



Table of Contents

1 Device variant	4
2 Communication	5
3 Parameter overview	6
4 System Commands	14
5 Identification	15
6 Observation	16
6.1 Process Data Input/Output	16
7 Parameter	19
7.1 Output configuration	19
7.2 Digital output 1	19
7.3 Signal	19
7.4 Profile 1	21
7.5 Profile 2	23
7.6 Profile 3	24
7.7 Profile 4	26
7.8 Profile 5	27
7.9 Profile 6	28
7.10 Profile 7	30
7.11 Profile 8	31
7.12 Profile 9	33
7.13 Profile 10	34
7.14 Profile 1 statistic	34
7.15 Profile 2 statistic	35
7.16 Profile 3 statistic	35
7.17 Profile 4 statistic	36
7.18 Profile 5 statistic	36
7.19 Profile 6 statistic	36
7.20 Profile 7 statistic	37
7.21 Profile 8 statistic	37
7.22 Profile 9 statistic	37
7.23 Profile 10 statistic	38



Table of Contents

7.24 Setting of the sensor display	.....	38
7.25 Setup	.....	39
8 Diagnosis	.....	42
8.1 Diagnosis	.....	42
9 Events	.....	44
10 Error types	.....	45



1 Device variant

<p>OPD101</p> <p>Profile Detector</p>		
--	--	--



2 Communication

Vendor ID	310 / Bytes 1-54 (hex: 01-36)
Device ID	1261 / Bytes 0-4-237 (hex: 00-04-ED)
Bit rate	COM3
Minimum cycle time	2,3 ms
SIO mode supported	Yes
Block parameterization	Yes
Data storage	Yes
Supported profiles	BLOB, Binary Large Objects Identification and Diagnosis Switching Signal Channel Measurement Data Channel (standard resolution)



NOTE:

If the Vendor ID and Device ID is referenced in your PLC system, then it is ensured that

- the connected Device type is correct
- the IO-Link datastorage is enabled
- your application is still able to work, even your Device has been exchanged with a successor model.



For process value update rate, as well as further information concerning sensor performance, see datasheet



