



# IPS controller 4000

Integrated pumping  
system for variable  
primary application

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## Data points

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**BAS DATA POINTS - MODBUS RTU**

**BUILDING AUTOMATION SYSTEM MODBUS RTU**

IPS 4000 COMMUNICATION INTERFACE VER-1.0.0 - 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		Hand	Toggle
10006	Digital	R	Pump 1 in Off mode		Off	Toggle
10007	Digital	R	Pump 1 in Auto mode		Auto	Toggle
10008	Digital	R	Pump 2 in Hand mode		Hand	Toggle
10009	Digital	R	Pump 2 in Off mode		Off	Toggle
10010	Digital	R	Pump 2 in Auto mode		Auto	Toggle
10011	Digital	R	Pump 3 in Hand mode		Hand	Toggle
10012	Digital	R	Pump 3 in Off mode		Off	Toggle
10013	Digital	R	Pump 3 in Auto mode		Auto	Toggle
10014	Digital	R	Pump 4 in Hand mode		Hand	Toggle
10015	Digital	R	Pump 4 in Off mode		Off	Toggle
10016	Digital	R	Pump 4 in Auto mode		Auto	Toggle
10017	Digital	R	Pump 5 in Hand mode		Hand	Toggle
10018	Digital	R	Pump 5 in Off mode		Off	Toggle
10019	Digital	R	Pump 5 in Auto mode		Auto	Toggle
10020	Digital	R	Pump 6 in Hand mode		Hand	Toggle
10021	Digital	R	Pump 6 in Off mode		Off	Toggle
10022	Digital	R	Pump 6 in Auto mode		Auto	Toggle
10023	Digital	R	Pump 7 in Hand mode		Hand	Toggle
10024	Digital	R	Pump 7 in Off mode		Off	Toggle
10025	Digital	R	Pump 7 in Auto mode		Auto	Toggle
10026	Digital	R	Pump 8 in Hand mode		Hand	Toggle
10027	Digital	R	Pump 8 in Off mode		Off	Toggle
10028	Digital	R	Pump 8 in Auto mode		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
10046	Digital	R	Reserved			
10047	Digital	R	Reserved			

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
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 (Note 1)	Ok	Alarm	Toggle
10070	Digital	R	Chiller/Boiler Max Flow Alarm (Note 2)	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
10096	Digital	R	Pump 6 Drive Fault	Ok	Alarm	Toggle
10097	Digital	R	Pump 7 Drive Fault	Ok	Alarm	Toggle

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MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
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	Reserved			
10117	Digital	R	Reserved			
10118	Digital	R	Reserved			
10119	Digital	R	Reserved			
10120	Digital	R	Reserved			
10121	Digital	R	Reserved			
10122	Digital	R	Reserved			
10123	Digital	R	Reserved			
10124	Digital	R	Reserved			
10125	Digital	R	Reserved			
10126	Digital	R	Reserved			
10127	Digital	R	Reserved			
10128	Digital	R	Reserved			
10129	Digital	R	Reserved			
10130	Digital	R	Reserved			
10131	Digital	R	Reserved			
10132	Digital	R	Reserved			
10133	Digital	R	Reserved			
10134	Digital	R	Reserved			
10135	Digital	R	Reserved			
10136	Digital	R	Reserved			
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	RANGE	UNITS
2	Digital	R/W	Remote Start	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 (Note 7)	Enabled	Toggle
35	Digital	R/W	Chiller/Boiler 2 Enabled (Note 7)	Enabled	Toggle
36	Digital	R/W	Chiller/Boiler 3 Enabled (Note 7)	Enabled	Toggle
37	Digital	R/W	Chiller/Boiler 4 Enabled (Note 7)	Enabled	Toggle
38	Digital	R/W	Chiller/Boiler 5 Enabled (Note 7)	Enabled	Toggle
39	Digital	R/W	Chiller/Boiler 6 Enabled (Note 7)	Enabled	Toggle
40	Digital	R/W	Chiller/Boiler 7 Enabled (Note 7)	Enabled	Toggle
41	Digital	R/W	Chiller/Boiler 8 Enabled (Note 7)	Enabled	Toggle
42	Digital	R/W	Reserved		
43	Digital	R/W	Reserved		
44	Digital	R/W	Reserved		
45	Digital	R/W	Reserved		
46	Digital	R/W	Reserved		
47	Digital	R/W	Reserved		
48	Digital	R/W	Reserved		

