Modbus
Unit Ventilator Configuration Properties

Modbus Object Type: Holding Registers

Name	Default	Min	Max	Units	Modbus Reg #	Multiplier	Focus Screen	Modbus Notes
Device Type	20	20	20	None	1	1	Device	(Not writable) 20=Unit Ventilator
Device Soft Ver	7.7	0	655.35	None	2	100	Device	(Not writable)
Device Hard Ver	3.1	0	0	None	3	10	Device	(Not writable) 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
RJ45 Baud	3	0	5	None	7	1	COM Port	0=9600 / 1=19200 / 2=38400 / 3=57600 / 4=76800 / 5=115200
RJ45 Parity	0	0	2	None	8	1	COM Port	0=NONE / 1=ODD / 2=EVEN
RJ45 StopBits	0	0	1	None	9	1	COM Port	0=1 Stop Bit / 1=2 Stop Bits
Device Name	0	0	65535	None	10	1	Device	Each reg holds 2 chars -- 16 chars max -- 8 regs (Regs 10-17)
Valve Mode	0	0	2	None	18	1	Hardware	0=ON/OFF / 1=MODULATING / 2=FACE&BYPASS
Contact Changeover Type	0	0	1	None	19	1	Valve	0=THERMISTOR / 1=CONTACT
Contact Changeover Mode	0	0	1	None	20	1	Valve	0=CLOSED CONTACT INDICATES HOT WATER / 1=CLOSED CONTACT INDICATES COLD WATER
System Type	0	0	1	None	21	1	Hardware	0=TWO PIPE SYSTEM / 1=FOUR PIPE SYSTEM

Fan Low Speed Configuration	217	0	255	None	22	1	Fan	[BITS 1&2: 0=FAN OFF WHEN OCCUPIED / 1=FAN ON WHEN OCCUPIED / ELSE=FAN AUTO WHEN OCCUPIED] [BITS 3&4: 0=FAN OFF WHEN UNOCC / 1=FAN ON WHEN UNOCC / ELSE=FAN AUTO WHEN UNOC] [BITS 5&6: 0=FAN OFF WHEN OVERRD / 1=FAN ON WHEN OVERRD / ELSE=FAN AUTO WHEN OVERRD] [BIT 7: AUTO MODE ENABLE HEAT] [BIT 8: AUTO MODE ENABLE COOL]
Fan Low Speed Heat Setpoint	40	0	100	%	23	1	Fan	
Fan Low Speed Cool Setpoint	40	0	100	%	24	1	Fan	
Outside Temperature Calibration	0	-40	40	deg C	25	100	Calibration	
Supply Temperature Calibration	0	-40	40	deg C	26	100	Calibration	
Pipe Temperature Calibration	0	-40	40	deg C	27	100	Calibration	For a Four Pipe System, this is the HOT WATER temperature calibration
Zone Temperature Calibration	0	-40	40	deg C	28	100	Calibration	
Cold Water Calibration	0	-40	40	deg C	29	100	Calibration	Four Pipe System Only
Zone Setpoint Calibration	0	-40	40	deg C	30	100	Calibration	
Zone Proportionnal Band	3	0	50	deg C	31	100	Temperature	
Zone Heat Integral	30	0	120	min	32	1	Temperature	
Zone Cool Integral	30	0	120	min	33	1	Temperature	
Fan Speed Config	0	0	2	None	34	1	Hardware	0=SINGLE SPEED / 1=TWO SPEED / 2=THREE SPEED
Chip Type	0	0	1	None	35	1	Device	0=PIC18F6722 / 1=PIC18F67K40
Default Zone Heat Setpoint	21.5	-30	40	deg C	36	100	Temperature	
Default Zone Cool Setpoint	22.5	-30	40	deg C	37	100	Temperature	