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
Device Access Locks	12		RecordT (16 Bit)	false (Unlocked)	39
Vendor name	16		StringT (19 Byte)	ifm electronic gmbh	15
Vendor text	17		StringT (11 Byte)	www.ifm.com	15
Product Name	18		StringT (6 Byte)	OPD101	15
Product ID	19		StringT (6 Byte)	OPD101	15
Product Text	20		StringT (16 Byte)	Profile Detector	15
Serial Number	21		StringT (12 Byte)		15
Hardware Revision	22		StringT (2 Byte)		15
Firmware Revision	23		StringT (17 Byte)		15
Application-specific Tag	24		StringT (32 Byte)	***	15
Function Tag	25		StringT (32 Byte)	***	15
Location Tag	26		StringT (32 Byte)	***	15
Device Status	36		UIntegerT (8 Bit)	0 (Device is OK)	42
Detailed Device Status	37		OctetStringT (3 Byte) [8]	0x00,0x00,0x00	42
Process data input	40		RecordT (160 Bit)		17
Process data output	41		RecordT (8 Bit)		18
BLOB ID	49		IntegerT (16 Bit)	0 (Idle)	41
SSC1 Param	60		RecordT (32 Bit)		19
SP1	60	1	IntegerT (16 Bit)	90	
SSC1 Config	61		RecordT (32 Bit)		19
Logic	61	1	UIntegerT (8 Bit)	0 (High active)	
P-n	500		UIntegerT (8 Bit)	0 (PnP)	19
Power cycles	541		IntegerT (32 Bit)	0	42
Operating hours	542		IntegerT (32 Bit)	0	42
Internal temperature	543		IntegerT (16 Bit)	0	43
Active Events	545		RecordT (32 Bit)		43
Loc	550		UIntegerT (8 Bit)	1 (uLoc)	38
coLr	554		UIntegerT (8 Bit)	5 (G1ou / Displayed value green when	38
ModE	684		UIntegerT (8 Bit)	1 (Continuous mode)	39
diS.R	801		UIntegerT (8 Bit)	0 (0 °)	38
diS.B	802		UIntegerT (8 Bit)	1 (On)	38
LanG	923		UIntegerT (8 Bit)	0 (EN)	39
SSC-Delay mode	2062		RecordT (16 Bit)		20
SSC1	2062	1	UIntegerT (8 Bit)	0 (no delay)	
trG.S	2201		UIntegerT (8 Bit)	0 (HW(pin5))	19
trG.D	2202		IntegerT (16 Bit)	0	19
LAS.d	2203		UIntegerT (8 Bit)	1 (PDOOut)	19
Mrk.E	2204		UIntegerT (8 Bit)	0 (OFF)	19
Act.P	2207		UIntegerT (16 Bit)	0	20
Pr.SS	2208		UIntegerT (8 Bit)	0 (local)	20
Pr.SL	2209		UIntegerT (8 Bit)	1	20
PrS.1	2220		RecordT (96 Bit)		34
N.PAS	2220	1	IntegerT (32 Bit)	0	
N.FAi	2220	2	IntegerT (32 Bit)	0	
N.trG	2220	3	IntegerT (32 Bit)	0	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
PrS.2	2221		RecordT (96 Bit)		35
N.PAS	2221	1	IntegerT (32 Bit)	0	
N.FAi	2221	2	IntegerT (32 Bit)	0	
N.trG	2221	3	IntegerT (32 Bit)	0	
PrS.3	2222		RecordT (96 Bit)		35
N.PAS	2222	1	IntegerT (32 Bit)	0	
N.FAi	2222	2	IntegerT (32 Bit)	0	
N.trG	2222	3	IntegerT (32 Bit)	0	
PrS.4	2223		RecordT (96 Bit)		36
N.PAS	2223	1	IntegerT (32 Bit)	0	
N.FAi	2223	2	IntegerT (32 Bit)	0	
N.trG	2223	3	IntegerT (32 Bit)	0	
PrS.5	2224		RecordT (96 Bit)		36
N.PAS	2224	1	IntegerT (32 Bit)	0	
N.FAi	2224	2	IntegerT (32 Bit)	0	
N.trG	2224	3	IntegerT (32 Bit)	0	
PrS.6	2225		RecordT (96 Bit)		36
N.PAS	2225	1	IntegerT (32 Bit)	0	
N.FAi	2225	2	IntegerT (32 Bit)	0	
N.trG	2225	3	IntegerT (32 Bit)	0	
PrS.7	2226		RecordT (96 Bit)		37
N.PAS	2226	1	IntegerT (32 Bit)	0	
N.FAi	2226	2	IntegerT (32 Bit)	0	
N.trG	2226	3	IntegerT (32 Bit)	0	
PrS.8	2227		RecordT (96 Bit)		37
N.PAS	2227	1	IntegerT (32 Bit)	0	
N.FAi	2227	2	IntegerT (32 Bit)	0	
N.trG	2227	3	IntegerT (32 Bit)	0	
PrS.9	2228		RecordT (96 Bit)		37
N.PAS	2228	1	IntegerT (32 Bit)	0	
N.FAi	2228	2	IntegerT (32 Bit)	0	
N.trG	2228	3	IntegerT (32 Bit)	0	
PrS.10	2229		RecordT (96 Bit)		38
N.PAS	2229	1	IntegerT (32 Bit)	0	
N.FAi	2229	2	IntegerT (32 Bit)	0	
N.trG	2229	3	IntegerT (32 Bit)	0	
PrR.1	2230		RecordT (240 Bit)		21
int.T	2230	1	IntegerT (16 Bit)	0	
Mt.tH	2230	2	IntegerT (16 Bit)	90	
roi1.L	2230	3	IntegerT (16 Bit)	-35	
roi1.r	2230	4	IntegerT (16 Bit)	-15	
roi2.L	2230	5	IntegerT (16 Bit)	15	
roi2.r	2230	6	IntegerT (16 Bit)	35	
MroE	2230	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2230	8	IntegerT (16 Bit)	150	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
roi.B	2230	9	IntegerT (16 Bit)	0	
roi.M	2230	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2230	11	IntegerT (16 Bit)	-50	
SEA.r	2230	12	IntegerT (16 Bit)	50	
SEA.t	2230	13	IntegerT (16 Bit)	150	
SEA.B	2230	14	IntegerT (16 Bit)	0	
Mt.to	2230	15	IntegerT (16 Bit)	5	
FS.rF	2230	16	IntegerT (16 Bit)	2	
PrR.2	2231		RecordT (240 Bit)		23
int.T	2231	1	IntegerT (16 Bit)	0	
Mt.tH	2231	2	IntegerT (16 Bit)	90	
roi1.L	2231	3	IntegerT (16 Bit)	-35	
roi1.r	2231	4	IntegerT (16 Bit)	-15	
roi2.L	2231	5	IntegerT (16 Bit)	15	
roi2.r	2231	6	IntegerT (16 Bit)	35	
MroE	2231	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2231	8	IntegerT (16 Bit)	150	
roi.B	2231	9	IntegerT (16 Bit)	0	
roi.M	2231	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2231	11	IntegerT (16 Bit)	-50	
SEA.r	2231	12	IntegerT (16 Bit)	50	
SEA.t	2231	13	IntegerT (16 Bit)	150	
SEA.B	2231	14	IntegerT (16 Bit)	0	
Mt.to	2231	15	IntegerT (16 Bit)	5	
FS.rF	2231	16	IntegerT (16 Bit)	2	
PrR.3	2232		RecordT (240 Bit)		24
int.T	2232	1	IntegerT (16 Bit)	0	
Mt.tH	2232	2	IntegerT (16 Bit)	90	
roi1.L	2232	3	IntegerT (16 Bit)	-35	
roi1.r	2232	4	IntegerT (16 Bit)	-15	
roi2.L	2232	5	IntegerT (16 Bit)	15	
roi2.r	2232	6	IntegerT (16 Bit)	35	
MroE	2232	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2232	8	IntegerT (16 Bit)	150	
roi.B	2232	9	IntegerT (16 Bit)	0	
roi.M	2232	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2232	11	IntegerT (16 Bit)	-50	
SEA.r	2232	12	IntegerT (16 Bit)	50	
SEA.t	2232	13	IntegerT (16 Bit)	150	
SEA.B	2232	14	IntegerT (16 Bit)	0	
Mt.to	2232	15	IntegerT (16 Bit)	5	
FS.rF	2232	16	IntegerT (16 Bit)	2	
PrR.4	2233		RecordT (240 Bit)		26
int.T	2233	1	IntegerT (16 Bit)	0	
Mt.tH	2233	2	IntegerT (16 Bit)	90	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
roi1.L	2233	3	IntegerT (16 Bit)	-35	
roi1.r	2233	4	IntegerT (16 Bit)	-15	
roi2.L	2233	5	IntegerT (16 Bit)	15	
roi2.r	2233	6	IntegerT (16 Bit)	35	
MroE	2233	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2233	8	IntegerT (16 Bit)	150	
roi.B	2233	9	IntegerT (16 Bit)	0	
roi.M	2233	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2233	11	IntegerT (16 Bit)	-50	
SEA.r	2233	12	IntegerT (16 Bit)	50	
SEA.t	2233	13	IntegerT (16 Bit)	150	
SEA.B	2233	14	IntegerT (16 Bit)	0	
Mt.to	2233	15	IntegerT (16 Bit)	5	
FS.rF	2233	16	IntegerT (16 Bit)	2	
PrR.5	2234		RecordT (240 Bit)		27
int.T	2234	1	IntegerT (16 Bit)	0	
Mt.tH	2234	2	IntegerT (16 Bit)	90	
roi1.L	2234	3	IntegerT (16 Bit)	-35	
roi1.r	2234	4	IntegerT (16 Bit)	-15	
roi2.L	2234	5	IntegerT (16 Bit)	15	
roi2.r	2234	6	IntegerT (16 Bit)	35	
MroE	2234	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2234	8	IntegerT (16 Bit)	150	
roi.B	2234	9	IntegerT (16 Bit)	0	
roi.M	2234	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2234	11	IntegerT (16 Bit)	-50	
SEA.r	2234	12	IntegerT (16 Bit)	50	
SEA.t	2234	13	IntegerT (16 Bit)	150	
SEA.B	2234	14	IntegerT (16 Bit)	0	
Mt.to	2234	15	IntegerT (16 Bit)	5	
FS.rF	2234	16	IntegerT (16 Bit)	2	
PrR.6	2235		RecordT (240 Bit)		28
int.T	2235	1	IntegerT (16 Bit)	0	
Mt.tH	2235	2	IntegerT (16 Bit)	90	
roi1.L	2235	3	IntegerT (16 Bit)	-35	
roi1.r	2235	4	IntegerT (16 Bit)	-15	
roi2.L	2235	5	IntegerT (16 Bit)	15	
roi2.r	2235	6	IntegerT (16 Bit)	35	
MroE	2235	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2235	8	IntegerT (16 Bit)	150	
roi.B	2235	9	IntegerT (16 Bit)	0	
roi.M	2235	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2235	11	IntegerT (16 Bit)	-50	
SEA.r	2235	12	IntegerT (16 Bit)	50	
SEA.t	2235	13	IntegerT (16 Bit)	150	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
SEA.B	2235	14	IntegerT (16 Bit)	0	
Mt.to	2235	15	IntegerT (16 Bit)	5	
FS.rF	2235	16	IntegerT (16 Bit)	2	
PrR.7	2236		RecordT (240 Bit)		30
int.T	2236	1	IntegerT (16 Bit)	0	
Mt.tH	2236	2	IntegerT (16 Bit)	90	
roi1.L	2236	3	IntegerT (16 Bit)	-35	
roi1.r	2236	4	IntegerT (16 Bit)	-15	
roi2.L	2236	5	IntegerT (16 Bit)	15	
roi2.r	2236	6	IntegerT (16 Bit)	35	
MroE	2236	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2236	8	IntegerT (16 Bit)	150	
roi.B	2236	9	IntegerT (16 Bit)	0	
roi.M	2236	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2236	11	IntegerT (16 Bit)	-50	
SEA.r	2236	12	IntegerT (16 Bit)	50	
SEA.t	2236	13	IntegerT (16 Bit)	150	
SEA.B	2236	14	IntegerT (16 Bit)	0	
Mt.to	2236	15	IntegerT (16 Bit)	5	
FS.rF	2236	16	IntegerT (16 Bit)	2	
PrR.8	2237		RecordT (240 Bit)		31
int.T	2237	1	IntegerT (16 Bit)	0	
Mt.tH	2237	2	IntegerT (16 Bit)	90	
roi1.L	2237	3	IntegerT (16 Bit)	-35	
roi1.r	2237	4	IntegerT (16 Bit)	-15	
roi2.L	2237	5	IntegerT (16 Bit)	15	
roi2.r	2237	6	IntegerT (16 Bit)	35	
MroE	2237	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2237	8	IntegerT (16 Bit)	150	
roi.B	2237	9	IntegerT (16 Bit)	0	
roi.M	2237	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2237	11	IntegerT (16 Bit)	-50	
SEA.r	2237	12	IntegerT (16 Bit)	50	
SEA.t	2237	13	IntegerT (16 Bit)	150	
SEA.B	2237	14	IntegerT (16 Bit)	0	
Mt.to	2237	15	IntegerT (16 Bit)	5	
FS.rF	2237	16	IntegerT (16 Bit)	2	
PrR.9	2238		RecordT (240 Bit)		33
int.T	2238	1	IntegerT (16 Bit)	0	
Mt.tH	2238	2	IntegerT (16 Bit)	90	
roi1.L	2238	3	IntegerT (16 Bit)	-35	
roi1.r	2238	4	IntegerT (16 Bit)	-15	
roi2.L	2238	5	IntegerT (16 Bit)	15	
roi2.r	2238	6	IntegerT (16 Bit)	35	
MroE	2238	7	UIntegerT (8 Bit)	0 (OFF)	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
roi.t	2238	8	IntegerT (16 Bit)	150	
roi.B	2238	9	IntegerT (16 Bit)	0	
roi.M	2238	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2238	11	IntegerT (16 Bit)	-50	
SEA.r	2238	12	IntegerT (16 Bit)	50	
SEA.t	2238	13	IntegerT (16 Bit)	150	
SEA.B	2238	14	IntegerT (16 Bit)	0	
Mt.to	2238	15	IntegerT (16 Bit)	5	
FS.rF	2238	16	IntegerT (16 Bit)	2	
PrR.10	2239		RecordT (240 Bit)		34
int.T	2239	1	IntegerT (16 Bit)	0	
Mt.tH	2239	2	IntegerT (16 Bit)	90	
roi1.L	2239	3	IntegerT (16 Bit)	-35	
roi1.r	2239	4	IntegerT (16 Bit)	-15	
roi2.L	2239	5	IntegerT (16 Bit)	15	
roi2.r	2239	6	IntegerT (16 Bit)	35	
MroE	2239	7	UIntegerT (8 Bit)	0 (OFF)	
roi.t	2239	8	IntegerT (16 Bit)	150	
roi.B	2239	9	IntegerT (16 Bit)	0	
roi.M	2239	10	UIntegerT (8 Bit)	1 (floating)	
SEA.L	2239	11	IntegerT (16 Bit)	-50	
SEA.r	2239	12	IntegerT (16 Bit)	50	
SEA.t	2239	13	IntegerT (16 Bit)	150	
SEA.B	2239	14	IntegerT (16 Bit)	0	
Mt.to	2239	15	IntegerT (16 Bit)	5	
FS.rF	2239	16	IntegerT (16 Bit)	2	
MDC Descr	16512		RecordT (88 Bit)		39
Lower limit	16512	1	IntegerT (32 Bit)	0 (0)	
Upper limit	16512	2	IntegerT (32 Bit)	100 (100)	
Unit code	16512	3	UIntegerT (16 Bit)	1342 (%)	
Scale	16512	4	IntegerT (8 Bit)	0 (0)	
MDC 2 Descr	16513		RecordT (88 Bit)		40
Lower limit	16513	1	IntegerT (32 Bit)	0 (0)	
Upper limit	16513	2	IntegerT (32 Bit)	100 (100)	
Unit code	16513	3	UIntegerT (16 Bit)	1342 (%)	
Scale	16513	4	IntegerT (8 Bit)	0 (0)	
MDC 3 Descr	16514		RecordT (88 Bit)		40
Lower limit	16514	1	IntegerT (32 Bit)	0 (0)	
Upper limit	16514	2	IntegerT (32 Bit)	15990 (15990)	
Unit code	16514	3	UIntegerT (16 Bit)	1010 (m)	
Scale	16514	4	IntegerT (8 Bit)	-5 (-5)	
MDC 4 Descr	16515		RecordT (88 Bit)		40
Lower limit	16515	1	IntegerT (32 Bit)	-10000 (-10000)	
Upper limit	16515	2	IntegerT (32 Bit)	10000 (10000)	
Unit code	16515	3	UIntegerT (16 Bit)	1010 (m)	



