

OPERATION MANUAL

burster 2311 EIP EtherCAT Manual

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1 For your safety

The following symbols on the RESISTOMAT® 2311 and in this operation manual warn of hazards.

1.1 Symbols used in the instruction manual

1.1.1 Signal words



The following signal words are used in the operation manual according to the specified hazard classification.

	DANGER
High degree of risk: indicates a hazardous situation which, if not avoided, will result in death or serious injury.	
	WARNING
Moderate degree of risk: indicates a hazardous situation which, if not avoided, may result in death or serious injury.	
	CAUTION
Low degree of risk: indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.	
NOTICE	
Property damage to the equipment or the surroundings will result if the hazard is not avoided.	


Note: It is important to heed these safety notices in order to ensure you handle the RESISTOMAT® 2311 correctly.

Important: Follow the information given in the operation manual.

1.1.2 Pictograms

Symbol	Description
	Warning concerning the use and installation of the device and software.
	Observe the advice for protecting the instrument.

1.2 Symbols and precautionary statements on the instrument

Symbol	Description
	Hazard warning Disconnect the power plug before opening – Follow safety instructions – Professional servicing only
Warning ! To prevent electrical shock do not open device.	Warning of electrical shock hazard Do not open the unit.
To prevent fire replace only with same type and rating of fuse !	Warning of fire hazard Always replace the fuse with a fuse of the same type and rating.

1.2.1 Conventions used in the instruction manual

Designation	Description
[Fx]	Function keys F1 to F3 on the touchscreen display
[Text]	Buttons on the touchscreen display
"Term"	Terms used in the instrument menus

2 Trademarks and Patents

EtherCat® is a registered trademark and patented technology of Beckhoff Automation GmbH, Germany



Patents:



The EtherCAT Technology is covered, including but not limited to the following patent applications and patents: EP1590927, EP1789857, DE102004044764, DE102007017835 with corresponding applications or registrations in various other countries.


You will find further information about EtherCAT at: www.ethercat.org

3 Introduction

3.1 General safety instructions

	 DANGER
	<p>Warning concerning installation of the device and software</p> <p>Installation of the device and the interface must be carried out by qualified personnel only. Qualified personnel meets the following requirements:</p> <ul style="list-style-type: none">• You are familiar with the safety designs used in automation engineering, and understand how to deal with them in your capacity as configuration engineer.• You are an operator of automation systems and have been instructed in how to handle the system. You are familiar with the operation of the equipment described in this documentation.• You are a commissioning or service engineer and have successfully completed a training course qualifying you to repair automation systems. In addition, you are authorized to commission, ground and label circuits and equipment in accordance with safety engineering standards. <p>Always observe the current safety and accident prevention regulations when commissioning the equipment. Install automation engineering equipment and installations with sufficient protection against accidental actuation.</p>

	 DANGER
	<p>Warning concerning use of the device</p> <ul style="list-style-type: none">• Take suitable precautions in both the hardware and software to prevent any undefined states of the automation installation in the event of an open circuit.• In installations where major damage to property or even personal injury may be caused by a malfunction, take suitable precautions to establish a safe operating state in the event of a fault. This may be achieved using limit switches, mechanical interlocks etc. for example.• Do not make unauthorized modifications to the device or to the device interface.• Always observe the current safety and accident prevention regulations when commissioning the equipment. <p>Install automation engineering equipment and installations with sufficient protection against accidental actuation.</p>

	NOTICE
	<ul style="list-style-type: none">• Install the power, signal and sensor cables so as to prevent electromagnetic interference from impairing operation of the equipment.• Proper transportation, storage, installation and assembly plus careful operation and maintenance are essential for trouble-free and safe operation of the equipment.• Have non-functional instruments inspected by the manufacturer.

3.2 Electromagnetic compatibility

3.2.1 Interference immunity

Interference immunity to EN 61326-1:2013

Industrial locations

3.2.2 Emitted interference

Emitted interference to EN 61326-1:2013

Class A

EN 61000-3-2:2014

EN 61000-3-3:2013

3.3 Notes on CE labeling

burster equipment carrying the CE mark meets the requirements of the EU directives and the harmonized European standards (EN) cited therein.

The EU declarations of conformity are available to the relevant authorities as specified in the directives. A copy of the declaration of conformity is included in the relevant equipment documentation.

4 Technical data

4.1 Supported EtherCAT Services

- Process Data Object (PDO)
- Service Data Object (SDO)

You will find further information about EtherCAT at: www.ethercat.org.

4.2 Model 2311 device data

Bus connector	RJ45
EDS file	burster_2311.xml

4.3 Electrical safety

Reverse voltage protection	Yes
Air clearance/leakage paths	To DIN EN 61010-1:2011
Electrical isolation	Between fieldbus and internal electronics
Withstand voltage	DC 500 V

5 Installation

Please note that you can download various documents such as installation guidelines and specifications about EtherCAT at www.ethercat.org

5.1 Connection of fieldbus lines

burster devices with a EtherCAT option have two **RJ 45** connectors for the fieldbus connection.

5.2 Meaning of LEDs states



LED	Status	Description
LA	OFF	Port closed
	ON / Flickering	Port open
RN	OFF	The device is in state INIT
	Blinking	The device is in state PRE-OPERATIONAL
	Single flash	The device is in state SAFE-OPERATIONAL
	ON	The device is in state OPERATIONAL
ER	OFF	No error
	Blinking	Invalid configuration, general configuration error
	Single flash	Local error
	Double flash	Process data watchdog timeout / EtherCAT watchdog timeout
BOOT	Blinking	During boot process (internal communication between EtherCAT-fieldbus-processor and Resistomat 2311 main processing unit)

The status of the LEDs is corresponding to EtherCAT specification (for detailed information please see <http://www.ethercat.de/default.htm> "EtherCAT Indicator and Labeling ETG.1300 S (R) V1.1.0").

