

# **O**IO-Link

# **IO-Link Interface Description**

DV2900 DV2910 DV2920 DV2930

IODD-PDFCreator V 2.2.0.47 ifm-0005FD-20220914-IODD1.1, V1.3 ifm electronic gmbh ΕN



#### 2 Device variant

DV2900 Multi-Color Light, with bracket, without buzzer DV2910	1	
Multi-Color Light, with bracket, with buzzer	$2 \underbrace{4}_{5}^{4}_{5}$	
Multi-Color Light, without bracket, without buzzer	$ \begin{array}{c}                                     $	
DV2930 Multi-Color Light, without bracket, with buzzer		

Vendor ID	310 / Bytes 1-54 (hex: 01-36)
Device ID	1533 / Bytes 0-5-253 (hex: 00-05-FD)
Bit rate	COM2
Minimum cycle time	2,7 ms
SIO mode supported	Yes
Block parameterization	Yes
Data storage	Yes
Supported profiles	Identification and Diagnosis



#### 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

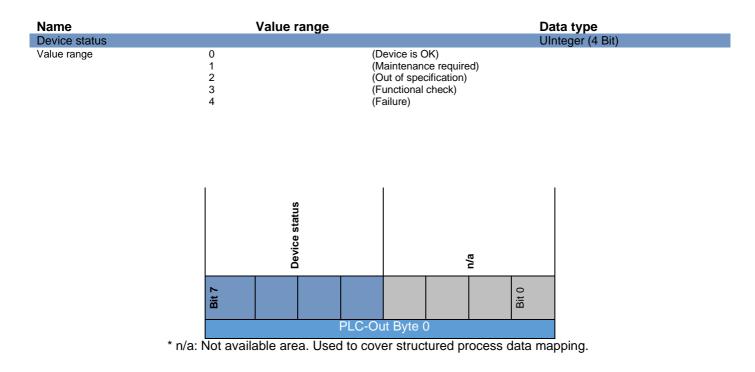


For process value update rate, as well as further information concerning sensor performance, see datasheet.



#### ProcessDataIn @ Operating mode = Signal Light Mode

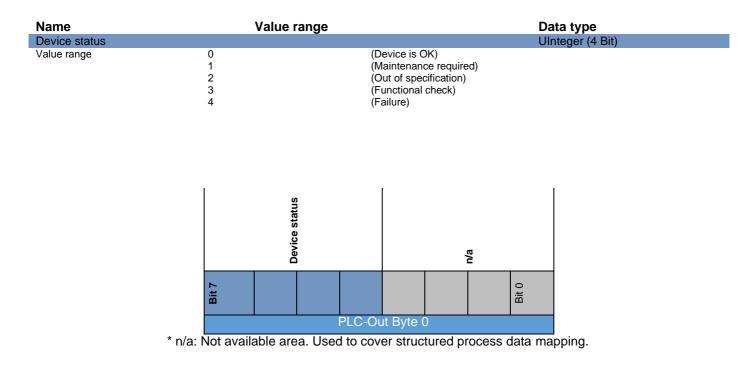
#### RecordT (8 Bit)





#### ProcessDataIn @ Operating mode = Level Mode

#### RecordT (8 Bit)

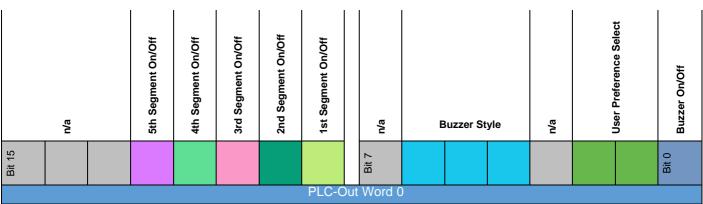




#### ProcessDataOut @ Operating mode = Signal Light Mode

RecordT (16 Bit)