3 Parameter overview

Parameter	Index	Subindex	Type	Factory setting	page
Scale	16515	4	IntegerT (8 Bit)	-5 (-5)	



4 System Commands



System Command information
- Address: Index 2, Subindex 0
- Datatype: UInteger (8 Bit)
- AccessRight: Write Only

System Commands	Text	Description
1	Upload Start	Start block parameter upload
2	Upload End	End block parameter upload
3	Download Start	Start block parameter download
4	Download End	Stop block parameter download
5	Store	Finalize block parameterization and start Data Storage
6	Break	Cancel block parameterization
130	Restore Factory Settings	
208	Teach	
209	Reset statistic All	
210	Read reference profile	
211	Reset statistic 1	
212	Reset statistic 2	
213	Reset statistic 3	
214	Reset statistic 4	
215	Reset statistic 5	
216	Reset statistic 6	
217	Reset statistic 7	
218	Reset statistic 8	
219	Reset statistic 9	



4 System Commands

220	Reset statistic 10
222	Flash On
223	Flash Off
230	Delete profile 1
231	Delete profile 2
232	Delete profile 3
233	Delete profile 4
234	Delete profile 5
235	Delete profile 6
236	Delete profile 7
237	Delete profile 8
238	Delete profile 9
239	Delete profile 10
240	IO-Link 1.1 system test command 240, Event 8DFE appears
241	IO-Link 1.1 system test command 241, Event 8DFE disappears
242	IO-Link 1.1 system test command 242, Event 8DFF appears
243	IO-Link 1.1 system test command 243, Event 8DFF disappears



