



# IPS controller 4000

Integrated pumping  
system for variable  
primary application

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## Data points

File No: 90.9751  
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Supersedes: NEW  
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**BAS DATA POINTS - MODBUS**

**BUILDING AUTOMATION SYSTEM - MODBUS RTU, MODBUS TCP/IP**

IPS 4000 COMMUNICATION INTERFACE VER-2.1.0 - PRIMARY

MODBUS ADDRESS	SIGNAL TYPE	READ/ WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
10002	Digital	R	General Alarm	Ok	Alarm	Toggle
10003	Digital	R	Pump Alarm	Ok	Alarm	Toggle
10004	Digital	R	Sensor Alarm	Ok	Alarm	Toggle
10005	Digital	R	Pump 1 in Hand mode	Ok	Hand	Toggle
10006	Digital	R	Pump 1 in Off mode	Ok	Off	Toggle
10007	Digital	R	Pump 1 in Auto mode	Ok	Auto	Toggle
10008	Digital	R	Pump 2 in Hand mode	Ok	Hand	Toggle
10009	Digital	R	Pump 2 in Off mode	Ok	Off	Toggle
10010	Digital	R	Pump 2 in Auto mode	Ok	Auto	Toggle
10011	Digital	R	Pump 3 in Hand mode	Ok	Hand	Toggle
10012	Digital	R	Pump 3 in Off mode	Ok	Off	Toggle
10013	Digital	R	Pump 3 in Auto mode	Ok	Auto	Toggle
10014	Digital	R	Pump 4 in Hand mode	Ok	Hand	Toggle
10015	Digital	R	Pump 4 in Off mode	Ok	Off	Toggle
10016	Digital	R	Pump 4 in Auto mode	Ok	Auto	Toggle
10017	Digital	R	Pump 5 in Hand mode	Ok	Hand	Toggle
10018	Digital	R	Pump 5 in Off mode	Ok	Off	Toggle
10019	Digital	R	Pump 5 in Auto mode	Ok	Auto	Toggle
10020	Digital	R	Pump 6 in Hand mode	Ok	Hand	Toggle
10021	Digital	R	Pump 6 in Off mode	Ok	Off	Toggle
10022	Digital	R	Pump 6 in Auto mode	Ok	Auto	Toggle
10023	Digital	R	Pump 7 in Hand mode	Ok	Hand	Toggle
10024	Digital	R	Pump 7 in Off mode	Ok	Off	Toggle
10025	Digital	R	Pump 7 in Auto mode	Ok	Auto	Toggle
10026	Digital	R	Pump 8 in Hand mode	Ok	Hand	Toggle
10027	Digital	R	Pump 8 in Off mode	Ok	Off	Toggle
10028	Digital	R	Pump 8 in Auto mode	Ok	Auto	Toggle
10029	Digital	R	Reserved			
10030	Digital	R	Reserved			
10031	Digital	R	Reserved			
10032	Digital	R	Reserved			
10033	Digital	R	Reserved			
10034	Digital	R	Reserved			
10035	Digital	R	Pump 1 Run Feedback	Stopped	Running	Toggle
10036	Digital	R	Pump 2 Run Feedback	Stopped	Running	Toggle
10037	Digital	R	Pump 3 Run Feedback	Stopped	Running	Toggle
10038	Digital	R	Pump 4 Run Feedback	Stopped	Running	Toggle
10039	Digital	R	Pump 5 Run Feedback	Stopped	Running	Toggle
10040	Digital	R	Pump 6 Run Feedback	Stopped	Running	Toggle
10041	Digital	R	Pump 7 Run Feedback	Stopped	Running	Toggle
10042	Digital	R	Pump 8 Run Feedback	Stopped	Running	Toggle
10043	Digital	R	Reserved			
10044	Digital	R	Reserved			
10045	Digital	R	Temperature Transmitter Failed	Ok	Alarm	Toggle

MODBUS ADDRESS	SIGNAL TYPE	READ/ WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
10046	Digital	R	Reserved			
10047	Digital	R	Reserved			
10048	Digital	R	All Zones DP/Temperature Transmitters Failed	Ok	Alarm	Toggle
10049	Digital	R	Zone 1 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10050	Digital	R	Zone 2 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10051	Digital	R	Zone 3 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10052	Digital	R	Zone 4 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10053	Digital	R	Zone 5 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10054	Digital	R	Zone 6 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10055	Digital	R	Zone 7 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10056	Digital	R	Zone 8 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10057	Digital	R	Zone 9 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10058	Digital	R	Zone 10 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10059	Digital	R	Zone 11 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10060	Digital	R	Zone 12 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10061	Digital	R	Zone 13 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10062	Digital	R	Zone 14 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10063	Digital	R	Zone 15 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10064	Digital	R	Zone 16 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
10065	Digital	R	Reserved			
10066	Digital	R	Reserved			
10067	Digital	R	Reserved			
10068	Digital	R	Reserved			
10069	Digital	R	Chiller/Boiler Min Flow Alarm	Ok	Alarm	Toggle
10070	Digital	R	Chiller/Boiler Max Flow Alarm	Ok	Alarm	Toggle
10071	Digital	R	Pump 1 Alarm	Ok	Alarm	Toggle
10072	Digital	R	Pump 2 Alarm	Ok	Alarm	Toggle
10073	Digital	R	Pump 3 Alarm	Ok	Alarm	Toggle
10074	Digital	R	Pump 4 Alarm	Ok	Alarm	Toggle
10075	Digital	R	Pump 5 Alarm	Ok	Alarm	Toggle
10076	Digital	R	Pump 6 Alarm	Ok	Alarm	Toggle
10077	Digital	R	Pump 7 Alarm	Ok	Alarm	Toggle
10078	Digital	R	Pump 8 Alarm	Ok	Alarm	Toggle
10079	Digital	R	Reserved			
10080	Digital	R	Reserved			
10081	Digital	R	Pump 1 Run feedback Alarm	Ok	Alarm	Toggle
10082	Digital	R	Pump 2 Run feedback Alarm	Ok	Alarm	Toggle
10083	Digital	R	Pump 3 Run feedback Alarm	Ok	Alarm	Toggle
10084	Digital	R	Pump 4 Run feedback Alarm	Ok	Alarm	Toggle
10085	Digital	R	Pump 5 Run feedback Alarm	Ok	Alarm	Toggle
10086	Digital	R	Pump 6 Run feedback Alarm	Ok	Alarm	Toggle
10087	Digital	R	Pump 7 Run feedback Alarm	Ok	Alarm	Toggle
10088	Digital	R	Pump 8 Run feedback Alarm	Ok	Alarm	Toggle
10089	Digital	R	Reserved			
10090	Digital	R	Reserved			
10091	Digital	R	Pump 1 Drive Fault	Ok	Alarm	Toggle
10092	Digital	R	Pump 2 Drive Fault	Ok	Alarm	Toggle
10093	Digital	R	Pump 3 Drive Fault	Ok	Alarm	Toggle
10094	Digital	R	Pump 4 Drive Fault	Ok	Alarm	Toggle
10095	Digital	R	Pump 5 Drive Fault	Ok	Alarm	Toggle

