

24/7 ASSET MONITORING SOLUTION

AMS01 CONFIGURATION TOOL USER MANUAL

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	SENSCOR
-4+ AMS Configuration Tool v1.4.3	AMS01 Configuration Tool
AMS01 Configuration Tool Stitcted network card: Diffuse Using NLM files Lasd from XML Create new	Version 1.4.3 Copyright 2023 SENSeOR www.senseor.com
	Support: support.senseor@wika.com
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WARRANTY

These products are warranted to be free from functional defects in material and in workmanship at the time of the manufacturing and to conform at that time to the specifications set forth in the relevant instruction manuals or in the data sheets, for such products for a period of one year.

Reference SENSeOR terms and conditions provided at time of purchase for complete warranty details.



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SAFETY INFORMATION

IT IS IMPORTANT TO READ THIS MANUAL BEFORE INSTALLING OR COMMISSIONING SENSEOR CRITICAL ASSET MONITORING SYSTEMS.

DANGER

DANGER INDICATES AN IMMINENTLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, WILL RESULT IN DEATH OR SERIOUS INJURY.

FAILURE TO FOLLOW THE INSTRUCTIONS GIVEN WILL RESULT IN DEATH OR SERIOUS INJURY.

WARNING

WARNING INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, COULD RESULT IN DEATH OR SERIOUS INJURY.

FAILURE TO FOLLOW THE GIVEN INSTRUCTIONS CAN RESULT IN DEATH OR IN SERIOUS INJURY.

CAUTION

CAUTION INDICATES A POTENTIALLY HAZARDOUS SITUATION, WHICH, IF NOT AVOIDED, MAY RESULT IN MINOR OR MODERATE INJURY.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PERSONAL INJURY.

NOTICE

NOTICE PROVIDES GUIDANCE ON DAMAGE UNRELATED TO PERSONAL INJURY, SUCH AS THOSE THAT CAN CAUSE DETERIORATED PROPERTY.

FAILURE TO FOLLOW THESE INSTRUCTIONS CAN RESULT IN PROPERTY DAMAGE.

IMPORTANT

IMPORTANT INDICATES ADDITIONAL INFORMATION ABOUT MAKING EFFECTIVE USE OF THIS PRODUCT.

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OVERVIEW

This user manual describes how to use the *AMSO1 Configuration Tool* software applicable with **AMS01-T**, **AMS01-P** and **AMS01-TP** readers.

The following guidelines are applicable from **version 1.4.3**.

RELATED DOCUMENTS

- UM00403-EN_AMS01 User Manual.
- UM00417-EN_AMS01 Modbus table.
- UM00418-EN_AMS01 Modbus table with HTR02 compatibility mode.
- UM00419-EN_AMS01 SD card file management.

For additional related documentation and file downloads see support website at <u>senseor.com/downloads</u>.

SYSTEM HARDWARE INSTALLATION

This manual provides details on the software installation and its configuration **only**, please refer to the 'AMS01 User Manual' for specific hardware details.

WARNING

PROFESSIONAL INSTALLATION REQUIRED.

INSTALLATION AND CONFIGURATION SHOULD BE PERFORMED ONLY BY USERS WHO ARE TECHNICALLY COMPETENT AND AUTHORIZED TO DO SO.

LOCAL REGULATIONS REGARDING ELECTRICAL INSTALLATION AND SAFETY MUST BE OBSERVED.

FAILURE TO FOLLOW THE GIVEN INSTRUCTIONS CAN RESULT IN DEATH OR IN SERIOUS INJURY.

CONFIGURATION TOOL INSTALLATION

OPERATING SYSTEM

The *AMS01 Configuration Tool* operates only on Microsoft Windows operating system, with at least Windows 10 **64-bit**.

AMS01 CONFIGURATION TOOL INSTALLER

To install AMS01 Configuration Tool, double-click on the 'Setup AMS01 Configuration Tool vX.Y.Z.msi'.

NOTE

THE LAST REVISION OF THE AMS01 CONFIGURATION TOOL IS AVAILABLE ON <u>WWW.SENSEOR.COM/DOWNLOADS</u>.