5 Identification

Vendor name	Index 16	Subindex 0	StringT (19 Byte)	ReadOnly
The vendor name that is assigned to a Vendor ID.				
Factory setting	ifm electronic gmbh			
Vendor text	Index 17	Subindex 0	StringT (11 Byte)	ReadOnly
Additional information about the vendor.				
Factory setting	www.ifm.com			
Product Name	Index 18	Subindex 0	StringT (6 Byte)	ReadOnly
Complete product name.				
Factory setting	OPD101			
Product Text	Index 20	Subindex 0	StringT (16 Byte)	ReadOnly
Additional product information for the device.				
Factory setting	Profile Detector			
Product ID	Index 19	Subindex 0	StringT (6 Byte)	ReadOnly
Vendor-specific product or type identification (e.g., item number or model number).				
Factory setting	OPD101			
Serial Number	Index 21	Subindex 0	StringT (12 Byte)	ReadOnly
Unique, vendor-specific identifier of the individual device.				
Hardware Revision	Index 22	Subindex 0	StringT (2 Byte)	ReadOnly
Unique, vendor-specific identifier of the hardware revision of the individual device.				
Firmware Revision	Index 23	Subindex 0	StringT (17 Byte)	ReadOnly
Unique, vendor-specific identifier of the firmware revision of the individual device.				
Application-specific Tag	Index 24	Subindex 0	StringT (32 Byte)	ReadWrite
Possibility to mark a device with user- or application-specific information.				
Factory setting	***			
Function Tag	Index 25	Subindex 0	StringT (32 Byte)	ReadWrite
Possibility to mark a device with function-specific information.				
Factory setting	***			
Location Tag	Index 26	Subindex 0	StringT (32 Byte)	ReadWrite
Possibility to mark a device with location-specific information.				
Factory setting	***			



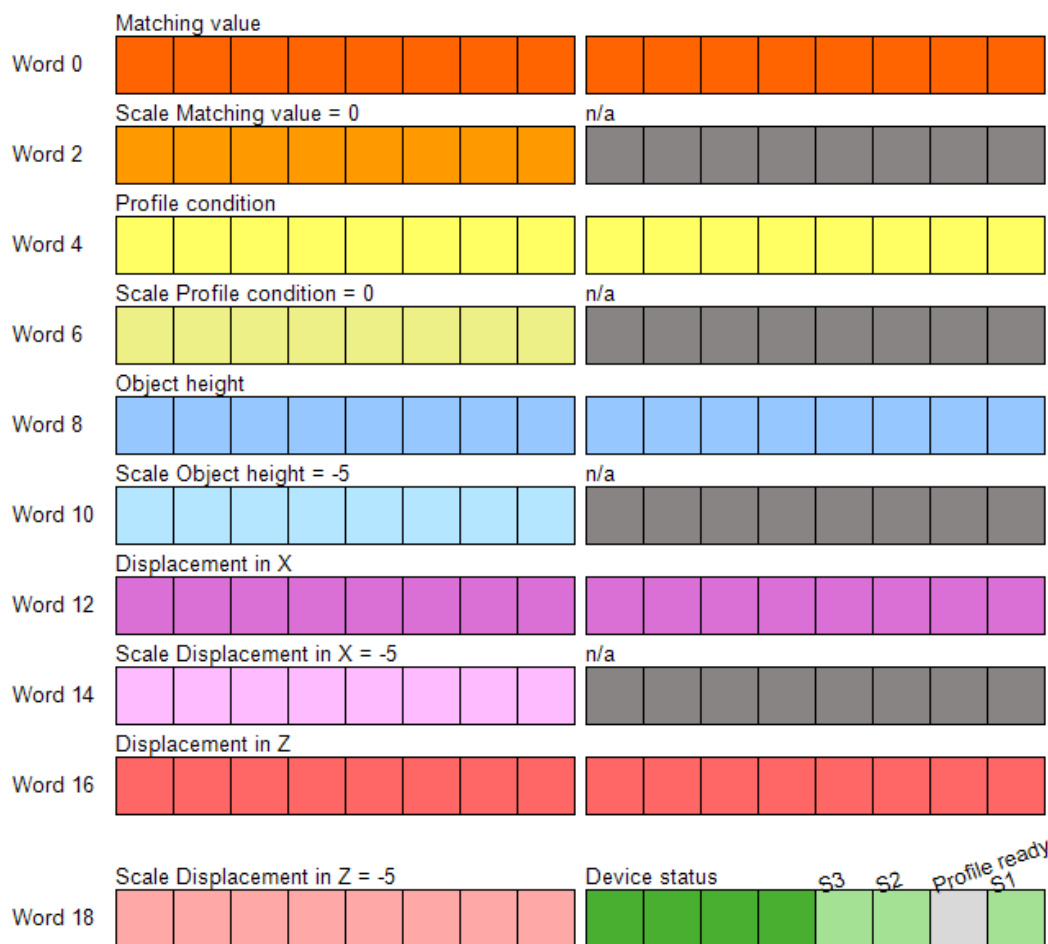
6 Observation

6.1 Process Data Input/Output

Process data input	RecordT (160 Bit)
Matching value	IntegerT (16 Bit)
Matching between reference profile and live profile [percentage]	
Value range [%]	(0 to 100) * 1
Profile condition	IntegerT (16 Bit)
Profile condition is the relative ratio of valid live profile measurement values	
Value range [%]	(0 to 100) * 1
Object height	IntegerT (16 Bit)
The object height is the difference of the global minimum and maximum Z-distance of the live profile	
Value range [mm]	(0 to 15990) * 0.01 32764 (NoData)
Displacement in X	IntegerT (16 Bit)
The displacement in X-direction is the horizontal shift between the live profile and reference profile	
Value range [mm]	(-10000 to 10000) * 0.01 32764 (NoData)
Displacement in Z	IntegerT (16 Bit)
The displacement in Z-direction is the vertical shift between the live profile and reference profile	
Value range [mm]	(-15991 to 15990) * 0.01 32764 (NoData)
Device status	UIntegerT (4 Bit)
Current device status, a copy of the parameter [Device Status, Index 36] in the process data channel	
Value range	0 (Device is OK) 1 (Maintenance required) 2 (Out of specification) 3 (Functional check) 4 (Failure)
S3	BooleanT
Triggered mode (ModE=0): S3=trigger, Continuous mode (ModE=1): S3=0	
Value range	false (OFF) true (On)
S2	BooleanT
Triggered mode (ModE=0): S2=ready/busy, Continuous mode (ModE=1): S2=inverted SSC1	
Value range	false (OFF) true (On)
Profile ready	BooleanT
Current status of the digital signal [Profile ready]	
Value range	false (OFF) true (On)
S1	BooleanT
S1 = SSC1	
Value range	false (OFF) true (On)



6 Observation



-Scale Matching value: A PLC function block calculates the 'Matching value' part of the process data (from WORD 0) into the unit [%]

-Scale Profile condition: A PLC function block calculates the 'Profile Condition' part of the process data (from WORD 4) into the unit [%]

-Scale Object height: A PLC function block calculates the 'Object height' part of the process data (from WORD 8) into the unit [m]

