

## Parameters / Setting Guide

for

1-Wire Controller / 1-Wire Gateway 1  
1-Wire Controller / 1-Wire Gateway 2

1-Wire Gateway 10  
1-Wire Gateway 11  
1-Wire Gateway 20

ESERA-Station 200

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## 1 Introduction

In the following, we would like to provide you with information on the possible settings of the 1-Wire Controller / 1-Wire Gateway 1.

These instructions are currently valid for the following versions:

Interface	Article-No.	Device
Ethernet	11319	Controller 1 Ethernet
	11340	Controller 2 Ethernet
	11336	Gateway 11 Modbus TCP
	11337	Gateway 20 Modbus TCP
	11317	Controller 1 USB
Seriell (COM-Port)	11320	Controller 1 Seriell RS232
	11324	Gateway 10 Modbus RTU

## 2 Settings of the 1-Wire Controller / 1-Wire Gateway

In the following we will explain the settings of the 1-Wire Controller / 1-Wire Gateway, sorted by columns.

ESERA-Automation - Config Tool 3

esera automation

LAST RESPONSE: 16:13:43 - 05.07.17

UPDATE ONLINE

RUN I/O OWB-ACTIVE

DISCONNECT TO CONTROLLER 16:13:18 - COM5 OPENED

HOME PROJECT CONTROLLER SETTING 1-WIRE/OWD EXTENSIONS DATA/DEBUG DOKU HELP/SUPPORT

**CONTROLLER SETTINGS**

KAL SEND [0/1]: ON DATA PRINT [0/1]: ON OWD-FORMAT [0/1/2]: 2 LOAD FROM CONTROLLER

KAL SEND TIME [60-240]: 60 DATA TIME [0, 10-240]: 10 DS2408 INV [0/1]: ON TRANSMIT TO CONTROLLER

KAL REC [0/1]: OFF OWB-POLLTIME [1-240]: 2 OWD-ID [0/1]: OFF

KAL REC TIME [60-240]: 65 OWB SEARCH [0/1/2]: 2 DEBUG [0/1/2]: 0 SAVE PERMANENT

KAL ALARM: EDIT 1,2,1 OWB SEARCH TIME [10-240]: 10

\* Changed values are shown in red

## 3 Left column

### KAL SEND [0/1] (KAL = Keep Alive or „heartbeat“)

- At a fixed time-interval, the 1-Wire Controller / 1-Wire Gateway outputs a message called "Keep Alive" or "heartbeat". This is to signal the function of the 1-Wire Controller / 1-Wire Gateway and the data transmission path to the higher-level system.
- The time-interval of the KAL message can either be changed (KALSENDDTIME) or completely deactivated (KAL SEND ON/OFF).
- Selectable states: ON = 1 / OFF = 0
- Factory setting: ON = 1
- Data output:  
1\_EVT|Time => controller no.\_event | time  
1\_KAL|1 => controller no.\_data record |1
- Command: SET,SYS,KALSEND,0/1

### KAL SEND TIME [60 – 240]

- The time-interval of the KAL message can be changed
- Selectable range: 60 - 240 seconds
- Factory setting: 60 seconds
- Command: SET,SYS,KALSENDDTIME,60 - 240

### KAL REC [0/1] (KAL REC = Keep Alive Receive)

- The 1-Wire Controller / 1-Wire Gateway expects a "Keep Alive" message from the higher-level system (PC, PLC, ...) in a fixed time-interval (default 65 seconds).
- If the KAL message fails to appear, the Data LED flashes rapidly in a fixed cycle and the assigned switching output of a 1-wire switching module is activated.
- The time-interval of the KAL message can either be changed (KALRECTIME) or completely deactivated (KALREC).
- Selectable states: ON = 1 / OFF = 0
- Factory setting: ON = 1
- Command: SET,SYS,KALREC,0/1

### KAL REC TIME [60 – 240] (KAL REC TIME= Keep Alive Receive Time)

- The time-interval of the KAL message from the higher-level system (PC, PLC, ...) can be changed (KALRECTIME).
- Selectable range: 60 - 240 seconds
- Factory setting: 65 seconds
- Command: SET,SYS,KALRECTIME,60 - 240

### KAL ALARM (Keep Alive Receive alarm)

With the "KAL ALARM" settings, a binary output is defined which is triggered if the KAL REC message fails to appear.

For all 1-Wire controllers and 1-Wire gateways a 1-Wire binary/digital output-module can be defined here.

