

24/7 ASSET MONITORING SOLUTION ENERGY

AMS01 MODBUS TABLE

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ISO 9001:2015

BUREAU VERITAS
Certification

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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-TCP port: **502**.

Default Modbus-RTU address is printed on the reader's serialization label.

MODBUS REGISTERS

Description		Register number	Data type	Min. value	Max. value	Default value	Meaning
INPUT REGISTERS (READ ONLY)							
TEMPERATURE SENSORS DATA							
Antenna pair 1	Sensor #01	30001	Signed	-300 (for °C)	1 500 (for °C)	-32 768	1/10°
	Sensor #02	30002					
	Sensor #03	30003					
	Sensor #04	30004					
	Sensor #05	30005					
	Sensor #06	30006					
	Sensor #07	30007					
	Sensor #08	30008					
	Sensor #09	30009					
Antenna pair 2	Sensor #01	30010					
	Sensor #02	30011					
	Sensor #03	30012					
	Sensor #04	30013					
	Sensor #05	30014					
	Sensor #06	30015					
	Sensor #07	30016					
	Sensor #08	30017					
	Sensor #09	30018					
Antenna pair 3	Sensor #01	30019					
	Sensor #02	30020					
	Sensor #03	30021					
	Sensor #04	30022					
	Sensor #05	30023					
	Sensor #06	30024					
	Sensor #07	30025					
	Sensor #08	30026					
	Sensor #09	30027					

Antenna pair 4	Sensor #01	30028					
	Sensor #02	30029					
	Sensor #03	30030					
	Sensor #04	30031					
	Sensor #05	30032					
	Sensor #06	30033					
	Sensor #07	30034					
	Sensor #08	30035					
	Sensor #09	30036					
Antenna pair 5	Sensor #01	30037					
	Sensor #02	30038					
	Sensor #03	30039					
	Sensor #04	30040					
	Sensor #05	30041					
	Sensor #06	30042					
	Sensor #07	30043					
	Sensor #08	30044					
	Sensor #09	30045					

ENVIRONMENTAL SENSOR DATA

Ambient temperature	30136	Signed	-450 (for °C)	1 750 (for °C)	-32 768	1/10°
Humidity	30137	Unsigned	0	1 000	65 535	1/10 %rH
Dew point	30138	Signed	-450 (for °C)	1 750 (for °C)	-32 768	1/10°

PARTIAL DISCHARGE PROBES DATA - FOR OFFSET LEVEL VALUE OF 3 ONLY

Antenna pair 1	PD indicator code	31000	Unsigned	0	3	65 535	see Table 5
	Ratio	31001			65 534		1/10 dB
	EPPC	31002			65 534		1/10 peaks/cycle
	PD level (2 registers)	31003					4 294 967 295
Antenna pair 2	PD indicator code	31009	Unsigned	0	3	65 535	see Table 5
	Ratio	31010			65 534		1/10 dB
	EPPC	31011			65 534		1/10 peaks/cycle
	PD level (2 registers)	31012					4 294 967 295
Antenna pair 3	PD indicator code	31018	Unsigned	0	3	65 535	see Table 5
	Ratio	31019			65 534		1/10 dB
	EPPC	31020			65 534		1/10 peaks/cycle
	PD level (2 registers)	31021					4 294 967 295
Antenna pair 4	PD indicator code	31027	Unsigned	0	3	65 535	see Table 5
	Ratio	31028			65 534		1/10 dB
	EPPC	31029			65 534		1/10 dB
	PD level (2 registers)	31030					4 294 967 295
Antenna pair 5	PD indicator code	31036	Unsigned	0	3	65 535	see Table 5
	Ratio	31037			65 534		1/10 dB
	EPPC	31038			65 534		1/10 peaks/cycle
	PD level (2 registers)	31039					4 294 967 295

TEMPERATURE NOTIFIERS									
Global temperature notifier indicator		32000	Unsigned	0	2	65 535	see Table 6		
Notifier #01	Overheating status	32001							
	Deviation status	32002							
Notifier #02	Overheating status	32003							
	Deviation status	32004							
Notifier #03	Overheating status	32005							
	Deviation status	32006							
Notifier #04	Overheating status	32007							
	Deviation status	32008							
Notifier #05	Overheating status	32009							
	Deviation status	32010							
Notifier #06	Overheating status	32011							
	Deviation status	32012							
Notifier #07	Overheating status	32013							
	Deviation status	32014							
Notifier #08	Overheating status	32015							
	Deviation status	32016							
Notifier #09	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	see Table 7		
Notifier #01	PD indicator	33001							
Notifier #02	PD indicator	33002							
Notifier #03	PD indicator	33003							
Notifier #04	PD indicator	33004							
Notifier #05	PD indicator	33005							
READER DATA									
Serial number		39001	String (11)	-	-		Ex: 'Q2A11120074'		
Constructor		39012	String (7)	-	-		SENSeOR		
Type		39019	String (10)	-	-		see Table 1		
Hardware version		39029	String (2)	-	-		Ex: 'AF'		
Firmware version	Major	39031	Unsigned	0	65 535		Ex: '1.7.1.0'		
	Minor	39032							
	Patch	39033							
	Type	39034							
Modbus table version	Major	39035							Ex: '1.1.0'
	Minor	39036							
	Patch	39037							

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

NOTE

FOR LEGACY MODBUS TABLES, PLEASE CONTACT THE SENSEOR SUPPORT SUPPORT.SENSEOR@WIKA.COM.

Table 1: Reader type code

Type	Description
AMS01-T	Temperature monitoring only
AMS01-P	Partial discharge monitoring only
AMS01-TP	Temperature & partial discharge monitoring

Table 2: Modbus speed code

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

Table 3: Modbus parity code

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

Table 4: Temperature unit 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 warning level reached
2	At least one notifier has alert level reached

Table 7: Partial discharge notifier indicator code

Register value	Configuration
0	No concern
1	At least one notifier has low activity detected
2	At least one notifier has medium activity detected
3	At least one notifier has high activity detected