

Generator PLC I/O

Bid Opportunity 159-2007 - Addendum 2

Global Word	Description	PLC VARIABLE DECLARATION	Global Data Address AP1	Global Data Address AP2	Data Type
1	System Alarms (Flashing for Annunciator)	AP1_GLOBAL1	401201	401241	Word
	Bit	BIT DECRPTION			
	0	Emode Alarm			
	1	SYS Not In Auto			
	2	Load Shed Override			
	3	Gen Bus Under Frequency			
	4	Master Shut Down			
	5	Any PLC Fault			
	6	Any Lynx Fault			
	7	Any Multi-function Relay Fail			
	8	Any PLC Low Battery			
	9	24VDC Battery Charger Fail 1			
	10	24VDC Battery Charger Fail 2			
	11	125VDC Battery Charger Fail			
	12	Not Enough Gens for Xfer to Emode			
	13	Load Management Setpoint Failure			
	14	Modbus Plus Network A Failure			
	15	Modbus Plus Network B Failure			
2	System Alarms (Steady for Alarm Summary)	AP1_GLOBAL2	401202	401242	Word
	Bit	BIT DECRPTION			
	0	Emode Alarm			
	1	SYS Not In Auto			
	2	Load Shed Override			
	3	Gen Bus Under Frequency			
	4	Master Shut Down			
	5	Any PLC Fault			
	6	Any Lynx Fault			
	7	Any Multi-function Relay Fail			
	8	Any PLC Low Battery			
	9	24VDC Battery Charger Fail 1			
	10	24VDC Battery Charger Fail 2			
	11	125VDC Battery Charger Fail			
	12	Not Enough Gens for Xfer to Emode			
	13	Load Management Setpoint Failure			
	14	Modbus Plus Network A Failure			
	15	Modbus Plus Network B Failure			
3	Status & Control Word	AP1_GLOBAL3	401203	401243	Word
	Bit	BIT DECRPTION			
	0	AP1 PLC OK			
	1	Node Switch			
	2	CB Fail Reset Button			
	3	System Annunciator Acknowledge			
	4	Underfrequency Reset Button			
	5	Horn Silence			
	6	Instant Auto			
	7	Run Request			
	8				
	9	Remove Gen Plant A			
	10	Open Gen Plant A			
	11	Close Emerg Tie Breakers in Emode			
	12	AP1 PLC Low Battery			
	13	Remove Gen Plant B			
	14	Open Gen Plant B			
	15	Load Shed Active			
4	Status & Control Word	AP1_GLOBAL4	401204	401244	Word
	Bit	BIT DECRPTION			
	0	Transfer to Emergency Mode - N1			
	1	Transfer to Emergency Mode - N2			
	2	Load Management Mode - N1			
	3	Load Management Mode - N2			
	4	Emergency Mode - N1			
	5	Emergency Mode - N2			
	6	Normal Mode - N1			
	7	Normal Mode - N2			
	8	Utility Failure - N1			
	9	Utility Failure - N2			
	10	Warmup Timer Done - N1			