Follow the Setup instructions to complete the installation.

OTHER REQUIRED INSTALLATION

NOTE

ADMINISTRATOR RIGHTS ARE REQUIRED TO INSTALL AND TO MANAGE THE NETWORK FIREWALL SECURITY SETTINGS.

The *AMS01 Configuration Tool* requires **Microsoft .NET 6.0**. If the machine does not have Microsoft .NET 6.0 installed, the installer can be found on the Microsoft website.

CONFIGURATION OF THE CONNECTION

The default IP address is printed on the serialization label on the back of the reader. This IP address can be modified using the software (see <u>'Settings' tab</u>)



To connect a computer to the reader, the Ethernet card must be configured as follows:

Network Connections				
SENSeOR Readers Properties	>	< rch Netwo		
Protocole Internet version 4 (TCP/IPv4	4) Properties	×		
General		E		
You can get IP settings assigned autor this capability. Otherwise, you need to for the appropriate IP settings.	matically if your network sup ask your network administ	ports _F rator		
Obtain an IP address automatical	llγ	¢		
Use the following IP address:			 IP address = 10.200).1.100
IP address:	10 . 200 . 1 . 100		Subnet mask = 255	255.0
Subnet mask:	255.255.0.0			.200.0.
Default gateway:		' II		
Obtain DNS server address autor	natically			
• Use the following DNS server add	lresses:	- II.		
Preferred DNS server:				
Alternative DNS server:				
Validate settings upon exit	Advan			
	OK	Cancel		

NOTE

TO RESET IP OF THE AMS01 READER, HOLD THE RESET BUTTON UNTIL ALL LEDS ARE FLASHING GREEN. THIS CAN TAKE UP TO 15 SECONDS.

APPLICATION LAUNCH

FIRST LAUNCH AND WINDOWS FIREWALL

At the first use of 'Scan' button, the Windows firewall will ask for you about security notice.

You must allow the AMS01 Configuration Tool software to communicate using your networks.

Prindows Security Alert						
Windo app	ws Defend	er Firewall has blocked some features of this				
Windows Defender and domain networ	Firewall has blo ks.	cked some features of AMS01ConfigTool on all public, private				
هلاب	Name:	AMS01ConfigTool				
-1-9	Publisher:	SENSeOR				
	Path:	C:\program files (x86)\senseor\ams01 config tool 1.3.0- alpha\ams01configtool.exe				
Allow AMS01Config	Tool to commur	icate on these networks:				
🗹 Domain netw	orks, such as a	workplace network				
Private netw	orks, such as m	y home or work network				
Public networks, such as those in airports and coffee shops (not recommended because these networks often have little or no security)						
What are the risks of allowing an app through a firewall?						
		Allow access Cancel				

MAIN WINDOW DESCRIPTION

READER DETECTION

At start-up, the application scans and lists available and active network adapters.

Select the network card associated with the readers IP address.



If the network card is not detected:

- Close the application,
- Check connection and configuration of the card in Windows settings,
- Restart the application.

Click on **Scan** button to list readers connected to the selected card:

-⁄∿∍ AMS (Configuration Tool v1.3.6				N		-	
AMS	501 Configuration T	Tool			6	SENS	50C	R
Selected n	etwork card: SENSeOR Readers Realtek PCIe GbE Family Controller 10.200.255.255				v Scan		11-41 <u>881</u> 881 → 140 → 14	nut -
Name :	Туре :	AMS01-P	S/N: Q2A11450112	IP Address : 10.200.1.12	Firmware : v1.3.0.0	DFU MODE Open	Update Firm	iware
Name :	My reader Type :	AMS01-TP	S/N: Q2A11120074	IP Address : 10.200.0.74	Firmware : v1.5.4.0	Open	Update Firm	iware
Name :	Туре	AMS01-T	S/N: Q2A11440365	IP Address : 10.200.3.65	Firmware : v1.4.3.0	Open	Update Firm	iware
About H	əlp						Powered by	WIKA

Open : Open reader window (see <u>next chapter</u>).