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
30003	Analog	R	Active Zone	0 to 100	
30005	Analog	R	Active Zone Error	-999.9 to 999.9	
30007	Analog	R	Active Zone PV	0.0 to 999.9	psi, ft, kPa, m, °F or °C
30009	Analog	R	Active Zone SP		
30011	Analog	R	Zone 1 Value		
30013	Analog	R	Zone 2 Value		
30015	Analog	R	Zone 3 Value		
30017	Analog	R	Zone 4 Value		
30019	Analog	R	Zone 5 Value		
30021	Analog	R	Zone 6 Value		
30023	Analog	R	Zone 7 Value		
30025	Analog	R	Zone 8 Value		
30027	Analog	R	Zone 9 Value		
30029	Analog	R	Zone 10 Value		
30031	Analog	R	Zone 11 Value		
30033	Analog	R	Zone 12 Value		
30035	Analog	R	Zone 13 Value		
30037	Analog	R	Zone 14 Value		
30039	Analog	R	Zone 15 Value		
30041	Analog	R	Zone 16 Value		
30043	Analog	R	Reserved		
30045	Analog	R	Reserved		
30047	Analog	R	Reserved		
30049	Analog	R	Reserved		
30051	Analog	R	Zone 1 Error	-999.9 to 999.9	
30053	Analog	R	Zone 2 Error		
30055	Analog	R	Zone 3 Error		
30057	Analog	R	Zone 4 Error		
30059	Analog	R	Zone 5 Error		
30061	Analog	R	Zone 6 Error		
30063	Analog	R	Zone 7 Error		
30065	Analog	R	Zone 8 Error		
30067	Analog	R	Zone 9 Error		
30069	Analog	R	Zone 10 Error		
30071	Analog	R	Zone 11 Error		
30073	Analog	R	Zone 12 Error		
30075	Analog	R	Zone 13 Error		
30077	Analog	R	Zone 14 Error		
30079	Analog	R	Zone 15 Error		
30081	Analog	R	Zone 16 Error		
30083	Analog	R	Reserved		
30085	Analog	R	Reserved		
30087	Analog	R	Reserved		
30089	Analog	R	Reserved		



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

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
30179	Analog	R	Pump 5 Drive Amp	0.0 to 1000.0	Amp
30181	Analog	R	Pump 5 Drive Volt ac		VAC
30183	Analog	R	Pump 5 Drive Power		kW
30185	Analog	R	Pump 5 Drive KWH		KWH
30187	Analog	R	Pump 5 Drive RPM		RPM
30189	Analog	R	Pump 5 Drive Run Hours		Hours
30191	Analog	R	Pump 5 Actual Run Hours		Hours
30193	Analog	R	Pump 5 Drive Speed Feedback	0.0 to 100.0	%
30195	Analog	R	Pump 6 Drive Amp	0.0 to 1000.0	Amp
30197	Analog	R	Pump 6 Drive Volt ac		VAC
30199	Analog	R	Pump 6 Drive Power		kW
30201	Analog	R	Pump 6 Drive KWH		KWH
30203	Analog	R	Pump 6 Drive RPM		RPM
30205	Analog	R	Pump 6 Drive Run Hours		Hours
30207	Analog	R	Pump 6 Actual Run Hours		Hours
30209	Analog	R	Pump 6 Drive Speed Feedback	0.0 to 100.0	%
30211	Analog	R	Pump 7 Drive Amp	0.0 to 1000.0	Amp
30213	Analog	R	Pump 7 Drive Volt ac		VAC
30215	Analog	R	Pump 7 Drive Power		kW
30217	Analog	R	Pump 7 Drive KWH		KWH
30219	Analog	R	Pump 7 Drive RPM		RPM
30221	Analog	R	Pump 7 Drive Run Hours		Hours
30223	Analog	R	Pump 7 Actual Run Hours		Hours
30225	Analog	R	Pump 7 Drive Speed Feedback	0.0 to 100.0	%
30227	Analog	R	Pump 8 Drive Amp	0.0 to 1000.0	Amp
30229	Analog	R	Pump 8 Drive Volt ac		VAC
30231	Analog	R	Pump 8 Drive Power		kW
30233	Analog	R	Pump 8 Drive KWH		KWH
30235	Analog	R	Pump 8 Drive RPM		RPM
30237	Analog	R	Pump 8 Drive Run Hours		Hours
30239	Analog	R	Pump 8 Actual Run Hours		Hours
30241	Analog	R	Pump 8 Drive Speed Feedback	0.0 to 100.0	%
30243	Analog	R	Reserved		
30245	Analog	R	Reserved		
30247	Analog	R	Reserved		
30249	Analog	R	Reserved		
30251	Analog	R	Reserved		
30253	Analog	R	Reserved		
30255	Analog	R	Reserved		
30257	Analog	R	Reserved		
30259	Analog	R	Reserved		
30261	Analog	R	Reserved		
30263	Analog	R	Reserved		
30265	Analog	R	Reserved		
30267	Analog	R	Reserved		
30269	Analog	R	Reserved		
30271	Analog	R	Reserved		
30273	Analog	R	Reserved		

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
30275	Analog	R	System Head	0.0 to 32767.0	ft, psi, kPa
30277	Analog	R	Pump 1 Head		
30279	Analog	R	Pump 2 Head		
30281	Analog	R	Pump 3 Head		
30283	Analog	R	Pump 4 Head		
30285	Analog	R	Pump 5 Head		
30287	Analog	R	Pump 6 Head		
30289	Analog	R	Pump 7 Head		
30291	Analog	R	Pump 8 Head		
30293	Analog	R	Reserved		
30295	Analog	R	Reserved		
30297	Analog	R	System Flow	0.0 to 32767.0	gpm, L/s, m <sup>3</sup> /h
30299	Analog	R	Pump 1 Flow		
30301	Analog	R	Pump 2 Flow		
30303	Analog	R	Pump 3 Flow		
30305	Analog	R	Pump 4 Flow		
30307	Analog	R	Pump 5 Flow		
30309	Analog	R	Pump 6 Flow		
30311	Analog	R	Pump 7 Flow		
30313	Analog	R	Pump 8 Flow		
30315	Analog	R	Reserved		
30317	Analog	R	Reserved		
30319	Analog	R	Reserved		
30321	Analog	R	Bypass Valve Position	0 to 100.0	%
30323	Analog	R	Number of Pumps Running in Auto (Note 4)	0 to 8	
30325	Analog	R	Lead Pump ID	0 to 8	
30327	Analog	R	Number of Pumps Configured	0 to 8	
30329	Analog	R	Number of Chillers/Boilers Configured	0 to 8	
30331	Analog	R	Lead Pump Switch Time	0.0 to 32767.0	Days, Hours
30333	Analog	R	Reserved		
30335	Analog	R	Reserved		
30337	Analog	R	Reserved		
30339	Analog	R	Reserved		
30341	Analog	R	Reserved		
30343	Analog	R	Reserved		
30345	Analog	R	Reserved		
30347	Analog	R	Reserved		
30349	Analog	R	Reserved		
30351	Analog	R	Reserved		
30353	Analog	R	Reserved		