MODBUS ADDRESS	SIGNAL TYPE	READ/ WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
10096	Digital	R	Pump 6 Drive Fault	Ok	Alarm	Toggle
10097	Digital	R	Pump 7 Drive Fault	Ok	Alarm	Toggle
10098	Digital	R	Pump 8 Drive Fault	Ok	Alarm	Toggle
10099	Digital	R	Reserved			
10100	Digital	R	Reserved			
10109	Digital	R	Reserved			
10110	Digital	R	Reserved			
10111	Digital	R	IPS On Status	Off	On	Toggle
10112	Digital	R	PLC Board High Temperature Alarm	Ok	Alarm	Toggle
10113	Digital	R	Reserved			
10114	Digital	R	Reserved			
10115	Digital	R	Reserved			
10116	Digital	R	All Chiller/Boiler DP Failed	Ok	Alarm	Toggle
10117	Digital	R	Chiller/Boiler DP 1 Sensor Fail	Ok	Alarm	Toggle
10118	Digital	R	Chiller/Boiler DP 2 Sensor Fail	Ok	Alarm	Toggle
10119	Digital	R	Chiller/Boiler DP 3 Sensor Fail	Ok	Alarm	Toggle
10120	Digital	R	Chiller/Boiler DP 4 Sensor Fail	Ok	Alarm	Toggle
10121	Digital	R	Chiller/Boiler DP 5 Sensor Fail	Ok	Alarm	Toggle
10122	Digital	R	Chiller/Boiler DP 6 Sensor Fail	Ok	Alarm	Toggle
10123	Digital	R	Chiller/Boiler DP 7 Sensor Fail	Ok	Alarm	Toggle
10124	Digital	R	Chiller/Boiler DP 8 Sensor Fail	Ok	Alarm	Toggle
10125	Digital	R	Reserved			
10126	Digital	R	Reserved			
10127	Digital	R	Min Chiller/Boiler DP Alarm	Ok	Alarm	Toggle
10128	Digital	R	Max Chiller/Boiler DP Alarm	Ok	Alarm	Toggle
10129	Digital	R	Chiller/Boiler DP1 Above Maximum	Ok	Warning	Toggle
10130	Digital	R	Chiller/Boiler DP2 Above Maximum	Ok	Warning	Toggle
10131	Digital	R	Chiller/Boiler DP3 Above Maximum	Ok	Warning	Toggle
10132	Digital	R	Chiller/Boiler DP4 Above Maximum	Ok	Warning	Toggle
10133	Digital	R	Chiller/Boiler DP5 Above Maximum	Ok	Warning	Toggle
10134	Digital	R	Chiller/Boiler DP6 Above Maximum	Ok	Warning	Toggle
10135	Digital	R	Chiller/Boiler DP7 Above Maximum	Ok	Warning	Toggle
10136	Digital	R	Chiller/Boiler DP8 Above Maximum	Ok	Warning	Toggle
10137	Digital	R	Reserved			
10138	Digital	R	Reserved			
10139	Digital	R	Reserved			
10140	Digital	R	Reserved			
10141	Digital	R	Reserved			
10142	Digital	R	Reserved			

MODBUS ADDRESS	SIGNAL TYPE	READ/ WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
2	Digital	R/W	Remote Start	Stop	Start	Toggle
3	Digital	R/W	Set Pump 1 Hand		Hand	Momentary
4	Digital	R/W	Set Pump 1 Off		Off	Momentary
5	Digital	R/W	Set Pump 1 Auto		Auto	Momentary
6	Digital	R/W	Set Pump 2 Hand		Hand	Momentary
7	Digital	R/W	Set Pump 2 Off		Off	Momentary
8	Digital	R/W	Set Pump 2 Auto		Auto	Momentary
9	Digital	R/W	Set Pump 3 Hand		Hand	Momentary
10	Digital	R/W	Set Pump 3 Off		Off	Momentary
11	Digital	R/W	Set Pump 3 Auto		Auto	Momentary
12	Digital	R/W	Set Pump 4 Hand		Hand	Momentary
13	Digital	R/W	Set Pump 4 Off		Off	Momentary
14	Digital	R/W	Set Pump 4 Auto		Auto	Momentary
15	Digital	R/W	Set Pump 5 Hand		Hand	Momentary
16	Digital	R/W	Set Pump 5 Off		Off	Momentary
17	Digital	R/W	Set Pump 5 Auto		Auto	Momentary
18	Digital	R/W	Set Pump 6 Hand		Hand	Momentary
19	Digital	R/W	Set Pump 6 Off		Off	Momentary
20	Digital	R/W	Set Pump 6 Auto		Auto	Momentary
21	Digital	R/W	Set Pump 7 Hand		Hand	Momentary
22	Digital	R/W	Set Pump 7 Off		Off	Momentary
23	Digital	R/W	Set Pump 7 Auto		Auto	Momentary
24	Digital	R/W	Set Pump 8 Hand		Hand	Momentary
25	Digital	R/W	Set Pump 8 Off		Off	Momentary
26	Digital	R/W	Set Pump 8 Auto		Auto	Momentary
27	Digital	R/W	Reserved			
28	Digital	R/W	Reserved			
29	Digital	R/W	Reserved			
30	Digital	R/W	Reserved			
31	Digital	R/W	Reserved			
32	Digital	R/W	Reserved			
33	Digital	R/W	Alarm Reset		Reset	Toggle
34	Digital	R/W	Chiller/Boiler 1 Enabled	Disabled	Enabled	Toggle
35	Digital	R/W	Chiller/Boiler 2 Enabled	Disabled	Enabled	Toggle
36	Digital	R/W	Chiller/Boiler 3 Enabled	Disabled	Enabled	Toggle
37	Digital	R/W	Chiller/Boiler 4 Enabled	Disabled	Enabled	Toggle
38	Digital	R/W	Chiller/Boiler 5 Enabled	Disabled	Enabled	Toggle
39	Digital	R/W	Chiller/Boiler 6 Enabled	Disabled	Enabled	Toggle
40	Digital	R/W	Chiller/Boiler 7 Enabled	Disabled	Enabled	Toggle
41	Digital	R/W	Chiller/Boiler 8 Enabled	Disabled	Enabled	Toggle
42	Digital	R/W	Reserved			
43	Digital	R/W	Reserved			
44	Digital	R/W	Chiller/Boiler_BAS_Enable	Disabled	Enabled	Toggle
45	Digital	R/W	Reserved			
46	Digital	R/W	Reserved			
47	Digital	R/W	Reserved			
48	Digital	R/W	Reserved			

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MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
30003	Int	R	Active Zone	0 to 16	0 to 16	
30005	Real	R	Active Zone Error	-9999 to 10000	-999.9 to 999.9	
30007	Real	R	Active Zone PV	0 to 9999	0.0 to 999.9	psi, ft, kPa, m, °F or °C
30009	Real	R	Active Zone SP			
30011	Real	R	Zone 1 Value			
30013	Real	R	Zone 2 Value			
30015	Real	R	Zone 3 Value			
30017	Real	R	Zone 4 Value			
30019	Real	R	Zone 5 Value			
30021	Real	R	Zone 6 Value			
30023	Real	R	Zone 7 Value			
30025	Real	R	Zone 8 Value			
30027	Real	R	Zone 9 Value			
30029	Real	R	Zone 10 Value			
30031	Real	R	Zone 11 Value			
30033	Real	R	Zone 12 Value			
30035	Real	R	Zone 13 Value			
30037	Real	R	Zone 14 Value			
30039	Real	R	Zone 15 Value			
30041	Real	R	Zone 16 Value			
30043	Real	R	Reserved			
30045	Real	R	Reserved			
30047	Real	R	Reserved			
30049	Real	R	Reserved			
30051	Real	R	Zone 1 Error	-9999 to 9999	-999.9 to 999.9	psi, ft, kPa, m, °F or °C
30053	Real	R	Zone 2 Error			
30055	Real	R	Zone 3 Error			
30057	Real	R	Zone 4 Error			
30059	Real	R	Zone 5 Error			
30061	Real	R	Zone 6 Error			
30063	Real	R	Zone 7 Error			
30065	Real	R	Zone 8 Error			
30067	Real	R	Zone 9 Error			
30069	Real	R	Zone 10 Error			
30071	Real	R	Zone 11 Error			
30073	Real	R	Zone 12 Error			
30075	Real	R	Zone 13 Error			
30077	Real	R	Zone 14 Error			
30079	Real	R	Zone 15 Error			
30081	Real	R	Zone 16 Error			
30083	Real	R	Reserved			
30085	Real	R	Reserved			
30087	Real	R	Reserved			
30089	Real	R	Reserved			



MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
30091	Real	R	Pump 1 Speed	0 to 1000	0.0 to 100.0	%
30093	Real	R	Pump 2 Speed			
30095	Real	R	Pump 3 Speed			
30097	Real	R	Pump 4 Speed			
30099	Real	R	Pump 5 Speed			
30101	Real	R	Pump 6 Speed			
30103	Real	R	Pump 7 Speed			
30105	Real	R	Pump 8 Speed			
30107	Real	R	Reserved			
30109	Real	R	Reserved			
30111	Real	R	Temperature Sensor PV	0 to 2120	0.0 to 212.0	°F or °c
30113	Real	R	Pump 1 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30115	Real	R	Pump 1 Drive Volt AC			VAC
30117	Real	R	Pump 1 Drive Power			kW
30119	Real	R	Pump 1 Drive KWH			KWH
30121	Real	R	Pump 1 Drive RPM			RPM
30123	Real	R	Pump 1 Drive Run Hours			Hours
30125	Int	R	Pump 1 Actual Run Hours			
30127	Int	R	Pump 1 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30129	Real	R	Pump 2 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30131	Real	R	Pump 2 Drive Volt AC			VAC
30133	Real	R	Pump 2 Drive Power			kW
30135	Real	R	Pump 2 Drive KWH			KWH
30137	Real	R	Pump 2 Drive RPM			RPM
30139	Real	R	Pump 2 Drive Run Hours			Hours
30141	Int	R	Pump 2 Actual Run Hours			
30143	Int	R	Pump 2 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30145	Real	R	Pump 3 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30147	Real	R	Pump 3 Drive Volt AC			VAC
30149	Real	R	Pump 3 Drive Power			kW
30151	Real	R	Pump 3 Drive KWH			KWH
30153	Real	R	Pump 3 Drive RPM			RPM
30155	Real	R	Pump 3 Drive Run Hours			Hours
30157	Int	R	Pump 3 Actual Run Hours			
30159	Int	R	Pump 3 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30161	Real	R	Pump 4 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30163	Real	R	Pump 4 Drive Volt AC			VAC
30165	Real	R	Pump 4 Drive Power			kW
30167	Real	R	Pump 4 Drive KWH			KWH
30169	Real	R	Pump 4 Drive RPM			RPM
30171	Real	R	Pump 4 Drive Run Hours			Hours
30173	Int	R	Pump 4 Actual Run Hours			
30175	Int	R	Pump 4 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30177	Real	R	Reserved			
30179	Real	R	Pump 5 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30181	Real	R	Pump 5 Drive Volt AC			VAC
30183	Real	R	Pump 5 Drive Power			kW
30185	Real	R	Pump 5 Drive KWH			KWH
30187	Real	R	Pump 5 Drive RPM			RPM
30189	Real	R	Pump 5 Drive Run Hours			Hours
30191	Int	R	Pump 5 Actual Run Hours			

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
30193	Int	R	Pump 5 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30195	Real	R	Pump 6 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30197	Real	R	Pump 6 Drive Volt AC			VAC
30199	Real	R	Pump 6 Drive Power			kW
30201	Real	R	Pump 6 Drive KWH			KWH
30203	Real	R	Pump 6 Drive RPM			RPM
30205	Real	R	Pump 6 Drive Run Hours			Hours
30207	Int	R	Pump 6 Actual Run Hours			
30209	Int	R	Pump 6 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30211	Real	R	Pump 7 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30213	Real	R	Pump 7 Drive Volt AC			VAC
30215	Real	R	Pump 7 Drive Power			kW
30217	Real	R	Pump 7 Drive KWH			KWH
30219	Real	R	Pump 7 Drive RPM			RPM
30221	Real	R	Pump 7 Drive Run Hours			Hours
30223	Int	R	Pump 7 Actual Run Hours			
30225	Int	R	Pump 7 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30227	Real	R	Pump 8 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
30229	Real	R	Pump 8 Drive Volt AC			VAC
30231	Real	R	Pump 8 Drive Power			kW
30233	Real	R	Pump 8 Drive KWH			KWH
30235	Real	R	Pump 8 Drive RPM			RPM
30237	Real	R	Pump 8 Drive Run Hours			Hours
30239	Int	R	Pump 8 Actual Run Hours			
30241	Int	R	Pump 8 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
30243	Real	R	Reserved			
30245	Real	R	Reserved			
30247	Real	R	Reserved			
30249	Real	R	Reserved			
30251	Real	R	Reserved			
30253	Real	R	Reserved			
30255	Real	R	Reserved			
30257	Real	R	Reserved			
30259	Real	R	Reserved			
30261	Real	R	Reserved			
30263	Real	R	Reserved			
30265	Real	R	Reserved			
30267	Real	R	Reserved			
30269	Real	R	Reserved			
30271	Real	R	Reserved			
30273	Real	R	Reserved			
30275	Real	R	System Head	0 to 32767	0.0 to 3276.7	ft, psi, kPa
30277	Real	R	Pump 1 Head			
30279	Real	R	Pump 2 Head			
30281	Real	R	Pump 3 Head			
30283	Real	R	Pump 4 Head			
30285	Real	R	Pump 5 Head			
30287	Real	R	Pump 6 Head			
30289	Real	R	Pump 7 Head			
30291	Real	R	Pump 8 Head			

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
30293	Real	R	Reserved			
30295	Real	R	Reserved			
30297	Real	R	System Flow			
30299	Real	R	Pump 1 Flow	0 to 32767	0.0 to 3276.7	GPM, L/s, m3/h
30301	Real	R	Pump 2 Flow			
30303	Real	R	Pump 3 Flow			
30305	Real	R	Pump 4 Flow			
30307	Real	R	Pump 5 Flow			
30309	Real	R	Pump 6 Flow			
30311	Real	R	Pump 7 Flow			
30313	Real	R	Pump 8 Flow			
30315	Real	R	Reserved			
30317	Real	R	Reserved			
30319	Real	R	Reserved			
30321	Real	R	Bypass Valve Position	0 to 100.0	0 to 100.0	%
30323	Int	R	Number of Pumps Running in Auto	1 to 8		
30325	Int	R	Lead Pump ID	1 to 8		
30327	Int	R	Number Of Pumps Configured	1 to 8		
30329	Int	R	Number Of Chillers/Boilers Configured	1 to 8		
30331	Real	R	Lead Pump Switch Time	0-32767		Hr/Day
30333	Real	R	Reserved			
30335	Real	R	Reserved			
30337	Int	R	Active Chiller/Boiler DP	1 to 8		
30339	Real	R	Active Chiller/Boiler DP Error	-9999 to 9999	-999.9 to 999.9	
30341	Real	R	Active Chiller/Boiler DP PV	0 to 9999	0.0 to 999.9	psi, ft, kPa, m
30343	Real	R	Active Chiller/Boiler DP SP			
30345	Real	R	Chiller/Boiler DP 1 Value			
30347	Real	R	Chiller/Boiler DP 2 Value			
30349	Real	R	Chiller/Boiler DP 3 Value			
30351	Real	R	Chiller/Boiler DP 4 Value			
30353	Real	R	Chiller/Boiler DP 5 Value			
30355	Real	R	Chiller/Boiler DP 6 Value			
30357	Real	R	Chiller/Boiler DP 7 Value			
30359	Real	R	Chiller/Boiler DP 8 Value			
30361	Real	R	Reserved			
30363	Real	R	Reserved			
30365	Real	R	Chiller/Boiler DP 1 Error	-9999 to 9999	-999.9 to 999.9	psi, ft, kPa, m
30367	Real	R	Chiller/Boiler DP 2 Error			
30369	Real	R	Chiller/Boiler DP 3 Error			
30371	Real	R	Chiller/Boiler DP 4 Error			
30373	Real	R	Chiller/Boiler DP 5 Error			
30375	Real	R	Chiller/Boiler DP 6 Error			
30377	Real	R	Chiller/Boiler DP 7 Error			
30379	Real	R	Chiller/Boiler DP 8 Error			
30381	Real	R	Reserved			
30383	Real	R	Reserved			

