Specification sheet, Unimatic PMS system

Ref.: 4189340188C

DEIF A/S
Frisenborgvej 33
DK-7800 Skive
Denmark

Tel.: +45 9614 9614
Fax: +45 96149615

Web: deif.com
E-mail: deif@deif.com

Select system type (one only):

System	no	tick
2 diesel generators on single busbar	1	
3 diesel generators on single busbar	2	
4 diesel generators on single busbar	3	
2 diesel generators and 1 shaft generator on single busbar	4	
3 diesel generators and 1 shaft generator on single busbar	5	
2 diesel generators on single busbar and 1 shaft generator on separate busbar, separated by synchronizing tie breaker	6	
3 diesel generators on single busbar and 1 shaft generator on separate busbar, separated by synchronizing tie breaker	7	

System Data:

Voltage (U_{nom})	VAC
Frequency (f_{nom})	Hz

Generator specification:

Gen. No.	Type		$P_{nom.}$ kW	$I_{nom.}$ Amps.	CT ratio	-P setp. (tick)	
						-5%, 10s	-10%, 5s
1	Diesel gen.				/		
2	Diesel gen.				/		
3	Diesel gen.				/		
4 / SG	Diesel	Shaft gen			/		

NOTE: Standard system max. power is 1000kW per generator

No of manuals required (English only)	

System hardware:
(Refer to system types)

Hardware units	System no. 1	2	3	4	5	6	7
OMRON PLC:							
PLC CPM1A-40CDT1-D	1	1		1	1	1	
Binary expansion module CPM1A-20EDT1	1	1		1	1	1	
Analog I/O module MAD01	1	2		2	2	2	
PLC power supply CQM1-PD026			1				1
PCL CPU CQM1-CPU45-EV1			1				1
Binary input module CQM1-ID212			2				2
Binary output module CQM1-OD214			2				2
DEIF A/S equipment:							
Dynamic synchronizer FAS-113DG	1	1	1	1	1	1	1
Half-automatic synchronizer HAS-111DG				1	1	1	1
Electronic potentiometer EPN-110DN				1	1	1	1
Load sharing unit w. –P> LSU-113DG	2	3	4	3	4	3	4
Dual overcurrent relay RMC-132D	2	3	4	3	4	3	4
Power transducer TAP-210DG	2	3	4	3	4	3	4

PLC software is included and configured acc. to the table on next page.

Power supply voltage: PLC's allways 24VDC
DEIF units allways AC phase-phase voltage if nothing else is specificly required.

Settings: **Note: Shaded areas are not to be filled in.**

FUNCTON	AVAILABLE RANGES		SETTING VALUE	DELAY	Remarks
	setting	delay			
Diesel generator 1 nominal power	0…1000		kW		
Diesel generator 2 nominal power	0…1000		kW		
Diesel generator 3 nominal power	0…1000		kW		
Shaft/diesel generator nominal power	0…1000		kW		
Generator 1 cooldown time		0…360		Sec	
Generator 2 cooldown time		0…360		Sec	
Generator 3 cooldown time		0…360		Sec	
Generator 4 cooldown time		0…360		Sec	
Deload time supervision timer		0…360		Sec	
Start point available power	0…1000	0…360	kW	Sec	*1
Load on remaining gen.'s after load dependent stop of generator	0…100	0…360	%	Sec	*2
Synchronisation time supervision timer		0…360		Sec	
Blackout close breaker delay timer		0…360		Sec	
Heavy consumer 1 nominal power	0…1000		kW		
Heavy consumer 2 nominal power	0…1000		kW	Sec	
Heavy consumer 3 nominal power	0…1000		kW		
Available power low alarm	0…1000	0…360	kW	Sec	
Start supervision time		0…360		Sec	
Analog input 1 (gen. 1) fullscale value	0…1250		kW		*3
Analog input 2 (gen. 2) fullscale value	0…1250		kW		*3
Analog input 3 (gen. 3) fullscale value	0…1250		kW		*3
Analog input 4 (shaft /diesel gen.) fullscale val.	0…1250		kW		*3
Analog output 1 (Avail. P) fullscale value	0…4000		kW		*4
Analog output 2 (produced P) fullscale value (not available in 2 generator systems).	0…4000		kW		*4
Use external blackout detection input? (1=yes, 2=no)	1 or 2				
Bus tie breaker supervision timer		0…360		Sec	*5

*1: Recommended value: 15% of smallest generator nominal power, i.e. if the smallest generator is 100 kW, recommended value is 15 kW

*2: Recommended value: 60% of smallest generator nominal power, i.e. if the smallest generator is 100 kW, recommended value is 60 kW

*3: Analog input scale is determined as generator nominal power *1.25 (125%)

*4: Analog output scale is determined as total nominal diesel generator power plant value

*5: Only systems with shaft generator and bus tie breaker.

errors and changes exepted