(Update Firmware) : Update firmware by loading firmware file (*.senseor) from file explorer.

DFU MODE : This label appears if the reader is in '*Device Firmware Update (DFU)*' mode.

NOTE

THE LATEST FIRMWARE VERSION IS AVAILABLE ON THE WEBSITE SENSEOR.COM/DOWNLOADS.

If a reader is not found:

- Reset the reader.
- Reset the reader's Ethernet settings.
- Disable all VPN services on the computer.

READER WINDOW DESCRIPTION

SETTINGS TAB

-/+ AMS Con	figuration Tool v1.	3.6 - Q2A11120074						-		×
Settings	% Installation	Temperature Notifiers	🕴 Partial Di	scharge Notifiers	😔 System Test					
					@ s	ettings	Cancel		Apply	
Name N Reader Info Product T Serial Nu Hardware Firmware	Ay reader prmation ype : AMS01-T mber : Q2A11120 e : AC a : y1540	P 074	Ethernet Setti IP Addro Subnet Mi Default Gatev Modbus Settir	ings 10 20 ask 255 25 way 10 20	00.0.74 5.0.0 10.0.1	Load/Save Configuration File (.xml) Save Load				
Battery V	oltage : 2.9 V	F0.11	Address Speed Parity Stop Bits	75 19200 None One	* * *		Ν			
Mains Por Temperat Compatib	wer Frequency ure Unit vility Mode	Celsius v AMSO1 v	Time Settings Date Time : (UTC) Coord	7/6/2023 11:20 A inated Universal Ti	M ime v		13			

This tab shows the reader information and could be used to configure the following settings:

- READER NAME (max 19 digits)
- SYSTEM
 - Mains power frequency ('50 Hz' or '60 Hz')¹
 - System temperature unit (*Celsius* or *Fahrenheit*)
 - Compatibility mode selection ('AMS01' or 'HTR02')²
- ETHERNET
 - IP address (IPv4 format)
 - Subnet mask (IPv4 format)
 - Default gateway (IPv4 format)
- RS485 MODBUS (RTU)
 - Modbus address (from '1' to '247' default value is printed on the reader label)
 - Speed (default value is '19 200' bauds)
 - Parity (default value is 'None')
 - Stop bits (default value is '1')
- TIME ZONE

¹ Select the mains frequency of the measured electric system depending of your installation region (incorrect selection could result in no detection of partial discharge).

² Selecting HTR02 compatibility mode results in limitation of reader capacity as only antenna pairs 1 to 3. A maximum of 6 sensors per antenna pairs are available for measurement. Compatibility mode could be used in case of addition / replacement of existing HTR02 systems in order to keep the same Modbus table interface.

- CONFIGURATION FILE -
 - Save the full reader configuration (all tabs) into a file.
 - Load full reader configuration (all tabs) from a specified file.

WARNING

ONCE THE READER IS FULLY COMMISSIONED, ENSURE TO SAVE THE FULL READER CONFIGURATION.

NEEDED FOR FACTORY/SITE ACCEPTANCE TEST WITH THE FINAL CUSTOMER.



Cancel : Cancel modifications.

INSTALLATION TAB

This tab is used to configure temperature sensors and partial discharge detection probes installation. For installation details, please refer to the '<u>UM00403-AMS01 User Manual</u>'.

- AMS Configuration Tool v1.3.6 - Q2A11450112		- 🗆 X
Settings 💥 Installation 🛔 Temperature N	lotifiers 🕴 Partial Discharge Notifiers 🔄 System Te	st
	ا ال ا	nstallation
Environmental Sensor	Temperature Installation Settings	
Ambient Temperature 24.6 °C Refres	h Global Reference Temperature 25.0 °C	Add New Antenna Clear All
Ambient Humidity 36.6 %	Use Global Reference v	

ENVIRONMENTAL SENSOR

- Environmental Sensor		
Ambient Temperature	25.1 °C	Refresh
Ambient Humidity	45.3 %	

This location shows the information from the external humidity and temperature sensor if connected.

Data are obtain by click on the refresh button (Refresh).