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
40003	Real	R/W	Zone 1 SP	0 to 9999	0.0 to 999.9	psi, ft, kPa, m, °F or °C
40005	Real	R/W	Zone 2 SP			
40007	Real	R/W	Zone 3 SP			
40009	Real	R/W	Zone 4 SP			
40011	Real	R/W	Zone 5 SP			
40013	Real	R/W	Zone 6 SP			
40015	Real	R/W	Zone 7 SP			
40017	Real	R/W	Zone 8 SP			
40019	Real	R/W	Zone 9 SP			
40021	Real	R/W	Zone 10 SP			
40023	Real	R/W	Zone 11 SP			
40025	Real	R/W	Zone 12 SP			
40027	Real	R/W	Zone 13 SP			
40029	Real	R/W	Zone 14 SP			
40031	Real	R/W	Zone 15 SP			
40033	Real	R/W	Zone 16 SP			
40035	Real	R/W	Reserved			
40037	Real	R/W	Reserved			
40039	Real	R/W	Reserved			
40041	Real	R/W	Reserved			
40043	Real	R/W	Pump 1 Hand Speed	0 to 100	0.0 to 100.0	%
40045	Real	R/W	Pump 2 Hand Speed			
40047	Real	R/W	Pump 3 Hand Speed			
40049	Real	R/W	Pump 4 Hand Speed			
40051	Real	R/W	Pump 5 Hand Speed			
40053	Real	R/W	Pump 6 Hand Speed			
40055	Real	R/W	Pump 7 Hand Speed			
40057	Real	R/W	Pump 8 Hand Speed			
40059	Real	R/W	Reserved			
40061	Real	R/W	Reserved			
40063	Real	R/W	Max Valve Opening	0 to 100	0.0 to 100.0	%
40065	Real	R/W	Design Flow	0 to 9999	0.0 to 999.9	GPM, L/s, m <sup>3</sup> /h
40067	Real	R/W	Design Head			ft, psi, kPa, m, bar
40069	Real	R/W	Zero Flow Head			GPM, L/s, m <sup>3</sup> /h
40071	Real	R/W	Flow BEP			ft, psi, kPa, m, bar
40073	Real	R/W	Head BEP			
40075	Real	R/W	Dead Band(K)	0-0.5		
40077	Real	R/W	Sensor Adjust	0 to 100%	0 to 100.0%	
40079	Real	R/W	Chiller/Boiler Min Flow	0 to 32767	0.0 to 32767.0	GPM, L/s, m <sup>3</sup> /h
40081	Real	R/W	Chiller/Boiler Max Flow			
40083	Real	R/W	Reserved			
40085	Real	R/W	Reserved			
40087	Real	R/W	Reserved			
40089	Real	R/W	Reserved			
40091	Real	R/W	Reserved			
40093	Real	R/W	Reserved			
40095	Real	R/W	Reserved			

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
40097	Real	R/W	BAS Zone 1 PV	0 to 9999	0.0 to 999.9	psi, ft, kPa, m, °F or °C
40099	Real	R/W	BAS Zone 2 PV			
40101	Real	R/W	BAS Zone 3 PV			
40103	Real	R/W	BAS Zone 4 PV			
40105	Real	R/W	BAS Zone 5 PV			
40107	Real	R/W	BAS Zone 6 PV			
40109	Real	R/W	BAS Zone 7 PV			
40111	Real	R/W	BAS Zone 8 PV			
40113	Real	R/W	BAS Zone 9 PV			
40115	Real	R/W	BAS Zone 10 PV			
40117	Real	R/W	BAS Zone 11 PV			
40119	Real	R/W	BAS Zone 12 PV			
40121	Real	R/W	BAS Zone 13 PV			
40123	Real	R/W	BAS Zone 14 PV			
40125	Real	R/W	BAS Zone 15 PV			
40127	Real	R/W	BAS Zone 16 PV			
40129	Real	R/W	Reserved			
40131	Real	R/W	Reserved			
40133	Real	R/W	Reserved			
40135	Real	R/W	Reserved			
40137	Real	R/W	Chiller/Boiler DP 1 Min	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
40139	Real	R/W	Chiller/Boiler DP 2 Min			
40141	Real	R/W	Chiller/Boiler DP 3 Min			
40143	Real	R/W	Chiller/Boiler DP 4 Min			
40145	Real	R/W	Chiller/Boiler DP 5 Min			
40147	Real	R/W	Chiller/Boiler DP 6 Min			
40149	Real	R/W	Chiller/Boiler DP 7 Min			
40151	Real	R/W	Chiller/Boiler DP 8 Min			
40153	Real	R/W	Reserved			
40155	Real	R/W	Reserved			
40157	Real	R/W	BAS Chiller/Boiler DP 1 PV	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
40159	Real	R/W	BAS Chiller/Boiler DP 2 PV			
40161	Real	R/W	BAS Chiller/Boiler DP 3 PV			
40163	Real	R/W	BAS Chiller/Boiler DP 4 PV			
40165	Real	R/W	BAS Chiller/Boiler DP 5 PV			
40167	Real	R/W	BAS Chiller/Boiler DP 6 PV			
40169	Real	R/W	BAS Chiller/Boiler DP 7 PV			
40171	Real	R/W	BAS Chiller/Boiler DP 8 PV			
40173	Real	R/W	Reserved			
40175	Real	R/W	Reserved			
40177	Real	R/W	Chiller/Boiler DP 1 Max	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
40179	Real	R/W	Chiller/Boiler DP 2 Max			
40181	Real	R/W	Chiller/Boiler DP 3 Max			
40183	Real	R/W	Chiller/Boiler DP 4 Max			
40185	Real	R/W	Chiller/Boiler DP 5 Max			
40187	Real	R/W	Chiller/Boiler DP 6 Max			
40189	Real	R/W	Chiller/Boiler DP 7 Max			
40191	Real	R/W	Chiller/Boiler DP 8 Max			

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MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	REPRESENT	UNITS
40193	Real	R/W	Reserved			
40195	Real	R/W	Reserved			
40197	Real	R/W	Reserved			
40199	Real	R/W	Reserved			
40201	Real	R/W	Reserved			
40203	Real	R/W	Reserved			
40205	Real	R/W	Reserved			
40207	Real	R/W	Reserved			
40209	Real	R/W	Reserved			
40211	Real	R/W	Reserved			
40213	Real	R/W	Reserved			
40215	Real	R/W	Reserved			
40217	Real	R/W	Reserved			
40219	Real	R/W	Reserved			

**NOTE:**

- 1 All Real values should be read as **Swapped FP**
- 2 For Modbus TCP/IP configuration, service Port should be **503**

