

WK0600 HOLDING REGISTERS

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
COMMON	0 to 3	4	int8	1	Low byte	R	Serial Number - 4 byte value. Read-only
COMMON	4 to 5	2	int8	0,1	Low byte	R	Software Version – 2 byte value. Read-only
COMMON	6	1	int8	1	Low byte	W/R	ADDRESS. Modbus device address
COMMON	7	1	int8	1	Low byte	R	Product Model. This is a read-only register that is used by the microcontroller to determine the product
COMMON	8	1	int8	1	Low byte	R	Hardware Revision. This is a read-only register that is used by the microcontroller to determine the hardware rev
COMMON	9	1	int8	1	Low byte	R	PIC firmware version
COMMON	10	1	int8	1	Low byte	R	PIC version of Humidity module
COMMON	11	1	int8	1	Low byte	W/R	PLUG_N_PLAY_ADDRESS, 'plug n play' address, used by the network master to resolve address conflicts.
COMMON	15	1	int8	1	Low byte	R	Base address selection.0 = Protocol address,1 = PLC address.
COMMON	16	1	int8	1	Low byte	W/R (reboot after write)	Firmware Update Register, used to show the status of firmware updates.Writing 143 sets the config back to out of the box except for Modbus ID and baud rate. Write 159 to fix the current config as the user defaults. Writing 175 resets the unit back to the user defaults.
COMMON	20	2	int16	1	Full	R	Hardware Options Register, starting with LSB: Bit0=Clock present or not, Bit1 = Humidity present or not, Bit2 = CO2 Sensor, Bit3=CO sensor, Bit4 = Motion Sensor
COMMON	21to100						Blank, for future use
MODE	101	1	int8	1	Low byte	W/R	COOL_HEAT_MODE, heating or cooling mode. 0=none, 1=cooling, 2=heating.
MODE	102	1	int8	1	Low byte	R	MODE_OPERATION, heating or cooling state: 0-7 = coasting, cooling 1,2,3, heating 1,2,3
MODE	103	1	int8	1	Low byte	W/R (reboot after write)	SEQUENCE , 0 = internal test sequence, outputs slowly cycle on/off or ramp up & down. 1 = normal, operation according to the output tables.
MODE	104	1	int8	1	Low byte	W/R (reboot after write)	DEGC_OR_F, engineering units, Deg C = 0, Deg F = 1
MODE	105	1	int8	1	Low byte	W/R	FAN MODE, number of fan speeds. Single speed = 1 up to three speed fan = 3
MODE	106	1	int8	1	Low byte	W/R	POWER_UP_MODE, mode of operation on power up. 0 = power off, 1 = power up in on mode, 2 = last value (default), 3 = auto mode.
MODE	107	1	int8	1	Low byte	W/R	AUTO_ONLY , enables or disables manual mode. 0 = Manual Fan Modes 1-x Allowed (depending on R122 value, 1 = Auto Mode Only, 2 = DDC mode,the user can not change setpoint and fan speed from keypad.
MODE	108	1	int8	1	Low byte	W/R (reboot after write)	Write 1 to register 108 - resets the unit to latest factory defaults (same as writing 143 to register 16)
MODE	109	1	int8	1	Low byte	W/R	Info Byte, this register contains info about the state of the thermostat.
	109_0						Bit 0 is read/write and shows the occupancy mode. Bit 0 = 0 means unoccupied. Bit 0 = 1 means occupied.
	109_1						Bit 1 is read only and shows the reset state. Bit 1 = 0 means hardware restart. Bit 1 = 1 means software restart.
	109_2						Bit 2 is read/write and is the reset prevention bit. Bit 2 = 0 means the thermostat will automatically reset after certain registers are changed. Bit 2 = 1 prevents this reset. Changing this bit from 1 to 0 will trigger a reset.
	109_3						Bit 3 is the state of the digital input. Bit 3 = 1 means logic high. Bit 3 = 0 means logic low.
	109_4						Bit 4: Reserved, used for some non standard occupancy sensor logic
	109_5						Bit5 0=no delay on modbus reply, 1= 10ms delay before send for slower PLC's to switch from TX to RX

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
MODE	109_7						Bit7, RS485/wireless communications mode: The normal communications method is a bus topology using RS485 which uses a 'transmit enable' or TX_EN line on the RS485 hardware whenever transmission from the thermostat to the bus takes place. For wireless devices this is typically taken care of by the radio module itself so it is not needed. Default = 0, When bit7 is 0, the RS485 chip, TX_EN line is used for normal RS485 bus communications. When bit7 is 1, the TX_EN line is not used, allowing the radio module to communicate one-to-one with the thermostat
MODE	110	1	int8	1	Low byte	W/R (reboot after write)	Bau - Baudrate, 0=9600, 1=19.2kbaud
MODE	111	1	int8	1	Low byte	W/R	Unoccupied Override Timer, Ort. 0=disabled, >0=number of minutes manual override is allowed
MODE	112	1	int8	1	Low byte	W/R	OVERRIDE_TIMER_DOWN_COUNT - Number of minutes remaining on the timer when unoccupied override timer is in effect.