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Global Word	Description	PLC VARIABLE DECLARATION	Global Data Address AP1	Global Data Address AP2	Data Type
	11	Warmup Timer Done - N2			
	12	Emergency Mode Exit - N1			
	13	Emergency Mode Exit - N2			
	14	Quick Emergency Mode Exit - N1			
	15	Quick Emergency Mode Exit - N2			
5	Status & Control Word	AP1_GLOBAL5	401205	401245	Word
	Bit	BIT DECRPTION			
	0	(CB Failure) Return to Emode - N1			
	1	(CB Failure) Return to Emode - N2			
	2	(CB Failure) Return to Normal - N1			
	3	(CB Failure) Return to Normal - N2			
	4	Utility Fail Test - N1			
	5	Utility Fail Test - N2			
	6	Synch Across N1 breaker			
	7	Synch Across N2 breaker			
	8	Ok to close generator breakers - Bus A			
	9	Ok to close generator breakers - Bus B			
	10	System Type - EGP			
	11	System Type - LM as a gen plant			
	12	System Type - LM-T as a gen plant			
	13	System Type - LM as individual gens			
	14	System Type - XLM			
	15	System Type - XLM-T			
6	Status & Control Word	AP1_GLOBAL6	401206	401246	Word
	Bit	BIT DECRPTION			
	0	Master Mode Switch in Manual			
	1	Master Mode Switch in Auto			
	2	Master Mode Switch in Transfer to Emerg			
	3	Master Mode Switch in Load Management			
	4	Generator No Load Test Toggle Switch On			
	5	Utility Retransfer Switch in Auto			
	6	Utility Retransfer Switch in Manual			
	7	Transition Switch in Closed Transition			
	8	Transition Switch in Open Transition			
	9	Xfer to Emerg Utility Selector Switch in N1			
	10	Xfer to Emerg Utility Selector Switch in N2			
	11	Xfer to Emerg Utility Selector Switch in Both			
	12	Load Management Utility Selector Switch in N1			
	13	Load Management Utility Selector Switch in N2			
	14	Baseload Switch			
	15	Export Switch			
7	Status & Control Word	AP1_GLOBAL7	401207	401247	Word
	Bit	BIT DECRPTION			
	0	Generator Priority Demand Active			
	1	Generator Priority Demand Enable			
	2	Load Shed Active			
	3	Load Shed Enabled			
	4	Load Shed Off from Key Switch			
	5	Manual Retransfer to N1 OK			
	6	Manual Retransfer to N2 OK			

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Global Word	Description	PLC VARIABLE DECLARATION	Global Data Address AP1	Global Data Address AP2	Data Type
	7	Transfer Imminent - N1			
	8	Transfer Imminent - N2			
	9	Warmup Timer to N1 Visible			
	10	Warmup Timer to N2 Visible			
	11	Emergency Exit Timer to N1 Visible			
	12	Emergency Exit Timer to N2 Visible			
	13	Immediate Retransfer Button			
	14	Any Alarm (flashing)			
	15	Spare			
8	Status & Control Word	AP1_GLOBAL8	401208	401248	Word
	Bit	BIT DECRPTION			
	0	PLC Failure - Gen #1			
	1	PLC Failure - Gen #2			
	2	PLC Failure - Gen #3			
	3	PLC Failure - Dist #1			
	4	PLC Failure - Dist #2			
	5	PLC Failure - Dist #3			
	6	PLC Failure -Utility Tie			
	7	PLC Failure -Generator Tie			
	8	Spare			
	9	Spare			
	10	PLC Failure - Utility N1			
	11	PLC Failure - Utility N2			
	12	PLC Failure -Emergency Tie 1			
	13	PLC Failure -Emergency Tie 2			
	14	Spare			
	15	PLC Failure - Data PLC			
9	Status & Control Word	AP1_GLOBAL9	401209	401249	Word
	Bit	BIT DECRPTION			
	0	Spare			
	1	Spare			
	2	Spare			
	3	Spare			
	4	Spare			
	5	Spare			
	6	Spare			
	7	Spare			
	8	Spare			
	9	Utility Selector Switch - N1			
	10	Utility Selector Switch - N2			
	11	Utility Selector Switch - Both			
	12	Spare			
	13	Spare			
	14	Single Utility Failure Mode - N1			
	15	Single Utility Failure Mode - N2			
10	Generator Priority Demand Word	AP1_genDMD	401210	401250	Word
	Bit	BIT DECRPTION			
	0	Spare			
	1	Generator Priority Demand - Remove Gen #1			
	2	Generator Priority Demand - Remove Gen #2			
	3	Generator Priority Demand - Remove Gen #3			
	4	Generator Priority Demand - Remove Gen #4			
	5	Generator Priority Demand - Remove Gen #5			
	6	Generator Priority Demand - Remove Gen #6			
	7	Generator Priority Demand - Remove Gen #7			
	8	Generator Priority Demand - Remove Gen #8			
	9	Generator Priority Demand - Remove Gen #9			
	10	Generator Priority Demand - Remove Gen #10			
	11	Spare			
	12	Spare			
	13	Spare			
	14	Spare			
	15	Spare			
11	Power Factor Setpoint	AP1_pfSET	401211	401251	Integer
12	System VAR Setpoint	AP1_varSET	401212	401252	Integer
13	System kW Request	AP1_kwREQ	401213	401253	Integer
14	Utility Sync Frequency Setpoint	AP1_syncHZ	401214	401254	Integer
15	System Voltage Setpoint	AP1_sysVOLTS	401215	401255	Integer
16	System Frequency Setpoint	AP1_sysHZ	401216	401256	Integer
17	System Sync Phase Angle Window	AP1_phANGLE	401217	401257	Integer
18	System Sync Phase Angle Dwell	AP1_dwell	401218	401258	Integer
19	System Fail to Sync Delay	AP1_ftsDELAY	401219	401259	Integer
20	System Voltage Match Setpoint	AP1_vMATCH	401220	401260	Integer