**BAS DATA POINTS - BACNET**

**BUILDING AUTOMATION SYSTEM - BACNET TCP/IP, BACNET MSTP**

IPS 4000 COMMUNICATION INTERFACE VER-2.1.0 - PRIMARY

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (O)	ON STATE (1)	TYPE
1	Binary Value	R/W	Remote Start	Stop	Start	Toggle
2	Binary Value	R/W	Set Pump 1 Hand		Hand	Momentary
3	Binary Value	R/W	Set Pump 1 Off		Off	Momentary
4	Binary Value	R/W	Set Pump 1 Auto		Auto	Momentary
5	Binary Value	R/W	Set Pump 2 Hand		Hand	Momentary
6	Binary Value	R/W	Set Pump 2 Off		Off	Momentary
7	Binary Value	R/W	Set Pump 2 Auto		Auto	Momentary
8	Binary Value	R/W	Set Pump 3 Hand		Hand	Momentary
9	Binary Value	R/W	Set Pump 3 Off		Off	Momentary
10	Binary Value	R/W	Set Pump 3 Auto		Auto	Momentary
11	Binary Value	R/W	Set Pump 4 Hand		Hand	Momentary
12	Binary Value	R/W	Set Pump 4 Off		Off	Momentary
13	Binary Value	R/W	Set Pump 4 Auto		Auto	Momentary
14	Binary Value	R/W	Set Pump 5 Hand		Hand	Momentary
15	Binary Value	R/W	Set Pump 5 Off		Off	Momentary
16	Binary Value	R/W	Set Pump 5 Auto		Auto	Momentary
17	Binary Value	R/W	Set Pump 6 Hand		Hand	Momentary
18	Binary Value	R/W	Set Pump 6 Off		Off	Momentary
19	Binary Value	R/W	Set Pump 6 Auto		Auto	Momentary
20	Binary Value	R/W	Set Pump 7 Hand		Hand	Momentary
21	Binary Value	R/W	Set Pump 7 Off		Off	Momentary
22	Binary Value	R/W	Set Pump 7 Auto		Auto	Momentary
23	Binary Value	R/W	Set Pump 8 Hand		Hand	Momentary
24	Binary Value	R/W	Set Pump 8 Off		Off	Momentary
25	Binary Value	R/W	Set Pump 8 Auto		Auto	Momentary
26	Binary Value	R/W	Reserved			
27	Binary Value	R/W	Reserved			
28	Binary Value	R/W	Reserved			
29	Binary Value	R/W	Reserved			
30	Binary Value	R/W	Reserved			
31	Binary Value	R/W	Reserved			
32	Binary Value	R/W	Alarm Reset		Reset	Toggle
33	Binary Value	R/W	Chiller/Boiler 1 Enabled	Disabled	Enabled	Toggle
34	Binary Value	R/W	Chiller/Boiler 2 Enabled	Disabled	Enabled	Toggle
35	Binary Value	R/W	Chiller/Boiler 3 Enabled	Disabled	Enabled	Toggle
36	Binary Value	R/W	Chiller/Boiler 4 Enabled	Disabled	Enabled	Toggle
37	Binary Value	R/W	Chiller/Boiler 5 Enabled	Disabled	Enabled	Toggle
38	Binary Value	R/W	Chiller/Boiler 6 Enabled	Disabled	Enabled	Toggle
39	Binary Value	R/W	Chiller/Boiler 7 Enabled	Disabled	Enabled	Toggle
40	Binary Value	R/W	Chiller/Boiler 8 Enabled	Disabled	Enabled	Toggle
41	Binary Value	R/W	Reserved			
42	Binary Value	R/W	Reserved			
43	Binary Value	R/W	Chiller/Boiler_BAS_Enable	Disabled	Enabled	Toggle
44	Binary Value	R/W	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
45	Binary Value	R/W	Reserved			
46	Binary Value	R/W	Reserved			
47	Binary Value	R/W	Reserved			
48	Binary Value	R/W	Reserved			
49	Binary Value	R/W	Reserved			
50	Binary Value	R/W	Reserved			
51	Binary Value	R/W	Reserved			
52	Binary Value	R/W	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
1	Binary Input	R	General Alarm	Ok	Alarm	Toggle
2	Binary Input	R	Pump Alarm	Ok	Alarm	Toggle
3	Binary Input	R	Sensor Alarm	Ok	Alarm	Toggle
4	Binary Input	R	Pump 1 in Hand mode	Ok	Hand	Toggle
5	Binary Input	R	Pump 1 in Off mode	Ok	Off	Toggle
6	Binary Input	R	Pump 1 in Auto mode	Ok	Auto	Toggle
7	Binary Input	R	Pump 2 in Hand mode	Ok	Hand	Toggle
8	Binary Input	R	Pump 2 in Off mode	Ok	Off	Toggle
9	Binary Input	R	Pump 2 in Auto mode	Ok	Auto	Toggle
10	Binary Input	R	Pump 3 in Hand mode	Ok	Hand	Toggle
11	Binary Input	R	Pump 3 in Off mode	Ok	Off	Toggle
12	Binary Input	R	Pump 3 in Auto mode	Ok	Auto	Toggle
13	Binary Input	R	Pump 4 in Hand mode	Ok	Hand	Toggle
14	Binary Input	R	Pump 4 in Off mode	Ok	Off	Toggle
15	Binary Input	R	Pump 4 in Auto mode	Ok	Auto	Toggle
16	Binary Input	R	Pump 5 in Hand mode	Ok	Hand	Toggle
17	Binary Input	R	Pump 5 in Off mode	Ok	Off	Toggle
18	Binary Input	R	Pump 5 in Auto mode	Ok	Auto	Toggle
19	Binary Input	R	Pump 6 in Hand mode	Ok	Hand	Toggle
20	Binary Input	R	Pump 6 in Off mode	Ok	Off	Toggle
21	Binary Input	R	Pump 6 in Auto mode	Ok	Auto	Toggle
22	Binary Input	R	Pump 7 in Hand mode	Ok	Hand	Toggle
23	Binary Input	R	Pump 7 in Off mode	Ok	Off	Toggle
24	Binary Input	R	Pump 7 in Auto mode	Ok	Auto	Toggle
25	Binary Input	R	Pump 8 in Hand mode	Ok	Hand	Toggle
26	Binary Input	R	Pump 8 in Off mode	Ok	Off	Toggle
27	Binary Input	R	Pump 8 in Auto mode	Ok	Auto	Toggle
28	Binary Input	R	Reserved			
29	Binary Input	R	Reserved			
30	Binary Input	R	Reserved			
31	Binary Input	R	Reserved			
32	Binary Input	R	Reserved			
33	Binary Input	R	Reserved			
34	Binary Input	R	Pump 1 Run Feedback	Stopped	Running	Toggle
35	Binary Input	R	Pump 2 Run Feedback	Stopped	Running	Toggle
36	Binary Input	R	Pump 3 Run Feedback	Stopped	Running	Toggle
37	Binary Input	R	Pump 4 Run Feedback	Stopped	Running	Toggle
38	Binary Input	R	Pump 5 Run Feedback	Stopped	Running	Toggle



INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
39	Binary Input	R	Pump 6 Run Feedback	Stopped	Running	Toggle
40	Binary Input	R	Pump 7 Run Feedback	Stopped	Running	Toggle
41	Binary Input	R	Pump 8 Run Feedback	Stopped	Running	Toggle
42	Binary Input	R	Reserved			
43	Binary Input	R	Reserved			
44	Binary Input	R	Temperature Transmitter Failed	Ok	Alarm	Toggle
45	Binary Input	R	Reserved			
46	Binary Input	R	Reserved			
47	Binary Input	R	All Zones DP/Temperature Transmitters Failed	Ok	Alarm	Toggle
48	Binary Input	R	Zone 1 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
49	Binary Input	R	Zone 2 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
50	Binary Input	R	Zone 3 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
51	Binary Input	R	Zone 4 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
52	Binary Input	R	Zone 5 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
53	Binary Input	R	Zone 6 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
54	Binary Input	R	Zone 7 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
55	Binary Input	R	Zone 8 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
56	Binary Input	R	Zone 9 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
57	Binary Input	R	Zone 10 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
58	Binary Input	R	Zone 11 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
59	Binary Input	R	Zone 12 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
60	Binary Input	R	Zone 13 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
61	Binary Input	R	Zone 14 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
62	Binary Input	R	Zone 15 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
63	Binary Input	R	Zone 16 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
64	Binary Input	R	Reserved			
65	Binary Input	R	Reserved			
66	Binary Input	R	Reserved			
67	Binary Input	R	Reserved			
68	Binary Input	R	Chiller/Boiler Min Flow Alarm	Ok	Alarm	Toggle
69	Binary Input	R	Chiller/Boiler Max Flow Alarm	Ok	Alarm	Toggle
70	Binary Input	R	Pump 1 Alarm	Ok	Alarm	Toggle
71	Binary Input	R	Pump 2 Alarm	Ok	Alarm	Toggle
72	Binary Input	R	Pump 3 Alarm	Ok	Alarm	Toggle
73	Binary Input	R	Pump 4 Alarm	Ok	Alarm	Toggle
74	Binary Input	R	Pump 5 Alarm	Ok	Alarm	Toggle
75	Binary Input	R	Pump 6 Alarm	Ok	Alarm	Toggle
76	Binary Input	R	Pump 7 Alarm	Ok	Alarm	Toggle
77	Binary Input	R	Pump 8 Alarm	Ok	Alarm	Toggle
78	Binary Input	R	Reserved			
79	Binary Input	R	Reserved			
80	Binary Input	R	Pump 1 Run feedback Alarm	Ok	Alarm	Toggle
81	Binary Input	R	Pump 2 Run feedback Alarm	Ok	Alarm	Toggle
82	Binary Input	R	Pump 3 Run feedback Alarm	Ok	Alarm	Toggle
83	Binary Input	R	Pump 4 Run feedback Alarm	Ok	Alarm	Toggle
84	Binary Input	R	Pump 5 Run feedback Alarm	Ok	Alarm	Toggle
85	Binary Input	R	Pump 6 Run feedback Alarm	Ok	Alarm	Toggle
86	Binary Input	R	Pump 7 Run feedback Alarm	Ok	Alarm	Toggle
87	Binary Input	R	Pump 8 Run feedback Alarm	Ok	Alarm	Toggle