MODE	113	1	int8	1	Low byte	W/R (reboot after write)	Heating cooling mode configuration, HC, 0=PID, 1=Keypad, 2=Digital_in1(not used), 3=Digital_in1,(not used) 4=Analog_in1, 5=Analog_in2
MODE	114	2	int16	1	Full	W/R	Period timer ON time.
MODE	115	2	int16	1	Full	W/R	Period timer OFF time.
MODE	116	1	int8	1	Low byte	W/R (reboot after write)	Period timer units. 0, second; 1, minute; 2, hour.
MODE	117	1	int8	1	Low byte	W/R	Dead master. The thermostat will go to occupied mode automatically if there is no serial communications for a user defined period of time, for example if the register is set to 10 the thermostat will go to occupied mode if there are no communications for a period of 10 minutes. Set the register to 0 to disable the feature
MODE	118	1	int8	1	Low byte	R	Time format. 0 = 12hours,1 = 24hours, in WK0600, it always 24h
MODE	119	1	int8	1	Low byte	W/R	free cool cobfigure byte
INPUT	121	2	int16	0.1(°C)	Full	W/R	TEMPERATURE reading in DegC or F from the sensor used in the control loop PI1 which is configured in register 111. This can be the internal sensor, external, or an average of the two. Writing a temperature value to this register will calibrate the currently selected sensor by adjusting the associated calibration register. If average is selected then you cannot write to this register.
INPUT	122	1	int8	1	Low byte	W/R	ANALOG INPUT1 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	123	1	int8	1	Low byte	W/R	ANALOG INPUT2 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	124	1	int8	1	Low byte	W/R	ANALOG INPUT3 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	125	1	int8	1	Low byte	W/R	ANALOG INPUT4 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	126	1	int8	1	Low byte	W/R	ANALOG INPUT5 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	127	1	int8	1	Low byte	W/R	ANALOG INPUT6 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	128	1	int8	1	Low byte	W/R	ANALOG INPUT7 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	129	1	int8	1	Low byte	W/R	ANALOG INPUT8 RANGE. 0 = raw data, 1 = thermistor, 2 = %, 3 = ON/OFF, 4 = N/A, 5 = OFF/ON
INPUT	130	2	int16	1.1(°C)	Full	W/R	Internal Thermistor Sensor - Shows the filtered, calibrated value of the internal thermistor sensor
INPUT	131	2	int16	depend on input range	Full	W/R	Analog input1 value
INPUT	132	2	int16	depend on input range	Full	W/R	Analog input2 value
INPUT	133	2	int16	depend on input range	Full	W/R	Analog input3 value

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
INPUT	134	2	int16	depend on input range	Full	W/R	Analog input4 value
INPUT	135	2	int16	depend on input range	Full	W/R	Analog input5 value
INPUT	136	2	int16	depend on input range	Full	W/R	Analog input6 value
INPUT	137	2	int16	depend on input range	Full	W/R	Analog input7 value
INPUT	138	2	int16	depend on input range	Full	W/R	Analog input8 value
INPUT	139	2	int16	1(ppm)	Full	W/R	co2 ppm(optional)
INPUT	140	2	int16	0.1(%)	Full	W/R	humidity % (optional)
INPUT	141	2	int16	1	Full	W/R	Input auto/ manual enable.
INPUT	142	1	int8	1	Low byte	W/R	Temperature sensor filter, FIL, weighted average of stored value to new raw value
INPUT	153	2	int16	0.1(°C)	Full	W/R	CALIBRATION, this is the calibration factor for the internal sensor, normally maintained by the thermostat.
INPUT	154	2	int16	1.1(°C)	Full	W/R	Calibration for the internal thermistor - internally managed offset for the internal temp sensor value
INPUT	155	2	int16	depend on input range	Full	W/R	Calibration for analog input1
INPUT	156	2	int16	depend on input range	Full	W/R	Calibration for analog input2
INPUT	157	2	int16	depend on input range	Full	W/R	Calibration for analog input3
INPUT	158	2	int16	depend on input range	Full	W/R	Calibration for analog input4
INPUT	159	2	int16	depend on input range	Full	W/R	Calibration for analog input5
INPUT	160	2	int16	depend on input range	Full	W/R	Calibration for analog input6
INPUT	161	2	int16	depend on input range	Full	W/R	Calibration for analog input7
INPUT	162	2	int16	depend on input range	Full	W/R	Calibration for analog input8
INPUT	167	1	int8	1	Low byte	W/R	Analog input1 function selection. 0, normal; 1, freeze protect sensor input; 2, occupancy sensor input; 3, sweep off mode; 4, clock mode; 5, change over mode.
INPUT	168	1	int8	1	Low byte	W/R	Analog input2 function selection. 0, normal; 1, freeze protect sensor input; 2, occupancy sensor input; 3, sweep off mode; 4, clock mode; 5, change over mode.