Name	Value range		Data type
Buzzer On/Off			BooleanT
Value range	false	(Disable)	
-	true	(Enable)	
User Preference Select			UIntegerT (2 Bit)
Value range	0	(Not use)	
	1	(Bank 1 use)	
	2	(Bank 2 use)	
	3	(Bank 3 use)	
Buzzer Style			UIntegerT (3 Bit)
Value range	0	(Buzzer No.1 (off))	
	1	(Buzzer No.2)	
	2	(Buzzer No.3)	
	3	(Buzzer No.4)	
	4	(Buzzer No.5)	
	5	(Buzzer No.6)	
	6	(Buzzer No.7)	
	7	(Buzzer No.8)	
1st Segment On/Off			BooleanT
Value range	false	(off)	
	true	(on)	
2nd Segment On/Off			BooleanT
Value range	false	(off)	
	true	(on)	
3rd Segment On/Off			BooleanT
Value range	false	(off)	
	true	(on)	
4th Segment On/Off			BooleanT
Value range	false	(off)	
	true	(on)	
5th Segment On/Off			BooleanT
Value range	false	(off)	
č	true	(on)	



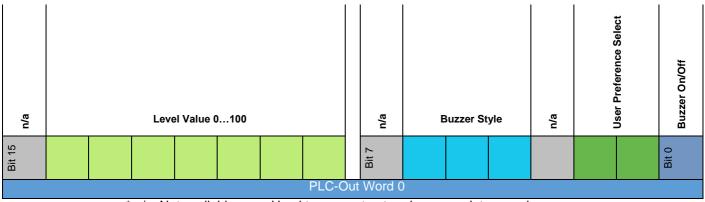
\* n/a: Not available area. Used to cover structured process data mapping.



#### ProcessDataOut @ Operating mode = Level Mode

RecordT (16 Bit)

Name	Value range		Data type
Buzzer On/Off			BooleanT
Value range	false true	(Disable) (Enable)	
User Preference Select		()	UIntegerT (2 Bit)
Value range	0 1 2 3	(Not use) (Bank 1 use) (Bank 2 use) (Bank 3 use)	
Buzzer Style			UIntegerT (3 Bit)
Value range	0 1 2 3 4 5 6 7	(Buzzer No.1 (off)) (Buzzer No.2) (Buzzer No.3) (Buzzer No.4) (Buzzer No.5) (Buzzer No.6) (Buzzer No.7) (Buzzer No.8)	
Level Value			UIntegerT (7 Bit)
Value range	0100		



\* n/a: Not available area. Used to cover structured process data mapping.



Parameter	Index	Subindex	Туре	Factory setting	page
Vendor name	16		StringT (19 Byte)	ifm electronic gmbh	11
Vendor text	17		StringT (11 Byte)	www.ifm.com	11
Product Name	18		StringT (16 Byte)		11
Product ID	19		StringT (16 Byte)		11
Product Text	20		StringT (64 Byte)		11
Serial Number	21		StringT (16 Byte)		11
Hardware Revision	22		StringT (2 Byte)		11
Firmware Revision	23		StringT (4 Byte)		11
Application-specific Tag	24		StringT (32 Byte)	***	11
Function Tag	25		StringT (32 Byte)	***	11
Location Tag	26		StringT (32 Byte)	***	11
Device Status	36		UIntegerT (8 Bit)	0 (Device is OK)	41
Detailed Device Status	37		OctetStringT (3 Byte) [5]		41
ProcessDataIn @ Operati	40		RecordT (8 Bit)		
Device Status	40	1	UIntegerT (4 Bit)		
ProcessDataOut @ Operat	41		RecordT (16 Bit)		
Buzzer On/Off	41	1	BooleanT		
User Preference Sel	41	2	UIntegerT (2 Bit)		
Buzzer Style	41	3	UIntegerT (3 Bit)		
Level Value	41	4	UIntegerT (7 Bit)		
Operating Hours	542		IntegerT (32 Bit)		41
Internal Temperature	543		IntegerT (16 Bit)		41
Active Events	545		RecordT (32 Bit)		41
ParaConfig Fault Collec	546		ArrayT	0	41
Operating mode	684		IntegerT (8 Bit)	0 (Signal Light Mode)	12
Segment colors	12000		RecordT (40 Bit)		12
Segment 1	12000	1	IntegerT (8 Bit)	1 (Red)	
Segment 2	12000	2	IntegerT (8 Bit)	3 (Amber)	
Segment 3	12000	3	IntegerT (8 Bit)	2 (Green)	
Segment 4	12000	4	IntegerT (8 Bit)	7 (White)	
Segment 5	12000	5	IntegerT (8 Bit)	4 (Blue)	
Segment appearance	12001		RecordT (40 Bit)		13
Segment 1	12001	1	IntegerT (8 Bit)	0 (Continuous)	
Segment 2	12001	2	IntegerT (8 Bit)	0 (Continuous)	
Segment 3	12001	3	IntegerT (8 Bit)	0 (Continuous)	
Segment 4	12001	4	IntegerT (8 Bit)	0 (Continuous)	
Segment 5	12001	5	IntegerT (8 Bit)	0 (Continuous)	
LED Intensity	12002		IntegerT (8 Bit)	70	13
Buzzer Intensity	12003		IntegerT (8 Bit)	100	13
User preference color B	12006		RecordT (160 Bit)		18
1st LED	12006	1	IntegerT (8 Bit)	0 (Off)	
2nd LED	12006	2	IntegerT (8 Bit)	0 (Off)	
3rd LED	12006	3	IntegerT (8 Bit)	0 (Off)	
4th LED	12006	4	IntegerT (8 Bit)	0 (Off)	
5th LED	12006		IntegerT (8 Bit)	0 (Off)	