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21	Load Shed Status - Load Bus 1	AP1_LoadBus1_LSout	401221	401261	Word
	Bit	BIT DECRPTION			
	0	Load Bus 1 Shed Non Essential			
	1	Load Bus 1 Shed Level 1			
	2	Load Bus 1 Shed Level 2			
	3	Load Bus 1 Shed Level 3			
	4	Load Bus 1 Shed Level 4			
	5	Load Bus 1 Shed Level 5			
	6	Load Bus 1 Shed Level 6			
	7	Load Bus 1 Shed Level 7			
	8	Load Bus 1 Shed Level 8			
	9	Load Bus 1 Shed Level 9			
	10	Load Bus 1 Shed Level 10			
	11	Spare			
	12	Spare			
	13	Spare			
	14	Spare			
	15	Spare			
22	Load Shed Status - Load Bus 2	AP1_LoadBus2_LSout	401222	401262	Word
	Bit	BIT DECRPTION			
	0	Load Bus 2 Shed Non Essential			
	1	Load Bus 2 Shed Level 1			
	2	Load Bus 2 Shed Level 2			
	3	Load Bus 2 Shed Level 3			
	4	Load Bus 2 Shed Level 4			
	5	Load Bus 2 Shed Level 5			
	6	Load Bus 2 Shed Level 6			
	7	Load Bus 2 Shed Level 7			
	8	Load Bus 2 Shed Level 8			
	9	Load Bus 2 Shed Level 9			
	10	Load Bus 2 Shed Level 10			
	11	Spare			
	12	Spare			
	13	Spare			
	14	Spare			
	15	Spare			
23			401223	401263	Integer
	Bit	BIT DECRPTION			
	0	Load Bus 1 Non Ess Level Switch - Auto			
	1	Load Bus 1 Non Ess Level Switch - Manual Add			
	2	Load Bus 1 Non Ess Level Switch - Manual Shed			
	3	Load Bus 1 Load Shed Level 1 Switch - Auto			
	4	Load Bus 1 Load Shed Level 1 Switch - Manual Add			
	5	Load Bus 1 Load Shed Level 1 Switch - Manual Shed			
	6	Load Bus 1 Load Shed Level 2 Switch - Auto			
	7	Load Bus 1 Load Shed Level 2 Switch - Manual Add			
	8	Load Bus 1 Load Shed Level 2 Switch - Manual Shed			
	9	Load Bus 1 Load Shed Level 3 Switch - Auto			
	10	Load Bus 1 Load Shed Level 3 Switch - Manual Add			
	11	Load Bus 1 Load Shed Level 3 Switch - Manual Shed			
	12	Load Bus 1 Load Shed Level 4 Switch - Auto			
	13	Load Bus 1 Load Shed Level 4 Switch - Manual Add			
	14	Load Bus 1 Load Shed Level 4 Switch - Manual Shed			
	15	Spare			
24			401224	401264	Integer
	Bit	BIT DECRPTION			
	0	Load Bus 1 Load Shed Level 5 Switch - Auto			
	1	Load Bus 1 Load Shed Level 5 Switch - Manual Add			
	2	Load Bus 1 Load Shed Level 5 Switch - Manual Shed			
	3	Load Bus 1 Load Shed Level 6 Switch - Auto			
	4	Load Bus 1 Load Shed Level 6 Switch - Manual Add			
	5	Load Bus 1 Load Shed Level 6 Switch - Manual Shed			
	6	Load Bus 1 Load Shed Level 7 Switch - Auto			
	7	Load Bus 1 Load Shed Level 7 Switch - Manual Add			
	8	Load Bus 1 Load Shed Level 7 Switch - Manual Shed			
	9	Load Bus 1 Load Shed Level 8 Switch - Auto			
	10	Load Bus 1 Load Shed Level 8 Switch - Manual Add			
	11	Load Bus 1 Load Shed Level 8 Switch - Manual Shed			
	12	Load Bus 1 Load Shed Level 9 Switch - Auto			
	13	Load Bus 1 Load Shed Level 9 Switch - Manual Add			
	14	Load Bus 1 Load Shed Level 9 Switch - Manual Shed			
	15	Spare			
25			401225	401265	Integer