5.3 Configuration menu in Resistomat 2311

To access the menu

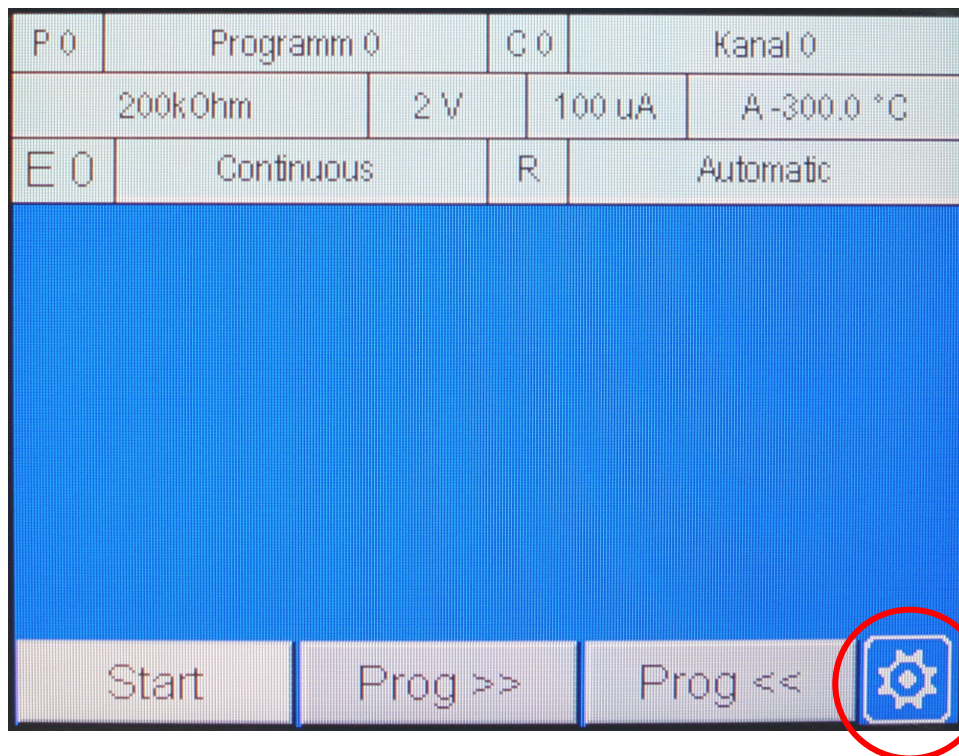
Start in measurement mode. After power on the measurement mode is always set. The display will look differently dependent on your settings or your last measurements.

You can go to "Configuration Main Menu" in measurement mode by pressing the **settings** button

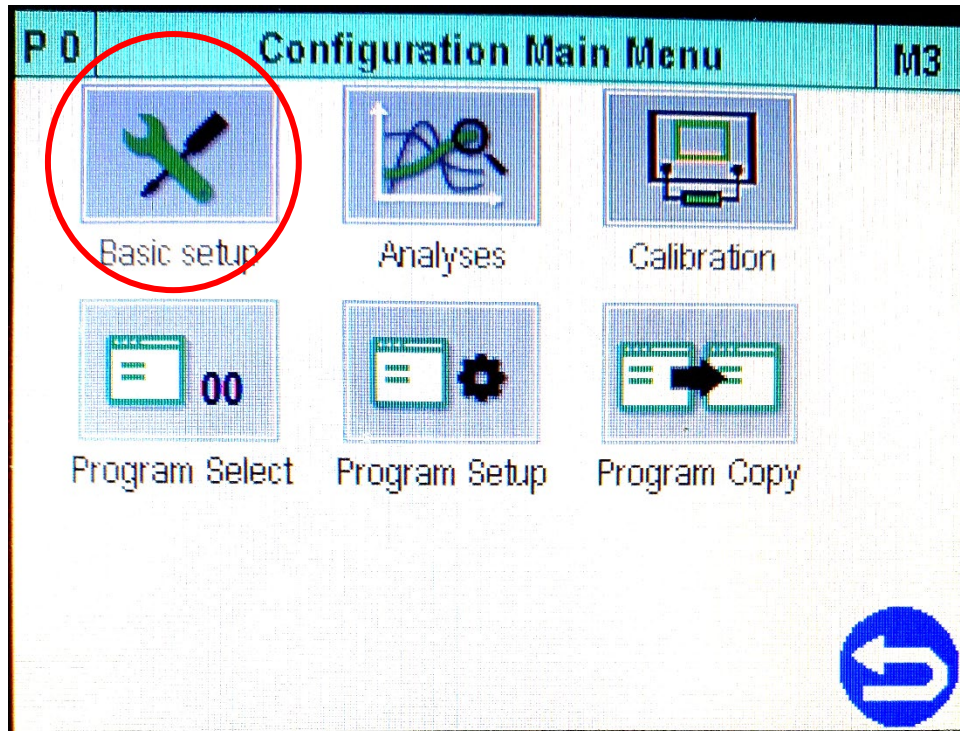


This is how it works

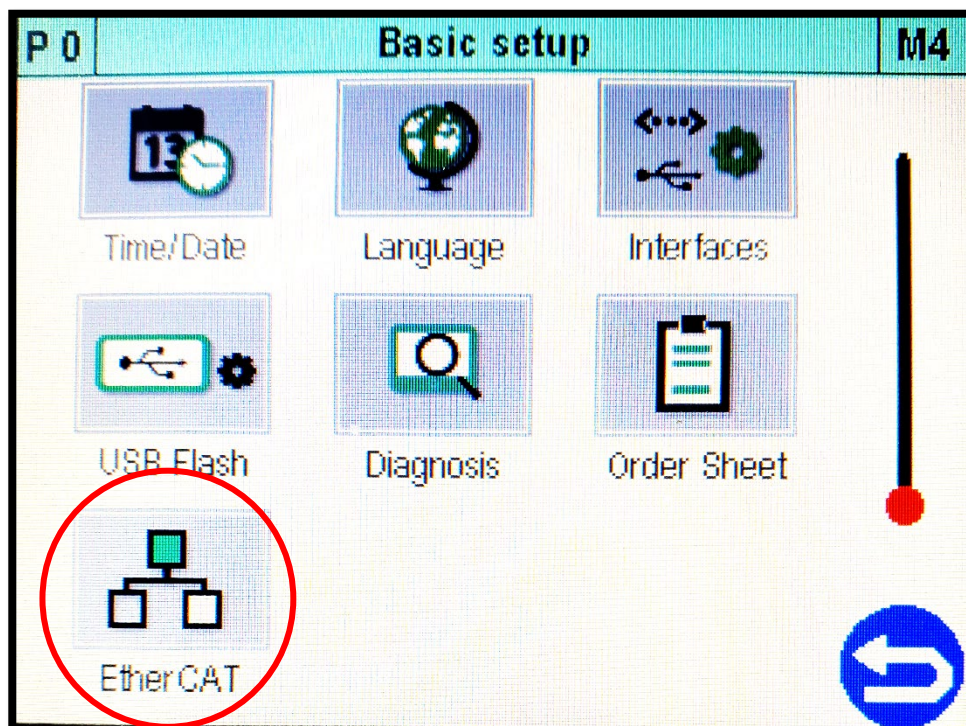
1. In measurement mode, press the **settings** button (gear wheel symbol)




2. Go to "Basic setup menu"



3. Scroll down to "EtherCAT" menu:



P 0	EtherCAT	M32
SW-version	EC-V202300	
Serial number	12345678910	
Control via	EtherCAT	
State machine		OP
Device ID		5



