HERU Modbus

ÖSTBERG

Reference Modbus addresses for HERU 62 - 250 (Gen 3)

Coil status Discrete Output (1bit) R/W		
Modbus	**Register Name**	**Description**
Application control registers		
0x00001	Unit on	
0x00002	Overpressure mode	
0x00003	Boost mode	
0x00004	Away mode	
0x00005	Clear Alarms	Write 1 to clear alarm, reads always 0
0x00006	Reset filter timer	Write 1 to reset filter timer, reads always 0

Input status Discrete Input (1bit) Read only		
Modbus	**Register Name**	**Description**
Alarm input registers		
1x00001	Fire alarm switch	
1x00002	Boost switch	
1x00003	Overpressure switch	
1x00004	Aux switch	
Alarm registers		
1x00010	Fire alarm	
1x00011	Rotor alarm	
1x00012	RFU	Readable, value has no meaning
1x00013	Freeze alarm	
1x00014	Low supply alarm	
1x00015	Low rotor temperature alarm	
1x00016	RFU	Readable, value has no meaning
1x00017	RFU	Readable, value has no meaning
1x00018	Temp. sensor open circuit alarm	
1x00019	Temp. sensor short circuit alarm	
1x00020	Pulser alarm	
1x00021	Supply fan alarm	
1x00022	Exhaust fan alarm	
1x00023	Supply filter alarm	
1x00024	Exhaust filter alarm	
1x00025	Filter timer alarm	
1x00026	Freeze protection B level	
1x00027	Freeze protection A level	
1x00028	Startup 1st phase	Supply fan stopped.
1x00029	Startup 2nd phase	No heating or cooling allowed.
1x00030	Heating	
1x00031	Recovering heat/cold	
1x00032	Cooling	
1x00033	CO2 boost	
1x00034	RH boost	

Input register 16 bit integer register Read only

Modbus	Register Name	Min	Max	Unit	Description
Common Identity register					
3x00001	Component ID				Always 10
Application control registers					
3x00002	Outdoor temperature				
3x00003	Supply air temperature				
3x00004	Exhaust air temperature				
3x00005	Waste air temperature				
3x00006	Water temperature				
3x00007	Heat Recovery Wheel temperature				
3x00008	Room temperature				
3x00009	RFU				Readable, value has no meaning
3x00010	RFU				Readable, value has no meaning
3x00011	RFU				Readable, value has no meaning
3x00012	Supply pressure			x0.1Pa	Valid only if pressure sensor connected.
3x00013	Exhaust pressure			x0.1Pa	Valid only if pressure sensor connected.
3x00014	Relative humidity			x0.1%	Valid only if RH sensor connected.
3x00015	Carbon dioxide			PPM	Valid only if CO_2 sensor conneced.
3x00016	RFU				Readable, value has no meaning
3x00017	RFU				Readable, value has no meaning
3x00018	Sensors open				Bit field. Bit is set if sensor is required and open circuit. See also *Sensors shorted.*
3x00019	Sensors shorted				Bit field. Sensor shorted if bit set. Bit0 = T1 … Bit7 = T8.
3x00020	Filter days left				Number of days to filter change.
3x00021	Current weektimer program	0	5		0 = none, 1-5 = program 1-5
3x00022	Current fan speed	0	4		0 = Off, 1 = Min, 2 = Std, 3 = Mod, 4 = Max. Fan speed set by user or by weektimer.
3x00023	Current supply fan step	0	4		0 = Off, 1 = Min, 2 = Std, 3 = Mod, 4 = Max
3x00024	Current exhaust fan step	0	4		0 = Off, 1 = Min, 2 = Std, 3 = Mod, 4 = Max
3x00025	Current supply fan power			%	
3x00026	Current exhaust fan power			%	
3x00027	Current supply fan speed			RPM	
3x00028	Current exhaust fan speed			RPM	
3x00029	Current heating power				In range 0-255
3x00030	Current heat/cold recovery power				In range 0-255
3x00031	Current cooling power				In range 0-255
3x00032	Supply fan control voltage	0	100	x0.1V	
3x00033	Exhaust fan control voltage	0	100	x0.1V	