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Global Word	Description	PLC VARIABLE DECLARATION	Global Data Address AP1	Global Data Address AP2	Data Type
	Bit	BIT DECRPTION			
	0	Load Bus 2 Non Ess Level Switch - Auto			
	1	Load Bus 2 Non Ess Level Switch - Manual Add			
	2	Load Bus 2 Non Ess Level Switch - Manual Shed			
	3	Load Bus 2 Load Shed Level 1 Switch - Auto			
	4	Load Bus 2 Load Shed Level 1 Switch - Manual Add			
	5	Load Bus 2 Load Shed Level 1 Switch - Manual Shed			
	6	Load Bus 2 Load Shed Level 2 Switch - Auto			
	7	Load Bus 2 Load Shed Level 2 Switch - Manual Add			
	8	Load Bus 2 Load Shed Level 2 Switch - Manual Shed			
	9	Load Bus 2 Load Shed Level 3 Switch - Auto			
	10	Load Bus 2 Load Shed Level 3 Switch - Manual Add			
	11	Load Bus 2 Load Shed Level 3 Switch - Manual Shed			
	12	Load Bus 2 Load Shed Level 4 Switch - Auto			
	13	Load Bus 2 Load Shed Level 4 Switch - Manual Add			
	14	Load Bus 2 Load Shed Level 4 Switch - Manual Shed			
	15	Spare			
26			401226	401266	Integer
	Bit	BIT DECRPTION			
	0	Load Bus 2 Load Shed Level 5 Switch - Auto			
	1	Load Bus 2 Load Shed Level 5 Switch - Manual Add			
	2	Load Bus 2 Load Shed Level 5 Switch - Manual Shed			
	3	Load Bus 2 Load Shed Level 6 Switch - Auto			
	4	Load Bus 2 Load Shed Level 6 Switch - Manual Add			
	5	Load Bus 2 Load Shed Level 6 Switch - Manual Shed			
	6	Load Bus 2 Load Shed Level 7 Switch - Auto			
	7	Load Bus 2 Load Shed Level 7 Switch - Manual Add			
	8	Load Bus 2 Load Shed Level 7 Switch - Manual Shed			
	9	Load Bus 2 Load Shed Level 8 Switch - Auto			
	10	Load Bus 2 Load Shed Level 8 Switch - Manual Add			
	11	Load Bus 2 Load Shed Level 8 Switch - Manual Shed			
	12	Load Bus 2 Load Shed Level 9 Switch - Auto			
	13	Load Bus 2 Load Shed Level 9 Switch - Manual Add			
	14	Load Bus 2 Load Shed Level 9 Switch - Manual Shed			
	15	Spare			
27			401227	401267	Integer
	Bit	BIT DECRPTION			
	0	Load Bus 1 Load Shed Level 10 Switch - Auto			
	1	Load Bus 1 Load Shed Level 10 Switch - Manual Add			
	2	Load Bus 1 Load Shed Level 10 Switch - Manual Shed			
	3	Load Bus 2 Load Shed Level 10 Switch - Auto			
	4	Load Bus 2 Load Shed Level 10 Switch - Manual Add			
	5	Load Bus 2 Load Shed Level 10 Switch - Manual Shed			
	6	Spare			
	7	Spare			
	8	Spare			
	9	Spare			
	10	Spare			
	11	Spare			
	12	Spare			
	13	Spare			
	14	Spare			
	15	Spare			
28	System Warm Up Timer	AP1_sysWARM	401228	401268	Integer
29	Emergency Exit Timer - N1	EMERexitN1time	401229	401269	Integer
30	Emergency Exit Timer - N2	EMERexitN2time	401230	401270	Integer
31			401231	401271	Integer
32			401232	401272	Integer