Parameters

SW-version	Version of the field bus card software
Serial number	Serial number of the fieldbus card
Control via	<p>EtherCAT: Resistomat 2311 responds solely to control signals (inputs) on the EtherCAT interface</p> <p>PLC: Resistomat 2311 responds solely to control signals (inputs) on the PLC I/O interface.</p> <p>When controlled via PLC I/O, data is still transferred in the cyclical EtherCAT Process Data Objects (PDO)</p>
State machine	<p>Status of the EtherCAT fieldbus state machine</p> <p>INIT The device is in state INIT</p> <p>PRE-OP The device is in state PRE-OPERATIONAL</p> <p>SAFE-OP The device is in state SAFE-OPERATIONAL</p> <p>OP The device is in state OPERATIONAL</p>
Device ID	Device Identification Value (used for slave identification, 0 is not valid)

6 EtherCAT

6.1 General information on EtherCAT data transfer

The RESISTOMAT 2311 with EtherCAT uses for the data transfer the EtherCAT technology CoE (CANopen over EtherCAT). There are two types of data – data which are transferred with each cycle (PDO – Process Data Objects) and data which are transferred on demand only (SDO – Service Data Objects). The SDO-Data are addressed via a combination of Index and Subindex which you will find in the tables below.

The device (Slave) is controlled using the data transferred from Master to Slave. This data always consists of four bytes for the Resistomat 2311 unit. The function of these four bytes is explained in chapter “**PLC inputs – Transfer from Master to Slave**”

The Resistomat 2311 sends cyclic 12 bytes to the EtherCAT Master. This packet contains PLC status, current program number, evaluation information, measurement value and measurement counter.

The Resistomat 2311 supports both types of Explicit Device Identification: SII Configured Station Alias and Device Identification Value (ID Value). The SII configured station alias can be set by a Slave or a configuration tool. This value is stored in the device and is loaded at power-on into the register 0x0012:0x0013. The Device Identification Value (ID Value) can be set directly in the EtherCAT menu of a display device (please refer to Configuration menu in Resistomat 2311) or with our PC Software DigiControl for a black box device. This value is loaded into the register 0x0134 on the Slave request.

Strings should be transferred with String-Ende (null terminated string)!

You will find further information about EtherCAT at: www.ethercat.org.

6.2 ESI file

The EtherCAT Slave Information (ESI) file `burster_2311.xml` can be downloaded from the section **Fieldbus** on our website: <https://www.burster.com/en/download-area>. This ESI file contains the EtherCAT configuration information for the Resistomat 2311.

The structure, contents and encoding of this device description data is standardized so that any EtherCAT devices can be configured using configuration tools from various manufacturers.

The ESI file does not specify what data is transferred or how this data should be interpreted. The user must glean this information from the operating manual and program their Controller accordingly.

7 EtherCAT data protocol

7.1 PLC inputs – Transfer from Master to Slave (Process Data Objects)

Four bytes of PLC-In data for the 2311 are always transferred from the EtherCAT Controller (Master) to the Resistomat 2311 (Slave). These bits have the same function as the parallel PLC inputs to the 2311 unit.

(See detailed documentation of these signals within the 2311 operation manual)

Please Note: Bits marked as ‘reserved’ should remain at 0.

PLC inputs byte 1

PLC inputs Byte 1 (Master -> Slave)	
Start/Stop measurement	Bit 0 LSB
Start/Stop comparator	Bit 1
Start/Stop max/min recording	Bit 2
Start/Stop datalogger	Bit 3
Start/Stop AUTO mode	Bit 4
Clear error bit	Bit 5
Reset comparator statistic	Bit 6
End load cooling curve	Bit 7 MSB

PLC inputs byte 2

PLC inputs Byte 2 (Master -> Slave)	
Program number - bit 0	Bit 0 LSB
Program number - bit 1	Bit 1
Program number - bit 2	Bit 2
Program number - bit 3	Bit 3
Program number - bit 4	Bit 4
reserved	Bit 5
reserved	Bit 6
Program number - strobe	Bit 7 MSB

PLC inputs byte 3

PLC inputs Byte 3 (Master -> Slave)	
reserved	Bit 0 LSB
reserved	Bit 1
reserved	Bit 2
reserved	Bit 3
Input AUX0 (reserved)	Bit 4
Input AUX1 (reserved)	Bit 5
Input AUX2 (reserved)	Bit 6
Input AUX3 (reserved)	Bit 7 MSB

PLC inputs byte 4

PLC inputs Byte 4 (Master -> Slave)	
reserved	Bit 0 LSB
reserved	Bit 1
reserved	Bit 2
reserved	Bit 3
reserved	Bit 4
reserved	Bit 5
reserved	Bit 6
reserved	Bit 7 MSB

7.2 PLC outputs – Transfer from Slave to Master

The data refers to the PLC output of the Resistomat 2311. The data described here is the data transferred from the 2311 (Slave) to the EtherCAT Controller (Master).

The function of the PLC-In / PLC-Out can be found in the 2311 operation manual for the unit. In addition, the signal timing is available within the 2311 operation manual.

PLC outputs byte 1

PLC outputs Byte 1 (Slave -> Master)	
Ready	Bit 0 LSB
reserved	Bit 1
Measurement ended	Bit 2
Measurement error	Bit 3
Error	Bit 4
reserved	Bit 5
reserved	Bit 6
reserved	Bit 7 MSB

PLC outputs byte 2

PLC outputs Byte 2 (Slave -> Master)	
Current program number - bit 0	Bit 0 LSB
Current program number - bit 1	Bit 1
Current program number - bit 2	Bit 2
Current program number - bit 3	Bit 3
Current program number - bit 4	Bit 4
reserved	Bit 5
reserved	Bit 6
Current program number - strobe	Bit 7 MSB

PLC outputs byte 3

PLC outputs Byte 3 (Slave -> Master)	
reserved	Bit 0 LSB
reserved	Bit 1
reserved	Bit 2
reserved	Bit 3
Output AUX0 (reserved)	Bit 4
Output AUX1 (reserved)	Bit 5
Output AUX2 (reserved)	Bit 6
Output AUX3 (reserved)	Bit 7 MSB

PLC outputs byte 4

PLC outputs Byte 4 (Slave -> Master)	
Comparator >>	Bit 0 LSB
Comparator >	Bit 1
Comparator =	Bit 2
Comparator <	Bit 3
Comparator <<	Bit 4
reserved	Bit 5
reserved	Bit 6
reserved	Bit 7 MSB

PLC outputs byte 5 – 8

Measurement value as a floating-point numbers ("float") based on the IEEE-754 standard

PLC outputs byte 9 – 12

Measurement counter as an unsigned 32-bit integer number

8 SDO – Service Data Objects

The services are described from the point of view of the Master.