TEMPERATURE INSTALLATION SETTINGS

Only applicable for 'AMS01-T' and 'AMS01-TP' readers.

The AMS01 system needs a reference temperature for sensor validation.

This section allows use of different sources for temperature selection.

Temperature Installation Settings	
Global Reference Temperature	25.0 °C
Use Global Reference	~

Use Global Reference	*	
Use Global Reference		·
Use Environmental Sensor	Ŧ	
Use Individual Reference Temperature	t.	

Select which temperature reference must be used for sensor installation.

Use Glo	oal Reference		Manually	set	temperature	is	used	as	reference
			temperatu	ıre.					
Use Environmental Sensor			Environmental sensor temperature is used as reference						
			temperatu	ıre.					
Use	Individual	Reference	The refere	nce te	emperature mu	st b	e manu	ally s	et for each
Temperature			sensor.						

ΝΟΤΕ

THE LOCAL TEMPERATURE INFORMATION MUST BE ADJUSTED TO REFLECT SENSOR TEMPERATURE.

ANTENNA PAIRS

The AMS01 reader support up to five antenna pairs. Temperature sensors and partial discharge probes needs to be configured for each antenna pair.

AMS Conf	iguration Tool v1.3	.6 - Q2A11120074								- 0
Settings	🗶 Installation	Temperature Notifiers	Partial Discharge Notifiers	System Test						
nvironme Ambient T Ambient H	ntal Sensor emperature 2 lumidity 3	4.4 °C (Refresh) 6.9 %	Temperature Installation Setting Global Reference Temperature Use Environmental Sensor	25.0 °C	X	Installation				Add New Antenna Clear All
Ante	nna Pair 1	Temperature Sensors							Add New Sensor	PD Probe Enabled
anel Lo	cation	Ph A Mo	dbus : 30001 Ref : TSAEV110	4 SN : TX8145069RX81	40196	Commit Status Check	Ref temp 24.4 °C	Diag Notifier #0	1 · Remove	Modbus : 31000 - 31004 Notifier
mparti	ment Location	Ph B Mo	dbus : 30002 Ref : TSAEV110	5 SN : TX8145744RX81	40191	Commit Status Check	Ref temp 24.4 °C	Diag Notifier #0	1 · Remove	PD Notifier #01 ~
Remo	ove Antenna	Ph C Mo	dbus : 30003 Ref : TSAEV1110	SN : TA6605RA9111		Commit Status Check	Ref temp 24.4 °C	Diag Notifier #0	1 · Remove	
		Temperature Sensors							Add New Sensor	PD Probe
		Ph A up Mo	dbus : 30010 Ref : TSAEV1101	SN : TX9176478RX91	71290	Commit Status Check	Ref temp 24.4 °C	Diag Natifier	• Remove	Modbus : 31009 - 31013 Notifier
Antei	nna Pair 2	Ph B up Mo	dbus: 30011 Ref: TSAEV110	4 SN : TX8145077RX81	40051	Commit Status Check	Ref temp 24.4 °C	Diag Natifier	* Remove	Notifier #02 v
iel Lo bicle (cation)1	Ph C up Mo	dbus : 30012 Ref : TSAEV110	6 SN : TX9177653RX91	74374	Commit Status Check	Ref temp 24.4 °C	Diag Natifier	* Remove	
npartr cuit b	ment Location reaker	Ph A down Mo	dbus : 30013 Ref : TSAEV1110	SN : TA6619RA9258		Commit Status Check	Ref temp 24.4 °C	Diag Natifier	* Remove	
Remo	ove Antenna	Name				Commit Status	Reftemp	Notifier		

Add New Antenna	:	Add new antenna to the reader configuration.
Clear All	:	Clear all antennas from the reader configuration.
Remove Antenna	:	Remove the antenna from the reader configuration.
Panel Location	:	Enter a panel location name (max 19 digits).
Compartment Location	:	Enter a compartment location (max 19 digits).

TEMPERATURE SENSORS

The following picture shows the temperature sensor configuration section in antenna pair.

