	○	
Serial communication	○	○	
Display/PC cables	○	○	
IP54 protection of display	○	○	
Configurable ext. cards	○	○	
TCP/IP	○	○	
Class 0.5 measurement	–	○	

● = standard    ○ = optional    – = not possible





	Genset Controller, GC-1F	Automatic Genset Controller, AGC-3	
			
Main function	Engine and generator control and protection unit for single operation	Island mode, AMF, fixed power, peak shaving, mains power export, load takeover	
Auxiliary voltage	6-36V DC	8-36V DC	
Measuring voltage	50-480 V	100-690 V	
Current transformer	-/1 A or -/5 A	-/1 A or -/5 A	
Frequency	30-70 Hz	30-70 Hz	
Remote mountable display	–	●	
Engine protection	●	●	
AMF logic	○	●	
Busbar and generator protection package	● (Generator protection only)	○	
Start/stop relay output to next generator	–	●	
Synchronising	–	●	
BASE/DIN rail mounting	–	●	
IP protection of display	○ (IP65)	○ (IP54)	
Engine communication	○	○	
Serial communication	○	○	
Additional Operator Panel/additional display	○	○	
Display/PC cables	○	○	
Loss of mains protection package	–	○	
df/dt	–	○	
Vector jump	–	○	
Positive sequence	–	○	
Directional overcurrent	–	○	
Generator add-on protection package	–	○	
Zero + negative sequence	–	○	
Voltage control	–	○	
VAR/cos phi control	–	○	
Analogue controller output	–	○	
Analogue transducer output	–	○	
Combination outputs	–	○	
Power management	–	○	
Load sharing	–	○	
Configurable ext. cards	–	○	
TCP/IP	–	○	
Alarm log printer	–	○	
Class 0.5 measurement	–	○	
Approvals	UL/cUL	UL/cUL	

● = standard    ○ = optional    – = not possible






	AGC 212	AGC 213	AGC 223	AGC 232	AGC 242	AGC 244	AGC 245	AGC 246
Main function	Island mode	Island mode, AMF	Island mode, AMF, fixed power, peak shaving, load takeover	Island mode, load sharing	Island mode, AMF, fixed power, peak shaving, load takeover, load sharing	Island mode, AMF, fixed power, peak shaving, load takeover, load sharing	Island mode, AMF, fixed power, peak shaving, load takeover, load sharing	Island mode, AMF, fixed power, peak shaving, load takeover, load sharing
Auxiliary voltage	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC	6-36V DC
Measuring voltage	50-690V AC	50-690V AC	50-690V AC	50-690V AC	50-690V AC	50-690V AC	50-690V AC	50-690V AC
Current transformer	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A
Frequency	30-70 Hz	30-70 Hz	30-70 Hz	30-70 Hz	30-70 Hz	30-70 Hz	30-70 Hz	30-70 Hz
Engine protection	●	●	●	●	●	●	●	●
Busbar and generator protection package	●	●	●	●	●	●	●	●
Synchronising	●	●	●	●	●	●	●	●
Engine communication	●	●	●	●	●	●	●	●
Voltage control	●	●	●	●	●	●	●	●
VAr/cos phi control	●	●	●	●	●	●	●	●
User-programmable logic (M-Logic)	●	●	●	●	●	●	●	●
Configurable inputs/outputs	●	●	●	●	●	●	●	●
High speed USB connection	●	●	●	●	●	●	●	●
AMF logic	–	●	●	–	●	●	●	●
Multi master power management	–	–	–	–	●	●	●	●
Redundant CANbus for power management	–	–	–	–	●	●	●	●
Start/stop relay output to next generator	–	–	–	●	●	–	–	–
Load sharing	–	–	–	●	●	–	–	–
IP65 protection	○	○	○	○	○	○	○	○
RS485	○	○	○	○	○	○	○	○
Additional Operator Panel	○	○	○	○	○	○	○	○
Loss of mains protection package	○	○	○	○	○	○	○	○
df/dt	○	○	○	○	○	○	○	○
Vector jump	○	○	○	○	○	○	○	○
Positive sequence	○	○	○	○	○	○	○	○
Directional overcurrent	○	○	○	○	○	○	○	○
Generator add-on protection package	○	○	○	○	○	○	○	○
Zero + negative sequence	○	○	○	○	○	○	○	○
Analogue controller output	○	○	○	○	○	○	○	○
TCP Modbus	○	○	○	○	○	○	○	○
Remote mountable display	–	–	–	–	–	–	–	–
Approvals	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending	CE, UL/cUL pending

● = standard    ○ = optional    – = not possible

	Generator Paralleling Controller, GPC-3	Advanced Protection Unit, APU-3	
			
Main function	Engine and generator control and protection for single and parallel operation	Mains protection unit	
Auxiliary voltage	8-36V DC	8-36V DC	
Measuring voltage	100-690 V	100-690 V	
Current transformer	-/1 A or -/5 A	-/1 A or -/5 A	
Frequency	30-70 Hz	30-70 Hz	
Remote mountable display	●	●	
BASE/DIN rail mounting	●	●	
M-Logic (Micro PLC)	●	●	
Synchronising	●	○	
df/dt	○	●	
Vector jump	○	●	
Busbar and generator protection package	●	–	
Load sharing	●	–	
Start/stop relay output to next generator	●	–	
Over-/undervoltage protection	–	●	
Over-/underfrequency protection	–	●	
IP54 protection of display	○	○	
Positive sequence	○	○	
Directional overcurrent	○	○	
TCP/IP	○	○	
Zero + negative sequence	○	–	
Additional display	○	–	
Voltage control/VAr/Pf	○	–	
Analogue transducer	○	–	
Engine communication	○	–	
Serial communication	○	–	
Configurable ext. cards	○	–	
Engine protection	○	–	
Analogue controller output	○	–	
Additional operator panel	○	–	
Class 0.5 measurement	○	–	
Approvals	UL/cUL	UL/cUL	

● = standard    ○ = optional    – = not possible

	Basic Genset Controller, BGC-2	Generator Paralleling Controller, GPC-2	Automatic Genset Controller, AGC-2
			
Main function	Island mode, AMF, fixed power, peak shaving, load takeover, load sharing	Engine and generator control and protection unit for single and parallel operation	Island mode, AMF, fixed power, peak shaving, mains power export, load takeover
Auxiliary voltage	8-36V DC	8-36V DC	8-36V DC
Measuring voltage	100/110 V + 380/480 V	100-690 V	100-690 V
Current transformer	-1 A or -5 A	-1 A or -5 A	-1 A or -5 A
Frequency	30-70 Hz	30-70 Hz	30-70 Hz
Start/stop relay output to next generator	○	●	●
Synchronising	○	●	●
AMF logic	●	–	●
Remote mountable display	–	●	●
BASE/DIN rail mounting	–	●	●
Load sharing	○	●	○
Engine protection	●	○	○
Loss of mains protection package	○	○	○
df/dt	○	○	○
Vector jump	○	○	○
Busbar and generator protection package	○	○	○
Generator add-on protection package	○	○	○
Voltage control	○	○	○
VAr/cos phi control	○	○	○
Analogue controller output	○	○	○
Analogue transducer output	○	○	○
Engine communication	○	○	○
Serial communication	○	○	○
Display/PC cables	○	○	○
IP54 protection of display	○	○	○
Configurable ext. cards	○	○	○
Zero + negative sequence	–	○	○
Combination outputs	–	○	○
Additional Operator Panel	–	–	○
Positive sequence	–	–	○
Power management	–	–	○

● = standard    ○ = optional    – = not possible





