How to use Excel file Modbus Memmap of Co-ordinator

FEB-2022

1. Introduce

When we add a sensor to the Co-ordinator WS433-CL or iConnector integrated Co-ordinator, the added sensor will be in the corresponding Modbus area in the Co-ordinator. The sensor's Modbus area can be monitored with our excel file. You can then read the data from the respective Modbus addresses using the PLC,HMI,... or use our Modbus Configuration Tool to view the values from the sensor.

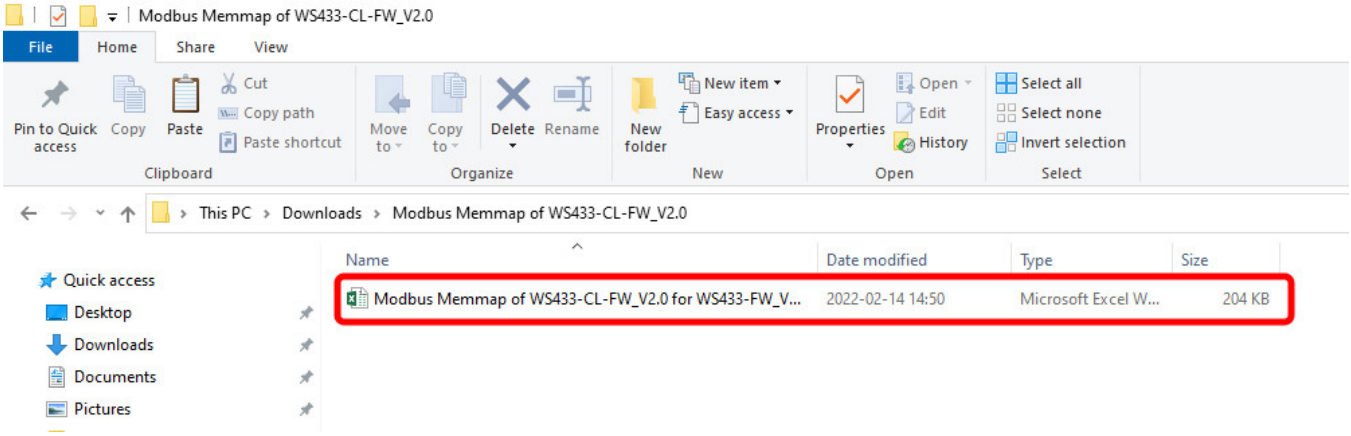
1.1 Download Excel file

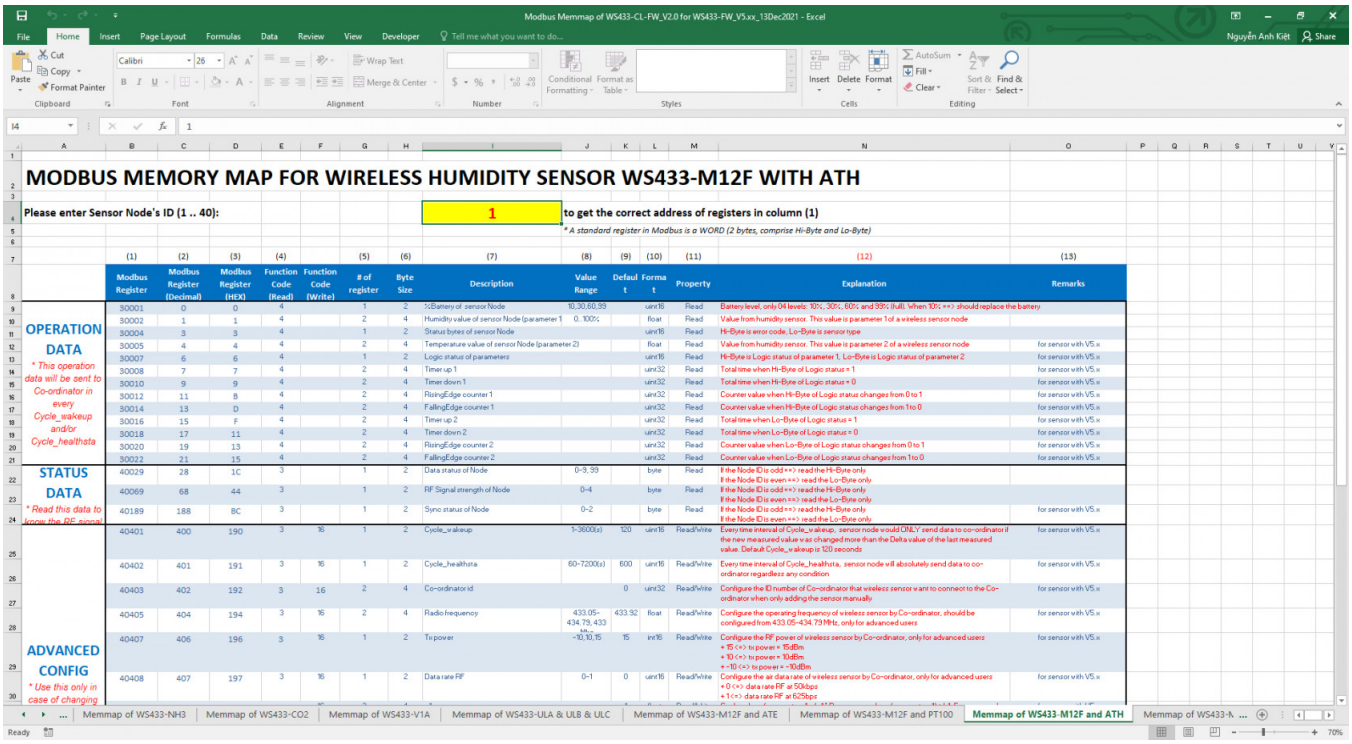
Download the Modbus Memmap Excel file in the link below:

https://filerun.daviteq.com/wl/?id=BKEaUzdArkoc0Hc7nfpRShdPVToVrqQZ

1.2 Excel file

After **unzip** file, open the excel file (**Modbus Memmap of WS433-CL-FW_V**xx)





MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SENSOR WS433-M12F WITH ATH

Please enter Sensor Node's ID (1 .. 40): 1 to get the correct address of registers in column (1)

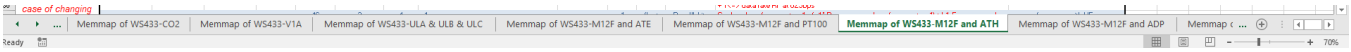
* A standard register in Modbus is a WORD (2 bytes, comprise Hi-Byte and Lo-Byte)

	(1) Modbus Register	(2) Modbus Register (Decimal)	(3) Modbus Register (HEX)	(4) Function Code (Read)	Function Code (Write)	(5) # of register	(6) Byte Size	(7) Description	(8) Value Range	(9) Default	(10) Format	(11) Property	(12) Explanation	(13) Remarks
OPERATION DATA * This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta	30001	0	0	4		1	2	%Battery of sensor Node	10,30,60,99		uint16	Read	Battery level, only 04 levels: 10%, 30%, 60% and 99% (full). When 10% ==> should replace the battery	
	30002	1	1	4		2	4	Humidity value of sensor Node (parameter 1	0..100%		float	Read	Value from humidity sensor. This value is parameter 1of a wireless sensor node	
	30004	3	3	4		1	2	Status bytes of sensor Node			uint16	Read	Hi-Byte is error code, Lo-Byte is sensor type	
	30005	4	4	4		2	4	Temperature value of sensor Node (parameter 2)			float	Read	Value from humidity sensor. This value is parameter 2 of a wireless sensor node	for sensor with V5.x
	30007	6	6	4		1	2	Logic status of parameters			uint16	Read	Hi-Byte is Logic status of parameter 1, Lo-Byte is Logic status of parameter 2	for sensor with V5.x
	30008	7	7	4		2	4	Timer up 1			uint32	Read	Total time when Hi-Byte of Logic status = 1	for sensor with V5.x
	30010	9	9	4		2	4	Timer down 1			uint32	Read	Total time when Hi-Byte of Logic status = 0	for sensor with V5.x
	30012	11	B	4		2	4	RisingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30014	13	D	4		2	4	FallingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 1 to 0	for sensor with V5.x
	30016	15	F	4		2	4	Timer up 2			uint32	Read	Total time when Lo-Byte of Logic status = 1	for sensor with V5.x
	30018	17	11	4		2	4	Timer down 2			uint32	Read	Total time when Lo-Byte of Logic status = 0	for sensor with V5.x
	30020	19	13	4		2	4	RisingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30022	21	15	4		2	4	FallingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 1 to 0	for sensor with V5.x
STATUS DATA * Read this data to know the RF signal	40029	28	1C	3		1	2	Data status of Node	0-9, 99		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40069	68	44	3		1	2	RF Signal strength of Node	0-4		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40189	188	BC	3		1	2	Sync status of Node	0-2		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	for sensor with V5.x
ADVANCED CONFIG * Use this only in case of changing	40401	400	190	3	16	1	2	Cycle_wakeup	1-3600(s)	120	uint16	Read/Write	Every time interval of Cycle_wakeup, sensor node would ONLY send data to co-ordinator if the new measured value was changed more than the Delta value of the last measured value. Default Cycle_wakeup is 120 seconds	for sensor with V5.x
	40402	401	191	3	16	1	2	Cycle_healthsta	60-7200(s)	600	uint16	Read/Write	Every time interval of Cycle_healthsta, sensor node will absolutely send data to co-ordinator regardless any condition	for sensor with V5.x
	40403	402	192	3	16	2	4	Co-ordinator id		0	uint32	Read/Write	Configure the ID number of Co-ordinator that wireless sensor want to connect to the Co-ordinator when only adding the sensor manually	for sensor with V5.x
	40405	404	194	3	16	2	4	Radio frequency	433.05-434.79, 433	433.92	float	Read/Write	Configure the operating frequency of wireless sensor by Co-ordinator, should be configured from 433.05-434.79 MHz, only for advanced users	for sensor with V5.x
	40407	406	196	3	16	1	2	Tx power	-30,10,15	15	int16	Read/Write	Configure the RF power of wireless sensor by Co-ordinator, only for advanced users + 15 (<=) tx power = 15dBm + 10 (<=) tx power = 10dBm + -30 (<=) tx power = -30dBm	for sensor with V5.x
	40408	407	197	3	16	1	2	Data rate RF	0-1	0	uint16	Read/Write	Configure the air data rate of wireless sensor by Co-ordinator, only for advanced users + 0 (<=) data rate RF at 50kbps + 1 (<=) data rate RF at 625bps	for sensor with V5.x