The SDO EtherCAT services allow access to following Resistomat 2311 functions:

- Complete device configuration
- Transfer of component/worker/job data for logging
- Retrieval of large amounts of process and curve data
- For further information please contact our service department at service@burster.com

Note: The current EtherCAT specification does not have any error codes in case the device cannot perform a command due to its current state, e.g. an optional analogue card is not build-in. If you write some data into the device, it is recommended to read the value back and compare it with the set value to be sure the device has accepted your parameter. Additionally, the device sends an emergency message if a parameter cannot be read or written. EtherCAT Master can read out these emergency messages. One message consists of 5 bytes: **CFGER** and means **Configuratiuon Error**. Please also use them with read commands, especially if the expected value is a 0 (zero). If the device fails to return data due to its current state, it sets all data bytes to zero and sends an emergency message.

Abbreviations

WO	Write Only
RO	Read Only
RW	Read and Write
Event!	Writing an arbitrary byte initiates action
BOOL	Data type Boolean
FLT	Data type Float, floating point number according to IEEE754, Length = 4 Byte
STR n	Data type String, String of n Bytes
U8	Data type Unsigned 8, Length = 1 Byte
U16	Data type Unsigned 16, Length = 2 Byte
U32	Data type Unsigned 32, Length = 4 Byte

8.1 Instrument configuration

8.1.1 Index 0x2000: Master Outputs

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2000	1	IN_MEAS_START	0	Set	U8	1	WO
			1	Not set			
0x2000	2	IN_COMPARATOR	0	Set	U8	1	WO
			1	Not set			
0x2000	3	IN_MAX_MIN_RECORD	0	Set	U8	1	WO
			1	Not set			
0x2000	4	IN_DATALOGGER	0	Set	U8	1	WO
			1	Not set			
0x2000	5	IN_AUTO	0	Set	U8	1	WO
			1	Not set			
0x2000	6	IN_CLEAR_ERROR_BIT	0	Set	U8	1	WO
			1	Not set			
0x2000	7	IN_RESET_COMPARATOR_STATI STIC	0	Set	U8	1	WO
			1	Not set			
0x2000	8	IN_END_LOAD_COOLING_CURVE	0	Set	U8	1	WO
			1	Not set			
0x2000	9	IN_PROG0	0	Set	U8	1	WO
			1	Not set			
0x2000	10	IN_PROG1	0	Set	U8	1	WO
			1	Not set			
0x2000	11	IN_PROG2	0	Set	U8	1	WO
			1	Not set			
0x2000	12	IN_PROG3	0	Set	U8	1	WO
			1	Not set			
0x2000	13	IN_PROG4	0	Set	U8	1	WO
			1	Not set			
0x2000	16	IN_STROBE	0	Set	U8	1	WO
			1	Not set			
0x2000	21	IN_AUX0 (reserved)	0	Set	U8	1	WO
			1	Not set			
0x2000	22	IN_AUX1 (reserved)	0	Set	U8	1	WO
			1	Not set			
0x2000	23	IN_AUX2 (reserved)	0	Set	U8	1	WO
			1	Not set			
0x2000	24	IN_AUX3 (reserved)	0	Set	U8	1	WO
			1	Not set			

8.1.2 Index 0x2001: Master Inputs

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2001	1	OUT_READY	0xff	Set	U8	1	RO
			0	Not set			
0x2001	2	OUT_MEASUREMENT_RUNNING	0xff	Set	U8	1	RO
			0	Not set			
0x2001	3	OUT_OK	0xff	Set	U8	1	RO
			0	Not set			

			0	Not set			
0x2001	4	OUT_NOK	0xff 0	Set Not set	U8	1	RO
0x2001	5	OUT_ERROR	0xff 0	Set Not set	U8	1	RO
0x2001	9	OUT_PROG0	0xff 0	Set Not set	U8	1	RO
0x2001	10	OUT_PROG1	0xff 0	Set Not set	U8	1	RO
0x2001	11	OUT_PROG2	0xff 0	Set Not set	U8	1	RO
0x2001	12	OUT_PROG3	0xff 0	Set Not set	U8	1	RO
0x2001	13	OUT_PROG4	0xff 0	Set Not set	U8	1	RO
0x2001	16	OUT_STROBE	0xff 0	Set Not set	U8	1	RO
0x2001	20	OUT_AUX0	0xff 0	Set Not set	U8	1	RO
0x2001	21	OUT_AUX1	0xff 0	Set Not set	U8	1	RO
0x2001	22	OUT_AUX2	0xff 0	Set Not set	U8	1	RO
0x2001	23	OUT_AUX3	0xff 0	Set Not set	U8	1	RO
0x2001	24	OUT_COMPARATOR >>	0xff 0	Set Not set	U8	1	RO
0x2001	25	OUT_COMPARATOR >	0xff 0	Set Not set	U8	1	RO
0x2001	26	OUT_COMPARATOR =	0xff 0	Set Not set	U8	1	RO
0x2001	27	OUT_COMPARATOR <	0xff 0	Set Not set	U8	1	RO
0x2001	28	OUT_COMPARATOR <<	0xff 0	Set Not set	U8	1	RO
0x2001	32	MEAS_VAL	0xff 0	Set Not set	FLT4	4	RO
0x2001	33	MEAS_CNT	0xff 0	Set Not set	U32	4	RO

8.1.3 General settings (Index 0x2030)

Index 0x2030, Attributes 0 to 77

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	0	Number of sub-indices	-		U8	1	RO
0x2030	1 - 9	Reserved	-	Not possible	x	x	x
0x2030	10	Device identifier	Resistomat Typ 2311		STR19	19	RO

