Modbus
Chiller Configuration Properties

Modbus Object Type: Holding Registers

Name	Default	Min	Max	Units	Modbus Reg #	Multiplier	Focus Screen	Modbus Notes
Device Type	16	16	16	None	1	1	Device	(Not writable) 16=Chiller
Device Soft Ver	7.5	0	655.35	None	2	100	Device	(Not writable)
Device Hard Ver	3.1	0	0	None	3	10	Device	(Not writable) 2.0=C1000 / 2.5=C1050 / 3.1=M2000
Net Baud	3	0	5	None	4	1	COM Port	0=9600 / 1=19200 / 2=38400 / 3=57600 / 4=76800 / 5=115200
Net Parity	0	0	2	None	5	1	COM Port	0=NONE / 1=ODD / 2=EVEN
Net StopBits	0	0	1	None	6	1	COM Port	0=1 Stop Bit / 1=2 Stop Bits
Int Baud	3	0	5	None	7	1	COM Port	0=9600 / 1=19200 / 2=38400 / 3=57600 / 4=76800 / 5=115200
Int Parity	0	0	2	None	8	1	COM Port	0=NONE / 1=ODD / 2=EVEN
Int StopBits	0	0	1	None	9	1	COM Port	0=1 Stop Bit / 1=2 Stop Bits
Location	0	0	65535	None	10	1	Device	Each reg holds 2 chars -- 16 chars max -- 8 regs (Regs 10-17)
Out Temp Calib	0	-40	40	deg C	18	100	Calibration	
Supply Temp Calib	0	-40	40	deg C	19	100	Calibration	
Return Temp Calib	0	-40	4000	deg C	20	100	Calibration	
ECWT Calibration	0	-40	40	deg C	21	100	Calibration	
LCWT Calibration	0	-40	40	deg C	22	100	Calibration	
Qty Pumps	2	0	2	None	23	1	Pumps	
Pump Enable Temperature	15	-40	100	deg C	24	100	Pumps	
Lead Pump Mode	0	0	3	None	25	1	Pumps	0=Enable Temp Only / 1=Occupancy Only / 2=Enable Temp OR Occupancy / 3=Enable Temp AND Occupancy
Enable Freeze Protection	1	0	1	None	26	1	Pumps	

Stop Pumps On Alarm Contact	1	0	1	None	27	1	Pumps	
Pump Freeze Protect Limit	2	-40	100	deg C	28	100	Pumps	
Pump Exercise Interval	48	0	1000	hours	29	1	Pumps	
Pump Exercise Time	15	5	60	min	30	1	Pumps	
Pump No Proof Time	10	1	250	sec	31	1	Pumps	
Allow Simultaneous Lead/Lag	0	0	1	None	32	1	Pumps	
Pump Lead Lag Sequence	0	0	3	None	33	1	Pumps	0=No Lead Lag / 1=Alternate after shut down / 2=Alternate with fixed runtime / 3=Equal Run Time after shut down
Pump Lead Lag Fixed Time	1440	1	5040	min	34	1	Pumps	
Pumps Min ON Time	2	0	20	min	35	1	Pumps	
Pumps Min OFF Time	5	0	20	min	36	1	Pumps	
Setpoint Mode	0	0	7	None	37	1	Setpoint	0=FIXED / 1=Reset on Return Temp / 2=Reset on Outside Temp / 3=Reset on Math1 / 4=Reset on Math2 / 5=Reset on Math3 / 6=Reset on Math4 / 7=Reset on Math5
Supply Temp Minimum	5	-40	100	deg C	38	100	Setpoint	
Supply Temp Maximum	18	-40	100	deg C	39	100	Setpoint	
Scale Minimum	1500	-4000	10000	None	40	1	Setpoint	Scale point that aligns with Supply Minimum. Multiplier=100 if degC, Multiplier=1 if Math
Scale Maximum	-1500	-4000	10000	None	41	1	Setpoint	Scale point that aligns with Supply Maximum. Multiplier=100 if degC, Multiplier=1 if Math
Chiller Type	0	0	1	None	42	1	Chiller	0=Water Cooled / 1=Air Cooled
Qty Chiller Stages Per Chiller	1	1	4	None	43	1	Chiller	
Chiller Lead Lag Sequence	0	0	3	None	44	1	Chiller	0=No Lead Lag / 1=Alternate after shut down / 2=Alternate with fixed runtime / 3=Equal Run Time after shut down
Chiller Differential	5	1	40	deg C	45	100	Setpoint	