2. How to use

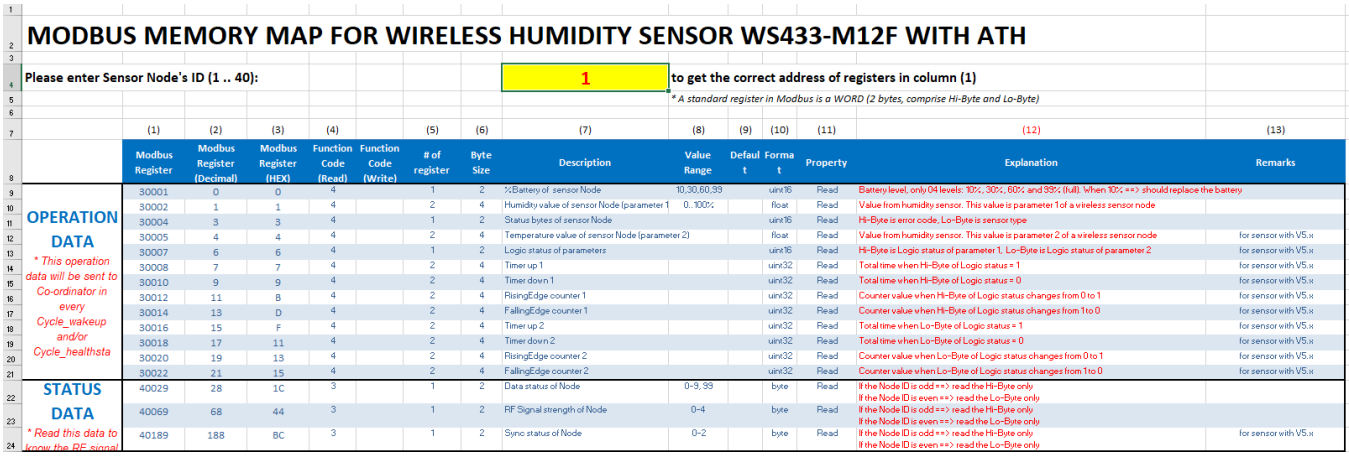
- We will choose the sheet that matches the sensor in use

Example: Choosing **WS433-M12F and ATH** sheet for **WS433-M12F-ATH** or **WS433-ATH**



- We write in the number where the sensor has been added to the Co-ordinator in the yellow frame to get the register address.