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
40003	Analog	R/W	Zone 1 SP	0.0 to 999.9	psi, ft, kPa, m, °F or °C
40005	Analog	R/W	Zone 2 SP		
40007	Analog	R/W	Zone 3 SP		
40009	Analog	R/W	Zone 4 SP		
40011	Analog	R/W	Zone 5 SP		
40013	Analog	R/W	Zone 6 SP		
40015	Analog	R/W	Zone 7 SP		
40017	Analog	R/W	Zone 8 SP		
40019	Analog	R/W	Zone 9 SP		
40021	Analog	R/W	Zone 10 SP		
40023	Analog	R/W	Zone 11 SP		
40025	Analog	R/W	Zone 12 SP		
40027	Analog	R/W	Zone 13 SP		
40029	Analog	R/W	Zone 14 SP		
40031	Analog	R/W	Zone 15 SP		
40033	Analog	R/W	Zone 16 SP		
40035	Analog	R/W	Reserved		
40037	Analog	R/W	Reserved		
40039	Analog	R/W	Reserved		
40041	Analog	R/W	Reserved		
40043	Analog	R/W	Pump 1 Hand Speed	0.0 to 100.0	%
40045	Analog	R/W	Pump 2 Hand Speed	0.0 to 100.0	%
40047	Analog	R/W	Pump 3 Hand Speed	0.0 to 100.0	%
40049	Analog	R/W	Pump 4 Hand Speed	0.0 to 100.0	%
40051	Analog	R/W	Pump 5 Hand Speed	0.0 to 100.0	%
40053	Analog	R/W	Pump 6 Hand Speed	0.0 to 100.0	%
40055	Analog	R/W	Pump 7 Hand Speed	0.0 to 100.0	%
40057	Analog	R/W	Pump 8 Hand Speed	0.0 to 100.0	%
40059	Analog	R/W	Reserved		
40061	Analog	R/W	Reserved		
40063	Analog	R/W	Max Valve Opening (Note 3)	0.0 to 100.0	%
40065	Analog	R/W	Design Flow	0.0 to 999.9	gpm, L/s, m <sup>3</sup> /h
40067	Analog	R/W	Design Head		ft, psi, bar
40069	Analog	R/W	Zero Flow Head		ft, psi, bar
40071	Analog	R/W	Flow BEP		gpm, L/s, m <sup>3</sup> /h
40073	Analog	R/W	Head BEP		ft, psi, bar
40075	Analog	R/W	Dead Band(K)	0 to 0.5	
40077	Analog	R/W	Staging Sensor Factor	0 to 1.0	
40079	Analog	R/W	Chiller/Boiler Min Flow (Note 5)		
40081	Analog	R/W	Chiller/Boiler Max Flow (Note 6)		
40083	Analog	R/W	Reserved		
40085	Analog	R/W	Reserved		
40087	Analog	R/W	Reserved		
40089	Analog	R/W	Reserved		
40091	Analog	R/W	Reserved		
40093	Analog	R/W	Reserved		
40095	Analog	R/W	Reserved		

MODBUS ADDRESS	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
40097	Analog	R/W	BAS Zone 1 PV	0.0 to 999.9	psi, ft, kPa, m, °F or °C
40099	Analog	R/W	BAS Zone 2 PV		
40101	Analog	R/W	BAS Zone 3 PV		
40103	Analog	R/W	BAS Zone 4 PV		
40105	Analog	R/W	BAS Zone 5 PV		
40107	Analog	R/W	BAS Zone 6 PV		
40109	Analog	R/W	BAS Zone 7 PV		
40111	Analog	R/W	BAS Zone 8 PV		
40113	Analog	R/W	BAS Zone 9 PV		
40115	Analog	R/W	BAS Zone 10 PV		
40117	Analog	R/W	BAS Zone 11 PV		
40119	Analog	R/W	BAS Zone 12 PV		
40121	Analog	R/W	BAS Zone 13 PV		
40123	Analog	R/W	BAS Zone 14 PV		
40125	Analog	R/W	BAS Zone 15 PV		
40127	Analog	R/W	BAS Zone 16 PV		
40129	Analog	R/W	Reserved		
40131	Analog	R/W	Reserved		
40133	Analog	R/W	Reserved		
40135	Analog	R/W	Reserved		