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
88	Binary Input	R	Reserved			
89	Binary Input	R	Reserved			
90	Binary Input	R	Pump 1 Drive Fault	Ok	Alarm	Toggle
91	Binary Input	R	Pump 2 Drive Fault	Ok	Alarm	Toggle
92	Binary Input	R	Pump 3 Drive Fault	Ok	Alarm	Toggle
93	Binary Input	R	Pump 4 Drive Fault	Ok	Alarm	Toggle
94	Binary Input	R	Pump 5 Drive Fault	Ok	Alarm	Toggle
95	Binary Input	R	Pump 6 Drive Fault	Ok	Alarm	Toggle
96	Binary Input	R	Pump 7 Drive Fault	Ok	Alarm	Toggle
97	Binary Input	R	Pump 8 Drive Fault	Ok	Alarm	Toggle
98	Binary Input	R	Reserved			
99	Binary Input	R	Reserved			
108	Binary Input	R	Reserved			
109	Binary Input	R	Reserved			
110	Binary Input	R	IPS On Status	Off	On	Toggle
111	Binary Input	R	PLC Board High Temperature Alarm	Ok	Alarm	Toggle
112	Binary Input	R	Reserved			
113	Binary Input	R	Reserved			
114	Binary Input	R	All Chiller/Boiler Failed	Ok	Alarm	Toggle
115	Binary Input	R	Chiller/Boiler 1 Sensor Fail	Ok	Alarm	Toggle
116	Binary Input	R	Chiller/Boiler 2 Sensor Fail	Ok	Alarm	Toggle
117	Binary Input	R	Chiller/Boiler 3 Sensor Fail	Ok	Alarm	Toggle
118	Binary Input	R	Chiller/Boiler 4 Sensor Fail	Ok	Alarm	Toggle
119	Binary Input	R	Chiller/Boiler 5 Sensor Fail	Ok	Alarm	Toggle
120	Binary Input	R	Chiller/Boiler 6 Sensor Fail	Ok	Alarm	Toggle
121	Binary Input	R	Chiller/Boiler 7 Sensor Fail	Ok	Alarm	Toggle
122	Binary Input	R	Chiller/Boiler 8 Sensor Fail	Ok	Alarm	Toggle
123	Binary Input	R	Reserved			
124	Binary Input	R	Reserved			
125	Binary Input	R	Min Chiller/Boiler DP Alarm	Ok	Alarm	Toggle
126	Binary Input	R	Max Chiller/Boiler DP Alarm	Ok	Alarm	Toggle
127	Binary Input	R	Chiller/Boiler DP1 Above Maximum	Ok	Warning	Toggle
128	Binary Input	R	Chiller/Boiler DP2 Above Maximum	Ok	Warning	Toggle
129	Binary Input	R	Chiller/Boiler DP3 Above Maximum	Ok	Warning	Toggle
130	Binary Input	R	Chiller/Boiler DP4 Above Maximum	Ok	Warning	Toggle
131	Binary Input	R	Chiller/Boiler DP5 Above Maximum	Ok	Warning	Toggle
132	Binary Input	R	Chiller/Boiler DP6 Above Maximum	Ok	Warning	Toggle
133	Binary Input	R	Chiller/Boiler DP7 Above Maximum	Ok	Warning	Toggle
134	Binary Input	R	Chiller/Boiler DP8 Above Maximum	Ok	Warning	Toggle
135	Binary Input	R	Reserved			
136	Binary Input	R	Reserved			
137	Binary Input	R	Reserved			
138	Binary Input	R	Reserved			
139	Binary Input	R	Reserved			
140	Binary Input	R	Reserved			
141	Binary Input	R	Reserved			
142	Binary Input	R	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
1	Analog Value	R/W	Zone 1 SP	0 to 9999	0.0 to 999.9	psi, ft, kPa, m, °F or °C
2	Analog Value	R/W	Zone 2 SP			
3	Analog Value	R/W	Zone 3 SP			
4	Analog Value	R/W	Zone 4 SP			
5	Analog Value	R/W	Zone 5 SP			
6	Analog Value	R/W	Zone 6 SP			
7	Analog Value	R/W	Zone 7 SP			
8	Analog Value	R/W	Zone 8 SP			
9	Analog Value	R/W	Zone 9 SP			
10	Analog Value	R/W	Zone 10 SP			
11	Analog Value	R/W	Zone 11 SP			
12	Analog Value	R/W	Zone 12 SP			
13	Analog Value	R/W	Zone 13 SP			
14	Analog Value	R/W	Zone 14 SP			
15	Analog Value	R/W	Zone 15 SP			
16	Analog Value	R/W	Zone 16 SP			
17	Analog Value	R/W	Reserved			
18	Analog Value	R/W	Reserved			
19	Analog Value	R/W	Reserved			
20	Analog Value	R/W	Reserved			
21	Analog Value	R/W	Pump 1 Hand Speed		0.0 to 100.0	%
22	Analog Value	R/W	Pump 2 Hand Speed		0.0 to 100.0	%
23	Analog Value	R/W	Pump 3 Hand Speed		0.0 to 100.0	%
24	Analog Value	R/W	Pump 4 Hand Speed		0.0 to 100.0	%
25	Analog Value	R/W	Pump 5 Hand Speed		0.0 to 100.0	%
26	Analog Value	R/W	Pump 6 Hand Speed		0.0 to 100.0	%
27	Analog Value	R/W	Pump 7 Hand Speed		0.0 to 100.0	%
28	Analog Value	R/W	Pump 8 Hand Speed		0.0 to 100.0	%
29	Analog Value	R/W	Reserved			
30	Analog Value	R/W	Reserved			
31	Analog Value	R/W	Max Valve Opening	0 to 100	0.0 to 100.0	%
32	Analog Value	R/W	Design Flow	0 to 9999	0.0 to 999.9	GPM, L/s, m <sup>3</sup> /h
33	Analog Value	R/W	Design Head			ft, psi, kPa, m, bar
34	Analog Value	R/W	Zero Flow Head			GPM, L/s, m <sup>3</sup> /h
35	Analog Value	R/W	Flow BEP			ft, psi, kPa, m, bar
36	Analog Value	R/W	Head BEP			
37	Analog Value	R/W	Dead Band(K)	0-0.5		
38	Analog Value	R/W	Sensor Adjust	0 to 100%	0 to 100.0%	
39	Analog Value	R/W	Chiller/Boiler Min Flow	0 to 9999	0.0 to 999.9	GPM, L/s, m <sup>3</sup> /h
40	Analog Value	R/W	Chiller/Boiler Max Flow			
41	Analog Value	R/W	Reserved			
42	Analog Value	R/W	Reserved			
43	Analog Value	R/W	Reserved			
44	Analog Value	R/W	Reserved			
45	Analog Value	R/W	Reserved			
46	Analog Value	R/W	Reserved			
47	Analog Value	R/W	Reserved			

