FP4000 Control

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
System ID	1032	Vendor Name	32	ASCII	no-units		
	1064	Model Name	32	ASCII	no-units		
	1096	Display Name	32	ASCII	no-units		
	1128	Device Type	32	ASCII	no-units		
	1605	Field Replaceable Unit	1	UINT16	no-units		
	18172	Energy Concentrator Configuration	125	ASCII	no-units		
Energy Concentrator Parameters	7220	Demand Forward Watts	2	FLOAT	watts		
	7262	Demand Reverse Watts	2	FLOAT	watts		
	7222	Peak Demand Forward Watts	2	FLOAT	watts		
	7264	Peak Demand Reverse Watts	2	FLOAT	watts		
	7303	Demand Lagging VARs	2	FLOAT	volt-amperes-reactive		
	7345	Demand Leading VARs	2	FLOAT	volt-amperes-reactive		
	7305	Peak Demand Lagging VARs	2	FLOAT	volt-amperes-reactive		
	7347	Peak Demand Leading VARs	2	FLOAT	volt-amperes-reactive		
Status	3048	Device Online Status	1	UINT16	no-units		Offline(3);Online(4)
	3000	Status	1	UINT16	no-units		Unknown(0);Open(1);Closed(2);Tripped(3);Alarmed(4);On(5);Off(6);Ready(7);Start(8);Run(9);Stop(10);Lockout(11);Pickup(13)
	3001	Status Reason	1	UINT16	no-units		INCOM 301 Reason Code

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	3115	Status Secondary	1	UINT16	no-units		Unknown(0);Not Used(1);Program Mode(2);Test Mode(3);Disabled(4);Disarmed(5);Operation Fail(6)
	3054	Breaker History Accumulated Interrupted IA	1	UINT16	no-units		
	3055	Breaker History Accumulated Interrupted IB	1	UINT16	no-units		
	3056	Breaker History Accumulated Interrupted IC	1	UINT16	no-units		
	3058	Breaker History Number of Breaker Operations	1	UINT16	no-units		
	3083	Number IOC Trips	1	UINT16	no-units		
	3084	Number Operating Hours	1	UINT16	hours		
	3085	Number Times Powered Up	1	UINT16	no-units		
	3086	Number TOC Trips	1	UINT16	no-units		
	3088	Number Unbalance Trips	1	UINT16	no-units		
	3089	Number Voltage Trips	1	UINT16	no-units		
	3109	Relay Healthy	1	UINT16	no-units		
	3121	Total History Accumulated Interrupted IA	1	UINT16	no-units		
	3122	Total History Accumulated Interrupted IB	1	UINT16	no-units		
	3123	Total History Accumulated Interrupted IC	1	UINT16	no-units		
	3125	Total History Number of Breaker Operations	1	UINT16	no-units		
	3126	Total History Number of Power Trips	1	UINT16	no-units		
	3127	Total Number of Trips	1	UINT16	no-units		
	3132	Tripping Disarmed Flag	1	UINT16	no-units		
	3219	PhC_Dir_Fwd_Flag	1	UINT16	no-units		
	3220	PhB_Dir_Fwd_Flag	1	UINT16	no-units		
	3221	PhA_Dir_Fwd_Flag	1	UINT16	no-units		
	3222	Gnd_Dir_V0IX_Rev_Flag	1	UINT16	no-units		
	3223	Gnd_Dir_V0IX_Fwd_Flag	1	UINT16	no-units		
	3224	Gnd_Ix_Rev_Flag	1	UINT16	no-units		
	3225	Gnd_Ix_Fwd_Flag	1	UINT16	no-units		
	3226	Gnd_Dir_Ip_Rev_Flag	1	UINT16	no-units		
	3227	Gnd_Dir_Ip_Fwd_Flag	1	UINT16	no-units		
	3228	Gnd_Dir_V2_Rev_Flag	1	UINT16	no-units		
	3229	Gnd_Dir_V2_Fwd_Flag	1	UINT16	no-units		

