H8035/8036 MODBUS POINT MAP

This table lists the addressed assigned to each data point. Registers are read MostSignificant Byte (MSB) first. 32 bit floating point values are encoded per IEEE Standard 754. For floating point format variables, each data point appears twice because two 16-bit addresses are required to hold a 32-bit float value. The 16 bit Most Significant Word (MSW) is in the lower address of the register pair, while the least Significant Word (LSW) is in the upper address.

Modbus RTU function codes supported: 3=read holding registers; 6=preset single register; 17=report Slave I.D.

Quick Reference of the Most Common Data Points

Address	Typical Offset	Units	Description	Integer: multiplier required	Float: upper 16 bits	Float: lower 16 bits
40001	0	KWH	Energy Consumption, LSW	X		
40002	1	KWH	Energy Consumption, MSW	X		
40003	2	KW	Real Power	X		
40257	---	KWH	Energy Consumption		X	
40258		KWH	Energy Consumption			X
40259	0	KWH	Energy Consumption (same 40257)		X	
40260		KWH	Energy Consumption (same 40258)			X
40261	2	KW	Real Power		X	
40262		KW	Real Power			X

Complete Listing of Data Points

Address	Typical Offset	Units	Description	Integer: multiplier required	Float: upper 16 bits	Float: lower 16 bits
40001	0	KWH	Energy Consumption, LSW	X		
40002	1	KWH	Energy Consumption, MSW	X		
40003	2	KW	Real Power	X		
40004	3	VAR	Reactive Power	X		
40005	4	VA	Apparent Power	X		
40006	5	---	Power Factor	X		
40007	6	VOLTS	Voltage, line to line	X		
40008	7	VOLTS	Voltage, line to neutral	X		
40009	8	AMPS	Current	X		
40010	9	KW	Real Power, Phase A	X		
40011	10	KW	Real Power, Phase B	X		
40012	11	KW	Real Power, Phase C	X		
40013	12	---	Power Factor, phase A	X		
40014	13	---	Power Factor, phase B	X		
40015	14	---	Power Factor, phase C	X		
40016	15	VOLTS	Voltage, phase A-B	X		
40017	16	VOLTS	Voltage, phase B-C	X		
40018	17	VOLTS	Voltage, phase A-C	X		
40019	18	VOLTS	Voltage, phase A-N	X		
40020	19	VOLTS	Voltage, phase B-N	X		
40021	20	VOLTS	Voltage, phase C-N	X		
40022	21	AMPS	Current, phase A	X		
40023	22	AMPS	Current, phase B	X		
40024	23	AMPS	Current, phase C	X		
40025	24	KW	Average Real Power	X		
40026	25	KW	Minimum Real Power	X		
40027	26	KW	Maximum Real Power	X		
40257	---	KWH	Energy Consumption		X	
40258		KWH	Energy Consumption			X
40259	0	KWH	Energy Consumption (same 40257)		X	
40260		KWH	Energy Consumption (same 40258)			X
40261	2	KW	Real Power		X	
40262		KW	Real Power			X

Address	Typical Offset	Units	Description	Integer: multiplier required	Float: upper 16 bits	Float: lower 16 bits
40263	4	VAR	Reactive Power		X	
40264		VAR	Reactive Power			X
40265	6	VA	Apparent Power		X	
40266		VA	Apparent Power			X
40267	8	---	Power Factor		X	
40268		---	Power Factor			X
40269	10	VOLTS	Voltage, line to line		X	
40270		VOLTS	Voltage, line to line			X
40271	12	VOLTS	Voltage, line to neutral		X	
40272		VOLTS	Voltage, line to neutral			X
40273	14	AMPS	Current		X	
40274		AMPS	Current			X
40275	16	KW	Real Power, phase A		X	
40276		KW	Real Power, phase A			X
40277	18	KW	Real Power, phase B		X	
40278		KW	Real Power, phase B			X
40279	20	KW	Real Power, phase C		X	
40280		KW	Real Power, phase C			X
40281	22	---	Power Factor, phase A		X	
40282		---	Power Factor, phase A			X
40283	24	---	Power Factor, phase B		X	
40284		---	Power Factor, phase B			X
40285	26	---	Power Factor, phase C		X	
40286		---	Power Factor, phase C			X
40287	28	VOLTS	Voltage, phase A-B		X	
40288		VOLTS	Voltage, phase A-B			X
40289	30	VOLTS	Voltage, phase B-C		X	
40290		VOLTS	Voltage, phase B-C			X
40291	32	VOLTS	Voltage, phase A-C		X	
40292		VOLTS	Voltage, phase A-C			X
40293	34	VOLTS	Voltage, phase A-N		X	
40294		VOLTS	Voltage, phase A-N			X
40295	36	VOLTS	Voltage, phase B-N		X	
40296		VOLTS	Voltage, phase B-N			X
40297	38	VOLTS	Voltage, phase C-N		X	
40298		VOLTS	Voltage, phase C-N			X
40299	40	AMPS	Current, phase A		X	
40300		AMPS	Current, phase A			X
40301	42	AMPS	Current, phase B		X	
40302		AMPS	Current, phase B			X
40303	44	AMPS	Current, phase C		X	
40304		AMPS	Current, phase C			X
40305	46	KW	Average Real Power		X	
40306		KW	Average Real Power			X
40307	48	KW	Minimum Real Power		X	
40308		KW	Minimum Real Power			X
40309	50	KW	Maximum Real Power		X	
40310		KW	Maximum Real Power			X

Note: Modbus addresses in the 4xxxx format follow the Modicon protocol specification for point addressing. The actual address sent is the value shown, minus 40001. In other words, the leading "4" is omitted, and the remaining 4-digit number is decremented so that point 40001 is requested with a value of zero in the actual Modbus communication. Some Modbus implementations require point addresses to be specified beginning at zero or 40000, instead of 40001. Programing code may also require addresses which correspond to actual values transmitted, so a value of zero is used to request data beginning at Modbus address 40001.

In many applications, a single Modbus command is used to read all of the data available from the Enercept. For integers, the beginning address is 40001 (or zero in the actual Modbus command), and for floats the first address used would typically be 40259 (or 258 in the actual Modbus command). Although the first float appears at address 40257, it is not necessary to read this value because it is a duplicate copy of the kWh value (required by the product firmware). When a block of data is read, the "typical offset" values index to the data within the block.

"Multiplier required" indicates that a multiplication is required to properly scale the integer value. See Using Integer Data Types section.