Holding register 16 bit integer register R/W

Modbus	Register Name	Min	Max	Unit	Description
Application control registers					
4x00001	User fan speed	0	4		0 = Off, 1 = Min, 2 = Std, 3 = Mod, 4 = Max. Used if no weektimer is active, AC fans only.
4x00002	Temperature setpoint	15	40	°C	
4x00003	Supply fan speed, EC	0	100	%	
4x00004	Exhaust fan speed, EC	0	100	%	
4x00005	Min exhaust fan speed, EC	0	100	%	Fan speed when min speed used, for example away-mode
4x00006	Mod exhaust fan speed, EC	0	100	%	Fan speed when mod speed used, for example boost
4x00007	Max exhaust fan speed, EC	0	100	%	Fan speed when max speed used, for example boost
4x00008	RFU				Readable, value has no meaning
4x00009	RFU				Readable, value has no meaning
4x00010	Min supply temperature	15	19	°C	
4x00011	Max supply temperature	20	40	°C	
4x00012	Regulation mode	0	2		0 = supply, 1 = exhaust, 2 = room.
4x00013	SNC indoor-outdoor diff. Limit	10	100	0.1°C	
4x00014	SNC exhaust low limit	18	24	°C	
4x00015	SNC exhaust high limit	19	26	°C	
4x00016	SNC enable	0	1		0 = no, 1 = yes
4x00017	Freeze protection limit	5	10	°C	
4x00018	RFU				Readable, value has no meaning
4x00019	RFU				Readable, value has no meaning
4x00020	CO2 limit	50	140	x10 PPM	Carbon dioxide level limit.
4x00021	CO2 interval	1	10	min	Boosting interval, AC fans only.
4x00022	CO2 ramp	2	200	%	Boosting ramp, EC fans only.
4x00023	RH limit	50	100		Relative humidity limit, in % RH units.
4x00024	RH interval	1	10		Boosting interval in minutes, AC fans only.
4x00025	RH ramp	2	200	%	Boosting ramp, EC fans only.
4x00026	Boost speed	3	4		3 = Mod, 4 = Max.
4x00027	Boost duration	10	240	min	
4x00028	Overpressure duration	10	60	min	
4x00029	Supply cold limit A	2	10	°C	
4x00030	Supply cold limit B	5	12	°C	Must be greater than limit A above.
4x00031	Fire sensor type	0	2		0 = none, 1 = normally open, 2 = normally closed
4x00032	RFU				Readable, value has no meaning
4x00033	Supply pressure sensor type	0	8		0 = switch, 1 = -50..50 Pa, 2 = 0..100 Pa, 3 = 0..150 Pa, 4 = 0..300 Pa, 5 = 0..500 Pa, 6 = 0..1000 Pa, 7 = 0..1600 Pa, 8 = 0..2500 Pa
4x00034	Exhaust pressure sensor type	0	8		
4x00035	Supply pressure switch present	0	1		0 = no, 1 = yes
4x00036	Exhaust pressure switch present	0	1		0 = no, 1 = yes
4x00037	Filter measurement, weekday	0	6		0 = Monday, 1 = Tuesday … 6 = Sunday.
4x00038	Filter measurement, hour	0	23		
4x00039	Filter measurement, minute	0	59		
4x00040	Filter speed increase	0	50	%pts	0 = off, 5 to 50 = allowed power increase in %-units. Writing 5 or less equals 0.
4x00041	RFU				Readable, value has no meaning
4x00042	RFU				Readable, value has no meaning
4x00043	RFU				Readable, value has no meaning