**BAS DATA POINTS - BACNET**

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

IPS 4000 COMMUNICATION INTERFACE VER-1.0.0 - PRIMARY

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
100080	Digital	R	General Alarm	Ok	Alarm	Toggle
100081	Digital	R	Pump Alarm	Ok	Alarm	Toggle
100082	Digital	R	Sensor Alarm	Ok	Alarm	Toggle
100083	Digital	R	Pump 1 in Hand mode		Hand	Toggle
100084	Digital	R	Pump 1 in Off mode		Off	Toggle
100085	Digital	R	Pump 1 in Auto mode		Auto	Toggle
100086	Digital	R	Pump 2 in Hand mode		Hand	Toggle
100087	Digital	R	Pump 2 in Off mode		Off	Toggle
100088	Digital	R	Pump 2 in Auto mode		Auto	Toggle
100089	Digital	R	Pump 3 in Hand mode		Hand	Toggle
100090	Digital	R	Pump 3 in Off mode		Off	Toggle
100091	Digital	R	Pump 3 in Auto mode		Auto	Toggle
100092	Digital	R	Pump 4 in Hand mode		Hand	Toggle
100093	Digital	R	Pump 4 in Off mode		Off	Toggle
100094	Digital	R	Pump 4 in Auto mode		Auto	Toggle
100095	Digital	R	Pump 5 in Hand mode		Hand	Toggle
100096	Digital	R	Pump 5 in Off mode		Off	Toggle
100097	Digital	R	Pump 5 in Auto mode		Auto	Toggle
100098	Digital	R	Pump 6 in Hand mode		Hand	Toggle
100099	Digital	R	Pump 6 in Off mode		Off	Toggle
100100	Digital	R	Pump 6 in Auto mode		Auto	Toggle
100101	Digital	R	Pump 7 in Hand mode		Hand	Toggle
100102	Digital	R	Pump 7 in Off mode		Off	Toggle
100103	Digital	R	Pump 7 in Auto mode		Auto	Toggle
100104	Digital	R	Pump 8 in Hand mode		Hand	Toggle
100105	Digital	R	Pump 8 in Off mode		Off	Toggle
100106	Digital	R	Pump 8 in Auto mode		Auto	Toggle
100107	Digital	R	Reserved			
100108	Digital	R	Reserved			
100109	Digital	R	Reserved			
100110	Digital	R	Reserved			
100111	Digital	R	Reserved			
100112	Digital	R	Reserved			
100113	Digital	R	Pump 1 Run Feedback	Stopped	Running	Toggle
100114	Digital	R	Pump 2 Run Feedback	Stopped	Running	Toggle
100115	Digital	R	Pump 3 Run Feedback	Stopped	Running	Toggle
100116	Digital	R	Pump 4 Run Feedback	Stopped	Running	Toggle
100117	Digital	R	Pump 5 Run Feedback	Stopped	Running	Toggle
100118	Digital	R	Pump 6 Run Feedback	Stopped	Running	Toggle
100119	Digital	R	Pump 7 Run Feedback	Stopped	Running	Toggle
100120	Digital	R	Pump 8 Run Feedback	Stopped	Running	Toggle
100121	Digital	R	Reserved			
100122	Digital	R	Reserved			
100123	Digital	R	Temperature Transmitter Failed	Ok	Alarm	Toggle

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
100124	Digital	R	Reserved			
100125	Digital	R	Reserved			
100126	Digital	R	All Zones DP/Temperature Transmitters Failed	Ok	Alarm	Toggle
100127	Digital	R	Zone 1 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100128	Digital	R	Zone 2 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100129	Digital	R	Zone 3 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100130	Digital	R	Zone 4 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100131	Digital	R	Zone 5 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100132	Digital	R	Zone 6 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100133	Digital	R	Zone 7 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100134	Digital	R	Zone 8 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100135	Digital	R	Zone 9 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100136	Digital	R	Zone 10 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100137	Digital	R	Zone 11 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100138	Digital	R	Zone 12 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100139	Digital	R	Zone 13 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100140	Digital	R	Zone 14 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100141	Digital	R	Zone 15 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100142	Digital	R	Zone 16 DP/Temperature Transmitter Failed	Ok	Alarm	Toggle
100143	Digital	R	Reserved			
100144	Digital	R	Reserved			
100145	Digital	R	Reserved			
100146	Digital	R	Reserved			
100147	Digital	R	Chiller/Boiler Min Flow Alarm (Note 1)	Ok	Alarm	Toggle
100148	Digital	R	Chiller/Boiler Max Flow Alarm (Note 2)	Ok	Alarm	Toggle
100149	Digital	R	Pump 1 Alarm	Ok	Alarm	Toggle
100150	Digital	R	Pump 2 Alarm	Ok	Alarm	Toggle
100151	Digital	R	Pump 3 Alarm	Ok	Alarm	Toggle
100152	Digital	R	Pump 4 Alarm	Ok	Alarm	Toggle
100153	Digital	R	Pump 5 Alarm	Ok	Alarm	Toggle
100154	Digital	R	Pump 6 Alarm	Ok	Alarm	Toggle
100155	Digital	R	Pump 7 Alarm	Ok	Alarm	Toggle
100156	Digital	R	Pump 8 Alarm	Ok	Alarm	Toggle
100157	Digital	R	Reserved			
100158	Digital	R	Reserved			
100159	Digital	R	Pump 1 Run feedback Alarm	Ok	Alarm	Toggle
100160	Digital	R	Pump 2 Run feedback Alarm	Ok	Alarm	Toggle
100161	Digital	R	Pump 3 Run feedback Alarm	Ok	Alarm	Toggle
100162	Digital	R	Pump 4 Run feedback Alarm	Ok	Alarm	Toggle
100163	Digital	R	Pump 5 Run feedback Alarm	Ok	Alarm	Toggle
100164	Digital	R	Pump 6 Run feedback Alarm	Ok	Alarm	Toggle
100165	Digital	R	Pump 7 Run feedback Alarm	Ok	Alarm	Toggle
100166	Digital	R	Pump 8 Run feedback Alarm	Ok	Alarm	Toggle
100167	Digital	R	Reserved			
100168	Digital	R	Reserved			
100169	Digital	R	Pump 1 Drive Fault	Ok	Alarm	Toggle
100170	Digital	R	Pump 2 Drive Fault	Ok	Alarm	Toggle
100171	Digital	R	Pump 3 Drive Fault	Ok	Alarm	Toggle
100172	Digital	R	Pump 4 Drive Fault	Ok	Alarm	Toggle