0x2030	11	Serial number	1234567890A		STR11	11	RO
0x2030	12	Software version	V202100		STR15	15	RO
0x2030	13	Bootloader software version	V202100		STR15	15	RO
0x2030	14	Field bus interface software version	EC-V202300		STR15	15	RO
0x2030	15	Reserved	-		x	x	x
0x2030	16	Station name	Stat14 right	Device station name	STR15	15	RW
0x2030	17	Calibration date analog interface	28.01.2021		STR10	10	RO
0x2030	18	Language	0 1 2 3 4	German English French Spanish Italian	U16	2	RW
0x2030	19	Date	[dd.mm.yyyy]	e.g.: 21.01.2021	STR10	10	RW
0x2030	20	Time	[hh:mm:ss], 24h	e.g.: 16:15:00	STR8	8	RW
0x2030	21	LCD brightness	1 ... 10	Integer value (10 max.)	U16	2	RW
0x2030	22	Measurement menu function key definition F1	0 1 2 3 4 5 6	Off Start/Stop Meas. program + Meas. program - End Load Range + Range -	U16	2	RW
0x2030	23	Measurement menu function key definition F2	0 1 2 3 4 5 6	Off Start/Stop Meas. program + Meas. program - End Load Range + Range -	U16	2	RW
0x2030	24	Measurement menu function key definition F3	0 1 2 3 4 5 6	Off Start/Stop Meas. program + Meas. program - End Load Range + Range -	U16	2	RW
0x2030	25	Display mode of function Keys	0 1	Fade out Always on	U16	2	RW
0x2030	26	Type of measured value display	0 1 2	Ohm d% evaluation	U16	2	RW
0x2030	27	Access authorization Password protection on/off	0 1	Password protection off Password protection on	U16	2	RW
		Note: If the user password is					

		entered, attributes 28-47 control device access. Using the master password bypasses this.					
0x2030	28	Access level: Basic setup	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	29	Access level: Program selection	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	30	Access level: Program copy	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	31	Access level: Measurement mode	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	32	Access level: PLC Test operation	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	33	Access level: External memory	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	34	Access level: Comparator	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	35	Access level: Max / Min	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	36	Access level: Data Logger	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	37	Access level: Temp. Compensation	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	38	Access level: Pt100	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	39	Access level: Volt. Input	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	40	Access level: Disp. Meas.	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	41	Access level: Max / Min Analysis	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	42	Access level: Comparator Analysis	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	43	Access level: Data Logger Analysis	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	44	Access level: Cooling Curve	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	45	Access level: Calibration	0 1	Access DENIED Access GRANTED	U16	2	RW
0x2030	46	Reserved	-		x	x	x
0x2030	47	Reserved	-		x	x	x
0x2030	48	Master password Note: The password is always 4 digits long, if less are supplied they are padded with 0s from the left	0000 ... 9999	4 digit master password as a U16	U16	2	RW
0x2030	49	Reset Master password	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO

0x2030	50	User password Note: Same conditions as with attribute 48	0000 ... 9999	4 digit user password as a U16	U16	2	RW
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Index 0x2030, Attribute 51 (Assignment adjustable PLC output 1)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	51	adj. PLC output 1	0	OUT_READY	U16	2	RW
			1	OUT_MEAS_END			
			2	OUT_MEAS_ERR			
			3	OUT_STROBE			
			4	OUT_PROG0			
			5	OUT_PROG1			
			6	OUT_PROG2			
			7	OUT_PROG3			
			8	OUT_PROG4			
			9	OUT_ERROR			
			10	OUT_COMP_>>			
			11	OUT_COMP_>			
			12	OUT_COMP_ =			
			13	OUT_COMP_ <			
			14	OUT_COMP_ <<			
			15	OUT_AUX0			
			16	OUT_AUX1			
			17	OUT_AUX2			
			18	OUT_AUX3			

Index 0x2030, Attributes 52 to 61 (Assignment adjustable PLC outputs 2 to 11)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	52	adj. PLC output 2	see Sub-Index 51		U16	2	RW
0x2030	53	adj. PLC output 3	see Sub-Index 51		U16	2	RW
0x2030	54	adj. PLC output 4	see Sub-Index 51		U16	2	RW
0x2030	55	adj. PLC output 5	see Sub-Index 51		U16	2	RW
0x2030	56	adj. PLC output 6	see Sub-Index 51		U16	2	RW
0x2030	57	adj. PLC output 7	see Sub-Index 51		U16	2	RW
0x2030	58	adj. PLC output 8	see Sub-Index 51		U16	2	RW
0x2030	59	adj. PLC output 9	see Sub-Index 51		U16	2	RW
0x2030	60	adj. PLC output 10	see Sub-		U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
			<i>Index 51</i>				
0x2030	61	adj. PLC output 11	<i>see Sub-Index 51</i>		U16	2	RW
0x2030	62	adj. PLC output 12	<i>see Sub-Index 51</i>		U16	2	RW

Index 0x2030, Attribute 63 (Assignment adjustable PLC input 1)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	63	adj. PLC input 1	0 1 2 3 4 5 6 7 8 9 10 11	SPS_IN_WHL_AUTO SPS_IN_WHL_RESET_STAT SPS_IN_WHL_STROBE SPS_IN_WHL_ACK_ERROR SPS_IN_WHL_COMP_START SPS_IN_WHL_MAX_MIN_START SPS_IN_WHL_LOGGER_START SPS_IN_WHL_END_LOAD SPS_IN_WHL_AUX0 SPS_IN_WHL_AUX1 SPS_IN_WHL_AUX2 SPS_IN_WHL_AUX3	U16	2	RW

Index 0x2030, Attributes 64 to 70 (Assignment adjustable PLC inputs 2 to 5)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	64	adj. PLC input 2	see Sub-Index 63		U16	2	RW
0x2030	65	adj. PLC input 3	see Sub-Index 63		U16	2	RW
0x2030	66	adj. PLC input 4	see Sub-Index 63		U16	2	RW
0x2030	67	adj. PLC input 5	see Sub-Index 63		U16	2	RW

Index 0x2030, Attributes 72 to 78

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2030	72	Order sheet: Operator	Michael_Mueller		STR 64	64	RW
0x2030	73	Order sheet: Order number	AN_123456		STR 64	64	RW
0x2030	74	Order sheet: Batch	BATCH_257-3		STR 64	64	RW
0x2030	75	Order sheet: Component	Cylinder_right		STR 64	64	RW
0x2030	76	Order sheet: Serial number 1	SN_12345678 9		STR 64	64	RW
0x2030	77	Order sheet: Serial number 2	SN_98765432 1		STR 64	64	RW
0x2030	78	Update display (refresh view)	Event!	Writing an arbitrary byte initiates action	U8	1	WO

8.1.4 Display update and fault indication (Index 0x2031)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2031	0	Number of sub-indices	-		U8	1	RO
0x2031	1 - 9	Reserved	-	-	x	x	x
0x2031	10	Initiate update of the LCD display	EVENT!	Writing an arbitrary byte initiates action	U8	1	WO
0x2031	11	Device fault status	0x00000000	No fault	U32	4	RO
			0x00000001	PREFIX addressing fault			
			0x00000002	Enquiry received in Device mode			
			0x00000004	Block check error			
			0x00000008	Command fault			
			0x00000010	Parameter error			