Chiller Lead Lag Fixed Minutes	1440	1	5040	min	46	1	Chiller	
Chiller Post Off Time	1	0	60	min	47	1	Pumps	
Chiller Min On Time	2	0	20	min	48	1	Chiller	
Chiller Min Off Time	5	0	20	min	49	1	Chiller	
Interstage Activation Delay	5	0	30	min	50	1	Chiller	
Interstage Deactivation Delay	5	0	30	min	51	1	Chiller	
Block Chiller when Freeze Protect Active	1	0	1	None	52	1	Chiller	0=NO / 1=YES
ECWT Emergency High Limit	38	-40	100	deg C	53	100	Chiller	
LCWT Emergency High Limit	43	-40	100	deg C	54	100	Chiller	
LCWT Stage Down Limit	38	-40	100	deg C	55	100	Chiller	
Lockout Trigger Delay	1440	1	5040	min	56	1	Chiller	
Enable Pressure Control	1	0	1	None	57	1	Pressure	
Pressure Signal Type	0	0	4	None	58	1	Pressure	0=0-5VDC / 1=1-5VDC / 2=4-20mA / 3=0.5-4.5VDC / 4=0-20mA
Pressure Range Min	0	-500	500	PSI	59	10	Pressure	
Pressure Range Max	50	-500	500	PSI	60	10	Pressure	
Pressure Setpoint	25	-500	500	PSI	61	10	Pressure	
Pressure Proportional Band	12	0	500	PSI	62	10	Pressure	
Pressure Integral Band	30	0	3600	sec	63	1	Pressure	
Pressure Calibration	0	-500	500	PSI	64	10	Calibration	
Range AO1	0	0	2	None	65	1	Pressure	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Range AO2	0	0	2	None	66	1	Pressure	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Range AO3	0	0	2	None	67	1		Not Currently in Use
Reverse Acting AO1	0	0	1	None	68	1	Pressure	0=NORMAL / 1=REVERSE ACTING
Reverse Acting AO2	0	0	1	None	69	1	Pressure	0=NORMAL / 1=REVERSE ACTING
Reverse Acting AO3	0	0	1	None	70	1	Pressure	Not Currently in Use
Qty Chillers	1	1	2	None	71	1	Chiller	

Edit Display Features	0	0	65535	None	72	1	Edit Display	Bit1 (LSB): Hide Outside Air Temp / Bit2: Hide Return Temp / Bit3: Hide ECWT / Bit4: Hide LCWT / Bit5: Hide Alarm Contact
VFD Min Value	0	0	10	volts	73	10	Pressure	
VFD Max Value	10	0	10	volts	74	10	Pressure	
Use Same Proof Input for Both Pumps	0	0	1	None	75	1	Pumps	(M2000 Only) 0=Use AI4 and AI5 for Proof of Pumps 1 and 2 / 1=Use only AI4 as Proof for BOTH Pumps 1 and 2
Chip Type	0	0	1	None	76	1	Device	0=PIC18F6722 / 1=PIC18F67K40
Reset	0	0	1	None	100	1	Device	Set to 1 to cause a reset
Reprogram	0	0	1	None	101	1	Device	Set to 255 to enter reprogram mode (Warning: Irreversible action - Reserved for ProLon Focus software)
Time Zone	7	0	25	None	125	1	Visualisation	
Use Daylight Savings Time	1	0	1	None	126	1	Visualisation	
DST Active Month	3	1	12	None	127	1	Visualisation	1=January … 12=December
DST Active Week	1	0	4	None	128	1	Visualisation	0= First weekend of month … 4=5th weekend of month
DST Deactive Month	11	1	12	None	129	1	Visualisation	1=January … 12=December
DST Deactive Week	0	0	4	None	130	1	Visualisation	0= First weekend of month … 4=5th weekend of month
Locked Address	0	0	127	None	140	1	Device	Saved address (overrides physical dipswitch address). Set to 0 to return to physical address.
DO1 Pump Override	255	0	255	None	150	1	Visualisation	0=Override OFF / 1=Override ON / Else=AUTO
DO2 Pump Override	255	0	255	None	151	1	Visualisation	0=Override OFF / 1=Override ON / Else=AUTO
DO3 Chiller Override	255	0	255	None	152	1	Visualisation	0=Override OFF / 1=Override ON / Else=AUTO
DO4 Chiller Override	255	0	255	None	153	1	Visualisation	0=Override OFF / 1=Override ON / Else=AUTO
DO5/AO Chiller Override	255	0	255	None	154	1	Visualisation	(DO5 for M2000, AO for C1000) 0=Override OFF / 1=Override ON / Else=AUTO