Parameter	Index	Subindex	Type	Factory setting	page
6th LED		6	IntegerT (8 Bit)	0 (Off)	page
7th LED		0 7	IntegerT (8 Bit)	0 (Off)	
8th LED		8			
9th LED		9	IntegerT (8 Bit)	0 (Off)	
10th LED	12006	-	IntegerT (8 Bit)	0 (Off)	
		10	IntegerT (8 Bit)	0 (Off)	
11th LED		11	IntegerT (8 Bit)	0 (Off)	
12th LED		12	IntegerT (8 Bit)	0 (Off)	
13th LED		13	IntegerT (8 Bit)	0 (Off)	
14th LED		14	IntegerT (8 Bit)	0 (Off)	
15th LED	12006	15	IntegerT (8 Bit)	0 (Off)	
16th LED	12006	16	IntegerT (8 Bit)	0 (Off)	
17th LED	12006	17	IntegerT (8 Bit)	0 (Off)	
18th LED	12006	18	IntegerT (8 Bit)	0 (Off)	
19th LED	12006	19	IntegerT (8 Bit)	0 (Off)	
20th LED	12006	20	IntegerT (8 Bit)	0 (Off)	
User preference color B	12007		RecordT (160 Bit)		23
1st LED	12007	1	IntegerT (8 Bit)	0 (Off)	
2nd LED	12007	2	IntegerT (8 Bit)	0 (Off)	
3rd LED	12007	3	IntegerT (8 Bit)	0 (Off)	
4th LED	12007	4	IntegerT (8 Bit)	0 (Off)	
5th LED	12007	5	IntegerT (8 Bit)	0 (Off)	
6th LED	12007	6	IntegerT (8 Bit)	0 (Off)	
7th LED	12007	7	IntegerT (8 Bit)	0 (Off)	
8th LED	12007	8	IntegerT (8 Bit)	0 (Off)	
9th LED	12007	9	IntegerT (8 Bit)	0 (Off)	
10th LED	12007	10	IntegerT (8 Bit)	0 (Off)	
11th LED	12007	11	IntegerT (8 Bit)	0 (Off)	
12th LED	12007	12	IntegerT (8 Bit)	0 (Off)	
13th LED	12007	13	IntegerT (8 Bit)	0 (Off)	
14th LED	12007	14	IntegerT (8 Bit)	0 (Off)	
15th LED	12007	15	IntegerT (8 Bit)	0 (Off)	
16th LED	12007	16	IntegerT (8 Bit)	0 (Off)	
17th LED	12007	17	IntegerT (8 Bit)	0 (Off)	
18th LED	12007		IntegerT (8 Bit)	0 (Off)	
19th LED		19	IntegerT (8 Bit)	0 (Off)	
20th LED	12007		IntegerT (8 Bit)	0 (Off)	
User preference color B	12008		RecordT (160 Bit)		28
1st LED	12008	1	IntegerT (8 Bit)	0 (Off)	
2nd LED	12008		IntegerT (8 Bit)	0 (Off)	
3rd LED	12008		IntegerT (8 Bit)	0 (Off)	
4th LED		4	IntegerT (8 Bit)	0 (Off)	
5th LED	12008		IntegerT (8 Bit)	0 (Off)	
6th LED		6	IntegerT (8 Bit)	0 (Off)	
7th LED					
		7 o	IntegerT (8 Bit)	0 (Off)	
8th LED	12008	0	IntegerT (8 Bit)	0 (Off)	