-Scale Displacement in X: A PLC function block calculates the 'Displacement in X' part of the process data (from WORD 12) into the unit [m]

-Scale Displacement in Z: A PLC function block calculates the 'Displacement in Z' part of the process data (from WORD 16) into the unit [m]



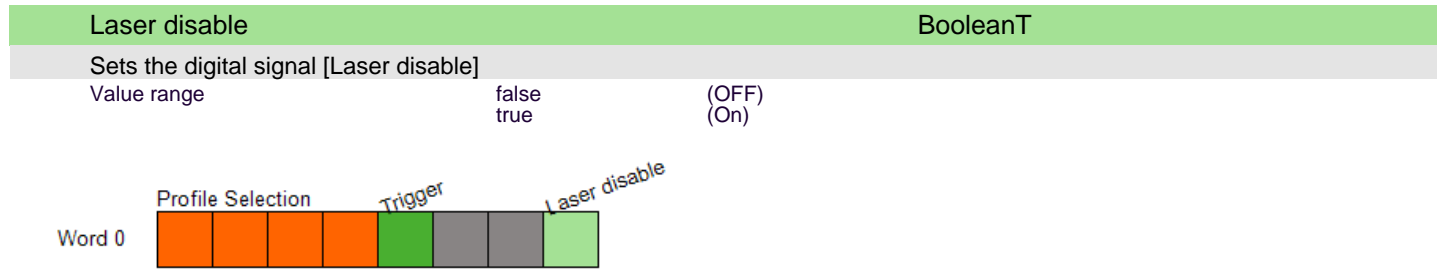
Process data displayed according device sort order.

Please note: Siemens PLCs swap the high and low byte when using byte addressing.

Process data output		RecordT (8 Bit)
Profile Selection		UIntegerT (4 Bit)
Select the active profile		
Value range	(0 to 10) * 1	
Trigger		BooleanT
Sets the digital signal [Trigger]		
Value range	false true	(OFF) (On)



6 Observation





7 Parameter

7.1 Output configuration

P-n	Index 500	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Output polarity for the switching outputs				
Factory setting	0	(PnP)		
Value range	0	(PnP)		
	1	(nPn)		

7.2 Digital output 1

SSC1 Param	Index 60	Subindex 0	RecordT (32 Bit)	ReadWrite
Switching signal channel 1, parameter				
SP1		Subindex 1	IntegerT (16 Bit)	
Setpoint 1				
Factory setting	90			
Value range [%]	(0 to 100) * 1			

SSC1 Config	Index 61	Subindex 0	RecordT (32 Bit)	ReadWrite
Switching signal channel 1, configuration				
Logic		Subindex 1	UIntegerT (8 Bit)	
Setpoint logic / State for target detected				
Factory setting	0	(High active)		
Value range	0	(High active)		
	1	(Low active)		

7.3 Signal

trG.S	Index 2201	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Select trigger source				
Factory setting	0	(HW(pin5))		
Value range	0	(HW(pin5))		
	1	(PDOOut)		

trG.D	Index 2202	Subindex 0	IntegerT (16 Bit)	ReadWrite
Select trigger delay				
Factory setting	0			
Value range [ms]	(0 to 500) * 10			

LAS.d	Index 2203	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Select Laser Disable source				
Factory setting	1	(PDOOut)		
Value range	0	(HW(pin5))		
	1	(PDOOut)		

Mrk.E	Index 2204	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Marker enable				
Factory setting	0	(OFF)		
Value range	0	(OFF)		
	1	(On)		



7 Parameter

Act.P	Index 2207	Subindex 0	UIntegerT (16 Bit)	ReadWrite
Currently stored profiles				
Factory setting	0			
Value range	(0 to 1023)			
Pr.SL	Index 2209	Subindex 0	UIntegerT (8 Bit)	ReadOnly
Currently selected profile				
Factory setting	1			
Value range	(0 to 10) * 1			
Pr.SS	Index 2208	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Profile select source				
Factory setting	0	(local)		
Value range	0	(local)		
	1	(PDOOut)		
SSC-Delay mode	Index 2062	Subindex 0	RecordT (16 Bit)	ReadWrite
Delay mode for each SSC				
SSC1		Subindex 1	UIntegerT (8 Bit)	
Delay mode for SSC1				
Factory setting	0	(no delay)		
Value range	0	(no delay)		
	4	(On Impulse)		

7.4 Profile 1

PrR.1	Index 2230	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 1 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			



7 Parameter

roi2.r		Subindex 6	IntegerT (16 Bit)
Right region of interest mark for ROI2			
Factory setting	35		
Value range [mm]	(-50 to 50) * 1		
MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0 1	(OFF) (On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0 1	(fixed) (floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.5 Profile 2

PrR.2	Index 2231	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 2 settings				



7 Parameter

int.T		Subindex 1	IntegerT (16 Bit)
Select integration time step			
Factory setting	0		
Value range	(0 to 10)		
Mt.tH		Subindex 2	IntegerT (16 Bit)
Current matching threshold			
Factory setting	90		
Value range [%]	(0 to 100) * 1		
roi1.L		Subindex 3	IntegerT (16 Bit)
Left region of interest mark for ROI1			
Factory setting	-35		
Value range [mm]	(-50 to 50) * 1		
roi1.r		Subindex 4	IntegerT (16 Bit)
Right region of interest mark for ROI1			
Factory setting	-15		
Value range [mm]	(-50 to 50) * 1		
roi2.L		Subindex 5	IntegerT (16 Bit)
Left region of interest mark for ROI2			
Factory setting	15		
Value range [mm]	(-50 to 50) * 1		
roi2.r		Subindex 6	IntegerT (16 Bit)
Right region of interest mark for ROI2			
Factory setting	35		
Value range [mm]	(-50 to 50) * 1		
MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0 1	(OFF) (On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0 1	(fixed) (floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		



7 Parameter

SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.6 Profile 3

PrR.3	Index 2232	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 3 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			
roi2.r		Subindex 6	IntegerT (16 Bit)	
Right region of interest mark for ROI2				
Factory setting	35			
Value range [mm]	(-50 to 50) * 1			
MroE		Subindex 7	UIntegerT (8 Bit)	
MultiROI enable (ROI1 / ROI2)				
Factory setting	0	(OFF)		
Value range	0	(OFF)		
	1	(On)		



7 Parameter

roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0	(fixed)	
	1	(floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.7 Profile 4

PrR.4	Index 2233	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 4 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			



7 Parameter

roi1.L		Subindex 3	IntegerT (16 Bit)
Left region of interest mark for ROI1			
Factory setting	-35		
Value range [mm]	(-50 to 50) * 1		
roi1.r		Subindex 4	IntegerT (16 Bit)
Right region of interest mark for ROI1			
Factory setting	-15		
Value range [mm]	(-50 to 50) * 1		
roi2.L		Subindex 5	IntegerT (16 Bit)
Left region of interest mark for ROI2			
Factory setting	15		
Value range [mm]	(-50 to 50) * 1		
roi2.r		Subindex 6	IntegerT (16 Bit)
Right region of interest mark for ROI2			
Factory setting	35		
Value range [mm]	(-50 to 50) * 1		
MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0	(OFF)	
	1	(On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0	(fixed)	
	1	(floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		