AO3 Chiller Override	255	0	255	None	155	1	Visualisation	(M2000 Only) 0=Override OFF / 1=Override ON / Else=AUTO
AO1 VFD Override	25.5	0	25.5	volts	156	10	Visualisation	0-10=Override 0-10.0V / Else=AUTO
AO2 VFD Override	25.5	0	25.5	volts	157	10	Visualisation	0-10=Override 0-10.0V / Else=AUTO
Schedule Override	255	0	255	None	158	1	Visualisation	0=Unoccupied / 1=Occupied / Else=AUTO
Clear Lead Pump Timers	0	0	1	None	165	1	Device	Set to 1 to clear these timers
Clear Pump DO1 Timers	0	0	1	None	166	1	Device	Set to 1 to clear these timers
Clear Pump DO2 Timers	0	0	1	None	167	1	Device	Set to 1 to clear these timers
Clear Lead Chiller Timers	0	0	1	None	168	1	Device	Set to 1 to clear these timers
Clear Chiller DO3 Timers	0	0	1	None	169	1	Device	Set to 1 to clear these timers
Clear Chiller DO4 Timers	0	0	1	None	170	1	Device	Set to 1 to clear these timers
Clear Chiller DO5/AO Timers	0	0	1	None	171	1	Device	(DO5 for M2000, AO for C1000) Set to 1 to clear these timers
Clear Chiller AO3 Timers	0	0	1	None	172	1	Device	Set to 1 to clear these timers
Clear Lockout Mode	0	0	1	None	173	1	Device	Set to 1 to clear Lockout Mode
Time - Set Year	0	0	99	None	175	1	Visualisation	
Time - Set Month	0	1	12	None	176	1	Visualisation	
Time - Set Weekday	0	0	6	None	177	1	Visualisation	
Time - Set Day	0	1	31	None	178	1	Visualisation	
Time - Set Hours	0	0	23	None	179	1	Visualisation	
Time - Set Minutes	0	0	59	None	180	1	Visualisation	
Time - Set Seconds	0	0	59	None	181	1	Visualisation	
Weekly Schedule	127	0	127	None	200	1	Schedule	Registers 300 to 427. Must access using Multiple Read/Write. [Sunday to Saturday, then Holiday] [period 1-8] [hour, minute]
Calendar	0	0	255	None	328	1	Calendar	Registers 428 to 475. Must access using Multiple Read/Write. [January to December][4 bytes = 32 days]. Each bit set to 1 is considered a holiday.

PROLON

Ver 7.5.0

Modbus
Chiller Network Variable Outputs

Modbus Object Type: Input Registers

Name	Units	Modbus Reg #	Mult	Modbus Notes
Supply Water Temperature	deg C	1	100	
Outside Air Temperature	deg C	2	100	
Return Water Temperature	deg C	3	100	
Entering Condenser Water Temp (ECWT)	deg C	4	100	
Leaving Condenser Water Temp (LCWT)	deg C	5	100	
Supply Water Target Temperature	deg C	6	100	
Occupancy	None	7	1	
Pump DO1 Call	None	8	1	
Pump DO2 Call	None	9	1	
Pump DO1 Proof	None	10	1	
Pump DO2 Proof	None	11	1	
Chiller Stage DO3 Call	None	12	1	
Chiller Stage DO4 Call	None	13	1	
Chiller Stage (DO5 / AO) Call	None	14	1	DO5 on M2000, AO on C1000
Chiller Stage AO3 Call	None	15	1	M2000 Only
VFD AO1 Value	volts	16	1	M2000 Only
VFD AO2 Value	volts	17	1	M2000 Only
Water Pressure	PSI	18	10	M2000 Only
Alarm Contact State	None	19	1	M2000 Only: 0=NO ALARM (open contact) / 1=ALARM (closed contact)
Pump Status	None	20	1	0=OK / 1=LEAD FAIL / 2=BOTH FAIL
Lockout Mode	None	21	1	0=OK / 1=LOCKOUT MODE ACTIVE
ECWT High Limit Triggered	None	22	1	0=NO / 1= YES

LCWT High Limit Triggered	None	23	1	0=NO / 1= YES
Lead Pump is DO1	None	24	1	0=NO / 1= YES
Lead Chill ID	None	25	1	0=DO3 / 1=DO4 / 2=DO5(AO for C1000) / 3=AO3
Lead Pump Total Minutes	min	30	1	
Lead Pump OFF Minutes	min	31	1	The amount of time the lead pump has been OFF
DO1 Total Days	days	32	1	
DO1 Total Minutes	min	33	1	
DO2 Total Days	days	34	1	
DO2 Total Minutes	min	35	1	
Lead Chiller Total Minutes	min	36	1	
DO3 Total Days	days	37	1	
DO3 Total Minutes	min	38	1	
DO4 Total Days	days	39	1	
DO4 Total Minutes	min	40	1	
DO5 Total Days	days	41	1	DO5 on M2000, AO on C1000
DO5 Total Minutes	min	42	1	DO5 on M2000, AO on C1000
AO3 Total Days	days	43	1	
AO3 Total Minutes	min	44	1	

Modbus
Chiller Network Variable Inputs

Modbus Object Type: Holding Registers

Name	Units	Modbus Reg #	Mult	Modbus Notes
Occupancy Input	None	136	1	Allows the occupancy to be set by another network device (0=Unoccupied, 1=Occupied, 2=AUTO)
Outside Temp Input	deg C	139	100	Allows the outside temp to be set by another network device. Physical sensor (if available) takes priority. Set to 0x7FFF to invalidate.
Supply Water Temp	deg C	142	1	Allows the supply water temp to be read and set by another network device.