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
			0x00000020	Timeout Receive Timer			
			0x00000040	Timeout Response Timer			
			0x00000080	Invalid ! or ?			
			0x00000100	Invalid configuration			
			0x00001000	EEPROM read error			
			0x00010000	Calibration failed			
			0x00040000	NETX Checksum error			
			0x20000000	USB flash error			

8.1.5 Program Selection/Renaming & comparator statistics reset (Index 0x2032)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2032	0	Number of sub-indices	-		U8	1	RO
0x2032	1 - 9	Reserved	-	-	x	x	x
0x2032	10	Current program number Note: The value from attribute 10 is applied through attribute 12, 13 or 14	0 ... 31		U16	2	RW
0x2032	11	Current program name Note: The value from attribute 11 is applied through attribute 12	<i>Program name</i>		STR 20	20	RW
0x2032	12	Apply program name for selected program Note: Apply program name from attribute 11 for program selected in attribute 10	<i>EVENT!</i>		U8	1	WO
0x2032	13	Apply measurement program selection Note: Value entered into attribute 10 is adopted	<i>EVENT!</i>		U8	1	WO
0x2032	14	Reset comparator statistics of selected measurement program Note: Value entered into attribute 10 is adopted	<i>EVENT!</i>		U8	1	WO

8.1.6 Measurement mode (Index 0x2038)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2038	0	Number of sub-indices	-		U8	1	RO
0x2038	1 - 9	Reserved	-	-	x	x	x
0x2038	10	Range selection	0 1	manual automatic	U16	2	RW
0x2038	11	Measurement range in manual range mode	1 2 3 4 5 6 7 8	20 mOhm 200 mOhm 2 Ohm 20 Ohm 200 Ohm 2 kOhm 20 kOhm 200 kOhm	U16	2	RW
0x2038	12	Minimum range in automatic range mode Note: The settings from attributes 12 - 13 are applied through attribute 14	1 2 3 4 5 6 7	20 mOhm 200 mOhm 2 Ohm 20 Ohm 200 Ohm 2 kOhm 20 kOhm	U16	2	RW
0x2038	13	Maximum range in automatic range mode Note: The writes to attributes 12 - 13 are applied through attribute 14	2 3 4 5 6 7 8	200 mOhm 2 Ohm 20 Ohm 200 Ohm 2 kOhm 20 kOhm 200 kOhm	U16	2	RW
0x2038	14	Set range for automatic range mode Note: Values entered into attributes 12 and 13 are adopted	<i>EVENT</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2038	15	Resistance type R or Z(0-3)	0 1 2 3 4	R Z0 Weak Inductivity Z1 ... Z2 ... Z3 Strong Inductivity	U16	2	RW
0x2038	16	Reserved	-		x	x	x
0x2038	17	Measuring Type	0 1 2	Single Continuous N measurements	U16	2	RW
0x2038	18	Cable break test	0 1 2	Off Once Always	U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2038	19	Number of measurements until stop	1 ... 20		U16	2	RW
0x2038	20	Number of mean values	1 ... 100		U16	2	RW
0x2038	21	Type of averaging: renewing/moving	0 1	Renewing Moving	U16	2	RW
0x2038	22	Voltage limiting	0 1 2	Off 18 mV 2V	U16	2	RW
0x2038	23	Number of conversions	0 1 2 3	Standard Minimal Medium Maximum	U16	2	RW
0x2038	24	Measuring Process	0 1 2 3 4	Standard Comp. once Without com. Ref comp. Current test	U16	2	RW
0x2038	25	Measuring current: large/small	0 1	Large Small	U16	2	RW
0x2038	26	Resolution 2000/20000 digits	0 1	2000 digits 20000 digits	U16	2	RW
0x2038	27	Behavior in case of measuring error	0 1	stop measuring continue measuring	U16	2	RW

8.1.7 Copy/initialize measurement programs (Index 0x2039)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2039	0	Number of sub-indices	-		U8	1	RO
0x2039	1 - 9	Reserved	-	-	x	x	x
0x2039	10	Meas. program number source Note: The writes to attributes 10 - 12 are being adopted through attributes 13 - 14	0 ... 31		U16	2	WO
0x2039	11	Meas. program number Target start Note: The writes to attributes 10 - 12 are being adopted through attributes 13 - 14	0 ... 31		U16	2	WO
0x2039	12	Meas. program number Target end	0 ... 31		U16	2	WO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
		Note: The writes to attributes 10 - 12 are being adopted through attributes 13 - 14					
0x2039	13	Copy whole program setup Note: Copy according to entries in attributes 10 - 12. Copies only if all attributes from 10-12 are entered.	<i>EVENT</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2039	14	Initialize selected programs Note: Initializing according to attributes 11 - 12.	<i>EVENT</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2039	15	Initialize all measurement programs and device parameters	<i>EVENT</i>	Writing an arbitrary byte initiates action	U8	1	WO

8.1.8 USB-Logging (Index 0x2040)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2040	0	Number of sub-indices	-		U8	1	RO
0x2040	1 - 9	Reserved	-	-	x	x	x
0x2040	10	USB-Logging on/off	0 1	Off On	U16	2	RW
0x2040	11	Logging of timestamp	0 1	Off On	U16	2	RW
0x2040	12	Logging of numerator	0 1	Off On	U16	2	RW
0x2040	13	Logging of order sheet	0 1	Off On	U16	2	RW
0x2040	14	Delta t – Hours Note: The writes to attributes 14 - 16 are being adopted through attribute 17	0 ... 99		U16	2	RW
0x2040	15	Delta t – Minutes	0 ... 59		U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
		Note: The writes to attributes 14 - 16 are being adopted through attribute 17					
0x2040	16	Delta t – Seconds Note: The writes to attributes 14 - 16 are being adopted through attribute 17	0 ... 59		U16	2	RW
0x2040	17	Set Delta t Note: Values entered into attributes 14, 15, 16 are adopted. Adopts only if all attributes from 14-16 are entered.	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2040	19	State of USB-Drive	0 1 2 3	State couldn't be read Not found Attached but not mounted Attached and mounted	U16	2	RO
0x2040	20	Free space on USB-Drive	<i>String</i>	If USB Drive is not attached or not mounted (see Sub-Index 12) "0,000 MB" will be returned	STR 15	15	RO
0x2040	21	Format USB Drive	<i>String formatusb</i>	"formatusb" works as a password here	STR 9	9	WO
0x2040	22	READY-Control	0 1	off on	U16	2	RW