It is defined here which output changes to which status (0 or 1) at which 1-Wire binary/digital output.

For 1-Wire Controller 20 and 1-Wire Gateway 20 Modbus, an internal binary

output can also be selected.

**In order to trigger a KAL alarm, KAL REC must be set to 1.**

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**OWD NO. / SYS** = Which output is to be used?

- 1-Wire Controller 1, 1-Wire Gateway 10 and 1-Wire Gateway 11: OWD 1-30
- 1-Wire Controller 20 or 1-Wire Gateway 20: OWD 1-3 or SYS 1-5

If an OWD output is selected or an internal relay output (SYS 1-5) is selected for 1-Wire Controller 20 and 1-Wire Gateway 20

**OUTPUT** = Which output of the 1-Wire binary/digital output is to be used??

- 1-Wire Controller 1, 1-Wire Gateway 10 and 1-Wire Gateway 11: OWD output 0-7
- 1-Wire Controller 20 or 1-Wire Gateway 20:
  - SYS 1-5 or
  - OWD: output 0-7 (for dual modules only output 0-1 can be used)

**DATA** = Which status should the output have? 0 or 1?

## 4 Middle column – left side

CONTROLLER SETTINGS			
KAL SEND [0/1]:	ON	DATA PRINT [0/1]:	ON
KAL SEND TIME [60-240]:	60	DATA TIME [0, 10-240]:	10
KAL REC [0/1]:	OFF	OWB-POLLTIME [1-240]:	2
KAL REC TIME [60-240]:	65	OWB SEARCH [0/1/2]:	2
KAL ALARM:	EDIT 1,1,0	OWB SEARCH TIME [10-240]:	10

OWD-FORMAT [0/1/2]:	2	LOAD FROM CONTROLLER
OWD-ON [0/1]:	ON	TRANSMIT TO CONTROLLER
OWD-IO [0/1]:	OFF	
OWD-IO [0/1/2]:	0	SAVE PERMANENT

### DATA PRINT [0/1]

- Setting of the operating mode for the data output of the sensor data
- Selectable states: ON = 1 / OFF = 0
- OFF = 0 => Data output in one line with one CR, ON = 1 => Continuous output in one line with separator "|".
- Factory setting: ON = 1
- Command: SET,SYS,DATAPRINT,0/1

### DATA TIME [0, 10 – 240]

- Setting the cycle time for sending 1-Wire / OWD data
- Selectable range: 0; 10 - 240
- 0 = Data only on request, cycle time = 10 - 240 seconds
- Factory setting: 10
- Command: SET,SYS,DATATIME,0/10 - 240

### OWB POLLTIME [1 – 240] (data output available starting with firmware V1.15\_51)

- Polling time for all 1-Wire devices can be defined here. Time in seconds defines, how often the 1-Wire devices are queried.
- Selectable range: Poll time (cycle time) = 1 - 240 seconds.
- Note: Time-cycles faster than 2 seconds should only be used with a very small number of devices (max. 5 - 6)
- 1-Wire devices can be selected
- Note, the OWB POLLTIME cannot be selected in shorter cycle than the DATA TIME.
- (POLLTIME <= DATA TIME)
- Factory setting: 2 seconds
- Command: SET,SYS,POLLTIME,1 - 240

### OWB SEARCH [1/2/3]

- Different methods of searching for OWDs and sorting them in the OWD list can be selected.
- Selectable states: ON = 1 or 2, OFF = 0
- Details on the two search functions can be found in the "Command list" under the "DOKU" tab.
- 0=no search, 1=complete cyclic search (sequence of blocks may change)
- 2=Adaptive cyclic search for new blocks. New blocks are written to the first free space in the OWD list.
- Factory setting: ON = 2
- Note: Due to security reasons, this function can only be used to switch between "Off" and "adaptive search" searches. With "OWB SEARCH 1" the OWD numbers may be re-sorted.
- Command: SET,OWB,SEARCHTIME,0 - 2

### OWB SEARCH TIME [10 – 240]

- Setting the cycle time for the search function
- Selectable range: 10 - 240
- Delivery status: 10 seconds, command: SET,OWB,SEARCHTIME,10 - 240

## 5 Middle column – right side

CONTROLLER SETTINGS						
KAL SEND [0/1]:	ON	DATA PRINT [0/1]:	ON	OWD-FORMAT [0/1/2]:	2	LOAD FROM CONTROLLER
KAL SEND TIME [60-240]:	60	DATA TIME [0, 10-240]:	10	DS2408 INV [0/1]:	ON	TRANSMIT TO CONTROLLER
KAL REC [0/1]:	OFF	OWB-POLLTIME [1-240]:	2	OWD-ID [0/1]:	OFF	SAVE PERMANENT
KAL REC TIME [60-240]:	65	OWB SEARCH [0/1/2]:	2	DEBUG [0/1/2]:	0	
KAL ALARM:	EDIT 1,1,0	OWB SEARCH TIME [10-240]:	10	* Changed values are shown in red.		