INPUT	175	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 0.0V value Sensor value that corresponds to 0.0V
INPUT	176	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 0.5V value Sensor value that corresponds to 0.5V
INPUT	177	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 1.0V value Sensor value that corresponds to 1.0V
INPUT	178	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 1.5V value Sensor value that corresponds to 1.5V

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
INPUT	179	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 2.0V value Sensor value that corresponds to 2.0V
INPUT	180	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 2.5V value Sensor value that corresponds to 2.5V
INPUT	181	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 3.0V value Sensor value that corresponds to 3.0V
INPUT	182	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 3.5V value Sensor value that corresponds to 3.5V
INPUT	183	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 4.0V value Sensor value that corresponds to 4.0V
INPUT	184	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 4.5V value Sensor value that corresponds to 4.5V
INPUT	185	2	int16	depend on input range	Full	W/R	Lookup Table 1 - 5.0V value Sensor value that corresponds to 5.0V
INPUT	186	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 0.0V value Sensor value that corresponds to 0.0V
INPUT	187	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 0.5V value Sensor value that corresponds to 0.5V
INPUT	188	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 1.0V value Sensor value that corresponds to 1.0V
INPUT	189	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 1.5V value Sensor value that corresponds to 1.5V
INPUT	190	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 2.0V value Sensor value that corresponds to 2.0V
INPUT	191	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 2.5V value Sensor value that corresponds to 2.5V
INPUT	192	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 3.0V value Sensor value that corresponds to 3.0V
INPUT	193	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 3.5V value Sensor value that corresponds to 3.5V
INPUT	194	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 4.0V value Sensor value that corresponds to 4.0V
INPUT	195	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 4.5V value Sensor value that corresponds to 4.5V
INPUT	196	2	int16	depend on input range	Full	W/R	Lookup Table 2 - 5.0V value Sensor value that corresponds to 5.0V
INPUT	197	1	int8	1	Low byte	W/R	Humidity Control Register, 0 = defaultl, write 1 here to set to fac calib,
INPUT	198	1	int8	1	Low byte	W/R	Current humidity sensor value
INPUT	199	1	int8	1	Low byte	W/R	Update calibration data, when set to 1, thermostat will update the calibration data to PIC
INPUT	200	1	int8	1	Low byte	W/R	Calibration points number, value can be single or two point calibration for the thermostat
INPUT	201	1	int8	1	Low byte	W/R	Decide which calibration table will be used. 0 = default table 1 = customer table
OUTPUT	202	1	int8	1	Low byte	W/R	Determine the output1 mode. 0, ON/OFF mode; 1, floating valve for cooling;
OUTPUT	203	1	int8	1	Low byte	W/R	Determine the output2 mode. 0, ON/OFF mode; 1, floating valve for cooling;

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
OUTPUT	204	1	int8	1	Low byte	W/R	Determine the output3 mode.
OUTPUT	205	1	int8	1	Low byte	W/R	Determine the output4 mode. 0, ON/OFF mode; 1, floating valve for cooling; 2, lighting control; 3, PWM
OUTPUT	206	1	int8	1	Low byte	W/R	Determine the output5 mode. 0, ON/OFF mode; 1, floating valve for heating; 2, lighting control; 3, PWM
OUTPUT	207	1	int8	1	Low byte	W/R	Analog Output1 range - 0=On/Off, 1=0-10V, 2=0-5V, 3=2-10V, 4= 10-0V
OUTPUT	208	1	int8	1	Low byte	W/R	Analog Output2 range - 0=On/Off, 1=0-10V, 2=0-5V, 3=2-10V, 4= 10-0V
OUTPUT	209	1	int8	1	Low byte	W/R	Output1 tot 5, bit 0 thru 4 = relay 1 thru 5.
OUTPUT	210	2	int16	1	Full	W/R (write only when manual output 6 enable)	Output6 ,Analog output1, a number from 0-1000 representing 0% (closed) to 100% (open). When Range = On/Off mode, On=1000, Off=0.
OUTPUT	211	2	int16	1	Full	W/R (write only when manual output7 enable)	Output7 Analog output2, a number from 0-1000 representing 0% (closed) to 100% (open). When Range = On/Off mode, On=1000, Off=0.