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	OFF STATE (0)	ON STATE (1)	TYPE
100173	Digital	R	Pump 5 Drive Fault	Ok	Alarm	Toggle
100174	Digital	R	Pump 6 Drive Fault	Ok	Alarm	Toggle
100175	Digital	R	Pump 7 Drive Fault	Ok	Alarm	Toggle
100176	Digital	R	Pump 8 Drive Fault	Ok	Alarm	Toggle
100177	Digital	R	Reserved			
100178	Digital	R	Reserved			
100187	Digital	R	Reserved			
100188	Digital	R	Reserved			
100189	Digital	R	IPS On Status	Off	On	Toggle
100190	Digital	R	PLC Board High Temperature Alarm	Ok	Alarm	Toggle
100191	Digital	R	Reserved			
100192	Digital	R	Reserved			
100193	Digital	R	Reserved			
100194	Digital	R	Reserved			
100195	Digital	R	Reserved			
100196	Digital	R	Reserved			
100197	Digital	R	Reserved			
100198	Digital	R	Reserved			
100199	Digital	R	Reserved			
100200	Digital	R	Reserved			
100201	Digital	R	Reserved			
100202	Digital	R	Reserved			
100203	Digital	R	Reserved			
100204	Digital	R	Reserved			
100205	Digital	R	Reserved			
100206	Digital	R	Reserved			
100207	Digital	R	Reserved			
100208	Digital	R	Reserved			
100209	Digital	R	Reserved			
100210	Digital	R	Reserved			
100211	Digital	R	Reserved			
100212	Digital	R	Reserved			
100213	Digital	R	Reserved			
100214	Digital	R	Reserved			
100215	Digital	R	Reserved			
100216	Digital	R	Reserved			
100217	Digital	R	Reserved			
100218	Digital	R	Reserved			
100219	Digital	R	Reserved			
100220	Digital	R	Reserved			
100221	Digital	R	Reserved			



INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100001	Digital	R/W	Remote Start	Start	Toggle
100002	Digital	R/W	Set Pump 1 Hand	Hand	Momentary
100003	Digital	R/W	Set Pump 1 Off	Off	Momentary
100004	Digital	R/W	Set Pump 1 Auto	Auto	Momentary
100005	Digital	R/W	Set Pump 2 Hand	Hand	Momentary
100006	Digital	R/W	Set Pump 2 Off	Off	Momentary
100007	Digital	R/W	Set Pump 2 Auto	Auto	Momentary
100008	Digital	R/W	Set Pump 3 Hand	Hand	Momentary
100009	Digital	R/W	Set Pump 3 Off	Off	Momentary
100010	Digital	R/W	Set Pump 3 Auto	Auto	Momentary
100011	Digital	R/W	Set Pump 4 Hand	Hand	Momentary
100012	Digital	R/W	Set Pump 4 Off	Off	Momentary
100013	Digital	R/W	Set Pump 4 Auto	Auto	Momentary
100014	Digital	R/W	Set Pump 5 Hand	Hand	Momentary
100015	Digital	R/W	Set Pump 5 Off	Off	Momentary
100016	Digital	R/W	Set Pump 5 Auto	Auto	Momentary
100017	Digital	R/W	Set Pump 6 Hand	Hand	Momentary
100018	Digital	R/W	Set Pump 6 Off	Off	Momentary
100019	Digital	R/W	Set Pump 6 Auto	Auto	Momentary
100020	Digital	R/W	Set Pump 7 Hand	Hand	Momentary
100021	Digital	R/W	Set Pump 7 Off	Off	Momentary
100022	Digital	R/W	Set Pump 7 Auto	Auto	Momentary
100023	Digital	R/W	Set Pump 8 Hand	Hand	Momentary
100024	Digital	R/W	Set Pump 8 Off	Off	Momentary
100025	Digital	R/W	Set Pump 8 Auto	Auto	Momentary
100026	Digital	R/W	Reserved		
100027	Digital	R/W	Reserved		
100028	Digital	R/W	Reserved		
100029	Digital	R/W	Reserved		
100030	Digital	R/W	Reserved		
100031	Digital	R/W	Reserved		
100032	Digital	R/W	Alarm Reset	Reset	Toggle
100033	Digital	R/W	Chiller/Boiler 1 Enabled (Note 7)	Enabled	Toggle
100034	Digital	R/W	Chiller/Boiler 2 Enabled (Note 7)	Enabled	Toggle
100035	Digital	R/W	Chiller/Boiler 3 Enabled (Note 7)	Enabled	Toggle
100036	Digital	R/W	Chiller/Boiler 4 Enabled (Note 7)	Enabled	Toggle
100037	Digital	R/W	Chiller/Boiler 5 Enabled (Note 7)	Enabled	Toggle
100038	Digital	R/W	Chiller/Boiler 6 Enabled (Note 7)	Enabled	Toggle
100039	Digital	R/W	Chiller/Boiler 7 Enabled (Note 7)	Enabled	Toggle
100040	Digital	R/W	Chiller/Boiler 8 Enabled (Note 7)	Enabled	Toggle
100041	Digital	R/W	Reserved		
100042	Digital	R/W	Reserved		
100043	Digital	R/W	Reserved		
100044	Digital	R/W	Reserved		
100045	Digital	R/W	Reserved		
100046	Digital	R/W	Reserved		
100047	Digital	R/W	Reserved		