### OWD FORMAT [0/1/2]

- Setting the number of decimal places for temperature sensors
- Selectable range: 0 - 2 decimal places
- Factory setting: 2 decimal places, e.g. 23.45 °C are used as output value 2345
- Command: SET,OWD,FORMAT,0 - 2

### DS2408 INV [0/1]

- Inversion of data from DS2408 blocks (8-fold I/O)  
This inversion is due to the electrical function of the "Open Drain"
- Optimized for 8-fold switching modules
- Selectable states: ON = 1 / OFF = 0
- Factory setting: ON = 1
- Command: SET,OWD,DS2408INV,0/1

### OWD ID [0/1]

- Switching of the output of the module name either with "OWD" or with its own serial number
- Selectable states: ON = 1 / OFF = 0,
- 0 = output "OWD", 1 = output of the block serial number
- Factory setting: OFF = 0
- Command: GET,SYS,OWDID,0/1

### DEBUG [0/1/2]

- Different outputs are given for the current activity of the 1-Wire Controller / 1-Wire Gateway. these can be, e.g. sensor raw values or search-results of 1-Wire devices.
- Selectable states: 0 = no debug (additional information), 1 and 2 = debug outputs
- Note, the debug output is not specified. They should only give information about the current work of the 1-Wire Controller / 1-Wire Gateways and about the determined data.
- Delivery status: 0
- Command: SET,SYS,DEBUG,0/1/2

## 6 Right column

CONTROLLER SETTINGS					
KAL SEND [0/1]:	ON	DATA PRINT [0/1]:	ON	OWD-FORMAT [0/1/2]:	2
KAL SEND TIME [60-240]:	60	DATA TIME [0, 10-240]:	10	DS2408 INV [0/1]:	ON
KAL REC [0/1]:	OFF	OWB-POLLTIME [1-240]:	2	OWD-ID [0/1]:	OFF
KAL REC TIME [60-240]:	65	OWB SEARCH [0/1/2]:	2	DEBUG [0/1/2]:	0
KAL ALARM:	EDIT	OWB SEARCH TIME [10-240]:	10		

LOAD FROM CONTROLLER

TRANSMIT TO CONTROLLER

SAVE PERMANENT

\* Changed values are shown in red.

### Push Button "LOAD FROM CONTROLLER"



Click this button to reload the settings of the 1-Wire Controller / 1-Wire Gateway.

If the 1-Wire Controller / 1-Wire Gateway is currently outputting data or querying the 1-Wire Bus, a short delay may occur.

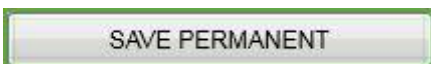
### Push Button "TRANSMIT TO CONTROLLER"



With this button the changed setting parameters are transferred to the 1-Wire Controller / 1-Wire Gateway.

Note: that the new setting parameters have not yet been saved permanently. A reset or a power interruption, will reload the previous, permanently saved, settings. To permanently save settings, click the "SAVE PERMANENT" button.

### Push Button "SAVE PERMANENT"



Click the "SAVE PERMANENT" button to permanently save the settings in the 1-Wire Controller. If not saved, the previously saved settings will be loaded if operating voltage has been interrupted.

## 7 Conclusion and feedback

During the development of the 1-Wire Controller / 1-Wire Gateway, we put a lot of effort into integrating as many practical aspects as possible from a user's point of view. As we are manufacturer and not the "end user", we certainly won't succeed to 100%. Therefore, we would like you to send us your feedback, impressions, suggestions for improvement as well as error messages that have occurred in your environment by mail to [support@esera.de](mailto:support@esera.de). We would also be very pleased if you will leave product reviews at our online shop.

Please recommend us also in various forum platforms. Our goal is to operate the 1-Wire bus as professional as possible and to establish it as a fixed standard in the field of IoT, Smart Automation and Smart Home. My special thanks go especially to all our test customers, who have taken a lot of time to test our 1-Wire Controller / 1-Wire Gateway and to leave very constructive feedback.

## 8 Warranty

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