OUTPUT	212	1	int8	1	Low byte	W/R	DAC_OFFSET , Calibration data for the 0-10VDC signal, internal variable maintained by thermostat
OUTPUT	213	1	int8	1	Low byte	W/R	Output1 Relay1_delay_OFF_TO_ON – delay time for output1 going from OFF to ON (sec)
OUTPUT	214	1	int8	1	Low byte	W/R	Output2 Relay2_delay_OFF_TO_ON – delay time for output2 going from OFF to ON (sec)
OUTPUT	215	1	int8	1	Low byte	W/R	Output3 Relay3_delay_OFF_TO_ON – delay time for output3 going from OFF to ON (sec)
OUTPUT	216	1	int8	1	Low byte	W/R	Output4 Relay4_delay_OFF_TO_ON – delay time for output4 going from OFF to ON (sec)
OUTPUT	217	1	int8	1	Low byte	W/R	Output5 Relay5_delay_OFF_TO_ON – delay time for output5 going from OFF to ON (sec)
OUTPUT	218	1	int8	1	Low byte	W/R	(future)Output6_delay_OFF_TO_ON – delay time for output4 going from OFF to ON (sec)
OUTPUT	219	1	int8	1	Low byte	W/R	(future)Output7_delay_OFF_TO_ON – delay time for output5 going from OFF to ON (sec)
OUTPUT	220	1	int8	1	Low byte	R	output 1 current time left from OFF to ON
OUTPUT	221	1	int8	1	Low byte	R	output 2 current time left from OFF to ON
OUTPUT	222	1	int8	1	Low byte	R	output 3 current time left from OFF to ON
OUTPUT	223	1	int8	1	Low byte	R	output 4 current time left from OFF to ON
OUTPUT	224	1	int8	1	Low byte	R	output 5 current time left from OFF to ON
OUTPUT	225	1	int8	1	Low byte	R	(reserved)output 6 current time left from OFF to ON
OUTPUT	226	1	int8	1	Low byte	R	(reserved)output 7 current time left from OFF to ON
OUTPUT	227	1	int8	1	Low byte	W/R	Output1 Relay1_delay_ON_TO_OFF – delay time for output1 going from ON to OFF (sec)
OUTPUT	228	1	int8	1	Low byte	W/R	Output2 Relay2_delay_ON_TO_OFF – delay time for output2 going from ON to OFF (sec)
OUTPUT	229	1	int8	1	Low byte	W/R	Output3 Relay3_delay_ON_TO_OFF – delay time for output3 going from ON to OFF (sec)
OUTPUT	230	1	int8	1	Low byte	W/R	Output4 Relay4_delay_ON_TO_OFF – delay time for output4 going from ON to OFF(sec)
OUTPUT	231	1	int8	1	Low byte	W/R	Output5 Relay5_delay_ON_TO_OFF – delay time for output5 going from ON to OFF(sec)
OUTPUT	232	1	int8	1	Low byte	W/R	(future)Output6_delay_ON_TO_OFF – delay time for output4 going from ON to OFF(sec)
OUTPUT	233	1	int8	1	Low byte	W/R	(future)Output7_delay_ON_TO_OFF – delay time for output5 going from ON to OFF (sec)
OUTPUT	234	1	int8	1	Low byte	R	output 1 current time left from ON to OFF
OUTPUT	235	1	int8	1	Low byte	R	output 2 current time left from ON to OFF
OUTPUT	236	1	int8	1	Low byte	R	output 3 current time left from ON to OFF
OUTPUT	237	1	int8	1	Low byte	R	output 4 current time left from ON to OFF
OUTPUT	238	1	int8	1	Low byte	R	output 5 current time left from ON to OFF
OUTPUT	239	1	int8	1	Low byte	R	(reserved)output 6 current time left from ON to OFF
OUTPUT	240	1	int8	1	Low byte	R	(reserved)output 7 current time left from ON to OFF

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
OUTPUT	241	1	int8	1	Low byte	W/R	MODBUS_CYCLING_DELAY – delay time (in minutes) for switching out of heating or cooling and then back in.
OUTPUT	242	1	int8	1	Low byte	W/R	MODBUS_CHANGOVER_DELAY – delay time (in minutes) for switching from cooling into heating or vice versa.
OUTPUT	243	1	int8	1	Low byte	W/R	Valve travel time. The time of the valve travel from one end to another end. The units is second.
OUTPUT	244	1	int8	1(%)	Low byte	R	Valve percent. Show the valve opened how much percent. READ ONLY
OUTPUT	245	1	int8	1	Low byte	W/R	Interlock for output1
OUTPUT	246	1	int8	1	Low byte	W/R	Interlock for output2
OUTPUT	247	1	int8	1	Low byte	W/R	Interlock for output3
OUTPUT	248	1	int8	1	Low byte	W/R	Interlock for output4
OUTPUT	249	1	int8	1	Low byte	W/R	Interlock for output5
OUTPUT	250	1	int8	1	Low byte	W/R	Interlock for output6
OUTPUT	251	1	int8	1	Low byte	W/R	Interlock for output7
OUTPUT	252	1	int8	1	Low byte	W/R	Delay to open. The heating valve will open if the ambient temp less than the Freeze temp setpoint last the time this register set. The units is second.
OUTPUT	253	1	int8	1	Low byte	W/R	Delay to close. The duration the heating valve open. The units is minute.
OUTPUT	254	1	int8	1	Low byte	W/R	Output auto/manual enable. Bit 0 to 4 correspond to output1 to output5, bit 5 correspond to output6, bit 6 correspond to output7. 0, auto mode; 1, manual mode.
OUTPUT	255	1	int8	1	Low byte	W/R	Relay1 manual output value
OUTPUT	256	1	int8	1	Low byte	W/R	Relay2 manual output value
OUTPUT	257	1	int8	1	Low byte	W/R	Relay3 manual output value
OUTPUT	258	1	int8	1	Low byte	W/R	Relay4 manual output value
OUTPUT	259	1	int8	1	Low byte	W/R	Relay5 manual output value
OUTPUT	262	1	int8	1	Low byte	W/R	DEADMASTER_MODE = 0, the default, outputs will not change when deadmaster is triggered DEADMASTER_MODE = 1, the output will be trigger to “AUTO” mode if they were previously in manual DEADMASTER_MODE = 2, the outputs will go to manual on or off as defined in the following registers.