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100180	Analog	R	Active Zone	0 to 100	
100182	Analog	R	Active Zone Error	-999.9 to 999.9	
100184	Analog	R	Active Zone PV	0.0 to 999.9	psi, ft, kPA, m, °F or °C
100186	Analog	R	Active Zone SP		
100188	Analog	R	Zone 1 Value		
100190	Analog	R	Zone 2 Value		
100192	Analog	R	Zone 3 Value		
100194	Analog	R	Zone 4 Value		
100196	Analog	R	Zone 5 Value		
100198	Analog	R	Zone 6 Value		
100200	Analog	R	Zone 7 Value		
100202	Analog	R	Zone 8 Value		
100204	Analog	R	Zone 9 Value		
100206	Analog	R	Zone 10 Value		
100208	Analog	R	Zone 11 Value		
100210	Analog	R	Zone 12 Value		
100212	Analog	R	Zone 13 Value		
100214	Analog	R	Zone 14 Value		
100216	Analog	R	Zone 15 Value		
100218	Analog	R	Zone 16 Value		
100220	Analog	R	Reserved		
100222	Analog	R	Reserved		
100224	Analog	R	Reserved		
100226	Analog	R	Reserved		
100228	Analog	R	Zone 1 Error	-999.9 to 999.9	
100230	Analog	R	Zone 2 Error		
100232	Analog	R	Zone 3 Error		
100234	Analog	R	Zone 4 Error		
100236	Analog	R	Zone 5 Error		
100238	Analog	R	Zone 6 Error		
100240	Analog	R	Zone 7 Error		
100242	Analog	R	Zone 8 Error		
100244	Analog	R	Zone 9 Error		
100246	Analog	R	Zone 10 Error		
100248	Analog	R	Zone 11 Error		
100250	Analog	R	Zone 12 Error		
100252	Analog	R	Zone 13 Error		
100254	Analog	R	Zone 14 Error		
100256	Analog	R	Zone 15 Error		
100258	Analog	R	Zone 16 Error		
100260	Analog	R	Reserved		
100262	Analog	R	Reserved		
100264	Analog	R	Reserved		
100266	Analog	R	Reserved		
100268	Analog	R	Pump 1 Speed	0.0 to 100.0	%
100270	Analog	R	Pump 2 Speed	0.0 to 100.0	%
100272	Analog	R	Pump 3 Speed	0.0 to 100.0	%
100274	Analog	R	Pump 4 Speed	0.0 to 100.0	%
100276	Analog	R	Pump 5 Speed	0.0 to 100.0	%
100278	Analog	R	Pump 6 Speed	0.0 to 100.0	%

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100280	Analog	R	Pump 7 Speed	0.0 to 100.0	%
100282	Analog	R	Pump 8 Speed	0.0 to 100.0	%
100284	Analog	R	Reserved		
100286	Analog	R	Reserved		
100288	Analog	R	Temperature Sensor PV	0.0 to 212.0	°F or °C
100290	Analog	R	Pump 1 Drive Amp	0.0 to 1000.0	Amp
100292	Analog	R	Pump 1 Drive Volt Ac		VAC
100294	Analog	R	Pump 1 Drive Power		kW
100296	Analog	R	Pump 1 Drive KWH		KWH
100298	Analog	R	Pump 1 Drive RPM		RPM
100300	Analog	R	Pump 1 Drive Run Hours		Hours
100302	Analog	R	Pump 1 Drive Run KHours		
100304	Analog	R	Pump 1 Actual Run Hours		
100306	Analog	R	Pump 1 Drive Speed Feedback	0.0 to 100.0	%
100308	Analog	R	Pump 2 Drive Amp	0.0 to 1000.0	Amp
100310	Analog	R	Pump 2 Drive Volt Ac		VAC
100312	Analog	R	Pump 2 Drive Power		kW
100314	Analog	R	Pump 2 Drive KWH		KWH
100316	Analog	R	Pump 2 Drive RPM		RPM
100318	Analog	R	Pump 2 Drive Run Hours		Hours
100320	Analog	R	Pump 2 Drive Run KHours		
100322	Analog	R	Pump 2 Actual Run Hours		
100324	Analog	R	Pump 2 Drive Speed Feedback	0.0 to 100.0	%
100326	Analog	R	Pump 3 Drive Amp	0.0 to 1000.0	Amp
100328	Analog	R	Pump 3 Drive Volt ac		VAC
100330	Analog	R	Pump 3 Drive Power		kW
100332	Analog	R	Pump 3 Drive KWH		KWH
100334	Analog	R	Pump 3 Drive RPM		RPM
100336	Analog	R	Pump 3 Drive Run Hours		Hours
100338	Analog	R	Pump 3 Drive Run KHours		
100340	Analog	R	Pump 3 Actual Run Hours		
100342	Analog	R	Pump 3 Drive Speed Feedback	0.0 to 100.0	%
100344	Analog	R	Pump 4 Drive Amp	0.0 to 1000.0	Amp
100346	Analog	R	Pump 4 Drive Volt ac		VAC
100348	Analog	R	Pump 4 Drive Power		kW
100350	Analog	R	Pump 4 Drive KWH		KWH
100352	Analog	R	Pump 4 Drive RPM		RPM
100354	Analog	R	Pump 4 Drive Run Hours		Hours
100356	Analog	R	Pump 4 Drive Run KHours		
100358	Analog	R	Pump 4 Actual Run Hours		
100360	Analog	R	Pump 4 Drive Speed Feedback	0.0 to 100.0	%
100362	Analog	R	Pump 5 Drive Amp	0.0 to 1000.0	Amp
100364	Analog	R	Pump 5 Drive Volt ac		VAC
100366	Analog	R	Pump 5 Drive Power		kW
100368	Analog	R	Pump 5 Drive KWH		KWH
100370	Analog	R	Pump 5 Drive RPM		RPM
100372	Analog	R	Pump 5 Drive Run Hours		Hours
100374	Analog	R	Pump 5 Drive Run KHours		
100376	Analog	R	Pump 5 Actual Run Hours		
100378	Analog	R	Pump 5 Drive Speed Feedback	0.0 to 100.0	%