Temperature Senso	rs				Add New Sensor
Name	Modbus : 30010	Ref : TSAEV1106	SN : TX9177653RX9174374	Commit Status Check Ref temp Notifier 24.7 *C Diag	• Remove
Name	Modbus : 30011	Ref : TSAEV1103	SN : T X843 2129 R C 3080	Commit Status Commit Status Ref temp Notifier Check 24.7 °C Diag	• Remove

Add New Sensor Add sensor(s) by selecting XML file(s) into the antenna pair (see 'Sensor Configuration File Generator' chapter). Name : Name of the sensor (max 19 digits). Check Check the sensor. Ref temp Enter the reference temperature (only available when Individual reference 24.7 °C temperature use is selected in Temperature installation settings space). Open diagnostic window (see next section - only available when check has Diag : been made). Select a temperature Notifier to associate with the sensor (see 'Temperature v : monitoring notifiers' chapter). Remove • Remove the sensor from the antenna pair.

Modbus addresses are assigned to sensors following order of configuration. In case of you need respect a specific Modbus mapping, please take care of the order while you add sensors to the antenna pair.

Check status

The Check button, will perform an interrogation of the sensor. This operation could take up to 20 seconds. Check status Led indicates if sensor installation permit correct interrogation by the reader.



No check has been performed.

- The sensor does not meet measurement criteria and cannot be commissioned.
- The sensor does not meet minimal measurement criteria and requires manual commissioning.
 - The sensor meets all measurement criteria and is automatically commissioned by the system.

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Commissioning status

The commissioning status information reflects the status of the sensor view by the reader. A noncommissioned sensor will not be interrogated by the reader.



- The sensor is commissioned by the **system** on the best RF signal available.
- The sensor is commissioned **manually** from the diagnostic page.
- The sensor is **not** commissioned.

DIAGNOSTIC WINDOW

Only applicable for 'AMS01-T' and 'AMS01-TP' readers.

This window shows the spectrum view of the sensitive elements of a temperature sensor and more precise information about sensor interrogation result.

The system will suggest an operating point validating most of its criteria. If needed you can select an other operating point.





PARTIAL DISCHARGE PROBES

Only applicable for 'AMS01-P' and 'AMS01-TP' readers.

PD Probe
Enabled
Modbus : 31018 - 31022
Notifier
Notifier #02 v



- Click to enable/disable the PD probe for this antenna pair.
- Select a PD Notifier to associate with the probe (see '<u>Partial discharge</u> <u>monitoring notifiers</u>' chapter).

TEMPERATURE NOTIFIERS

Only applicable for 'AMS01-T' and 'AMS01-TP' readers.

NOTIFIER OPERATION

Temperature notifiers is an information system based on predefined temperature threshold values and duration time.

A notifier could be linked to one or several sensors (see Installation tab).

Two temperature notification **types** can be activated for the same notifier: '**Overheating'** and '**Deviation'**.

Each notification type has two levels of severity : 'Warning' and 'Alert'.

Up to 10 notifiers could be configured and assigned in the system.



Temperature notifiers provide feedback on following levels:

- Led indication (see AMS01 reader manual)
- File on μSD card.
- Modbus registers.
- Relay switch (if activated).

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WARNING

ALERT OR WARNING NOTIFICATION SWITCHES ON WHEN TEMPERATURE MEASURED EXCEED THE ALERT THRESHOLD FOR A PREDEFINED PERIOD (EX: 1 HOUR).

ALERT OR WARNING NOTIFICATION SWITCHES OFF WHEN TEMPERATURE MEASURED BREAK DOWN THE ALERT THRESHOLD FOR A PREDEFINED PERIOD (EX: 1 HOUR).