OUTPUT	263	1	int8	1	Low byte	W/R	Define output states when DEADMASTER_MODE = 2 (active) Bit0 is for relay 1, bit1 for relay 2 and so on up to output 5
OUTPUT	264	2	int16	1	Full	W/R	Analog Output1 goes to this value when DEADMASTER_MODE = 2 (active), 0-1000
OUTPUT	265	2	int16	1	Full	W/R	Analog Output2 goes to this value when DEADMASTER_MODE = 2 (active), 0-1000
OUTPUT	266	1	int8	1	Low byte	W/R	Output1 Function setting: 0=normal, default. 1 = rotation (old disabled feature) 2 = lighting control, one keypad button can be assigned to toggle a relay on & off
OUTPUT	267	1	int8	1	Low byte	W/R	Output2 function setting (see above)
OUTPUT	268	1	int8	1	Low byte	W/R	Output3 function setting (see above)
OUTPUT	269	1	int8	1	Low byte	W/R	Output4 function setting (see above)
OUTPUT	270	1	int8	1	Low byte	W/R	Output5 function setting (see above)
OUTPUT	271	1	int8	1	Low byte	W/R	(future)Output6 function setting (see above)
OUTPUT	272	1	int8	1	Low byte	W/R	(future)Output7 function setting (see above)
OUTTABLE	273	1	int8	1	Low byte	W/R	FAN_SPEED, current operating fan speed Relay Output Tables (bit0 = relay1, bit1 = relay2, bit2 = relay3, bit3 = relay4, bit4 = relay5) Fan0 table is for the off state. Fan1, Fan2, and Fan3 are for the manual states. Fan4 is for the Auto state. These states are controlled by the user. The mode of operation (coasting, cooling, heating) is determined by the PID parameter

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							determined by the PID parameter.
OUTTABLE	274	1	int8	1	Low byte	W/R	Output 1 PID Interlock 0 = PID1, can assign each output to either PID1 or 2, the max or the min of the two PIDS
OUTTABLE	275	1	int8	1	Low byte	W/R	Output 2 PID Interlock 1 = PID2
OUTTABLE	276	1	int8	1	Low byte	W/R	Output 3 PID Interlock 2 = Maximum of PID1 and PID2
OUTTABLE	277	1	int8	1	Low byte	W/R	Output 4 PID Interlock 3 = Minimum of PID1 and PID2
OUTTABLE	278	1	int8	1	Low byte	W/R	Output 5 PID Interlock
OUTTABLE	279	1	int8	1	Low byte	W/R	Output 6 PID Interlock
OUTTABLE	280	1	int8	1	Low byte	W/R	Output 7 PID Interlock
OUTTABLE	281	1	int8	1	Low byte	W/R	PID2 Output table- Coasting
OUTTABLE	282	1	int8	1	Low byte	W/R	PID2 Output table- Cooling1
OUTTABLE	283	1	int8	1	Low byte	W/R	PID2 Output table- Cooling2
OUTTABLE	284	1	int8	1	Low byte	W/R	PID2 Output table- Cooling3
OUTTABLE	285	1	int8	1	Low byte	W/R	PID2 Output - Heating1
OUTTABLE	286	1	int8	1	Low byte	W/R	PID2 Output - Heating
OUTTABLE	287	1	int8	1	Low byte	W/R	PID2 Output - Heating3
OUTTABLE	288	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_COAST
OUTTABLE	289	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_COOL1
OUTTABLE	290	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_COOL2
OUTTABLE	291	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_COOL3
OUTTABLE	292	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_HEAT1
OUTTABLE	293	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_HEAT2
OUTTABLE	294	1	int8	1	Low byte	W/R	FAN0_OPERATION_TABLE_HEAT3
OUTTABLE	295	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_COAST
OUTTABLE	296	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_COOL1
OUTTABLE	297	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_COOL2
OUTTABLE	298	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_COOL3
OUTTABLE	299	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_HEAT1
OUTTABLE	300	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_HEAT2
OUTTABLE	301	1	int8	1	Low byte	W/R	FAN1_OPERATION_TABLE_HEAT3
OUTTABLE	302	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_COAST
OUTTABLE	303	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_COOL1
OUTTABLE	304	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_COOL2
OUTTABLE	305	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_COOL3
OUTTABLE	306	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_HEAT1
OUTTABLE	307	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_HEAT2
OUTTABLE	308	1	int8	1	Low byte	W/R	FAN2_OPERATION_TABLE_HEAT3
OUTTABLE	309	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_COAST
OUTTABLE	310	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_COOL1
OUTTABLE	311	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_COOL2

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
OUTTABL E	312	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_COOL3
OUTTABL E	313	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_HEAT1
OUTTABL E	314	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_HEAT2
OUTTABL E	315	1	int8	1	Low byte	W/R	FAN3_OPERATION_TABLE_HEAT3
OUTTABL E	316	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_COAST
OUTTABL E	317	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_COOL1
OUTTABL E	318	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_COOL2
OUTTABL E	319	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_COOL3
OUTTABL E	320	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_HEAT1
OUTTABL E	321	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_HEAT2
OUTTABL E	322	1	int8	1	Low byte	W/R	FANAUT_OPERATION_TABLE_HEAT3
OUTTABL E	323	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_COAST, Analog output state for each of the 7 modes of operation