IPS 4000 Integrated pumping  
system for variable primary application

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INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100380	Analog	R	Pump 6 Drive Amp	0.0 to 1000.0	Amp
100382	Analog	R	Pump 6 Drive Volt ac		VAC
100384	Analog	R	Pump 6 Drive Power		kW
100386	Analog	R	Pump 6 Drive KWH		KWH
100388	Analog	R	Pump 6 Drive RPM		RPM
100390	Analog	R	Pump 6 Drive Run Hours		Hours
100392	Analog	R	Pump 6 Drive Run KHours		
100394	Analog	R	Pump 6 Actual Run Hours		
100396	Analog	R	Pump 6 Drive Speed Feedback	0.0 to 100.0	%
100398	Analog	R	Pump 7 Drive Amp	0.0 to 1000.0	Amp
100400	Analog	R	Pump 7 Drive Volt ac		VAC
100402	Analog	R	Pump 7 Drive Power		kW
100404	Analog	R	Pump 7 Drive KWH		KWH
100406	Analog	R	Pump 7 Drive RPM		RPM
100408	Analog	R	Pump 7 Drive Run Hours		Hours
100410	Analog	R	Pump 7 Drive Run KHours		
100412	Analog	R	Pump 7 Actual Run Hours		
100414	Analog	R	Pump 7 Drive Speed Feedback	0.0 to 100.0	%
100416	Analog	R	Pump 8 Drive Amp	0.0 to 1000.0	Amp
100418	Analog	R	Pump 8 Drive Volt ac		VAC
100420	Analog	R	Pump 8 Drive Power		kW
100422	Analog	R	Pump 8 Drive KWH		KWH
100424	Analog	R	Pump 8 Drive RPM		RPM
100426	Analog	R	Pump 8 Drive Run Hours		Hours
100428	Analog	R	Pump 8 Drive Run KHours		
100430	Analog	R	Pump 8 Actual Run Hours		
100432	Analog	R	Pump 8 Drive Speed Feedback	0.0 to 100.0	%
100434	Analog	R	Reserved		
100436	Analog	R	Reserved		
100438	Analog	R	Reserved		
100440	Analog	R	Reserved		
100442	Analog	R	Reserved		
100444	Analog	R	Reserved		
100446	Analog	R	Reserved		
100448	Analog	R	Reserved		
100450	Analog	R	Reserved		
100452	Analog	R	Reserved		
100454	Analog	R	Reserved		
100456	Analog	R	Reserved		
100458	Analog	R	Reserved		
100460	Analog	R	Reserved		
100462	Analog	R	Reserved		
100464	Analog	R	Reserved		

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100466	Analog	R	System Head	0.0 to 32767.0	ft, psi, kPa
100468	Analog	R	Pump 1 Head		
100470	Analog	R	Pump 2 Head		
100472	Analog	R	Pump 3 Head		
100474	Analog	R	Pump 4 Head		
100476	Analog	R	Pump 5 Head		
100478	Analog	R	Pump 6 Head		
100480	Analog	R	Pump 7 Head		
100482	Analog	R	Pump 8 Head	0.0 to 32767.0	gpm, L/s, m <sup>3</sup> /h
100484	Analog	R	Reserved		
100486	Analog	R	Reserved		
100488	Analog	R	System Flow		
100490	Analog	R	Pump 1 Flow		
100492	Analog	R	Pump 2 Flow		
100494	Analog	R	Pump 3 Flow		
100496	Analog	R	Pump 4 Flow		
100498	Analog	R	Pump 5 Flow		
100500	Analog	R	Pump 6 Flow		
100502	Analog	R	Pump 7 Flow	0 to 100.0	%
100504	Analog	R	Pump 8 Flow		
100506	Analog	R	Reserved	0 to 8	
100508	Analog	R	Reserved		
100510	Analog	R	Reserved	0 to 8	
100512	Analog	R	Bypass Valve Position		
100514	Analog	R	Number of Pumps Running in Auto (Note 4)	0 to 8	
100516	Analog	R	Lead Pump ID		
100518	Analog	R	Number Of Pumps Configured	0 to 8	
100520	Analog	R	Number Of Chillers/Boilers Configured		
100522	Analog	R	Lead Pump Switch Time	0.0 to 32767.0	Days, Hours
100524	Analog	R	Reserved		
100526	Analog	R	Reserved		
100528	Analog	R	Reserved		
100530	Analog	R	Reserved		
100532	Analog	R	Reserved		
100534	Analog	R	Reserved		
100536	Analog	R	Reserved		
100538	Analog	R	Reserved		
100540	Analog	R	Reserved		
100542	Analog	R	Reserved		
100544	Analog	R	Reserved		
100546	Analog	R	Reserved		
100548	Analog	R	Reserved		
100550	Analog	R	Reserved		
100552	Analog	R	Reserved		