Example 1: WS433-ATH is the first sensor to be added, so it has a position of **1**



MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SENSOR WS433-M12F WITH ATH

Please enter Sensor Node's ID (1 .. 40): 1 to get the correct address of registers in column (1)

* A standard register in Modbus is a WORD (2 bytes, comprise Hi-Byte and Lo-Byte)

	(1) Modbus Register	(2) Modbus Register (Decimal)	(3) Modbus Register (HEX)	(4) Function Code (Read)	Function Code (Write)	(5) # of register	(6) Byte Size	(7) Description	(8) Value Range	(9) Default	(10) Format	(11) Property	(12) Explanation	(13) Remarks
OPERATION DATA * This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta	30001	0	0	4		1	2	%Battery of sensor Node	10,30,60,99		uint16	Read	Battery level, only 04 levels: 10%, 30%, 60% and 99% (full). When 10% ==> should replace the battery	
	30002	1	1	4		2	4	Humidity value of sensor Node (parameter 1	0..100%		float	Read	Value from humidity sensor. This value is parameter 1of a wireless sensor node	
	30004	3	3	4		1	2	Status bytes of sensor Node			uint16	Read	Hi-Byte is error code, Lo-Byte is sensor type	
	30005	4	4	4		2	4	Temperature value of sensor Node (parameter 2)			float	Read	Value from humidity sensor. This value is parameter 2 of a wireless sensor node	for sensor with V5.x
	30007	6	6	4		1	2	Logic status of parameters			uint16	Read	Hi-Byte is Logic status of parameter 1, Lo-Byte is Logic status of parameter 2	for sensor with V5.x
	30008	7	7	4		2	4	Timer up 1			uint32	Read	Total time when Hi-Byte of Logic status = 1	for sensor with V5.x
	30010	9	9	4		2	4	Timer down 1			uint32	Read	Total time when Hi-Byte of Logic status = 0	for sensor with V5.x
	30012	11	B	4		2	4	RisingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30014	13	D	4		2	4	FallingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 1 to 0	for sensor with V5.x
	30016	15	F	4		2	4	Timer up 2			uint32	Read	Total time when Lo-Byte of Logic status = 1	for sensor with V5.x
	30018	17	11	4		2	4	Timer down 2			uint32	Read	Total time when Lo-Byte of Logic status = 0	for sensor with V5.x
	30020	19	13	4		2	4	RisingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30022	21	15	4		2	4	FallingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 1 to 0	for sensor with V5.x
STATUS DATA * Read this data to know the RF signal	40029	28	1C	3		1	2	Data status of Node	0-9, 99		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40069	68	44	3		1	2	RF Signal strength of Node	0-4		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40189	188	BC	3		1	2	Sync status of Node	0-2		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	for sensor with V5.x

Example 2: WS433-ATH is the third sensor to be added, so it has a position of **3**

MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SENSOR WS433-M12F WITH ATH

Please enter Sensor Node's ID (1 .. 40): **3** **to get the correct address of registers in column (1)**

** A standard register in Modbus is a WORD (2 bytes, comprise Hi-Byte and Lo-Byte)*

	(1)	(2)	(3)	(4)		(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)
	Modbus Register	Modbus Register (Decimal)	Modbus Register (HEX)	Function Code (Read)	Function Code (Write)	# of register	Byte Size	Description	Value Range	Default	Format	Property	Explanation	Remarks
OPERATION DATA ** This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta*	30065	64	40	4		1	2	%Battery of sensor Node	10,30,60,99		uint16	Read	Battery level, only 04 levels: 10%, 30%, 60% and 99% (full). When 10% ==> should replace the battery	
	30066	65	41	4		2	4	Humidity value of sensor Node (parameter 1	0..100%		float	Read	Value from humidity sensor. This value is parameter 1 of a wireless sensor node	
	30068	67	43	4		1	2	Status bytes of sensor Node			uint16	Read	Hi-Byte is error code, Lo-Byte is sensor type	
	30069	68	44	4		2	4	Temperature value of sensor Node (parameter 2)			float	Read	Value from humidity sensor. This value is parameter 2 of a wireless sensor node	for sensor with V5.x
	30071	70	46	4		1	2	Logic status of parameters			uint16	Read	Hi-Byte is Logic status of parameter 1, Lo-Byte is Logic status of parameter 2	for sensor with V5.x
	30072	71	47	4		2	4	Timer up 1			uint32	Read	Total time when Hi-Byte of Logic status = 1	for sensor with V5.x
	30074	73	49	4		2	4	Timer down 1			uint32	Read	Total time when Hi-Byte of Logic status = 0	for sensor with V5.x
	30076	75	4B	4		2	4	RisingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30078	77	4D	4		2	4	FallingEdge counter 1			uint32	Read	Counter value when Hi-Byte of Logic status changes from 1 to 0	for sensor with V5.x
	30080	79	4F	4		2	4	Timer up 2			uint32	Read	Total time when Lo-Byte of Logic status = 1	for sensor with V5.x
	30082	81	51	4		2	4	Timer down 2			uint32	Read	Total time when Lo-Byte of Logic status = 0	for sensor with V5.x
	30084	83	53	4		2	4	RisingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 0 to 1	for sensor with V5.x
	30086	85	55	4		2	4	FallingEdge counter 2			uint32	Read	Counter value when Lo-Byte of Logic status changes from 1 to 0	for sensor with V5.x
STATUS DATA ** Read this data to know the RF signal*	40030	29	1D	3		1	2	Data status of Node	0-3, 99		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40070	69	45	3		1	2	RF Signal strength of Node	0-4		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	
	40190	189	BD	3		1	2	Sync status of Node	0-2		byte	Read	If the Node ID is odd ==> read the Hi-Byte only If the Node ID is even ==> read the Lo-Byte only	for sensor with V5.x

