

24/7 ASSET MONITORING SOLUTION ENERGY

AMS01 MODBUS TABLE

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ISO 9001:2015

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OVERVIEW

The AMS01 Modbus table described in this document is the **version 1.1.0**. The registers described are intended for AMS01 readers with AMS01 compatibility mode applied.

MODBUS REGISTERS

Description	Register address	Data type	Min. value	Max. value	Error value	Meaning	
INPUT REGISTERS (READ ONLY)							
SAW TEMPERATURE SENSOR DATA							
Antenna 1	SAW DATA 1	30001	Signed	-300 (for °C)	1 500 (for °C)	-32 768	1/10° *Specific use
	SAW DATA 2	30002					
	SAW DATA 3	30003					
	SAW DATA 4	30004					
	SAW DATA 5	30005					
	SAW DATA 6	30006					
	SAW DATA 7*	30007*					
	SAW DATA 8*	30008*					
	SAW DATA 9*	30009*					
Antenna 2	SAW DATA 10	30010					
	SAW DATA 11	30011					
	SAW DATA 12	30012					
	SAW DATA 13	30013					
	SAW DATA 14	30014					
	SAW DATA 15	30015					
	SAW DATA 16*	30016*					
	SAW DATA 17*	30017*					
	SAW DATA 18*	30018*					
Antenna 3	SAW DATA 19	30019					
	SAW DATA 20	30020					
	SAW DATA 21	30021					
	SAW DATA 22	30022					
	SAW DATA 23	30023					
	SAW DATA 24	30024					
	SAW DATA 25*	30025*					
	SAW DATA 26*	30026*					
	SAW DATA 27*	30027*					

Antenna 4	SAW DATA 28	30028						
	SAW DATA 29	30029						
	SAW DATA 30	30030						
	SAW DATA 31	30031						
	SAW DATA 32	30032						
	SAW DATA 33	30033						
	SAW DATA 34*	30034*						
	SAW DATA 35*	30035*						
	SAW DATA 36*	30036*						
Antenna 5	SAW DATA 37	30037						
	SAW DATA 38	30038						
	SAW DATA 39	30039						
	SAW DATA 40	30040						
	SAW DATA 41	30041						
	SAW DATA 42	30042						
	SAW DATA 43*	30043*						
	SAW DATA 44*	30044*						
	SAW DATA 45*	30045*						
ENVIRONMENTAL SENSOR DATA								
Ambient temperature		30136	Signed	-450 (for °C)	1 750 (for °C)	-32 768	1/10°	
Ambient humidity		30137	Unsigned	0	1 000	65 535	1/10 %rH	
Ambient dew point		30138	Signed	-450 (for °C)	1 750 (for °C)	-32 768	1/10°	
PARTIAL DISCHARGE DATA - FOR OFFSET LEVEL VALUE OF 3 ONLY								
Probe 1	PD indicator code	31000	Unsigned	0	3	65 535	<i>*see Table 5</i>	
	Ratio	31001			65 534		1/10 dB	
	EPPC	31002			65 534		1/10 peaks/cycle	
	PD level (2 registers)	31003				4 294 967 295	1/10 a.u.	
Probe 2	PD indicator code	31009				3	65 535	<i>*see Table 5</i>
	Ratio	31010			65 534	1/10 dB		
	EPPC	31011			65 534	1/10 peaks/cycle		
	PD level (2 registers)	31012				4 294 967 295	1/10 a.u.	
Probe 3	PD indicator code	31018				3	65 535	<i>*see Table 5</i>
	Ratio	31019			65 534	1/10 dB		
	EPPC	31020			65 534	1/10 peaks/cycle		
	PD level (2 registers)	31021				4 294 967 295	1/10 a.u.	
Probe 4	PD indicator code	31027				3	65 535	<i>*see Table 5</i>
	Ratio	31028			65 534	1/10 dB		
	EPPC	31029			65 534	1/10 dB		
	PD level (2 registers)	31030				4 294 967 295	1/10 a.u.	
Probe 5	PD indicator code	31036				3	65 535	<i>*see Table 5</i>
	Ratio	31037			65 534	1/10 dB		
	EPPC	31038			65 534	1/10 peaks/cycle		
	PD level (2 registers)	31039				4 294 967 295	1/10 a.u.	