TAB DESCRIPTION

AMS Configuration Tool v1.3.6 - Q2A11	1120074					-		×
	erature Notifiers 🕴 Partial Discharge Not	tifiers 🔄 System Test						
		E Tempera	ature Notifie	rs	Reset	Cancel	Apply	
	Temperature Notifier 1 Name Notifier #01	Overheating	Warning 75 ▼ °C Alert 90 ▼ °C	Duration 1 × h Duration 1 × h	Relay			
		Deviation	Warning 10 ★ °C Alert 20 ★ °C	Duration 1 A Duration 1 A h	Relay			
	Temperature Notifier 2	Overheating	Warning 75 * C Alert 90 * C	Duration Duration 1 4 N h	Relay			
		Deviation	Warning 10 🔺 °C Alert	Duration	Relay			<



³ Duration minimum is 1h. Value '0' corresponding to one cycle of measurement, approximatively 15 minutes and could be used only for tests.
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PARTIAL DISCHARGE NOTIFIERS

Only applicable for 'AMS01-P' and 'AMS01-TP' readers.

NOTIFIER OPERATION

Partial discharge notifiers are information systems that use predefined **PD level threshold** values to monitor a **percentage of PD activity** over a **specific period**.

The system calculate a *PD level* who is proportional to the *Ratio* (dB) and the Estimated Pulse Per Cycle (*EPPC*) measured at each cycle.

A notifier could be linked to one or several PD probes (see Installation tab).

Up to 10 notifiers could be configured and assigned in the system.

Three notification levels are defined of Partial Discharge notification: 'Low activity', 'Medium activity' and 'High activity'.



Partial Discharge notifiers provide feedback on followings levels:

- Led indication (see AMS01 reader manual)
- File on μSD card.
- Modbus registers.
- Relay switch (if activated).

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TAB DESCRIPTION

Notifiers 7	Partial Discharge No	tifiers 🛧 9	System Test				
	4	Parti	al Discha	rge Notifiers		Reset Ca	ancel Apply
	Low Activity	PD Level	Ratio	EPPC	Duration	Time Activity	
	4	10	2 🛓 dB	5 🔹 ррс	14 🗙 days	75 🔹 %	Relay
	Medium Activity	45	3 📥 dB	15 🔺 ppc	7 📥 days	30 🔺 %	Relay
	High Activity	250	10 📥 dB	25 • ppc	7 📥 days	15 🔷 %	Relay
	Low Activity	PD Level	Ratio 2 ▲ dB	EPPC 5 x ppc	Duration 14 🔦 days	Time Activity	Relay
	+	45	3 📥 dB	15 💂 ppc	7 📥 days	30 🔹 %	Relay
	High Activity	255	15 📥 dB	17 💂 ppc	5 📥 days	18 🚔 %	Relay
		PD Level	Ratio	EPPC	Duration	Time Activity	
		Low Activity Medium Activity High Activity Medium Activity Medium Activity Medium Activity Medium Activity Medium Activity Medium Activity	PD Level Low Activity PD Level Medium Activity PD Level High Activity PD Level PD Level PD Level PD Level V Activity V 45 High Activity V 45 Low Activity	PD Level Ratio ✓ Constraint PD Level Ratio ✓ dB Medium Activity ✓ d5 3 ★ dB High Activity ✓ 250 10 ★ dB ✓ Low Activity ✓ 10 2 ★ dB Medium Activity ✓ 45 3 ★ dB ✓ 10 2 ★ dB ✓ 45 3 ★ dB	PD Level Ratio EPPC Low Activity 45 3 a dB 15 ppc High Activity 250 10 dB 25 ppc Low Activity PD Level Ratio EPPC Low Activity PD Level Ratio EPPC Low Activity 45 3 a dB 15 ppc High Activity 45 3 a dB 15 ppc 10 a dB 25 ppc Low Activity 45 3 a dB 15 ppc	PD Level Ratio EPPC Duration Low Activity 10 2 m dB 5 m ppc 16 m days Medium Activity 45 3 m dB 15 m ppc 7 m days High Activity 250 10 m dB 25 m ppc 7 m days Low Activity PD Level Ratio EPPC Duration Low Activity 250 10 m dB 25 m ppc 7 m days Medium Activity Medium Activity 45 3 m dB 15 m ppc 7 m days	PD Level Ratio EPPC Duration Time Activity Image: Strain product of the strain

\bigcirc	: Activate/Deactivate the PD Notifier.
PD Level 10 Ratio	: This value is the notification threshold level, obtained by multiplying <i>Ratio</i> by <i>EPPC</i> .
2 ▲ dB	: Choose a Ratio level for PD triggered level calculation.
EPPC	: Choose an EPPC level for PD triggered level calculation.
14 🛓 days	: Choose the period above the PD level threshold value for notification activation.
Time Activity	: Choose the percentage of activity required to activate notification.
Relay	: Activate relay switch on corresponding notifier level.
Reset	: Restore default values for all notifiers.
Cancel	: Cancel modifications.
Apply	: Apply modifications.