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	3230	Gnd_Dir_V0_Rev_Flag	1	UINT16	no-units		
	3231	Gnd_Dir_V0_Fwd_Flag	1	UINT16	no-units		
	3232	Gnd_Ir_Dir_Rev_Flag	1	UINT16	no-units		
	3233	Gnd_Ir_Dir_Fwd_Flag	1	UINT16	no-units		
	3234	Sync_Block_Flag	1	UINT16	no-units		
	3235	Sync_Bypass_Flag	1	UINT16	no-units		
	3236	Sync_Ang_Diff_Flag	1	UINT16	no-units		
	3237	Sync_Volt_Diff_Flag	1	UINT16	no-units		
	3238	Sync_Slip_Diff_Flag	1	UINT16	no-units		
	3239	Cold_Load_Condition_Flag	1	UINT16	no-units		
	3240	Line_Voltage_Live_Flag	1	UINT16	no-units		
	3241	Bus_Voltage_Live_Flag	1	UINT16	no-units		
	3242	Slip_Freq_Alarm_Flag	1	UINT16	no-units		
	3243	Sync_Fail_Flag	1	UINT16	no-units		
	3244	In_Sync_Flag	1	UINT16	no-units		
	13454	Breaker Position	1	UINT16	no-units		
Meters	4002	Vab	2	FLOAT	volts		
	4004	Vbc	2	FLOAT	volts		
	4006	Vca	2	FLOAT	volts		
	4008	V(L-L) Average	2	FLOAT	volts		
	4010	Van	2	FLOAT	volts		
	4012	Vbn	2	FLOAT	volts		
	4014	Vcn	2	FLOAT	volts		
	4016	V(L-N) Average	2	FLOAT	volts		
	4483	Percent Voltage Unbalance	2	FLOAT	percent		
	4509	3V0 Voltage Magnitude	2	FLOAT	volts		
	4511	3V0 Voltage Angle	2	FLOAT	degrees-phase		
	4513	V1 Voltage Magnitude	2	FLOAT	volts		
	4515	V1 Voltage Angle	2	FLOAT	degrees-phase		
	4517	V2 Voltage Magnitude	2	FLOAT	volts		

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	4519	V2 Voltage Angle	2	FLOAT	degrees-phase		
	5002	Ia	2	FLOAT	amperes		
	5004	Ib	2	FLOAT	amperes		
	5006	Ic	2	FLOAT	amperes		
	5008	Ig	2	FLOAT	amperes		
	5010	In	2	FLOAT	amperes		
	5012	Iavg	2	FLOAT	amperes		
	5014	Peak Demand Ia	2	FLOAT	amperes		
	5016	Peak Demand Ib	2	FLOAT	amperes		
	5018	Peak Demand Ic	2	FLOAT	amperes		
	5142	Phase Current Unbalance	2	FLOAT	percent		
	5250	Demand Ia	2	FLOAT	amperes		
	5252	Demand Ib	2	FLOAT	amperes		
	5254	Demand Ic	2	FLOAT	amperes		
	5302	I(R)	2	FLOAT	amperes		
	5308	I(Fourth CT)	2	FLOAT	amperes		
	5422	3I0 Current Magnitude	2	FLOAT	amperes		
	5424	3I0 Current Angle	2	FLOAT	degrees-phase		
	5426	I1 Current Magnitude	2	FLOAT	amperes		
	5428	I1 Current Angle	2	FLOAT	degrees-phase		
	5430	I2 Current Magnitude	2	FLOAT	amperes		
	5432	I2 Current Angle	2	FLOAT	degrees-phase		
	6006	Real Power	2	FLOAT	watts		
	6070	Apparent Power	2	FLOAT	volt-amperes		
	6134	Reactive Power	2	FLOAT	volt-amperes-reactive		
	6218	PF Displacement	2	FLOAT	power-factor		
	6220	PF Apparent	2	FLOAT	power-factor		
	6180	K-Factor	2	FLOAT	no-units		
	6182	THD Factor	2	FLOAT	no-units		