7 Parameter

Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.8 Profile 5

PrR.5	Index 2234	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 5 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			
roi2.r		Subindex 6	IntegerT (16 Bit)	
Right region of interest mark for ROI2				
Factory setting	35			
Value range [mm]	(-50 to 50) * 1			
MroE		Subindex 7	UIntegerT (8 Bit)	
MultiROI enable (ROI1 / ROI2)				
Factory setting	0	(OFF)		
Value range	0 1	(OFF) (On)		
roi.t		Subindex 8	IntegerT (16 Bit)	
Top border of ROI				
Factory setting	150			
Value range [mm]	(0 to 150) * 1			
roi.B		Subindex 9	IntegerT (16 Bit)	
Bottom border of ROI				
Factory setting	0			
Value range [mm]	(0 to 150) * 1			



7 Parameter

roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0	(fixed)	
	1	(floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.9 Profile 6

PrR.6	Index 2235	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 6 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			



7 Parameter

roi2.L		Subindex 5	IntegerT (16 Bit)
Left region of interest mark for ROI2			
Factory setting	15		
Value range [mm]	(-50 to 50) * 1		
roi2.r		Subindex 6	IntegerT (16 Bit)
Right region of interest mark for ROI2			
Factory setting	35		
Value range [mm]	(-50 to 50) * 1		
MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0 1	(OFF) (On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0 1	(fixed) (floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		



7 Parameter

7.10 Profile 7

PrR.7	Index 2236	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 7 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			
roi2.r		Subindex 6	IntegerT (16 Bit)	
Right region of interest mark for ROI2				
Factory setting	35			
Value range [mm]	(-50 to 50) * 1			
MroE		Subindex 7	UIntegerT (8 Bit)	
MultiROI enable (ROI1 / ROI2)				
Factory setting	0	(OFF)		
Value range	0 1	(OFF) (On)		
roi.t		Subindex 8	IntegerT (16 Bit)	
Top border of ROI				
Factory setting	150			
Value range [mm]	(0 to 150) * 1			
roi.B		Subindex 9	IntegerT (16 Bit)	
Bottom border of ROI				
Factory setting	0			
Value range [mm]	(0 to 150) * 1			
roi.M		Subindex 10	UIntegerT (8 Bit)	
Select ROI mode				
Factory setting	1	(floating)		
Value range	0 1	(fixed) (floating)		
SEA.L		Subindex 11	IntegerT (16 Bit)	
Left border of search area				
Factory setting	-50			
Value range [mm]	(-50 to 50) * 1			



7 Parameter

SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.11 Profile 8

PrR.8	Index 2237	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 8 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			
roi2.r		Subindex 6	IntegerT (16 Bit)	
Right region of interest mark for ROI2				
Factory setting	35			
Value range [mm]	(-50 to 50) * 1			



7 Parameter

MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0 1	(OFF) (On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0 1	(fixed) (floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.12 Profile 9

PrR.9	Index 2238	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 9 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			



7 Parameter

Mt.tH		Subindex 2	IntegerT (16 Bit)
Current matching threshold			
Factory setting	90		
Value range [%]	(0 to 100) * 1		
roi1.L		Subindex 3	IntegerT (16 Bit)
Left region of interest mark for ROI1			
Factory setting	-35		
Value range [mm]	(-50 to 50) * 1		
roi1.r		Subindex 4	IntegerT (16 Bit)
Right region of interest mark for ROI1			
Factory setting	-15		
Value range [mm]	(-50 to 50) * 1		
roi2.L		Subindex 5	IntegerT (16 Bit)
Left region of interest mark for ROI2			
Factory setting	15		
Value range [mm]	(-50 to 50) * 1		
roi2.r		Subindex 6	IntegerT (16 Bit)
Right region of interest mark for ROI2			
Factory setting	35		
Value range [mm]	(-50 to 50) * 1		
MroE		Subindex 7	UIntegerT (8 Bit)
MultiROI enable (ROI1 / ROI2)			
Factory setting	0	(OFF)	
Value range	0	(OFF)	
	1	(On)	
roi.t		Subindex 8	IntegerT (16 Bit)
Top border of ROI			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0	(fixed)	
	1	(floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		



7 Parameter

SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.13 Profile 10

PrR.10	Index 2239	Subindex 0	RecordT (240 Bit)	ReadWrite
Profile 10 settings				
int.T		Subindex 1	IntegerT (16 Bit)	
Select integration time step				
Factory setting	0			
Value range	(0 to 10)			
Mt.tH		Subindex 2	IntegerT (16 Bit)	
Current matching threshold				
Factory setting	90			
Value range [%]	(0 to 100) * 1			
roi1.L		Subindex 3	IntegerT (16 Bit)	
Left region of interest mark for ROI1				
Factory setting	-35			
Value range [mm]	(-50 to 50) * 1			
roi1.r		Subindex 4	IntegerT (16 Bit)	
Right region of interest mark for ROI1				
Factory setting	-15			
Value range [mm]	(-50 to 50) * 1			
roi2.L		Subindex 5	IntegerT (16 Bit)	
Left region of interest mark for ROI2				
Factory setting	15			
Value range [mm]	(-50 to 50) * 1			
roi2.r		Subindex 6	IntegerT (16 Bit)	
Right region of interest mark for ROI2				
Factory setting	35			
Value range [mm]	(-50 to 50) * 1			
MroE		Subindex 7	UIntegerT (8 Bit)	
MultiROI enable (ROI1 / ROI2)				
Factory setting	0		(OFF)	
Value range	0 1		(OFF) (On)	
roi.t		Subindex 8	IntegerT (16 Bit)	
Top border of ROI				
Factory setting	150			
Value range [mm]	(0 to 150) * 1			



7 Parameter

roi.B		Subindex 9	IntegerT (16 Bit)
Bottom border of ROI			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
roi.M		Subindex 10	UIntegerT (8 Bit)
Select ROI mode			
Factory setting	1	(floating)	
Value range	0 1	(fixed) (floating)	
SEA.L		Subindex 11	IntegerT (16 Bit)
Left border of search area			
Factory setting	-50		
Value range [mm]	(-50 to 50) * 1		
SEA.r		Subindex 12	IntegerT (16 Bit)
Right border of search area			
Factory setting	50		
Value range [mm]	(-50 to 50) * 1		
SEA.t		Subindex 13	IntegerT (16 Bit)
Top border of search area			
Factory setting	150		
Value range [mm]	(0 to 150) * 1		
SEA.B		Subindex 14	IntegerT (16 Bit)
Bottom border of search area			
Factory setting	0		
Value range [mm]	(0 to 150) * 1		
Mt.to		Subindex 15	IntegerT (16 Bit)
Current matching tolerance range			
Factory setting	5		
Value range	(1 to 10)		
FS.rF		Subindex 16	IntegerT (16 Bit)
Current profile data filter			
Factory setting	2		
Value range	(0 to 3)		