Min Zone Heat Setpoint	19	-30	40	deg C	38	100	Temperature	
Max Zone Heat Setpoint	25	-30	40	deg C	39	100	Temperature	
Min Zone Cool Setpoint	20	-30	40	deg C	40	100	Temperature	
Max Zone Cool Setpoint	26	-30	40	deg C	41	100	Temperature	
Unoccupied Heat Setpoint Offset	3	-20	20	deg C	42	100	Temperature	
Unoccupied Cool Setpoint Offset	5	-20	20	deg C	43	100	Temperature	
Unoccupied Heat Setpoint Limit	15	-30	40	deg C	44	100	Temperature	
Unoccupied Cool Setpoint Limit	30	-30	40	deg C	45	100	Temperature	
Unoccupied Override Time	120	0	720	min	46	1	Temperature	
Valve Heat Changeover Offset	8	0	20	deg C	47	100	Valve	
Valve Cool Changeover Offset	8	0	20	deg C	48	100	Valve	
Zone Integral Dropoff Rate	3	0	4	None	49	1	Temperature	0=SLOW / 4=FAST
Fan Minimum ON Time	15	0	250	min	50	1	Fan	
Valve Enable Purge	0	0	1	None	51	1	Valve	
Valve Purge Interval	2	1	250	hours	52	1	Valve	
Valve Min Purge Delay	120	0	6000	sec	53	1	Valve	
Valve Max Purge Delay	5	0	250	min	54	1	Valve	
Freeze Protection Valve Pos	100	0	100	%	55	1	Valve	
Valve Demand Heat Setpoint	35	0	100	%	56	1	Valve	
Valve Demand Heat Band	20	0	100	%	57	1	Valve	
Valve Demand Cool Setpoint	35	0	100	%	58	1	Valve	
Valve Demand Cool Band	20	0	100	%	59	1	Valve	
Valve Reheat Proportional Band	10	0	50	deg C	60	100	Valve	

Valve Reheat Integral	5	0	120	min	61	1	Valve	
Valve Threshold Setpoint	10	0	100	%	62	1	Valve	
Alarm Type	0	0	1	None	63	1	Hardware	0=WATER LEAK / 1=FREEZE_SMOKE_PROTECTION
Reheat Enable	0	0	1	None	64	1	Valve	
Economizer Mode	0	0	2	None	65	1	Hardware	0=NONE / 1=COOLING_ONLY / 2=COOLING_CO2
Reheat Setpoint	21	-40	40	deg C	66	100	Valve	
Reheat Outside Temp Enable	13	-40	40	deg C	67	100	Valve	
Supply Temp High Limit	40	-40	100	deg C	68	100	Limits	
Outside Temp High Limit	30	-40	40	deg C	69	100	Limits	
Outside Temp Low Limit	-40	-40	40	deg C	70	100	Limits	
Two Pipe Valve Reverse Acting	0	0	1	None	71	1	Hardware	
Two Pipe Valve Analog Output Range	0	0	2	None	72	1	Hardware	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Four Pipe Heat Valve Reverse Acting	0	0	1	None	73	1	Hardware	
Four Pipe Heat Valve Analog Output Range	0	0	2	None	74	1	Hardware	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Four Pipe Cool Valve Reverse Acting	0	0	1	None	75	1	Hardware	
Four Pipe Cool Valve Analog Output Range	0	0	2	None	76	1	Hardware	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Valve Minimum Increment	5	0	50	%	77	1	Valve	
Four Pipe Sensor Display	3	0	3	None	78	1	Hardware	0=NONE / 1=FOUR PIPE HOT WATER TEMP ONLY / 2=FOUR PIPE COLD WATER TEMP ONLY / 3=BOTH
Input Profile	3	0	3	None	79	1	Hardware	0=NONE / 1=ENABLE FAN PROOF ONLY / 2=ENABLE ALARM ONLY / 3=ENABLE BOTH