IPS 4000 Integrated pumping  
system for variable primary application

DATA POINTS

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INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
48	Analog Value	R/W	BAS Zone 1 PV	0 to 9999	0.0 to 999.9	psi, ft, kPA, m, °F or °C
49	Analog Value	R/W	BAS Zone 2 PV			
50	Analog Value	R/W	BAS Zone 3 PV			
51	Analog Value	R/W	BAS Zone 4 PV			
52	Analog Value	R/W	BAS Zone 5 PV			
53	Analog Value	R/W	BAS Zone 6 PV			
54	Analog Value	R/W	BAS Zone 7 PV			
55	Analog Value	R/W	BAS Zone 8 PV			
56	Analog Value	R/W	BAS Zone 9 PV			
57	Analog Value	R/W	BAS Zone 10 PV			
58	Analog Value	R/W	BAS Zone 11 PV			
59	Analog Value	R/W	BAS Zone 12 PV			
60	Analog Value	R/W	BAS Zone 13 PV			
61	Analog Value	R/W	BAS Zone 14 PV			
62	Analog Value	R/W	BAS Zone 15 PV			
63	Analog Value	R/W	BAS Zone 16 PV			
64	Analog Value	R/W	Reserved			
65	Analog Value	R/W	Reserved			
66	Analog Value	R/W	Reserved			
67	Analog Value	R/W	Reserved			
68	Analog Value	R/W	Chiller/Boiler DP 1 Min	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
69	Analog Value	R/W	Chiller/Boiler DP 2 Min			
70	Analog Value	R/W	Chiller/Boiler DP 3 Min			
71	Analog Value	R/W	Chiller/Boiler DP 4 Min			
72	Analog Value	R/W	Chiller/Boiler DP 5 Min			
73	Analog Value	R/W	Chiller/Boiler DP 6 Min			
74	Analog Value	R/W	Chiller/Boiler DP 7 Min			
75	Analog Value	R/W	Chiller/Boiler DP 8 Min			
76	Analog Value	R/W	Reserved			
77	Analog Value	R/W	Reserved			
78	Analog Value	R/W	BAS Chiller/Boiler DP 1 PV	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
79	Analog Value	R/W	BAS Chiller/Boiler DP 2 PV			
80	Analog Value	R/W	BAS Chiller/Boiler DP 3 PV			
81	Analog Value	R/W	BAS Chiller/Boiler DP 4 PV			
82	Analog Value	R/W	BAS Chiller/Boiler DP 5 PV			
83	Analog Value	R/W	BAS Chiller/Boiler DP 6 PV			
84	Analog Value	R/W	BAS Chiller/Boiler DP 7 PV			
85	Analog Value	R/W	BAS Chiller/Boiler DP 8 PV			
86	Analog Value	R/W	Reserved			
87	Analog Value	R/W	Reserved			
88	Analog Value	R/W	Chiller/Boiler DP 1 Max	0 to 9999	0.0 to 999.9	psi, ft, kPA, m
89	Analog Value	R/W	Chiller/Boiler DP 2 Max			
90	Analog Value	R/W	Chiller/Boiler DP 3 Max			
91	Analog Value	R/W	Chiller/Boiler DP 4 Max			
92	Analog Value	R/W	Chiller/Boiler DP 5 Max			
93	Analog Value	R/W	Chiller/Boiler DP 6 Max			
94	Analog Value	R/W	Chiller/Boiler DP 7 Max			
95	Analog Value	R/W	Chiller/Boiler DP 8 Max			
96	Analog Value	R/W	Reserved			
97	Analog Value	R/W	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
98	Analog Value	R/W	Reserved			
99	Analog Value	R/W	Reserved			
100	Analog Value	R/W	Reserved			
101	Analog Value	R/W	Reserved			
102	Analog Value	R/W	Reserved			
103	Analog Value	R/W	Reserved			
104	Analog Value	R/W	Reserved			
105	Analog Value	R/W	Reserved			
106	Analog Value	R/W	Reserved			
107	Analog Value	R/W	Reserved			
108	Analog Value	R/W	Reserved			
109	Analog Value	R/W	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
1	Analog Input	R	Active Zone	0 to 16	0 to 16	
2	Analog Input	R	Active Zone Error	-9999 to 10000	-999.9 to 999.9	
3	Analog Input	R	Active Zone PV			
4	Analog Input	R	Active Zone SP			
5	Analog Input	R	Zone 1 Value			
6	Analog Input	R	Zone 2 Value			
7	Analog Input	R	Zone 3 Value			
8	Analog Input	R	Zone 4 Value			
9	Analog Input	R	Zone 5 Value			
10	Analog Input	R	Zone 6 Value			
11	Analog Input	R	Zone 7 Value			
12	Analog Input	R	Zone 8 Value			
13	Analog Input	R	Zone 9 Value			
14	Analog Input	R	Zone 10 Value			
15	Analog Input	R	Zone 11 Value			
16	Analog Input	R	Zone 12 Value			
17	Analog Input	R	Zone 13 Value			
18	Analog Input	R	Zone 14 Value			
19	Analog Input	R	Zone 15 Value			
20	Analog Input	R	Zone 16 Value			
21	Analog Input	R	Reserved			
22	Analog Input	R	Reserved			
23	Analog Input	R	Reserved			
24	Analog Input	R	Reserved			

0 to 9999      0.0 to 999.9      psi, ft, kPA, m, °F or °C

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
25	Analog Input	R	Zone 1 Error	-9999 to 9999	-999.9 to 999.9	psi, ft, kPA, m, °F or °C
26	Analog Input	R	Zone 2 Error			
27	Analog Input	R	Zone 3 Error			
28	Analog Input	R	Zone 4 Error			
29	Analog Input	R	Zone 5 Error			
30	Analog Input	R	Zone 6 Error			
31	Analog Input	R	Zone 7 Error			
32	Analog Input	R	Zone 8 Error			
33	Analog Input	R	Zone 9 Error			
34	Analog Input	R	Zone 10 Error			
35	Analog Input	R	Zone 11 Error			
36	Analog Input	R	Zone 12 Error			
37	Analog Input	R	Zone 13 Error			
38	Analog Input	R	Zone 14 Error			
39	Analog Input	R	Zone 15 Error			
40	Analog Input	R	Zone 16 Error			
41	Analog Input	R	Reserved			
42	Analog Input	R	Reserved			
43	Analog Input	R	Reserved			
44	Analog Input	R	Reserved			
45	Analog Input	R	Pump 1 Speed	0 to 1000	0.0 to 100.0	%
46	Analog Input	R	Pump 2 Speed	0 to 1000	0.0 to 100.0	%
47	Analog Input	R	Pump 3 Speed	0 to 1000	0.0 to 100.0	%
48	Analog Input	R	Pump 4 Speed	0 to 1000	0.0 to 100.0	%
49	Analog Input	R	Pump 5 Speed	0 to 1000	0.0 to 100.0	%
50	Analog Input	R	Pump 6 Speed	0 to 1000	0.0 to 100.0	%
51	Analog Input	R	Pump 7 Speed	0 to 1000	0.0 to 100.0	%
52	Analog Input	R	Pump 8 Speed	0 to 1000	0.0 to 100.0	%
53	Analog Input	R	Reserved			
54	Analog Input	R	Reserved			
55	Analog Input	R	Temperature Sensor PV	0 to 2120	0.0 to 212.0	°F or °C
56	Analog Input	R	Pump 1 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
57	Analog Input	R	Pump 1 Drive Volt AC			VAC
58	Analog Input	R	Pump 1 Drive Power			kW
59	Analog Input	R	Pump 1 Drive KWH			KWH
60	Analog Input	R	Pump 1 Drive RPM			RPM
61	Analog Input	R	Pump 1 Drive Run Hours			Hours
62	Analog Input	R	Pump 1 Actual Run Hours			
63	Analog Input	R	Pump 1 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
64	Analog Input	R	Pump 2 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
65	Analog Input	R	Pump 2 Drive Volt AC			VAC
66	Analog Input	R	Pump 2 Drive Power			kW
67	Analog Input	R	Pump 2 Drive KWH			KWH
68	Analog Input	R	Pump 2 Drive RPM			RPM
69	Analog Input	R	Pump 2 Drive Run Hours			Hours
70	Analog Input	R	Pump 2 Actual Run Hours			
71	Analog Input	R	Pump 2 Drive Speed Feedback	0 to 100	0.0 to 100.0	%