TEMPERATURE NOTIFIERS							
Global temperature notifier indicator		32000	Unsigned	0	2	65 535	<i>*see Table 6</i>
Notifier 1	Overheating status	32001					
	Deviation status	32002					
Notifier 2	Overheating status	32003					
	Deviation status	32004					
Notifier 3	Overheating status	32005					
	Deviation status	32006					
Notifier 4	Overheating status	32007					
	Deviation status	32008					
Notifier 5	Overheating status	32009					
	Deviation status	32010					
Notifier 6	Overheating status	32011					
	Deviation status	32012					
Notifier 7	Overheating status	32013					
	Deviation status	32014					
Notifier 8	Overheating status	32015					
	Deviation status	32016					
Notifier 9	Overheating status	32017					
	Deviation status	32018					
Notifier 10	Overheating status	32019					
	Deviation status	32020					
PARTIAL DISCHARGE NOTIFIERS							
Global PD notifier indicator		33000	Signed	0	3	65 535	<i>*see Table 7</i>
Notifier 1	PD indicator	33001					
Notifier 2	PD indicator	33002					
Notifier 3	PD indicator	33003					
Notifier 4	PD indicator	33004					
Notifier 5	PD indicator	33005					
SYSTEM DATA							
Serial number		39001	String (11)	-	-		Serial number
Product vendor		39012	String (7)	-	-		SENSeOR
Product model		39019	String (10)	-	-		<i>*see Table 1</i>
Hardware version		39029	String (2)	-	-		
Software	Major version	39031	Unsigned	0	65 535		
	Minor version	39032					
	Patch version	39033					
	Type version	39034					
Modbus table version	Major version	39035					
	Minor version	39036					
	Patch version	39037					

HOLDING REGISTERS							
SYSTEM CONFIGURATION							
Modbus	Address	40001	Unsigned	1	247	65 535	Reader S/N + 1
	Baudrate code	40002		0	7		*see Table 2
	Parity code	40003		0	2		*see Table 3
	Stop bits	40004		0	3		Default value: 1
Temperature unit code		40005		0	1		*see Table 4
Ethernet IP address	Byte 0	40006		0	255	-	Default value: 10
	Byte 1	40007					Default value: 200
	Byte 2	40008					Depends of S/N
	Byte 3	40009					Depends of S/N
Subnet mask	Byte 0	40010					Default value: 255
	Byte 1	40011					Default value: 255
	Byte 2	40012					Default value: 0
	Byte 3	40013					Default value: 0
Default gateway	Byte 0	40014					Default value: 10
	Byte 1	40015					Default value: 200
	Byte 2	40016					Default value: 0
	Byte 3	40017					Default value: 1

NOTE

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Table 1: Reader product register code

Model	Description
AMS01-T	Temperature monitoring only
AMS01-P	Partial discharge monitoring only
AMS01-TP	Temperature and partial discharge monitoring

Table 2: Modbus baudrate register code

Register value	Baudrate (bps)
0	9 600
1	19 200 (default value)
2	38 400
3	57 600
4	115 200

Table 3: Modbus parity register code

Register value	Parity
0	None (default value)
1	Odd
2	Even

Table 4: System temperature unit register code

Register value	Configuration
0	Celsius (default value)
1	Fahrenheit

Table 5: Partial discharge indicator code

Register value	Configuration
0	No presence
1	Presence
2	Warning
3	Alert

Table 6: Temperature notifier indicator code

Register value	Configuration
0	No concern
1	(At least one notifier has) Level 1 exceeded
2	(At least one notifier has) Level 2 exceeded

Table 7: Partial discharge notifier indicator code

Register value	Configuration
0	No concern
1	(At least one notifier has) Low level activity
2	(At least one notifier has) Medium level activity
3	(At least one notifier has) High level activity