4x00044	Filter change period	0	12	month	Filter timer in months. 0 = off, 6-12 time in months (30 days). Writing 5 or less equals 0.
4x00045	Alarm relay option 1	0	255		Bit mask: bit 0 = Fire, bit 1 = Rotor, bit 2 = 0, bit 3 = Freeze, bit 4 = Low supply temperature, bit 5 = Low rotor temperature, bit 6 = 0, bit 7 = 0
4x00046	Alarm relay option 2	0	255		Bit mask: bit 0 = Sensor open, bit 1 = Sensor shorted, bit 2 = Pulser, bit 3 = Supply fan, bit 4 = Exhaust fan, bit 5 = Supply filter, bit 6 = Exhaust filter, bit 7 = Filter timer
4x00047	Sensor calibration	-100	100	x0.1°C	Sensor offset
4x00048	Maximum temperature	15	40	°C	Maximum selectable temperature setpoint.
4x00049	RFU				Readable, value has no meaning
4x00050	Water heater connected	0	1		0 = no, 1 = yes
4x00051	Electric heater connected	0	1		0 = no, 1 = yes
4x00052	Cooler connected	0	1		0 = no, 1 = yes
4x00053	Flow direction	0	1		0 = right, 1 = left
4x00054	RFU				Readable, value has no meaning
4x00055	RFU				Readable, value has no meaning
4x00056	RFU				Readable, value has no meaning
4x00057	RFU				Readable, value has no meaning
4x00058	RFU				Readable, value has no meaning
4x00059	RFU				Readable, value has no meaning
4x00060	Clock, Weekday	0	6		0 = Monday, 1 = Tuesday … 6 = Sunday. Reading this copies time to read/write buffer.
4x00061	Clock, Hours	0	23		
4x00062	Clock, Minutes	0	59		
4x00063	Clock, Seconds	0	59		Writing this writes time from read/write buffer
4x00064	RFU				Readable, value has no meaning
4x00065	RFU				Readable, value has no meaning
4x00066	RFU				Readable, value has no meaning
4x00067	RFU				Readable, value has no meaning
4x00068	RFU				Readable, value has no meaning
4x00069	Weektimer enable	0	1		Zero = No, Non-zero = Yes. (Write 0/1)
4x00070	WT1 on hour	0	23		
4x00071	WT1 on minute	0	59		
4x00072	WT1 off hour	0	23		
4x00073	WT1 off minute	0	59		
4x00074	WT1 weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00075	WT1 temperature setpoint	15	40	°C	
4x00076	WT1 fan speed	1	4		1 = Min, 2 = Std, 3 = Mod, 4 = Max.
4x00077	RFU				Readable, value has no meaning
4x00078	RFU				Readable, value has no meaning
4x00079	RFU				Readable, value has no meaning
4x00080	WT2 on hour	0	23		
4x00081	WT2 on minute	0	59		
4x00082	WT2 off hour	0	23		
4x00083	WT2 off minute	0	59		
4x00084	WT2 weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00085	WT2 temperature setpoint	15	40	°C	
4x00086	WT2 fan speed	1	4		1 = Min, 2 = Std, 3 = Mod, 4 = Max.
4x00087	RFU				Readable, value has no meaning
4x00088	RFU				Readable, value has no meaning
4x00089	RFU				Readable, value has no meaning
4x00090	WT3 on hour	0	23		

4x00091	WT3 on minute	0	59		
4x00092	WT3 off hour	0	23		
4x00093	WT3 off minute	0	59		
4x00094	WT3 weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00095	WT3 temperature setpoint	15	40	°C	
4x00096	WT3 fan speed	1	4		1 = Min, 2 = Std, 3 = Mod, 4 = Max.
4x00097	RFU				Readable, value has no meaning
4x00098	RFU				Readable, value has no meaning
4x00099	RFU				Readable, value has no meaning
4x00100	WT4 on hour	0	23		
4x00101	WT4 on minute	0	59		
4x00102	WT4 off hour	0	23		
4x00103	WT4 off minute	0	59		
4x00104	WT4 weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00105	WT4 temperature setpoint	15	40	°C	
4x00106	WT4 fan speed	1	4		1 = Min, 2 = Std, 3 = Mod, 4 = Max.
4x00107	RFU				Readable, value has no meaning
4x00108	RFU				Readable, value has no meaning
4x00109	RFU				Readable, value has no meaning
4x00110	WT5 on hour	0	23		
4x00111	WT5 on minute	0	59		
4x00112	WT5 off hour	0	23		
4x00113	WT5 off minute	0	59		
4x00114	WT5 weekdays	0	128		Bit mask: bit 0 = Monday, bit 6 = Sunday.
4x00115	WT5 temperature setpoint	15	40	°C	
4x00116	WT5 fan speed	1	4		1 = Min, 2 = Std, 3 = Mod, 4 = Max.
4x00800	First two characters of name				Access to unit name
...	...				
4x00927	Last two characters of name				

Access to following holding registers (except password) is denied until a correct password is written. If an incorrect password is written access to any password protected register is denied. This means that any written correct password is valid until an incorrect password is written.

Modbus	Register Name	Min	Max	Unit	Description
4x01000	Password (1991)	0	65535		Reading not allowed.
4x01001	Fan type	0	2		0 = AC fans, 1 = EC fans with tacho, 2 = EC fans with alarm output
4x01002	EC fan max speed	20	100	x0.1V	Voltage on fan when 100% power is applied.
4x01003	Rotor pulsing period	20	120	s	Rotor pulsing period.