8.1.9 Data-Logging (Index 0x2041)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2041	0	Number of sub-indices	-		U8	1	RO
0x2041	1 - 9	Reserved	-	-	x	x	x
0x2041	10	Data logger on/off	0 1	Off On	U16	2	RW
0x2041	11	Data logger filter	0 1 2 3 4 5	Record all values Record only OK values Record only NOK values Record every n. value Record if time > Delta t Record if value(i) – value(i-1) >= Delta R	U16	2	RW
0x2041	12	N. Value	2 ... 200		U16	2	RW
0x2041	13	Delta t – Hours	0 ... 99		U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
		Note: The writes to attributes 13 - 15 are being adopted through attribute 16					
0x2041	14	Delta t – Minutes Note: The writes to attributes 13 - 15 are being adopted through attribute 17	0 ... 59		U16	2	RW
0x2041	15	Delta t – Seconds Note: The writes to attributes 13 - 15 are being adopted through attribute 17	0 ... 59		U16	2	RW
0x2041	16	Set Delta t Note: Values entered into attributes 13, 14, 15 are adopted. Adoptes only if all attributes from 14-16 are entered.	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2041	17	Delta R (Filter Parameter)	0 ... 200000		U16	2	RW
0x2041	18	Designation	<i>String</i>		STR 50	50	RW
0x2041	19	Free data logger space			U16	2	RO
0x2041	20	Number of stored values			U16	2	RO
0x2041	21	Storage number of value to be read 0 is the 1 st entry Note: the actual read is performed at attribute 22			U16	2	WO
0x2041	22	Stored measurement values Note: the storage number has to be set at attribute 21 first	<i>String</i>	Format: <i>dd.mm.yyyy, hh:mm:ss, delta in ms, state*, resistance</i> <i>*state</i> (bit coded): Logical OR combined status: 0: No Error 1: Resistance value invalid 2: Current overflow 4: Voltage overflow 8: Temperature measurement invalid 16: Pt100 Measurement error 32: Cable break	STR 64	64	RO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
				64: Zero measurement invalid 128: First value since start of measurement (data logger) 256: USB storage error 512: Cooling curve active while saving (data logger) 1024: No measurement value acquired (from FW V202205) 2048: Temperature too high for 1A measurement (from FW V202303)			
0x2041	23	Clear data logger	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO

8.1.10 Comparator (Index 0x2042)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2042	0	Number of sub-indices	-		U8	1	RO
0x2042	1 - 9	Reserved	-	-	x	x	x
0x2042	10	Comparator on/off	0 1	Off On	U16	2	RW
0x2042	11	Number of limits	2 or 4		U16	2	RW
0x2042	12	Behavior if error	0 1	Not used > or >>	U16	2	RW
0x2042	13	Limit value << Note: The writes to attributes 13 - 16 are being adopted through attribute 17		Float value Float according to IEEE754	FLT	4	RW
0x2042	14	Limit value < Note: The writes to attributes 13 - 16 are being adopted through attribute 17		Float value Float according to IEEE754	FLT	4	RW
0x2042	15	Limit value > Note: The writes to attributes 13 - 16 are being adopted through attribute 17		Float value Float according to IEEE754	FLT	4	RW
0x2042	16	Limit value >> Note: The writes to attributes 13 - 16 are being adopted through attribute 17		Float value Float according to IEEE754	FLT	4	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2042	17	Set limits Note: Values entered into attributes 13, 14, 15, 16 are adopted	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2042	18	Number of values < limit_<< If 2 limits: not relevant			U16	1	RO
0x2042	19	Number of values > limit_<< and < limit_< If 2 limits: < Limit_<			U16	1	RO
0x2042	20	Number of values > limit_< and < limit_> If 2 limits: > limit_< and < limit_>			U16	1	RO
0x2042	21	Number of values > limit_> and < limit_>> If 2 limits: > limit_>			U16	1	RO
0x2042	22	Number of values > limit_>> If 2 limits: not relevant			U16	1	RO
0x2042	23	Total number of values			U16	1	RO
0x2042	24	Reset statistic values	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO

8.1.11 Max / Min Values (Index 0x2043)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2043	0	Number of sub-indices	-		U8	1	RO
0x2043	1 - 9	Reserved	-	-	x	x	x
0x2043	10	Max / Min on/off	0 1	Off On	U16	2	RW
0x2043	11	Minimum value		Float value Float according to IEEE754	FLT	4	RO
0x2043	12	Maximum value		Float value Float according to IEEE754	FLT	4	RO
0x2043	13	Maximum – Minimum value		Float value Float according to IEEE754	FLT	4	RO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2043	14	Reset Max / Min values	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO

8.1.12 PT100 (Index 0x2044)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2044	0	Number of sub-indices	-		U8	1	RO
0x2044	1 - 9	Reserved	-	-	x	x	x
0x2044	10	Coefficient Ro of the Pt100 formula	90 ... 110	Float value Float according to IEEE754	FLT	4	RW
0x2044	11	Coefficient A of Pt100 formula	3.0E-3 ... 6.0E-3	Float value Float according to IEEE754	FLT	4	RW
0x2044	12	Coefficient B of Pt100 formula	-5.0E-6 ... 5.0E-6	Float value Float according to IEEE754	FLT	4	RW
0x2044	13	Resets the coefficients to their default values	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO

8.1.13 Temperature compensation (Index 0x2045)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2045	0	Number of sub-indices	-		U8	1	RO
0x2045	1 - 9	Reserved	-	-	x	x	x
0x2045	10	Temperature compensation On/Off	0 1	Off On	U16	2	RW
0x2045	11	Detection of temperature	0 1 2	Manual Pt100 U Input	U16	2	RW
0x2045	12	Manual temperature if manual temperature detection	-200 ... 999	Float value Float according to IEEE754	FLT	4	RW
0x2045	13	Reference temperature	-200 ... 999	Float value Float according to IEEE754	FLT	4	RW
0x2045	14	Temperature coefficient	0 1 2 3 4 5 6 7 8 9	1600 ppm/K 1700 ppm/K 2400 ppm/K 3100 ppm/K 3930 ppm/K 4030 ppm/K 4500 ppm/K 4800 ppm/K 6000 ppm/K 6500 ppm/K	U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2045	15	User defined temperature coefficient	1000 ... 9999		U16	2	RW

8.1.14 Scaling of voltage input (Index 0x2046)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2046	0	Number of sub-indices	-		U8	1	RO
0x2046	1 - 9	Reserved	-	-	x	x	x
0x2046	10	Low voltage	0 ... 11	Float value Float according to IEEE754	FLT	4	RW
0x2046	11	High voltage	0 ... 11	Float value Float according to IEEE754	FLT	4	RW
0x2046	12	Low temperature	-200 ... 800	Float value Float according to IEEE754	FLT	4	RW
0x2046	13	High temperature	-200 ... 800	Float value Float according to IEEE754	FLT	4	RW