Alarm Closed Contact Meaning	0	0	1	None	80	1	Hardware	0=CLOSED CONTACT MEANS ALARM ON / 1=CLOSED CONTACT MEANS ALARM OFF
Fan Med Speed Heat SP	40	0	100	%	81	1	Fan	
Fan Med Speed Cool SP	40	0	100	%	82	1	Fan	
Zone Setpoint Min Scale	15	-30	40	deg C	83	100	Temperature	
Zone Setpoint Max Scale	30	-30	40	deg C	84	100	Temperature	
Group Code 1	0	0	250	None	85	1	Group Codes	
Group Code 2	0	0	250	None	86	1	Group Codes	
Group Code 3	0	0	250	None	87	1	Group Codes	
Group Weight 1	0	0	15	None	88	1	Group Codes	
Group Weight 2	0	0	15	None	89	1	Group Codes	
Group Weight 3	0	0	15	None	90	1	Group Codes	
Global Weight	0	0	60	None	91	1	Group Codes	
Supply Air Fan Stop Limit	4	-40	40	deg C	92	100	Limits	
Supply Air Fan Reactivate Limit	12	-38	60	deg C	93	100	Limits	
Reheat Low Limit	13	-1	40	deg C	94	100	Valve	
Fan High Speed Heat SP	60	0	100	%	95	1	Fan	
Fan High Speed Cool SP	60	0	100	%	96	1	Fan	
Economizer Reverse Acting	0	0	1	None	97	1	Economizer	
Economizer Range	0	0	2	None	98	1	Hardware	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Face & Bypass Reverse Acting	0	0	1	None	99	1	Hardware	
Face & Bypass Range	0	0	2	None	100	100	Hardware	0=0-10VDC / 1=2-10VDC / 2=0-5VDC
Low OAT Protection Enabled	1	0	1	None	101	1	Face&Bypass	

Low OAT Protection Temp	-1	-40	40	deg C	102	100	Face&Bypass	
Schedule Override	255	0	255	None	120	1	Visualisation	0=Unoccupied / 1=Occupied / Else=AUTO
Fan Override	255	0	255	None	121	1	Visualisation	0=OFF / 1=LOW / 2=MED / 3=HIGH / ELSE=AUTO
Face&Bypass Damper Override	255	0	255	None	122	1	Visualisation	0-100=OVERRIDE / ELSE=AUTO
Two Pipe Valve Override	255	0	255	%	123	1	Visualisation	0-100=OVERRIDE / ELSE=AUTO
Four Pipe Heat Valve Override	255	0	255	%	124	1	Visualisation	0-100=OVERRIDE / ELSE=AUTO
Four Pipe Cool Valve Override	255	0	255	%	125	1	Visualisation	0-100=OVERRIDE / ELSE=AUTO
Economizer Damper Override	255	0	255	%	126	1	Visualisation	0-100=OVERRIDE / ELSE=AUTO
System User Mode	255	0	255	None	132	1	Visualisation	[4LSB=FAN MODE -> 0=OFF / 1=LOW / 2=MED / 3=HIGH / ELSE=AUTO] [NEXT 4LSB=SYSTEM MODE -> 0=OFF / 1=HEAT ONLY / 2=COOL ONLY / ELSE=AUTO]
Locked Address	0	0	127	None	140	1	Device	Saved address (overrides physical dipswitch address). Set to 0 to return to physical address.
Reset	0	0	1	None	145	1	Device	Set to 1 to cause a reset
Reprogram	0	0	1	None	146	1	Device	Set to 255 to enter reprogram mode (Warning: Irreversible action - Reserved for Prolon Focus software)
Fan Purge Mode	0	0	1	None	150	1	Valve	0=STOPPED / 1=LOW_SPEED_ONLY
Econo Change Over Temp	13	-40	40	deg C	151	100	Economizer	
Econo Change Over Differential	3	0	20	deg C	152	100	Economizer	
Econo Min Pos - Fan High	10	0	100	%	153	1	Economizer	
Econo Min Pos - Fan Med	20	0	100	%	154	1	Economizer	