- We will see the parameters in the address column will change

Please enter Sensor Node's ID (1 .. 40): **3**

	(1)	(2)	(3)	(4)		(5)	(6)	(7)
	Modbus Register	Modbus Register (Decimal)	Modbus Register (HEX)	Function Code (Read)	Function Code (Write)	# of register	Byte Size	Description
OPERATION DATA ** This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta*	30065	64	40	4		1	2	%Battery of sensor Node
	30066	65	41	4		2	4	Humidity value of sensor Node (parameter 1
	30068	67	43	4		1	2	Status bytes of sensor Node
	30069	68	44	4		2	4	Temperature value of sensor Node (paramet
	30071	70	46	4		1	2	Logic status of parameters
	30072	71	47	4		2	4	Timer up 1
	30074	73	49	4		2	4	Timer down 1
	30076	75	4B	4		2	4	RisingEdge counter 1
	30078	77	4D	4		2	4	FallingEdge counter 1
	30080	79	4F	4		2	4	Timer up 2
	30082	81	51	4		2	4	Timer down 2
	30084	83	53	4		2	4	RisingEdge counter 2
	30086	85	55	4		2	4	FallingEdge counter 2
STATUS DATA ** Read this data to know the RF signal*	40030	29	1D	3		1	2	Data status of Node
	40070	69	45	3		1	2	RF Signal strength of Node
	40190	189	BD	3		1	2	Sync status of Node

MODBUS MEMORY MAP FOR WIRELESS HUMIDITY SEI

Please enter Sensor Node's ID (1 .. 40): **6**

	(1)	(2)	(3)	(4)		(5)	(6)	(7)
	Modbus Register	Modbus Register (Decimal)	Modbus Register (HEX)	Function Code (Read)	Function Code (Write)	# of register	Byte Size	Description
OPERATION DATA ** This operation data will be sent to Co-ordinator in every Cycle_wakeup and/or Cycle_healthsta*	30161	160	A0	4		1	2	%Battery of sensor Node
	30162	161	A1	4		2	4	Humidity value of sensor Node (parameter 1
	30164	163	A3	4		1	2	Status bytes of sensor Node
	30165	164	A4	4		2	4	Temperature value of sensor Node (paramet
	30167	166	A6	4		1	2	Logic status of parameters
	30168	167	A7	4		2	4	Timer up 1
	30170	169	A9	4		2	4	Timer down 1
	30172	171	AB	4		2	4	RisingEdge counter 1
	30174	173	AD	4		2	4	FallingEdge counter 1
	30176	175	AF	4		2	4	Timer up 2
	30178	177	B1	4		2	4	Timer down 2
	30180	179	B3	4		2	4	RisingEdge counter 2
	30182	181	B5	4		2	4	FallingEdge counter 2
STATUS DATA ** Read this data to know the RF signal*	40031	30	1E	3		1	2	Data status of Node
	40071	70	46	3		1	2	RF Signal strength of Node
	40191	190	BE	3		1	2	Sync status of Node

3. Troubleshooting

No.	Phenomena	Reason	Solutions
1	Cannot type into yellow frame of excel file	Edit mode is not open yet	Click Enable Editing to edit the number in yellow frame
2	No suitable sensor found	Old memmap or other modified sensor name	• Check **HERE** the latest memmap file • Contact us for support

4. Support contacts

Manufacturer

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No.11 Street 2G, Nam Hung Vuong Res., An Lac Ward, Binh Tan Dist., Ho Chi Minh City, Vietnam.
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