OUTTABL E	324	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_COOLING1
OUTTABL E	325	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_COOLING2
OUTTABL E	326	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_COOLING3
OUTTABL E	327	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_HEATING1
OUTTABL E	328	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_HEATING2
OUTTABL E	329	1	int8	1	Low byte	W/R	VALVE_OPER_TABLE_HEATING3
OUTTABL E	330	1	int8	1	Low byte	W/R	Number of Heating Stages (Max heat+cool = 6)
OUTTABL E	331	1	int8	1	Low byte	W/R	Number of Cooling Stages (Max heat + Cool = 6)
OUTTABL E	332	1	int8	1	Low byte	W/R	Number of Heating Stages in Original Table - (Maximum # of total heating and cooling states is 6)
OUTTABL E	333	1	int8	1	Low byte	W/R	Number of Cooling Stages in Original Table - (Maximum # of total heating and cooling states is 6)
OUTTABL E	334	1	int8	1	Low byte	W/R	analog output in OFF table, coating mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	335	1	int8	1	Low byte	W/R	analog output in OFF table, cooling1 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	336	1	int8	1	Low byte	W/R	analog output in OFF table, cooling2 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	337	1	int8	1	Low byte	W/R	analog output in OFF table, cooling3 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	338	1	int8	1	Low byte	W/R	analog output in OFF table, heating1 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	339	1	int8	1	Low byte	W/R	analog output in OFF table, heating2 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
OUTTABL E	340	1	int8	1	Low byte	W/R	analog output in OFF table, heating3 mode,bit1 means AO1 : 1 = on, 0 = off bit3 means AO2 : 1 = on, 0 = off
SETPOINT	341	1	int8	1	Low byte	W/R	Default occupied setpoint. Works in concert with the "occupied setpoint control register", register 339
SETPOINT	345	1	int8	0.1(°C)	Low byte	W/R	(Day) Occupied setpoint
SETPOINT	346	1	int8	0.1(°C)	Low byte	W/R	(Day)Occupied cooling setpoint dead band , offset from setpoint for cooling to begin. Units are 0.1 deg.
SETPOINT	347	1	int8	0.1(°C)	Low byte	W/R	(Day)Occupied heating setpoint dead band , offset from setpoint for heating to begin. Units are 0.1 deg.
SETPOINT	348	2	int16	0.1(°C)	Full	W/R	(Day)Occupied cooling setpoint (day cooling setpoint)
SETPOINT	349	2	int16	0.1(°C)	Full	W/R	(Day)Occupied heating setpoint (day heating setpoint)
SETPOINT	350	1	int8	0.1(°C)	Low byte	W/R	(Night)Unoccupied setpoint.
SETPOINT	351	1	int8		Low byte		spare
SETPOINT	352	1	int8	0.1(°C)	Low byte	W/R	(Night)Unoccupied heating setpoint dead band , heating deadband for the night (OFF) mode. Units of 1 deg.
SETPOINT	353	1	int8	0.1(°C)	Low byte	W/R	(Night)Unoccupied cooling setpoint dead band , cooling deadband for the night (OFF) mode. Units of 1 deg.
SETPOINT	354	2	int16	10(°C)	Full	W/R	(Night)Unoccupied heating setpoint

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
UI	395	1	int8	1	Low byte	W/R (Reboot after write)	KEYPAD_SELECT , variable to select various keypad arrangements. Refer to PAd description in Table 1: Advanced Menu Items Number of buttons on the keypad The keypad can have up to six buttons. The setting is not normally adjusted in the field. Care should be taken to coordinate with the settings in register 106, the Heat / Cool changeover parameter 128=0 , two buttons, for adjusting the setpoint. 128=1 , 4 buttons, lower pair for the mode and upper pair for the setpoint. 128=2 , 6 button keypad, with heat cool manual selection. Lower pair for the mode, next pair for the setpoint and upper pair for the heat or cool mode. 128=3 , 6 button keypad, with separate heating and cooling setpoints. Lower pair for the mode, next pair for the cooling setpoint and uppermost pair for the heating setpoint.
UI	396	1	int8	1	Low byte	W/R	SPECIAL_MENU_LOCK, Special menu lockout via keypad, serial port only, 0=Full Menu, 1=Menu Disabled, 2=Typical small menu system, 3 = The user can adjust the setpoint in menu mode, 4 = Partial menu enabled When the LOC parameter is set to '1' the keypad will be locked out from all menu operations. The normal operation of the keypad is not affected; the fan and setpoint buttons work as usual. When the LOC parameter is set to '2' the keypad will be locked out from partial menu operations allowing maintenance personnel to access some of the less critical menu parameters while maintaining a LOC on functions reserved for the primary administrator. This option allows access to calibration of the internal and external temperature sensor (CAL and CAE) and the override time parameter (ORT). LOC = 3, The user can not do anything from keypad except enter menu mode. In menu mode, the user can set setpoint, fan speed, calibration and override timer. When the menu system is locked out, the only way to adjust the tstat parameters is through the network port or through the communications jack at the bottom of the tstat. The parameter can be set back to '0' only through the communications ports as well LOC = 4, User can adjust setpoint and fan speed from keypad, and enter menu to operate part of menu, include CAL, pterm, item, SOP, cooling deadband, heating deadband, C/F units and factory default.