SYSTEM TEST TAB

This window allow to check the system installation by performing the measurement of selected elements (temperature sensors and partial discharge probes).

- 🕪 AMS Confi	iguration Tool v1.3	.6 - Q2A111200	74									- 0	×
Settings	% Installation	🖁 Temperatu	re Notifiers 🕴 🕴 Pa	rtial Discharge Notifiers	도 Syste	m Test							
	Relay	Test			<u>∽</u>	Syster	n To	est				PD Test Method	
		Available FAT is run	only when ning			-						Use default reader settings	*
C													
		, Temperatur	e Sensors									PD Probe	ר ו
Anter	nna Pair 1		Ph A	Modbus :	30001	TSAEV1104	SN :	TX8145069RX8140196	8		•c	Enabled	
												Modbus : 31000 - 31004	
			Ph B	Modbus :	30002	TSAEV1106	SN :	TX8145744RX8140191			°C	OFFSET LEVEL 1 v	
			Ph C	Modbus :	30003	TSAEV1110	SN :	TA6605RA9111	٢	22.1	°C	PD Indicator 🦸	
												PD Level 3107.41	
												Ratio 15.78 dB	
												EPPC 196.94 ppc	
l													J
		. Temperatur	e Sensors									PD Probe	ń
Anter	nna Pair 2		Ph A up	Modbus :	30010	TSAEV1101	SN :	TX9176478RX9171290		22.9	••	Enabled	
)										\exists	Modbus : 31009 - 31013	
			Ph B up	Modbus :	30011	TSAEV1104	SN :	TX8145077RX8140051	0	26.8	•C	OFFSET LEVEL 2 ~	
		\bigcirc	Ph A dowr	Modbus :	30013	TSAEV1110	SN :	TA6619RA9258			°C	PD Indicator	
												PD Level 19.21	
												Ratio 10.31 dB	
												EPPC 1.86 ppc	
													J

This test is activated with the 'Play' button

Uncheck the toggle buttons in front of temperature sensor or PD probe to not run a measurement on this elements.

Data from this test mode are also available on Modbus registers and in μ SD card.

ΝΟΤΕ

DURING THE SYSTEM TEST IT IS NO LONGER POSSIBLE TO ACTIVATE OR DEACTIVATE MEASUREMENT ELEMENTS (TEMPERATURE SENSORS AND PD PROBES).

TEST OF RELAY

Relay Test	: When the test is running, click on the toggle button to open/close the relay.
Relay Open	

TEST OF THE TEMPERATURE SENSORS

For each enabled temperature sensor, the system will check the sensor and return **temperature** with one of the following test result icons:



: The sensor is correctly interrogated.

- 8
- : The system failed to interrogate the sensor.
- C : The sensor is being evaluated.

TEST OF THE PARTIAL DISCHARGE PROBES

AMS01 partial discharge detection system use specific filters to monitor partial discharge. In system test mode, you can select the configuration of this filter depending on your method to generate partial discharge. An incorrect selection will result in no detection of partial discharge.

Possible configuration for AMS01 system:

- Use the reader actual settings (50 Hz or 60 Hz).
- Use of *OMICRON* generator configured on 50 Hz.
- Use of *OMICRON* generator configured on 60 Hz.
- Use of a non-conventional generator, in this case filters are totally deactivated and external noise could perturbate calculation of PD values.

	PD Test Method
	Use default reader settings 🛛 🗸
	Use default reader settings
	Use OMICRON 50Hz
_	Use OMICRON 60Hz
Ы	Use non conventional generator

: Choose the corresponding test method.