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100002	Analog	R/W	Zone 1 SP	0.0 to 999.9	psi, ft, kPA, m, °F or °C
100004	Analog	R/W	Zone 2 SP		
100006	Analog	R/W	Zone 3 SP		
100008	Analog	R/W	Zone 4 SP		
100010	Analog	R/W	Zone 5 SP		
100012	Analog	R/W	Zone 6 SP		
100014	Analog	R/W	Zone 7 SP		
100016	Analog	R/W	Zone 8 SP		
100018	Analog	R/W	Zone 9 SP		
100020	Analog	R/W	Zone 10 SP		
100022	Analog	R/W	Zone 11 SP		
100024	Analog	R/W	Zone 12 SP		
100026	Analog	R/W	Zone 13 SP		
100028	Analog	R/W	Zone 14 SP		
100030	Analog	R/W	Zone 15 SP		
100032	Analog	R/W	Zone 16 SP		
100034	Analog	R/W	Reserved		
100036	Analog	R/W	Reserved		
100038	Analog	R/W	Reserved		
100040	Analog	R/W	Reserved		
100042	Analog	R/W	Pump 1 Hand Speed	0.0 to 100.0	%
100044	Analog	R/W	Pump 2 Hand Speed	0.0 to 100.0	%
100046	Analog	R/W	Pump 3 Hand Speed	0.0 to 100.0	%
100048	Analog	R/W	Pump 4 Hand Speed	0.0 to 100.0	%
100050	Analog	R/W	Pump 5 Hand Speed	0.0 to 100.0	%
100052	Analog	R/W	Pump 6 Hand Speed	0.0 to 100.0	%
100054	Analog	R/W	Pump 7 Hand Speed	0.0 to 100.0	%
100056	Analog	R/W	Pump 8 Hand Speed	0.0 to 100.0	%
100058	Analog	R/W	Reserved		
100060	Analog	R/W	Reserved		
100062	Analog	R/W	Max Valve Opening	0.0 to 100.0	%
100064	Analog	R/W	Design Flow	0.0 to 999.9	gpm, L/s, m³/h
100066	Analog	R/W	Design Head		ft, psi, bar
100068	Analog	R/W	Zero Flow Head		ft, psi, bar
100070	Analog	R/W	Flow BEP		gpm, L/s, m³/h
100072	Analog	R/W	Head BEP		ft, psi, bar
100074	Analog	R/W	Dead Band(K)	0-0.5	
100076	Analog	R/W	Staging Sensor Factor	0 to 1.0	
100078	Analog	R/W	Chiller/Boiler Min Flow (Note 5)		
100080	Analog	R/W	Chiller/Boiler Max Flow (Note 6)		
100082	Analog	R/W	Reserved		
100084	Analog	R/W	Reserved		
100086	Analog	R/W	Reserved		
100088	Analog	R/W	Reserved		
100090	Analog	R/W	Reserved		
100092	Analog	R/W	Reserved		
100094	Analog	R/W	Reserved		

INSTANCE	SIGNAL TYPE	READ/WRITE	DESCRIPTION	RANGE	UNITS
100096	Analog	R/W	BAS Zone 1 PV	0.0 to 999.9	psi, ft, kPA, m, °F or °C
100098	Analog	R/W	BAS Zone 2 PV		
100100	Analog	R/W	BAS Zone 3 PV		
100102	Analog	R/W	BAS Zone 4 PV		
100104	Analog	R/W	BAS Zone 5 PV		
100106	Analog	R/W	BAS Zone 6 PV		
100108	Analog	R/W	BAS Zone 7 PV		
100110	Analog	R/W	BAS Zone 8 PV		
100112	Analog	R/W	BAS Zone 9 PV		
100114	Analog	R/W	BAS Zone 10 PV		
100116	Analog	R/W	BAS Zone 11 PV		
100118	Analog	R/W	BAS Zone 12 PV		
100120	Analog	R/W	BAS Zone 13 PV		
100122	Analog	R/W	BAS Zone 14 PV		
100124	Analog	R/W	BAS Zone 15 PV		
100126	Analog	R/W	BAS Zone 16 PV		
100128	Analog	R/W	Reserved		
100130	Analog	R/W	Reserved		
100132	Analog	R/W	Reserved		
100134	Analog	R/W	Reserved		

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