8.1.15 Cooling curve (Index 0x2047)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2047	0	Number of sub-indices	-		U8	1	RO
0x2047	1 - 9	Reserved	-	-	x	x	x
0x2047	10	Cooling curve On/Off	0 1	Off On	U16	2	RW
0x2047	11	Interval time	1 ... 100		U16	2	RW
0x2047	12	Settling time	1 ... 100		U16	2	RW
0x2047	13	Measuring end time	10 ... 100000		U16	2	RW
0x2047	14	End load	EVENT!	Writing an arbitrary byte initiates action	U8	1	WO
0x2047	15	Number of stored measurement values Note: the actual read is performed at attribute 16	0 ... 900		U16	2	WO
0x2047	16	Stored measurement values Note: the number of the measurement	String	Format: timestamp in seconds, state*, resistance with unit *state (bit coded): 8 bit value	STR64	64	RO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
		values to read has to be set at attribute 15 first		Logical OR combined status: 0: No Error 1: Resistance value invalid 2: Current overflow 4: Voltage overflow 8: Temperature measurement invalid 16: Pt100 Measurement error 32: Cable break 64: Zero measurement invalid 128: First value since start of measurement (data logger) 256: USB storage error 512: Cooling curve active while saving (data logger) 1024: No measurement value acquired (from FW V202205) 2048: Temperature too high for 1A measurement (from FW V202303)			

8.1.16 Current measurement values (Index 0x2048)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2048	0	Number of sub-indices	-		U8	1	RO
0x2048	1 - 9	Reserved	-	-	x	x	x
0x2048	10	Measurement running state	0 1	Measurement is stopped Measurement is running	U16	2	RO
0x2048	11	Measurement counter	0 ... 65536		U16	2	RO
0x2048	12	Measurement status		Logical OR combined status: 0: No Error 1: Resistance value invalid 2: Current overflow 4: Voltage overflow 8: Temperature measurement invalid 16: Pt100 Measurement error 32: Cable break 64: Zero measurement invalid 128: First value since start of measurement (data logger) 256: USB storage error	U16	2	RO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
				512: Cooling curve active while saving (data logger) 1024: No measurement value acquired (from FW V202205) 2048: Temperature too high for 1A measurement (from FW V202303)			
0x2048	13	Result of Evaluation	<i>String</i>		STR6 4	64	RO
0x2048	14	Delta % of Set Point	<i>String</i>		STR6 4	64	RO
0x2048	15	Resistance	<i>String</i>	Value plus appropriate Ohm unit	STR6 4	64	RO
0x2048	16	Range	<i>String</i>	Value plus appropriate Ohm unit	STR6 4	64	RO
0x2048	17	Current	<i>String</i>	Value plus unit	STR6 4	64	RO
0x2048	18	Voltage	<i>String</i>	Value plus unit	STR6 4	64	RO
0x2048	19	Temperature	<i>String</i>	Value in °C	STR6 4	64	RO

8.1.17 Record errors/events in the logfile (Index 0x2049)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2049	0	Number of sub-indices	-		U8	1	RO
0x2049	1 - 9	Reserved	-	-	x	x	x
0x2049	10	Index of last entry	0 ... 255		U16	2	RO
0x2049	11	Entry index Note: the actual read is performed at attribute 12	0 ... 255		U16	2	WO
0x2049	12	Log entry Note: the index of the measurement value to read has to be set at attribute 11 first	<i>String</i>	Format: entry code*,program number,access**,year,month,day,hour,minute,second, repetitions *entry code: 0 -> no error 1 -> Memory error detected 4 -> Main analog board EEPROM error detected 39 -> Start of measurement without READY 40 -> Change of analog interface	STR6 4	64	RO

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
				42 -> Device power up 130 -> Menu: Measurement mode 136 -> Menu: Assignment PLC-Outputs 137 -> Menu: Assignment PLC-Inputs 139 -> Menu: Interface USB 140 -> Menu: Interface Ethernet 141 -> Copy Measurement setup 142 -> Initialize target program(s) 143 -> Copy whole setup 145 -> Menu: Comparator 146 -> Menu: Max / Min 147 -> Menu: Datalogger 148 -> Menu: Temp. Comp. 149 -> Menu: Pt100 150 -> Menu: Volt Input 151 -> Menu: Disp. Meas. 152 -> Menu: Cooling Curve 153 -> Menu: USB-Logging **access: 0 -> No access protection 1 -> Master access 2 -> User access 4 -> Access via port			

8.1.18 General Purpose (Indexes 0x2060 - 0x2070)

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2060	0	Number of sub-indices	-		U8	1	RO
0x2060	1 - 9	Reserved	-	-	x	x	x
0x2060	10	Generic Value 1	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2060	11	Generic Value 2	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2060	12	Generic Value 3	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2060	13	Generic Value 4	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2060	14	Generic Value 5	<i>EVENT!</i>	Writing an arbitrary byte initiates action	U8	1	WO
0x2060	15	Generic Value 6			U16	2	RW
0x2060	16	Generic Value 7			U16	2	RW

Index	Sub-Index	Description	Value	Meaning of value	Type	Len	R/W
0x2060	17	Generic Value 8			U16	2	RW
0x2060	18	Generic Value 9			U16	2	RW
0x2060	19	Generic Value 10			U16	2	RW
0x2060	20	Generic Value 11			U32	4	RW
0x2060	21	Generic Value 12			U32	4	RW
0x2060	22	Generic Value 13			U32	4	RW
0x2060	23	Generic Value 14			U32	4	RW
0x2060	24	Generic Value 15			U32	4	RW
0x2060	25	Generic Value 16		Float value Float according to IEEE754	FLT	4	RW
0x2060	26	Generic Value 17		Float value Float according to IEEE754	FLT	4	RW
0x2060	27	Generic Value 18		Float value Float according to IEEE754	FLT	4	RW
0x2060	28	Generic Value 19		Float value Float according to IEEE754	FLT	4	RW
0x2060	29	Generic Value 20		Float value Float according to IEEE754	FLT	4	RW
0x2060	30	Generic Value 21			STR64	64	RW
0x2060	31	Generic Value 22			STR64	64	RW
0x2060	32	Generic Value 23			STR64	64	RW
0x2060	33	Generic Value 24			STR64	64	RW
0x2060	34	Generic Value 25			STR64	64	RW

General Purpose (Indexes 0x2061 - 0x2070)

See Index 0x2060.

9 Error Codes

Error Code	Description
0xC065003A	Subindex does not exist (read access)
0xC0CF8013	Subindex does not exist (write access)
0xC0CF8006	Object is read only and can not be written
0xC0CF8010	Data type does not match
0xC0CF8011	Data length is too long
0xC0650028	Timeout
0xC065002F	Object is write only and can not be read