UI	397	1	int8	1	Low byte	W/R	dis – Display. This sets the display to either room temperature or setpoint. 0 = room temp, 1 = setpoint, 2 = Blank Display, 3 = PID2 value, 4 = PID2 setpoint, 5 = set segment code by manually, 6 = Display sleep
UI	399	1	int8	1	Low byte	R	Last key pressed counter. Minutes since the used last pressed a key.
UI	400	1	int8	1	Low byte	R	Keypad encoded value. Last keypress, READ ONLY
UI	401	1	int8	1	Low byte	W/R	LED hundred's digit, , can drive the LEDs manually when the display register 381 is set to manual (5)
	402	1	int8	1	Low byte	W/R	LED ten's digit, , can drive the LEDs manually when the display register 381 is set to manual (5)
UI	403	1	int8	1	Low byte	W/R	LED one's digit code, can drive the LEDs manually when the display register 381 is set to manual (5)
UI	404	1	int8	1	Low byte	W/R	LED discrete status symbols, can drive the LEDs manually when the display register 381 is set to manual (5)
UI	405	1	int8	1	Low byte	W/R	Rounding display. 0 = round the display to the nearest digit; 1 = round the display to the nearest 1/10 unit; 5 = round the display to the nearest 1/2 unit. 2,3,4 reserved.
UI	406	1	int8	1	Low byte	W/R	The minimum address which the device can accept, use this to limit addresses to a certain defined band.
UI	407	1	int8	1	Low byte	W/R	The maximum device address can be set. The device address should be between min and max address, default is 254
UI	408	1	int8	1	Low byte	R	Show the size of E2 chip. 0 = 24c02, 1 = 24c08/24c16.

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
UI	409	1	int8	1	Low byte	W/R	Assign the timer to be used for which feature. 0 = period timer, 1 = rotation timer, 2 = interlock, 3 = PWM timer.
UI	410	1	int8	1	Low byte	W/R	Clock, year
UI	411	1	int8	1	Low byte	W/R	Clock,month
UI	412	1	int8	1	Low byte	W/R	Clock,week
UI	413	1	int8	1	Low byte	W/R	Clock,day
UI	414	1	int8	1	Low byte	W/R	clock, hours
UI	415	1	int8	1	Low byte	W/R	clock,minutes
UI	416	1	int8	1	Low byte	W/R	clock,seconds
UI	417	1	int8	1	Low byte	W/R	alarm,not used now
UI	418	1	int8	1	Low byte	W/R	work day,wake time hour
UI	419	1	int8	1	Low byte	W/R	work day,wake time minutes
UI	420	1	int8	1	Low byte	W/R	work day,away time,hour
UI	421	1	int8	1	Low byte	W/R	work day,away time,minute
UI	422	1	int8	1	Low byte	W/R	work day,home time,hour
UI	423	1	int8	1	Low byte	W/R	work day,home time,minute
UI	424	1	int8	1	Low byte	W/R	work day,sleep time,hour
UI	425	1	int8	1	Low byte	W/R	work day,sleep time,minute
UI	426	1	int8	1	Low byte	W/R	weekend day,wake time hour
UI	427	1	int8	1	Low byte	W/R	weekend day,wake time minutes
UI	428	1	int8	1	Low byte	W/R	weekend,away time,hour
UI	429	1	int8	1	Low byte	W/R	weekend,away time,minute
UI	430	1	int8	1	Low byte	W/R	weekend,home time,hour
UI	431	1	int8	1	Low byte	W/R	weekend,home time,minute
UI	432	1	int8	1	Low byte	W/R	weekend,sleep time,hour
UI	433	1	int8	1	Low byte	W/R	weekend,sleep time,minute
UI	434	1	int8	1	Low byte	W/R	LCD turn off, 0 = turn off, 1 = normal
UI	435	2	int16	1	Full	W/R	User name. line 1:characters 1 & 2
UI	436	2	int16	1	Full	W/R	User name. line 1:characters 3 & 4
UI	437	2	int16	1	Full	W/R	User name. line 1:characters 5 & 6
UI	438	2	int16	1	Full	W/R	User name. line 1:characters 7 & 8
UI	439	2	int16	1	Full	W/R	User name. line 2:characters 1 & 2
UI	440	2	int16	1	Full	W/R	User name. line 2:characters 3 & 4
UI	441	2	int16	1	Full	W/R	User name. line 2:characters 5 & 6
UI	442	2	int16	1	Full	W/R	User name. line 2:characters 7 & 8
UI	443	2	int16	1	Full	W/R	Internal sensor name. line 1:characters 1 & 2
UI	444	2	int16	1	Full	W/R	Internal sensor name. line 1:characters 3 & 4
UI	445	2	int16	1	Full	W/R	Internal sensor name. line 1:characters 5 & 6
UI	446	2	int16	1	Full	W/R	Internal sensor name. line 1:characters 7 & 8
UI	447	2	int16	1	Full	W/R	Input 1 user name. line 1:characters 1 & 2

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
UI	448	2	int16	1	Full	W/R	Input 1 user name. line 1:characters 3 & 4
UI	449	2	int16	1	Full	W/R	Input 1 user name. line 1:characters 5 & 6