Parameter	Index	Subindex		Factory setting	page
9th LED		9	IntegerT (8 Bit)	0 (Off)	page
10th LED	12008	10	IntegerT (8 Bit)	0 (Off)	
11th LED	12008	11	IntegerT (8 Bit)	0 (Off)	
12th LED	12008	12	IntegerT (8 Bit)	0 (Off)	
13th LED	12008	13	IntegerT (8 Bit)	0 (Off)	
14th LED	12008	14	IntegerT (8 Bit)	0 (Off)	
15th LED	12008	15	IntegerT (8 Bit)	0 (Off)	
16th LED	12008	16	IntegerT (8 Bit)	0 (Off)	
17th LED	12008	18	IntegerT (8 Bit)	0 (Off)	
18th LED	12008	18	IntegerT (8 Bit)	0 (Off)	
19th LED	12008	19	IntegerT (8 Bit)	0 (Off)	
20th LED	12000	20	IntegerT (8 Bit)	0 (Off)	
Select user color	12000	20	IntegerT (8 Bit)	7	29
Size of segment	12009		RecordT (40 Bit)	T	29
Segment 1		1	IntegerT (8 Bit)	4	29
Segment 2	12010	-	IntegerT (8 Bit)	4	
5	12010	3		4	
Segment 3			IntegerT (8 Bit)		
Segment 4		4	IntegerT (8 Bit)	4	
Segment 5		5	IntegerT (8 Bit)	4 0 (Disable)	00
Blank between Segments	12011		UIntegerT (8 Bit)	0 (Disable)	29
Direction of flow	12012		IntegerT (8 Bit)	0 (Bottom up)	29
Level meter thresholds	12013		RecordT (160 Bit)	<u>^</u>	31
1st LED		1	IntegerT (8 Bit)	0	
2nd LED		2	IntegerT (8 Bit)	5	
3rd LED	12013	3	IntegerT (8 Bit)	10	
4th LED		4	IntegerT (8 Bit)	15	
5th LED	12013	5	IntegerT (8 Bit)	20	
6th LED		6	IntegerT (8 Bit)	25	
7th LED	12013		IntegerT (8 Bit)	30	
8th LED	12013		IntegerT (8 Bit)	35	
9th LED	12013		IntegerT (8 Bit)	40	
10th LED	12013		IntegerT (8 Bit)	45	
11th LED	12013		IntegerT (8 Bit)	50	
12th LED	12013		IntegerT (8 Bit)	55	
13th LED	12013		IntegerT (8 Bit)	60	
14th LED	12013		IntegerT (8 Bit)	65	
15th LED	12013		IntegerT (8 Bit)	70	
16th LED	12013		IntegerT (8 Bit)	75	
17th LED	12013		IntegerT (8 Bit)	80	
18th LED	12013		IntegerT (8 Bit)	85	
19th LED	12013		IntegerT (8 Bit)	90	
20th LED	12013	20	IntegerT (8 Bit)	95	
LED Colors	12014		RecordT (160 Bit)		36
1st LED	12014	1	IntegerT (8 Bit)	13	
2nd LED	12014	2	IntegerT (8 Bit)	13	