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
72	Analog Input	R	Pump 3 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
73	Analog Input	R	Pump 3 Drive Volt AC			VAC
74	Analog Input	R	Pump 3 Drive Power			kW
75	Analog Input	R	Pump 3 Drive KWH			KWH
76	Analog Input	R	Pump 3 Drive RPM			RPM
77	Analog Input	R	Pump 3 Drive Run Hours			Hours
78	Analog Input	R	Pump 3 Actual Run Hours			
79	Analog Input	R	Pump 3 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
80	Analog Input	R	Pump 4 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
81	Analog Input	R	Pump 4 Drive Volt AC			VAC
82	Analog Input	R	Pump 4 Drive Power			kW
83	Analog Input	R	Pump 4 Drive KWH			KWH
84	Analog Input	R	Pump 4 Drive RPM			RPM
85	Analog Input	R	Pump 4 Drive Run Hours			Hours
86	Analog Input	R	Pump 4 Actual Run Hours			
87	Analog Input	R	Pump 4 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
88	Analog Input	R	Pump 5 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
89	Analog Input	R	Pump 5 Drive Volt AC			VAC
90	Analog Input	R	Pump 5 Drive Power			kW
91	Analog Input	R	Pump 5 Drive KWH			KWH
92	Analog Input	R	Pump 5 Drive RPM			RPM
93	Analog Input	R	Pump 5 Drive Run Hours			Hours
94	Analog Input	R	Pump 5 Actual Run Hours			
95	Analog Input	R	Pump 5 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
96	Analog Input	R	Pump 6 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
97	Analog Input	R	Pump 6 Drive Volt AC			VAC
98	Analog Input	R	Pump 6 Drive Power			kW
99	Analog Input	R	Pump 6 Drive KWH			KWH
100	Analog Input	R	Pump 6 Drive RPM			RPM
101	Analog Input	R	Pump 6 Drive Run Hours			Hours
102	Analog Input	R	Pump 6 Actual Run Hours			
103	Analog Input	R	Pump 6 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
104	Analog Input	R	Pump 7 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
105	Analog Input	R	Pump 7 Drive Volt AC			VAC
106	Analog Input	R	Pump 7 Drive Power			kW
107	Analog Input	R	Pump 7 Drive KWH			KWH
108	Analog Input	R	Pump 7 Drive RPM			RPM
109	Analog Input	R	Pump 7 Drive Run Hours			Hours
110	Analog Input	R	Pump 7 Actual Run Hours			
111	Analog Input	R	Pump 7 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
112	Analog Input	R	Pump 8 Drive Amp	0 to 10000	0.0 to 1000.0	Amp
113	Analog Input	R	Pump 8 Drive Volt AC			VAC
114	Analog Input	R	Pump 8 Drive Power			kW
115	Analog Input	R	Pump 8 Drive KWH			KWH
116	Analog Input	R	Pump 8 Drive RPM			RPM
117	Analog Input	R	Pump 8 Drive Run Hours			Hours
118	Analog Input	R	Pump 8 Actual Run Hours			
119	Analog Input	R	Pump 8 Drive Speed Feedback	0 to 100	0.0 to 100.0	%
120	Analog Input	R	Reserved			

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
121	Analog Input	R	Reserved			
122	Analog Input	R	Reserved			
123	Analog Input	R	Reserved			
124	Analog Input	R	Reserved			
125	Analog Input	R	Reserved			
126	Analog Input	R	Reserved			
127	Analog Input	R	Reserved			
128	Analog Input	R	Reserved			
129	Analog Input	R	Reserved			
130	Analog Input	R	Reserved			
131	Analog Input	R	Reserved			
132	Analog Input	R	Reserved			
133	Analog Input	R	Reserved			
134	Analog Input	R	Reserved			
135	Analog Input	R	Reserved			
136	Analog Input	R	System Head	0 to 32767	0.0 to 3276.7	ft, psi, kPa, kPa, m, bar
137	Analog Input	R	Pump 1 Head			
138	Analog Input	R	Pump 2 Head			
139	Analog Input	R	Pump 3 Head			
140	Analog Input	R	Pump 4 Head			
141	Analog Input	R	Pump 5 Head			
142	Analog Input	R	Pump 6 Head			
143	Analog Input	R	Pump 7 Head			
144	Analog Input	R	Pump 8 Head			
145	Analog Input	R	Reserved			
146	Analog Input	R	Reserved			
147	Analog Input	R	System Flow	0 to 32767	0.0 to 3276.7	GPM, L/s, m <sup>3</sup> /h
148	Analog Input	R	Pump 1 Flow			
149	Analog Input	R	Pump 2 Flow			
150	Analog Input	R	Pump 3 Flow			
151	Analog Input	R	Pump 4 Flow			
152	Analog Input	R	Pump 5 Flow			
153	Analog Input	R	Pump 6 Flow			
154	Analog Input	R	Pump 7 Flow			
155	Analog Input	R	Pump 8 Flow			
156	Analog Input	R	Reserved			
157	Analog Input	R	Reserved			
158	Analog Input	R	Reserved			
159	Analog Input	R	Bypass Valve Position	0 to 100.0	0 to 100.0	%
160	Analog Input	R	Number of Pumps Running in Auto	1 to 8		
161	Analog Input	R	Lead Pump ID	1 to 8		
162	Analog Input	R	Number Of Pumps Configured	1 to 8		
163	Analog Input	R	Number Of Chiller/Boiler Configured	1 to 8		
164	Analog Input	R	Lead Pump Switch Time	0-32767		Day/Hr
165	Analog Input	R	Active Chiller/Boiler	1 to 8		
166	Analog Input	R	Active Chiller/Boiler Error	-9999 to 9999	-999.9 to 999.9	GPM, L/s, m <sup>3</sup> /h



INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
167	Analog Input	R	Active Chiller/Boiler PV	0 to 9999	0.0 to 999.9	GPM, L/s, m <sup>3</sup> /h
168	Analog Input	R	Active Chiller/Boiler SP			
169	Analog Input	R	Chiller/Boiler 1 Value			
170	Analog Input	R	Chiller/Boiler 2 Value			
171	Analog Input	R	Chiller/Boiler 3 Value			
172	Analog Input	R	Chiller/Boiler 4 Value			
173	Analog Input	R	Chiller/Boiler 5 Value			
174	Analog Input	R	Chiller/Boiler 6 Value			
175	Analog Input	R	Chiller/Boiler 7 Value			
176	Analog Input	R	Chiller/Boiler 8 Value			
177	Analog Input	R	Reserved			
178	Analog Input	R	Reserved			
179	Analog Input	R	Chiller/Boiler 1 Error	-9999 to 9999	-999.9 to 999.9	GPM, L/s, m <sup>3</sup> /h
180	Analog Input	R	Chiller/Boiler 2 Error			
181	Analog Input	R	Chiller/Boiler 3 Error			
182	Analog Input	R	Chiller/Boiler 4 Error			
183	Analog Input	R	Chiller/Boiler 5 Error			
184	Analog Input	R	Chiller/Boiler 6 Error			
185	Analog Input	R	Chiller/Boiler 7 Error			
186	Analog Input	R	Chiller/Boiler 8 Error			
187	Analog Input	R	Reserved			
188	Analog Input	R	Reserved			

**NOTE:**

1 For BACnet TCP/IP configuration, Port should be **47808** (Hex : BACO)

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