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	7004	Forward Real Energy	2	FLOAT	watt-hours		
	7006	Reverse Real Energy	2	FLOAT	watt-hours		
	7008	Net Real Energy	2	FLOAT	watt-hours		
	7010	Leading Reactive Energy	2	FLOAT	volt-ampere-reactive-hours		
	7012	Lagging Reactive Energy	2	FLOAT	volt-ampere-reactive-hours		
	7014	Net Reactive Energy	2	FLOAT	volt-ampere-reactive-hours		
	7016	Apparent Energy	2	FLOAT	volt-ampere-hours		
	7023	Demand Watts	2	FLOAT	watts		
	7029	Demand VARs	2	FLOAT	volt-amperes-reactive		
	7035	Demand VAs	2	FLOAT	volt-amperes		
	7040	Peak Demand Watts	2	FLOAT	watts		
	7042	Time Peak Demand Watts	3	TIME	no-units		
	7045	Peak Demand VARs	2	FLOAT	volt-amperes-reactive		
	7047	Time Peak Demand VARs	3	TIME	no-units		
	7050	Peak Demand VAs	2	FLOAT	volt-amperes		
	7052	Time Peak Demand VAs	3	TIME	no-units		
	7628	Total Reactive Energy	2	FLOAT	volt-ampere-reactive-hours		
	7679	Total Real Energy	2	FLOAT	watt-hours		
	9436	Percent THD Ia	2	FLOAT	percent		
	9438	Percent THD Ib	2	FLOAT	percent		
	9440	Percent THD Ic	2	FLOAT	percent		
	8148	Percent THD Vab	2	FLOAT	percent		
	8150	Percent THD Vbc	2	FLOAT	percent		

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	8152	Percent THD Vca	2	FLOAT	percent		
	8154	Percent THD Van	2	FLOAT	percent		
	8156	Percent THD Vbn	2	FLOAT	percent		
	8158	Percent THD Vcn	2	FLOAT	percent		
	10248	Contact Input 1 Flag	1	UINT16	no-units		
	10249	Contact Input 2 Flag	1	UINT16	no-units		
	10250	Contact Input 3 Flag	1	UINT16	no-units		
	10251	Contact Input 4 Flag	1	UINT16	no-units		
	10252	Contact Input 5 Flag	1	UINT16	no-units		
	10253	Contact Input 6 Flag	1	UINT16	no-units		
	10254	Contact Input 7 Flag	1	UINT16	no-units		
	10255	Contact Input 8 Flag	1	UINT16	no-units		
	10256	Logic Timer 1	1	UINT16	no-units		
	10257	Logic Timer 2	1	UINT16	no-units		
	10258	Logic Timer 3	1	UINT16	no-units		
	10259	Logic Timer 4	1	UINT16	no-units		
	10260	Logic Timer 5	1	UINT16	no-units		
	10261	Logic Timer 6	1	UINT16	no-units		
	10264	Relay 3	1	UINT16	no-units		
	10265	Relay 4	1	UINT16	no-units		
	10266	Relay 5	1	UINT16	no-units		
	10268	Logic Gate 1	1	UINT16	no-units		
	10269	Logic Gate 2	1	UINT16	no-units		
	10270	Logic Gate 3	1	UINT16	no-units		
	10271	Logic Gate 4	1	UINT16	no-units		
	10272	Logic Gate 5	1	UINT16	no-units		
	10273	Logic Gate 6	1	UINT16	no-units		
	10297	Logic Latch 1	1	UINT16	no-units		
	10298	Logic Latch 2	1	UINT16	no-units		
	11000	Frequency	2	FLOAT	hertz		
	12432	Comm Logic State	1	UINT16	no-units		OFF(0);3(4);4(8);
Alarms	3136	Voltage THD Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13403	27-A1 Aux Vx Under Volt Flag	1	UINT16	no-units		False(0);True(1)

