

	Generator Protection Unit (GPU)	Generator Paralleling Controller (GPC)	Paralleling and Protection Unit (PPU)
			
Aux.: 8-36V DC	√	√	√
Meas. voltage: 100-690V	√	√	√
Current transformer: -/1A or -/5A	√	√	√
Frequency: 30-70Hz	√	√	√
Loss of mains protection package	A	A	A
df / dt	A	A	A
Vector jump	A	A	A
Busbar and generator protection package	B1	B1	B1
Generator add-on protection package	C1	C1	C1
Zero + negative sequence	C2	C2	C2
Voltage control	D2	D1	D1
Var / cos phi control	-	D1	D1
Analogue controller output	-	E1	E1
Analogue transducer output	F	F	F
Combination outputs	-	EF	EF
Start / stop relay output to next generator	G1	√	√
Power management	-	-	-
AMF logic	-	-	-
Synchronising	G2	√	√
Load sharing	-	√	√
Engine communication	H4/H5/H6	H4/H5/H6	H4/H5/H6
Serial communication	H1/H2/H3	H1/H2/H3	H1/H2/H3
Remote mountable display	√	√	√
Display / PC cables	J	J	J
IP54 protection of display	L	L	L
Available without display	√	√	√
Configurable ext. cards	M	M	M
Engine protection	M1/M2	M1/M2	M1/M2
Approved by classification societies	√	-	√
BASE / DIN rail mounting	√	√	√
Additional Operator Panel	-	-	-

	Automatic Gen-set Controller (AGC)	Basic Gen-set Controller (BGC)	Multi Differential Relay (MDR-2)
			
Main function:	Island mode, AMF, fixed power, peak shaving, mains power export, load take over.	Island mode, AMF, fixed power, peak shaving, load take over, load sharing.	Multi Differential Relay for protection against short circuits and leakage currents of the generator
Aux.: 8-36V DC	√	√	√
Meas. voltage:	100-690V	100/110V + 380/480V	-
Differential relay:	-	-	√
Current transformer: -1A or -5A	√	√	√
Frequency: 30-70Hz	√	√	√
Loss of mains protection package	A	A	-
df / dt	A	A	-
Vector jump	A	A	-
Busbar and generator	B1	B1	-
Generator add-on protection package	C1	C1	-
Negative sequence	C2	-	-
Voltage control	D1	D1	-
Var / cos phi control	D1	D1	-
Analogue controller output	E1	G2/G3	-
Analogue transducer output	F1	F1/F2	-
Combination outputs	EF	-	-
Start / stop relay output to next generator	√	G1	-
Power management	G5	-	-
AMF logic	√	√	-
Synchronising	√	G2	-
Load sharing	G3	G3	-
Engine communication	H4/H5/H6	H4/H5/H6	-
Serial communication	H1/H2/H3	H1/H2/H3	-
Remote mountable display	√	-	√
Display / PC cables	J	J5	J
IP54 protection of display	L	L	L
Available without display	√	-	√
Configurable ext. cards	M	M	-
Engine protection	√	√	-
Approved by classification societies	-	-	√
BASE / DIN rail mounting	√	-	√
Additional Operator Panel	√	-	-

	Engine Controller (EC-1) 	Generator Controller (GC-1) 	
Main function:	Engine control and protection.	Engine and generator control and protection.	
Aux.: 8-36V DC	√	√	
Meas. voltage:	50-480V	50-480V	
Differential relay:	-	-	
Current transformer: -/1A or -/5A	-	√	
Frequency: 30-70Hz	√	√	
Loss of mains protection package	-	-	
df / dt	-	-	
Vector jump	-	-	
Busbar and generator protection package	B2 (Generator only)	Generator only	
Generator add-on protection package	-	-	
Negative sequence	-	-	
Voltage control	-	-	
Var / cos phi control	-	-	
Analogue controller output	-	-	
Analogue transducer output	-	-	
Combination outputs	-	-	
Engine start / stop relay output	√	√	
Power management	-	-	
AMF logic	-	B3	
Synchronising	-	-	
Load sharing	-	-	
Engine communication	H5	H5	
Serial communication	H1	-	
Remote mountable display	-	-	
Display / PC cables	J5	J5	
IP54 protection of display	L	L	
Available without display	-	-	
Configurable ext. cards	-	-	
Engine protection	√	√	
Approved by classification societies	-	-	
BASE / DIN rail mounting	-	-	
Additional Operator Panel	-	-	