UI	450	2	int16	1	Full	W/R	Input 1 user name. line 1:characters 7 & 8
UI	451	2	int16	1	Full	W/R	Input 2 user name. line 1:characters 1 & 2
UI	452	2	int16	1	Full	W/R	Input 2 user name. line 1:characters 3 & 4
UI	453	2	int16	1	Full	W/R	Input 2 user name. line 1:characters 5 & 6
UI	454	2	int16	1	Full	W/R	Input 2 user name. line 1:characters 7 & 8
UI	455	2	int16	1	Full	W/R	Input 3 user name. line 1:characters 1 & 2
UI	456	2	int16	1	Full	W/R	Input 3 user name. line 1:characters 3 & 4
UI	457	2	int16	1	Full	W/R	Input 3 user name. line 1:characters 5 & 6
UI	458	2	int16	1	Full	W/R	Input 3 user name. line 1:characters 7 & 8
UI	459	2	int16	1	Full	W/R	Input 4 user name. line 1:characters 1 & 2
UI	460	2	int16	1	Full	W/R	Input 4 user name. line 1:characters 3 & 4
UI	461	2	int16	1	Full	W/R	Input 4 user name. line 1:characters 5 & 6
UI	462	2	int16	1	Full	W/R	Input 4 user name. line 1:characters 7 & 8
UI	463	2	int16	1	Full	W/R	Input 5 user name. line 1:characters 1 & 2
UI	464	2	int16	1	Full	W/R	Input 5 user name. line 1:characters 3 & 4
UI	465	2	int16	1	Full	W/R	Input 5 user name. line 1:characters 5 & 6
UI	466	2	int16	1	Full	W/R	Input 5 user name. line 1:characters 7 & 8
UI	467	2	int16	1	Full	W/R	Input 6 user name. line 1:characters 1 & 2
UI	468	2	int16	1	Full	W/R	Input 6 user name. line 1:characters 3 & 4
UI	469	2	int16	1	Full	W/R	Input 6 user name. line 1:characters 5 & 6
UI	470	2	int16	1	Full	W/R	Input 6 user name. line 1:characters 7 & 8
UI	471	2	int16	1	Full	W/R	Input 7 user name. line 1:characters 1 & 2
UI	472	2	int16	1	Full	W/R	Input 7 user name. line 1:characters 3 & 4
UI	473	2	int16	1	Full	W/R	Input 7 user name. line 1:characters 5 & 6
UI	474	2	int16	1	Full	W/R	Input 7 user name. line 1:characters 7 & 8
UI	475	2	int16	1	Full	W/R	Input 8 user name. line 1:characters 1 & 2
UI	476	2	int16	1	Full	W/R	Input 8 user name. line 1:characters 3 & 4
UI	477	2	int16	1	Full	W/R	Input 8 user name. line 1:characters 5 & 6
UI	478	2	int16	1	Full	W/R	Input 8 user name. line 1:characters 7 & 8
UI	539	1	int8	1	Low byte	W/R	LCD screen1,select which information will display on LCD,range0 to 12
UI	540	1	int8	1	Low byte	W/R	LCD screen2,select which information will display on LCD,range0 to 12
UI	541	1	int8	1	Low byte	W/R	Demand response flag 0: disable 1:yes 2:no
UI	542	1	int8	1	Low byte	W/R	(reserved)All registers except fan speed and manual input are not writable.0 = lock,1 = no lock
RESERVE D	543	1	int8	1	Low byte		Enable/disable PIR correspond 1/0 respectively.
UI	564	1	int8	1	Low byte	W/R	lcd rotate enable, decide how many items will be shown on rotate mode,range0 to 21.Display item select:0:none 1:temperature 2:setpoint 3:A11 4:A12 5:A13 6:A14 7:A15 8:A16 9:A17 10:A18 11:MODE 12:USER INFO 13:CLOCK DATE 14:CLOCK TIME (TBD:OUTPUT)
UI	565	1	int8	1	Low byte	W/R	schedule enable/disable control bit. 0 = disable 1 = enable, default: enable

Block	Holding Register	Bytes	Ints	Multiplier	Length	Operation info	Register and Description
UI	566 - 579	14	int8	1	Low byte	W/R	decide which item will be shown in the display sequency.see up note
UI	580 - 586	7	int8	1	Low byte	W/R	decide which item will be shown as the output item.
OUTPUT TABLE	587	1	int8	1	Low byte	W/R	PWM output range in COAST mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	588	1	int8	1	Low byte	W/R	PWM output range in COOLING2 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	589	1	int8	1	Low byte	W/R	PWM output range in COOLING3 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	590	1	int8	1	Low byte	W/R	PWM output range in COOLING1 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	591	1	int8	1	Low byte	W/R	PWM output range in HEATING1 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	592	1	int8	1	Low byte	W/R	PWM output range in HEATING2 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5
OUTPUT TABLE	593	1	int8	1	Low byte	W/R	PWM output range in HEATING3 mode. 0 = CLOSE, 1 = OPEN, 2 = 0-100%, 3 = 50-100%, 4 = 0-50%. MSb 4 bits correspond to output4 and LSB 4 bits correspond to output5