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	13404	27-A2 Aux Vx Under Volt Flag	1	UINT16	no-units		False(0);True(1)
	13405	27-M1 Main Vp Under Volt Flag	1	UINT16	no-units		False(0);True(1)
	13406	27-M2 Main Vp Under Volt Flag	1	UINT16	no-units		False(0);True(1)
	13410	46-1 Current Unbal Op Flag	1	UINT16	no-units		False(0);True(1)
	13411	46-2 Current Unbal Op Flag	1	UINT16	no-units		False(0);True(1)
	13412	47-1 Voltage Unbalance Op Flag	1	UINT16	no-units		False(0);True(1)
	13413	47-2 Voltage Unbalance Op Flag	1	UINT16	no-units		False(0);True(1)
	13414	50P-1 Phase IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13415	50P-2 Phase IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13416	50P-3 Phase IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13417	50R-1 Ir IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13418	50R-2 Ir IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13419	50R-3 Ir IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13420	50X-1 Ix IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13421	50X-2 Ix IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13422	50X-3 Ix IOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13424	51P Phase TOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13425	51R Ir TOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13426	51X Ix TOC Operation Flag	1	UINT16	no-units		False(0);True(1)
	13427	55A App Pwr Factor Op Flag	1	UINT16	no-units		False(0);True(1)
	13428	55D Displ Pwr Factor Op Flag	1	UINT16	no-units		False(0);True(1)
	13429	59-A1 Aux Vx Over Volt Flag	1	UINT16	no-units		False(0);True(1)
	13430	59-A2 Aux Vx Over Volt Flag	1	UINT16	no-units		False(0);True(1)
	13431	59-M1 Main Vp Over Volt Flag	1	UINT16	no-units		False(0);True(1)
	13432	59-M2 Main Vp Over Volt Flag	1	UINT16	no-units		False(0);True(1)
	13435	81O-1 Overfrequency Op Flag	1	UINT16	no-units		False(0);True(1)
	13436	81O-2 Overfrequency Op Flag	1	UINT16	no-units		False(0);True(1)
	13437	81U-1 Underfrequency Op Flag	1	UINT16	no-units		False(0);True(1)
	13438	81U-2 Underfrequency Op Flag	1	UINT16	no-units		False(0);True(1)
	13439	Accumulated Interrupted Current Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13444	Alarm LED Flag	1	UINT16	no-units		False(0);True(1)
	13446	Auxiliary LED Flag	1	UINT16	no-units		False(0);True(1)
	13452	Breaker Fail Op Flag	1	UINT16	no-units		False(0);True(1)
	13453	Breaker Operations Alarm Flag	1	UINT16	no-units		False(0);True(1)