Econo Min Pos - Fan Low	30	0	100	%	155	1	Economizer	
Econo Morning Vent Delay	90	0	250	min	156	1	Economizer	
Econo Min Demand Scale	10	0	100	%	157	1	Economizer	
Econo Max Demand Scale	50	0	100	%	158	1	Economizer	
Econo Min Setpoint Scale	18	-40	40	deg C	159	100	Economizer	
Econo Max Setpoint Scale	15	-40	40	deg C	160	100	Economizer	
CO2 Setpoint	800	0	1500	ppm	161	1	Economizer	
CO2 Proportional Band	200	0	1000	ppm	162	1	Economizer	
CO2 Supply Low Limit	13.5	1	30	deg C	163	100	Economizer	
CO2 Reading Offset	0	-3000	3000	ppm	164	1	Economizer	
CO2 Max Damper Opening	50	0	100	%	165	1	Economizer	
Econo Default Damper Speed	0	0	4	None	166	1	Economizer	0=SLOW / 4=FAST
Fan Min On/Off/Interstage Delay	3	0	250	min	167	1	Fan	
Valve Type	0	0	1	None	168	1	Hardware	0=TWO-WAY / 1=THREE-WAY
Time Zone	7	0	25	None	250	1	Visualisation	
Use Daylight Savings Time	1	0	1	None	251	1	Visualisation	
DST Active Month	3	1	12	None	252	1	Visualisation	1=January … 12=December
DST Active Week	1	0	4	None	253	1	Visualisation	0= First weekend of month … 4=5th weekend of month
DST Deactive Month	11	1	12	None	254	1	Visualisation	1=January … 12=December
DST Deactive Week	0	0	4	None	255	1	Visualisation	0= First weekend of month … 4=5th weekend of month
Time - Set Year	0	0	99	None	275	1	Visualisation	
Time - Set Month	0	1	12	None	276	1	Visualisation	
Time - Set Weekday	0	0	6	None	277	1	Visualisation	
Time - Set Day	0	1	31	None	278	1	Visualisation	
Time - Set Hours	0	0	23	None	279	1	Visualisation	

Time - Set Minutes	0	0	59	None	280	1	Visualisation	
Time - Set Seconds	0	0	59	None	281	1	Visualisation	
Weekly Schedule	127	0	127	None	300	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	428	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.

Modbus
Unit Ventilator Network Variable Outputs

Modbus Object Type: Input Registers

Name	Units	Modbus Reg #	Mult	Modbus Notes
Zone Temp	degC	1	100	
Zone Heat SP	degC	2	100	
Zone Cool SP	degC	3	100	
Demand	%	4	1	
Supply Temp	degC	5	100	
Outside Temp	degC	6	100	
Occupancy	None	7	1	
Fan Call	None	8	1	0=OFF / 1=LOW / 2=MED / 3=HIGH
System User Mode	None	9	1	[4LSB=FAN MODE -> 0=OFF / 1=LOW / 2=MED / 3=HIGH / ELSE=AUTO] [4MSB=SYSTEM MODE -> 0=OFF / 1=HEAT ONLY / 2=COOL ONLY / 3=AUTO]
Fan Proof	None	10	1	
Supply Setpoint	degC	11	100	
Two Pipe Temp	degC	12	100	
Two Pipe Changeover Contact State	None	13	1	0=CLOSED / 1=OPEN
Two Pipe Temp Mode	None	14	1	0=INVALID / 1=NEUTRAL / 2=HEAT / 3=COOL
Two Pipe Valve Pos	%	15	1	
Four Pipe Hot Water Temp	deg C	16	100	
Four Pipe Cold Water Temp	degC	17	100	
Four Pipe Hot Water Valve Position	%	18	1	
Four Pipe Cold Water Valve Position	%	19	1	
Face & Bypass Damper Pos	%	20	1	
Economizer Damper Pos	%	21	1	
Two Pipe Valve Purge Status	None	22	1	0=NOT PURGING / 1=PURGING
Alarm Status	None	23	1	0=NO ALARM / 1=ALARM ON

Freeze Protection Mode	None	24	1	0=INACTIVE / 1=ACTIVE
Economizer Calc Min Pos	%	25	1	
CO2 Reading	ppm	26	1	
Low OAT Protection Mode	None	27	1	0=INACTIVE / 1=ACTIVE

Modbus
Unit Ventilator Network Variable Inputs

Modbus Object Type: Holding Registers

Name	Units	Modbus Reg #	Mult	Modbus Notes
Zone Temp INPUT	degC	130	100	Allows the zone temp to be set by another network device (Write a value greater than 300degC to clear)
Unoccupied Override INPUT	None	131	1	Allows a network device to indicate the Unoccupied Override mode is desired (Write a 1 to start the Unoccupied Override Timer. Cannot be canceled once the timer starts.)
Occupancy INPUT	None	136	1	Allows the occupancy to be set by another network device (0=Unoccupied, 1=Occupied, 2=AUTO)
Outside Temperature INPUT	degC	139	100	Allows the outsie temp to be set by another network device (Write a value greater than 300degC to clear)
Two Pipe Temp INPUT	degC	142	100	Allows the zone temp to be set by another network device (Write a value greater than 300degC to clear)