Parameter	Index S	ubindex Type	Factory setting	page
3rd LED	12014 3	IntegerT (8 Bit		
4th LED	12014 4	IntegerT (8 Bit	t) 13	
5th LED	12014 5	IntegerT (8 Bit	t) 11	
6th LED	12014 6	IntegerT (8 Bit	t) 11	
7th LED	12014 7	IntegerT (8 Bit	t) 11	
8th LED	12014 8	IntegerT (8 Bit	t) 11	
9th LED	12014 9	IntegerT (8 Bit	t) 9	
10th LED	12014 10	IntegerT (8 Bit	t) 9	
11th LED	12014 11	IntegerT (8 Bit	t) 9	
12th LED	12014 12	IntegerT (8 Bit	t) 9	
13th LED	12014 13	IntegerT (8 Bit	t) 5	
14th LED	12014 14	IntegerT (8 Bit	t) 5	
15th LED	12014 15	IntegerT (8 Bit	t) 5	
16th LED	12014 16	IntegerT (8 Bit	t) 5	
17th LED	12014 17	/ IntegerT (8 Bit	t) 1 (Red)	
18th LED	12014 18	IntegerT (8 Bit	t) 1 (Red)	
19th LED	12014 19	IntegerT (8 Bit	t) 1 (Red)	
20th LED	12014 20	IntegerT (8 Bit	t) 1 (Red)	
LED appearance	12015	RecordT (160	Bit)	40
1st LED	12015 1	IntegerT (8 Bit	t) 0 (Continuous)	
2nd LED	12015 2	IntegerT (8 Bit	t) 0 (Continuous)	
3rd LED	12015 3	IntegerT (8 Bit	t) 0 (Continuous)	
4th LED	12015 4	IntegerT (8 Bit	t) 0 (Continuous)	
5th LED	12015 5	IntegerT (8 Bit	t) 1 (Blinking slow)	
6th LED	12015 6	IntegerT (8 Bit	t) 1 (Blinking slow)	
7th LED	12015 7	IntegerT (8 Bit	t) 1 (Blinking slow)	
8th LED	12015 8	IntegerT (8 Bit	t) 1 (Blinking slow)	
9th LED	12015 9	IntegerT (8 Bit	t) 3 (Blinking fast)	
10th LED	12015 10	IntegerT (8 Bit	t) 3 (Blinking fast)	
11th LED	12015 11	IntegerT (8 Bit	t) 3 (Blinking fast)	
12th LED	12015 12	IntegerT (8 Bit	t) 3 (Blinking fast)	
13th LED	12015 13	IntegerT (8 Bit	t) 5 (Flashing mid)	
14th LED	12015 14	IntegerT (8 Bit	t) 5 (Flashing mid)	
15th LED	12015 15	integerT (8 Bit	t) 5 (Flashing mid)	
16th LED	12015 16	IntegerT (8 Bit	t) 5 (Flashing mid)	
17th LED	12015 17	IntegerT (8 Bit	t) 6 (Flashing fast)	
18th LED	12015 18	IntegerT (8 Bit	t) 6 (Flashing fast)	
19th LED	12015 19	IntegerT (8 Bit	t) 6 (Flashing fast)	
20th LED	12015 20	IntegerT (8 Bit	t) 6 (Flashing fast)	
Scope of appearance	12016	IntegerT (8 Bit	t) 0 (All LEDs)	40



## **1 System Command**



Command interface for applications. A positive acknowledge indicates the complete and correct finalization of the requested function.System Command information - Address: Index 2, Subindex 0 - Datatype: UInteger (8 Bit) - AccessRight: Write Only