7.14 Profile 1 statistic

Pr.S.1	Index 2220	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 0				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			



7 Parameter

7.15 Profile 2 statistic

PrS.2	Index 2221	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 1				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.16 Profile 3 statistic

PrS.3	Index 2222	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 2				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.17 Profile 4 statistic

PrS.4	Index 2223	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 3				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			



7 Parameter

N.trG		Subindex 3	IntegerT (32 Bit)
Total number of triggers			
Factory setting	0		
Value range	(0 to 2147483647)		

7.18 Profile 5 statistic

PrS.5	Index 2224	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 4				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.19 Profile 6 statistic

PrS.6	Index 2225	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 5				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.20 Profile 7 statistic

PrS.7	Index 2226	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 6				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			



7 Parameter

N.FAi		Subindex 2	IntegerT (32 Bit)
Number of failed matches			
Factory setting	0		
Value range	(0 to 2147483647)		
N.trG		Subindex 3	IntegerT (32 Bit)
Total number of triggers			
Factory setting	0		
Value range	(0 to 2147483647)		

7.21 Profile 8 statistic

PrS.8	Index 2227	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 7				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.22 Profile 9 statistic

PrS.9	Index 2228	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 8				
N.PAS		Subindex 1	IntegerT (32 Bit)	
Number of passed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.FAi		Subindex 2	IntegerT (32 Bit)	
Number of failed matches				
Factory setting	0			
Value range	(0 to 2147483647)			
N.trG		Subindex 3	IntegerT (32 Bit)	
Total number of triggers				
Factory setting	0			
Value range	(0 to 2147483647)			

7.23 Profile 10 statistic

PrS.10	Index 2229	Subindex 0	RecordT (96 Bit)	ReadOnly
Profile statistic Ch 9				



7 Parameter

N.PAS		Subindex 1	IntegerT (32 Bit)
Number of passed matches			
Factory setting	0		
Value range	(0 to 2147483647)		
N.FAi		Subindex 2	IntegerT (32 Bit)
Number of failed matches			
Factory setting	0		
Value range	(0 to 2147483647)		
N.trG		Subindex 3	IntegerT (32 Bit)
Total number of triggers			
Factory setting	0		
Value range	(0 to 2147483647)		

7.24 Setting of the sensor display

diS.R	Index 801	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Current display rotation clockwise				
Factory setting	0	(0 °)		
Value range	0 2	(0 °) (180 °)		

diS.B	Index 802	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Current display brightness				
Factory setting	1	(On)		
Value range	0 1	(OFF) (On)		

coLr	Index 554	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Colour configuration of the display				
Factory setting	5	(G1ou / Displayed value green when OUT1 switches)		
Value range	4 5 16 17 18	(r1ou / Displayed value red when OUT1 switches) (G1ou / Displayed value green when OUT1 switches) (bk/wh / Displayed value black and white) (red / Displayed value red) (green / Displayed value green)		

Loc	Index 550	Subindex 0	UIntegerT (8 Bit)	ReadWrite
[Loc] locks the local user interface to prevent unintentional changes, [Loc] is resettable at the device				
Factory setting	1	(uLoc)		
Value range	0 1	(Loc) (uLoc)		



7 Parameter

7.25 Setup

LanG	Index 923	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Select device menu language				
Factory setting	0	(EN)		
Value range	0	(EN)		
	1	(DE)		
	2	(IT)		
	3	(FR)		
	4	(ES)		
	5	(PT)		
	6	(JA)		
	7	(KO)		
	8	(RU)		
	9	(ZH)		

Device Access Locks	Index 12	Subindex 0	RecordT (16 Bit)	ReadWrite
The access to the device parameters can be restricted by setting appropriate flags within this parameter.				
Local Parameterization		bitOffset 2	BooleanT	
This lock prevents the device settings from being changed via local operating elements on the device.				
Factory setting	false	(Unlocked)		
Value range	true	(Locked)		
	false	(Unlocked)		

ModE	Index 684	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Operating mode				
Factory setting	1	(Continuous mode)		
Value range	0	(Triggered mode)		
	1	(Continuous mode)		

MDC Descr	Index 16512	Subindex 0	RecordT (88 Bit)	ReadOnly
Description of the measurement data channel				
Lower limit		Subindex 1	IntegerT (32 Bit)	
Lower value measurement range				
Factory setting	0	(0)		
Value range	0	(0)		
Upper limit		Subindex 2	IntegerT (32 Bit)	
Upper value measurement range				
Factory setting	100	(100)		
Value range	100	(100)		
Unit code		Subindex 3	UIntegerT (16 Bit)	
Unit code of the measurement data				
Factory setting	1342	(%)		
Value range	1342	(%)		
Scale		Subindex 4	IntegerT (8 Bit)	
Range shifting (10 scale)				
Factory setting	0	(0)		
Value range	0	(0)		

MDC 2 Descr	Index 16513	Subindex 0	RecordT (88 Bit)	ReadOnly
Description of the 2nd measurement data channel				
Lower limit		Subindex 1	IntegerT (32 Bit)	
Lower value measurement range				
Factory setting	0	(0)		
Value range	0	(0)		



7 Parameter

Upper limit		Subindex 2	IntegerT (32 Bit)
Upper value measurement range			
Factory setting	100	(100)	
Value range	100	(100)	
Unit code		Subindex 3	UIntegerT (16 Bit)
Unit code of the measurement data			
Factory setting	1342	(%)	
Value range	1342	(%)	
Scale		Subindex 4	IntegerT (8 Bit)
Range shifting (10 scale)			
Factory setting	0	(0)	
Value range	0	(0)	

MDC 3 Descr	Index 16514	Subindex 0	RecordT (88 Bit)	ReadOnly
Description of the 3rd measurement data channel				
Lower limit		Subindex 1	IntegerT (32 Bit)	
Lower value measurement range				
Factory setting	0	(0)		
Value range	0	(0)		
Upper limit		Subindex 2	IntegerT (32 Bit)	
Upper value measurement range				
Factory setting	15990	(15990)		
Value range	15990	(15990)		
Unit code		Subindex 3	UIntegerT (16 Bit)	
Unit code of the measurement data				
Factory setting	1010	(m)		
Value range	1010	(m)		
Scale		Subindex 4	IntegerT (8 Bit)	
Range shifting (10 scale)				
Factory setting	-5	(-5)		
Value range	-5	(-5)		

MDC 4 Descr	Index 16515	Subindex 0	RecordT (88 Bit)	ReadOnly
Description of the 4th measurement data channel				
Lower limit		Subindex 1	IntegerT (32 Bit)	
Lower value measurement range				
Factory setting	-10000	(-10000)		
Value range	-10000	(-10000)		
Upper limit		Subindex 2	IntegerT (32 Bit)	
Upper value measurement range				
Factory setting	10000	(10000)		
Value range	10000	(10000)		
Unit code		Subindex 3	UIntegerT (16 Bit)	
Unit code of the measurement data				
Factory setting	1010	(m)		
Value range	1010	(m)		
Scale		Subindex 4	IntegerT (8 Bit)	
Range shifting (10 scale)				
Factory setting	-5	(-5)		
Value range	-5	(-5)		