For each enabled PD probe, the system will evaluate the partial discharge levels (based on default values of PD notifiers) and the '*PD Indicator*' icon can take one of the following values:



: The system has detected no partial discharge activity.



: The system has detected low partial discharge activity.



F : The system has detected a high partial discharge activity.

AMS01 Configuration Tool User Manual www.senseor.com

 \mathcal{C} : The partial discharge activity is being evaluated.

During the system test it is possible to change offset level to show the partial discharge activity measurements depending on the different offset levels.

The offset level is used to vary the sensitivity of partial discharge activity detection.

A low offset level allows detection of a partial discharge in a nearby zone, or detection of a low intensity partial discharge.

Conversely, a high offset allows detection of a partial discharge in a large area zone, or detection of a high intensity partial discharge.

OFFSET LEVEL 1	~
OFFSET LEVEL 1	
OFFSET LEVEL 2	
OFFSET LEVEL 3	13

: Choose the offset level.

OFFLINE MODE

This configuration tool software allow user to prepare configuration of a reader without the need of this reader.

To start an offline configuration, select 'Offline' in network card.

-Ne AMS Configuration Tool v1.3.6		– 🗆 X
AMS01 Configuration Tool		SENSCOR
Selected network card: OffLine Using XLM files	v	
	Load from XML Create new	
		^
		v
About Help		Powered by

In '*Offline*' mode you can load an existing configuration with '*Load from XML*' or start a new configuration using the button '*Create new*'.

All the functions seen previously are available except:

- **Installation tab**: Environmental sensor, Temperature sensor check, commissioning and diagnostic.

- System test tab

SENSOR CONFIGURATION FILE GENERATOR

This tool is used to generate XML configuration files for TSAEV11 sensors from their top Datamatrix.

To launch it, click on the 'Sensor Configuration File Generator' button from the main page.

-₩ AMS	Configuration Tool v1.4.3	- o x
AMS01 Configuration Tool		SENSCOR
Selected I	network card: Ethernet Realtek USB GbE Family Controller 10.171.32.255	Scan Scan
About F	Неф	Sensor Configuration File Generator

If a Datamatrix-compatible USB scanner (handle unit) is connected to the computer:

- -
 - Connect it to the computer.
 - Ensure the input cursor is in the 'Data to convert' field.
 - Scan the Datamatrix **on top** of sensors to get data. Text content data is added and line wrap is automatic after each scan.

WARNING

DO NOT SCAN THE DATAMATRIX UNDER THE SENSOR.

Else (without handle unit):

- Use free mobile apps such as '*CortexScan*' or '*QRbot*' (available from '*App Store*' and '*Google Play*') to scan the Datamatrix of the top of sensors.
- Copy the generated data into the 'Data to convert' field.

-Ne AMS Configuration Tool v1.4.3	_		×					
Sensor Configuration File Generator								
File generation method Scan Datamatrix content from the top of the temperature sensor (offline method) Data to convert (from handle unit or text file content):	A DEP	CE THE						
TSAEV1107 AB007001H3;438129432;4.8250;-2.5396;438871091;-1.4370;-3.3546 TSAEV1109 AB006001G3;440666927;4.7196;-2.4409;441290880;-1.5595;-3.3070 TSAEV1111 AB006001D1;443095168;4.6391;-2.4726;443758035;-1.5604;-3.3060			< >					
Output Directory	Gene	erate File	(s)					

When all the sensors data is set, select the output directory (

Sélectionner un dossier X									
← → ∽ ↑ 📮 « Documer	nts > SENSeOR > Sensor data	~ C	Rechercher dans : S	ensor d 🔎					
Organiser 🔻 Nouveau dossier				≣ - 😗					
> I Bureau Nom	^ Aucun élément ne	Statut Mo	difié le echerche.	Туре					
> Documents									
Dossier : Sensor data									
		Sélectio	onner un dossier	Annuler .::					

Click on the 'Generate File(s)' button to start the conversion.

Once data conversion is done, a message indicates how many XML files have been generated.



Click 'Yes' to open the output folder if necessary.