#	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
129	Application Reset	The parameter of the technology-specific application are set to default values. Identification parameter remain unchanged. An upload to the data storage of the master will be executed, if activated in the port configuration of the master.
131	Back-to-box	The parameter of the device are set to factory default values and communication will be inhibited until the next power cycle. Note: Directly detach the device from the master port!
222	Flash On	Flash On
223	Flash Off	Flash Off
240	IO-Link 1.1 system test command 240, Event 8DFE appears	IO-Link 1.1 system test command 240, Event 8DFE appears
241	IO-Link 1.1 system test command 241, Event 8DFE disappears	IO-Link 1.1 system test command 241, Event 8DFE disappears
242	IO-Link 1.1 system test command 242, Event 8DFF appears	IO-Link 1.1 system test command 242, Event 8DFF appears
243	IO-Link 1.1 system test command 243, Event 8DFF disappears	IO-Link 1.1 system test command 243, Event 8DFF disappears



# 2 Identification

Vendor name	Index 16	Subindex 0	StringT (19 Byte)	ReadOnly
The vendor name that is assign				
Factory setting	ifm electronic gr	nbh		
Vendor text	Index 17	Subindex 0	StringT (11 Byte)	ReadOnly
Additional information about the				Reduciny
Factory setting	www.ifm.com			
Product Name	Index 18	Subindex 0	StringT (16 Byte)	ReadOnly
Complete product name.				
Product ID	Index 19	Subindex 0	StringT (16 Byte)	ReadOnly
Vendor-specific product or type				Roddoniy
Product Text	Index 20	Subindex 0	StringT (64 Byte)	ReadOnly
Additional product information for	or the device.			
Serial Number	Index 21	Subindex 0	StringT (16 Byte)	ReadOnly
Unique, vendor-specific identifie				
Hardware Revision	Index 22	Subindex 0	StringT (2 Byte)	ReadOnly
Unique, vendor-specific identifie	er of the hardware revision of	the individual device.		
Firmware Revision	Index 23	Subindex 0	StringT (4 Byte)	ReadOnly
Unique, vendor-specific identifie				
•				
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				
Factory setting	***			
Location Tag	Index 26	Subindex 0	StringT (32 Byte)	ReadWrite
Possibility to mark a device with	location-specific information	۱.		
Factory setting	008			



perating mode	Index 684	Subindex 0	IntegerT (8 Bit)	ReadWrite
Switch between Signal Light- and Level	Meter Mode			
Factory setting Value range	<b>0</b> 0	(Signal Light Mode) (Signal Light Mode)		
value range	1	(Level Meter Mode)		
egment colors	Index 12000	Subindex 0	RecordT (40 Bit)	ReadWrite
Select between different colors (incl. off)	for individual segmer	nts in Signal Light Mode		
Segment 1		Subindex 1	IntegerT (8 Bit)	
Select color (incl. off) for 1st segment.				
Factory setting Value range	<b>1</b> 0	(Red) (Off)		
value range	1	(Red)		
	2 3	(Green) (Amber)		
	4 5	(Blue) (Purple)		
	6 7	(Cyan)		
	8	(White) (User Color (selected	in "Select user color" parameter))	
Segment 2		Subindex 2	IntegerT (8 Bit)	
		Subinuex 2	integer (o bit)	
Select color (incl. off) for 2nd segment Factory setting	3	(Amber)		
Value range	0 1	(Off) (Red)		
	2	(Greén)		
	3 4	(Amber) (Blue)		
	5	(Purple) (Cyan)		
	6 7 8	(White)	in "Coloct year color" parameter))	
	0	· ·	in "Select user color" parameter))	
Segment 3		Subindex 3	IntegerT (8 Bit)	
Select color (incl. off) for 3rd segment.				
Factory setting Value range	<b>2</b> 0	(Green) (Off)		
C C	1 2	(Red) (Green)		
	3	(Amber)		
	4 5	(Blue) (Purple)		
	6 7	(Cyan) (White)		
	8	User Color (selected	in "Select user color" parameter))	
Segment 4		Subindex 4	IntegerT (8 Bit)	
Select color (incl. off) for 4th segment.				
Factory setting	7	(White)		
Value range	0 1	(Off) (Red)		
	2 3 4	(Green) (Amber)		
	4 5	(Blue) (Purple)		
	6	(Cyan)		
	7 8	(White) (User Color (selected	in "Select user color" parameter))	
Segment 5		Subindex 5	IntegerT (8 Bit)	
-		Submuex 5		
Select color (incl. off) for 5th segment. Factory setting	4	(Blue)		
Value range	0 1	(Off) (Red)		
	2	(Greén)		
	3 4 5	(Amber) (Blue)		
	5 6	(Purple) (Cyan)		
	7	(White)		
	8	/Lloor Color (l	in "Select user color" parameter))	