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	13455	Breaker State Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13456	Breaker State Change of State Flag	1	UINT16	no-units		False(0);True(1)
	13458	Breaker State Fail Flag	1	UINT16	no-units		False(0);True(1)
	13459	Breaker State Lockout Flag	1	UINT16	no-units		False(0);True(1)
	13461	Breaker State Time Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13463	Current Demand Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13464	Current THD Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13471	Ground Trip LED Flag	1	UINT16	no-units		False(0);True(1)
	13495	Other Trip LED Flag	1	UINT16	no-units		False(0);True(1)
	13502	Phase Trip LED Flag	1	UINT16	no-units		False(0);True(1)
	13505	Pickup LED Flag	1	UINT16	no-units		False(0);True(1)
	13521	TRIP1 Monitor Active Flag	1	UINT16	no-units		False(0);True(1)
	13522	TRIP1 Monitor Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13523	TRIP1 Output Flag	1	UINT16	no-units		False(0);True(1)
	13524	TRIP2 Monitor Active Flag	1	UINT16	no-units		False(0);True(1)
	13525	TRIP2 Monitor Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13526	TRIP2 Output Flag	1	UINT16	no-units		False(0);True(1)
	13534	VA Power Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13535	VA Power Demand Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13536	Var Power Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13537	Var Power Demand Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13538	Watt Power Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13539	Watt Power Demand Alarm Flag	1	UINT16	no-units		False(0);True(1)
	13541	Zone Interlock Gnd Input Flag	1	UINT16	no-units		False(0);True(1)
	13542	Zone Interlock Gnd Op Flag	1	UINT16	no-units		False(0);True(1)
	13543	Zone Interlock Output Flag	1	UINT16	no-units		False(0);True(1)
	13544	Zone Interlock Phase Op Flag	1	UINT16	no-units		False(0);True(1)
	13545	Zone Interlock Phase Input Flag	1	UINT16	no-units		False(0);True(1)
	14000	Zone Interlock Ground Output Flag	1	UINT16	no-units		False(0);True(1)
	14001	Zone Interlock Phase Output Flag	1	UINT16	no-units		False(0);True(1)
	14002	Close Breaker Request	1	UINT16	no-units		False(0);True(1)
	14003	Open Breaker Request	1	UINT16	no-units		False(0);True(1)
	13557	Unknown	1	UINT16	no-units		False(0);True(1)
	13558	External Event	1	UINT16	no-units		False(0);True(1)

Category	Modbus TCP Register	Description	Register Count	Type ID	Units	Writable	Possible Values
	13601	Phase Instantaneous Overcurrent	1	UINT16	no-units		False(0);True(1)
	13602	Ground Instantaneous Overcurrent	1	UINT16	no-units		False(0);True(1)
	13603	Neutral Instantaneous Overcurrent	1	UINT16	no-units		False(0);True(1)
	13604	Residual Instantaneous Overcurrent	1	UINT16	no-units		False(0);True(1)
	13605	Phase Inverse Time Overcurrent	1	UINT16	no-units		False(0);True(1)
	13606	Ground Inverse Time Overcurrent	1	UINT16	no-units		False(0);True(1)
	13607	Neutral Inverse Time Overcurrent	1	UINT16	no-units		False(0);True(1)
	13608	Residual Inverse Time Overcurrent	1	UINT16	no-units		False(0);True(1)
	13629	Operations Count	1	UINT16	no-units		False(0);True(1)
	13630	Contact Maintenance	1	UINT16	no-units		False(0);True(1)
	13631	Communications	1	UINT16	no-units		False(0);True(1)
	13636	Programmable Logic	1	UINT16	no-units		False(0);True(1)
	13638	Diagnostic Failure #1	1	UINT16	no-units		False(0);True(1)
	13639	Low Battery	1	UINT16	no-units		False(0);True(1)
	13640	Multiple Reasons	1	UINT16	no-units		False(0);True(1)
	14021	Diagnostic Warning	1	UINT16	no-units		False(0);True(1)
	14022	Alarm Output	1	UINT16	no-units		False(0);True(1)
Controls	2200	Receive Date and Time	3	TIME	no-units		
	2203	Reset Alarm	1	BOOL	no-units	Yes	
	2204	Reset Trip	1	BOOL	no-units	Yes	
	2205	Reset Peak Demand Watts	1	BOOL	no-units	Yes	
	2206	Reset Energy	1	BOOL	no-units	Yes	
	2208	Reset Demand Watts Window	1	BOOL	no-units	Yes	
	2209	Snapshot	1	BOOL	no-units	Yes	
	2210	Reset Peak Demand Currents	1	BOOL	no-units	Yes	
	2220	Open Request	1	BOOL	no-units	Yes	
	2221	Close Request	1	BOOL	no-units	Yes	
	2223	Capture Waveform	1	BOOL	no-units	Yes	
	2224	Reset INCOM Slave Interface Statistics	1	BOOL	no-units	Yes	
	2225	Reset Product Specific Statistics	1	BOOL	no-units	Yes	
	2226	Ack Energy Reset	1	BOOL	no-units	Yes	