7 Parameter

BLOB ID	Index 49	Subindex 0	IntegerT (16 Bit)	ReadOnly
ID of the BLOB that is currently transferred				
Factory setting	0	(Idle)		
Value range	0	(Idle)		
	-4096	(Read_DataSet1_BIN)		
	4096	(Write_DataSet1_BIN)		
	-4097	(Read_DataSet2_BIN)		
	4097	(Write_DataSet2_BIN)		
	-4098	(Read_DataSet3_BIN)		
	4098	(Write_DataSet3_BIN)		
	-4099	(Read_DataSet4_BIN)		
	4099	(Write_DataSet4_BIN)		
	-4100	(Read_DataSet5_BIN)		
	4100	(Write_DataSet5_BIN)		
	-4101	(Read_DataSet6_BIN)		
	4101	(Write_DataSet6_BIN)		
	-4102	(Read_DataSet7_BIN)		
	4102	(Write_DataSet7_BIN)		
	-4103	(Read_DataSet8_BIN)		
	4103	(Write_DataSet8_BIN)		
	-4104	(Read_DataSet9_BIN)		
	4104	(Write_DataSet9_BIN)		
	-4105	(Read_DataSet10_BIN)		
	4105	(Write_DataSet10_BIN)		



8 Diagnosis

8.1 Diagnosis

Device Status	Index 36	Subindex 0	UIntegerT (8 Bit)	ReadOnly
Indicator for the current device condition and diagnosis state.				
Factory setting	0	(Device is OK)		
Value range	0	(Device is OK)		
	1	(Maintenance required)		
	2	(Out of specification)		
	3	(Functional check)		
	4	(Failure)		
	(5 to 255)	(Reserved)		
Detailed Device Status	Index 37	Subindex 0	OctetStringT (3 Byte) [8]	ReadOnly
List of all currently pending events in the device.				
Factory setting	0x00,0x00,0x00			
Power cycles	Index 541	Subindex 0	IntegerT (32 Bit)	ReadOnly
Number of power cycles since delivery				
Factory setting	0			
Value range	(0 to 2000000) * 1			
Operating hours	Index 542	Subindex 0	IntegerT (32 Bit)	ReadOnly
Counter of the operating hours since delivery				
Factory setting	0			
Value range [h]	(0 to 2000000) * 1			
Active Events	Index 545	Subindex 0	RecordT (32 Bit)	ReadOnly
Bit mask for current pending events				
Bit_31		bitOffset 31	BooleanT	
Test Event 2. Device Status = 1 (Maintenance required)				
Factory setting	0	(noEv)		
Value range	0	(noEv)		
	1	(0x8DFF)		
Bit_30		bitOffset 30	BooleanT	
Test Event 1. Device Status = 1 (Maintenance required)				
Factory setting	0	(noEv)		
Value range	0	(noEv)		
	1	(0x8DFE)		
Bit_29		bitOffset 29	BooleanT	
Flash sequence active. Device Status = 1 (Maintenance required)				
Factory setting	0	(noEv)		
Value range	0	(noEv)		
	1	(0x8CDB)		
Bit_11		bitOffset 11	BooleanT	
Device temperature under-run				
Factory setting	0	(noEv)		
Value range	0	(noEv)		
	1	(0x4220)		
Bit_10		bitOffset 10	BooleanT	
Device temperature over-run				
Factory setting	0	(noEv)		
Value range	0	(noEv)		
	1	(0x4210)		



8 Diagnosis

Bit_2		bitOffset 2	BooleanT
Short circuit			
Factory setting	0	(noEv)	
Value range	0	(noEv)	
	1	(0x7710)	

8.1.1 Temperature

Internal temperature	Index 543	Subindex 0	IntegerT (16 Bit)	ReadOnly
Current internal temperature of the device				
Factory setting	0			
Value range [°C]	(-40 to 85) * 1			



9 Events

Code	Device status	PQ*	Class	Name	Description
0x4210 16912d	2 (Out of specification)	valid	Warning	Device temperature overrun	Clear source of heat
0x4220 16928d	2 (Out of specification)	valid	Warning	Device temperature underrun	Insulate device
0x7710 30480d	3 (Functional check)	valid	Error	Short circuit	Check installation
0x8CDB 36059d	1 (Maintenance required)	valid	Warning	Flash sequence active. Device Status = 1 (Maintenance required)	Deactivate flash sequence
0x8DFE 36350d	1 (Maintenance required)	valid	Warning	Test Event 1. Device Status = 1 (Maintenance required)	Event appears by setting index 2 to value 240, Event disappears by setting index 2 to value 241
0x8DFF 36351d	1 (Maintenance required)	valid	Warning	Test Event 2. Device Status = 1 (Maintenance required)	Event appears by setting index 2 to value 242, Event disappears by setting index 2 to value 243



Events are raised by the device itself to notify irregular device states
PQ* = Process data quality



10 Error types

Code	Name	Description
0x8000 32768d	Device application error - no details	Service was denied by the technology-specific application. No detailed root-cause information is available.
0x8011 32785d	Index not available	Read or write access attempt to a non-existing index.
0x8012 32786d	Subindex not available	Read or write access attempt to a non-existing subindex of an existing index.
0x8020 32800d	Service temporarily not available	Parameter not accessible due to the current state of the technology-specific application.
0x8021 32801d	Service temporarily unavailable - local control	Parameter not accessible. The device is currently in an ongoing, locally controlled operation.
0x8022 32802d	Service temporarily unavailable - device control	Parameter not accessible. The technology-specific application is currently in a remotely triggered operation.
0x8023 32803d	Access denied	Write access to a read-only parameter or read access to write-only parameter.
0x8030 32816d	Parameter value out of range	Written parameter value is outside of the permitted value range.
0x8031 32817d	Parameter value above limit	Written parameter value is above its specified value range
0x8032 32818d	Parameter value below limit	Written parameter value is below its specified value range
0x8033 32819d	Parameter length overrun	Written parameter is longer than specified.
0x8034 32820d	Parameter length underrun	Written parameter is shorter than specified.
0x8035 32821d	Function unavailable	Written command is not supported by the technology-specific application
0x8036 32822d	Function temporarily unavailable	Written command is unavailable due to the current state of the technology-specific application.
0x8040 32832d	Invalid parameter set	Written single parameter value collides with other existing parameter settings.
0x8041 32833d	Inconsistent parameter set	Parameter set inconsistencies at the end of block parameter transfer. Device plausibility check failed.
0x8082 32898d	Application not ready	Read or write access denied. The technology-specific application is temporarily unavailable.



Error types are used for the ISDU response. Values unequal '0' indicate the cause of a failed ISDU read or write service.