Segment appearance	Index 12001	Subindex 0	RecordT (40 Bit)	ReadWrite			
Select between different appearances for individual segments in Signal Light Mode.							
Segment 1		Subindex 1	IntegerT (8 Bit)				
Select appearance for 1st segment.							
Factory setting Value range	<b>0</b> 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)					
Segment 2		Subindex 2	IntegerT (8 Bit)				
Select appearance for 2nd segment. Factory setting Value range	0 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)					
Segment 3		Subindex 3	IntegerT (8 Bit)				
Select appearance for 3rd segment.							
Factory setting Value range	0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)					
Segment 4		Subindex 4	IntegerT (8 Bit)				
Select appearance for 4th segment.							
Factory setting Value range	0 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)					
Segment 5		Subindex 5	IntegerT (8 Bit)				
Select appearance for 5th segment. Factory setting Value range	<b>0</b> 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)					
LED Intensity	Index 12002	Subindex 0	IntegerT (8 Bit)	ReadWrite			
Set LED intensity between 0 and 100. Factory setting Value range	<b>70</b> (0 to 100)						
Buzzer Intensity	Index 12003	Subindex 0	IntegerT (8 Bit)	ReadWrite			
Set Buzzer intensity between 0 and 100. Factory setting Value range	<b>100</b> (0 to 100)						



User preference color Bank 1	Index 12006	Subindex 0	RecordT (160 Bit)	ReadWrite
Select individual colors (incl. off) for ea				
1st LED		Subindex 1	IntegerT (8 Bit)	
Select LED color (incl. off) in User F				
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
2nd LED		Subindex 2	IntegerT (8 Bit)	
Select LED color (incl. off) in User F				
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
3rd LED		Subindex 3	IntegerT (8 Bit)	
Select LED color (incl. off) in User F	Preference Select for 3rd			
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
4th LED		Subindex 4	IntegerT (8 Bit)	
Select LED color (incl. off) in User F Factory setting				
Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 1	Index 12006	Subindex 0	RecordT (160 Bit)	ReadWrite
5th LED		Subindex 5	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	rence Select for 5th L 0 1 2 4 6 8 10 12 14 16 17 19 21	ED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
6th LED		Subindex 6	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 6th L 0 1 2 4 6 8 10 12 14 16 17 19 21	ED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
7th LED		Subindex 7	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
8th LED		Subindex 8	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe	rence Select for 8th L			
Factory setting Value range	0 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 1	Index 12006	Subindex 0	RecordT (160 Bit)	ReadWrite
9th LED		Subindex 9	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pref Factory setting	erence Select for 9th 0			
Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
10th LED		Subindex 10	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pref Factory setting Value range	erence Select for 10th 0 1 2 4 6 8 10 12 14 16 17 19 21	n LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
11th LED		Subindex 11	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pref				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
12th LED		Subindex 12	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pref				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 1	Index 12006	Subindex 0	RecordT (160 Bit)	ReadWrite
13th LED		Subindex 13	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 13t 0 1 2 4 6 8 10 12 14 16 17 19 21	th LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
14th LED		Subindex 14	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 141 0 0 1 2 4 6 8 10 12 14 16 17 19 21	th LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
15th LED		Subindex 15	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 15t 0 1 2 4 6 8 10 12 14 16 17 19 21	th LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
16th LED		Subindex 16	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 16t 0 1 2 4 6 8 10 12 14 16 17 19 21	th LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 1	Index 12006	Subindex 0	RecordT (160 Bit)	ReadWrite
17th LED		Subindex 17	IntegerT (8 Bit)	
Select LED color (incl. off) in User P				
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
18th LED		Subindex 18	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 18 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
19th LED		Subindex 19	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pl	reference Select for 19t	h LED.		
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
20th LED		Subindex 20	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr				
Factory setting Value range	<b>0</b> 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 2	Index 12007	Subindex 0	RecordT (160 Bit)	ReadWrite
Select individual colors (incl. off) for e				ReadWille
1st LED		Subindex 1	IntegerT (8 Bit)	
Select LED color (incl. off) in User	Preference Select for 1st	LED.	,	
Factory setting Value range	0 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
2nd LED		Subindex 2	IntegerT (8 Bit)	
Select LED color (incl. off) in User				
Factory setting Value range	<b>0</b> 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
3rd LED		Subindex 3	IntegerT (8 Bit)	
Select LED color (incl. off) in User Factory setting Value range	Preference Select for 3rd 0 1 2 4 6 8 10 12 14 16 17 19 21	I LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
4th LED		Subindex 4	IntegerT (8 Bit)	
Select LED color (incl. off) in User				
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 2	Index 12007	Subindex 0	RecordT (160 Bit)	ReadWrite
5th LED		Subindex 5	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr	eference Select for 5th			
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
6th LED		Subindex 6	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr	eference Select for 6th			
Factory setting Value range	<b>0</b> 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
7th LED		Subindex 7	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr				
Factory setting Value range	<b>0</b> 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
8th LED		Subindex 8	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr	eference Select for 8th			
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 2	Index 12007	Subindex 0	RecordT (160 Bit)	ReadWrite
9th LED		Subindex 9	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 9th L 0 1 2 4 6 8 10 12 14 16 17 19 21	LED. (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
10th LED		Subindex 10	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 10th 0 1 2 4 6 8 10 12 14 16 17 19 21	LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
11th LED		Subindex 11	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
12th LED		Subindex 12	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 2	Index 12007	Subindex 0	RecordT (160 Bit)	ReadWrite
13th LED		Subindex 13	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 13th 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
14th LED		Subindex 14	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 14th 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
15th LED		Subindex 15	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 15th 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
16th LED		Subindex 16	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe Factory setting Value range	erence Select for 16th 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 2	Index 12007	Subindex 0	RecordT (160 Bit)	ReadWrite
17th LED		Subindex 17	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 171 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
18th LED		Subindex 18	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 181 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
19th LED		Subindex 19	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 19t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
20th LED		Subindex 20	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pr Factory setting Value range	reference Select for 201 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 3	Index 12008	Subindex 0	RecordT (160 Bit)	ReadWrite
Select individual colors (incl. off) for e				Readwrite
1st LED		Subindex 1	IntegerT (8 Bit)	
Select LED color (incl. off) in User	Preference Select for 1st	LED.		
Factory setting Value range	0 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
2nd LED		Subindex 2	IntegerT (8 Bit)	
Select LED color (incl. off) in User Factory setting Value range	Preference Select for 2nd 0 1 2 4 6 8 10 12 14 16 17 19 21	d LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
3rd LED		Subindex 3	IntegerT (8 Bit)	
Select LED color (incl. off) in User Factory setting Value range	Preference Select for 3rd 0 1 2 4 6 8 10 12 14 16 17 19 21	I LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
4th LED		Subindex 4	IntegerT (8 Bit)	
Select LED color (incl. off) in User				
Factory setting Value range	0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 3	Index 12008	Subindex 0	RecordT (160 Bit)	ReadWrite
5th LED		Subindex 5	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe	erence Select for 5th			
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
6th LED		Subindex 6	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe	erence Select for 6th			
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
7th LED		Subindex 7	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
8th LED		Subindex 8	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prefe	erence Select for 8th			
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 3	Index 12008	Subindex 0	RecordT (160 Bit)	ReadWrite
9th LED		Subindex 9	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pro Factory setting Value range	eference Select for 9th 0 1 2 4 6 8 10 12 14 16 17 19 21	LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
10th LED		Subindex 10	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pro Factory setting Value range	eference Select for 10t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
11th LED		Subindex 11	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pro				
Factory setting Value range	<b>0</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
12th LED		Subindex 12	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre	-			
Factory setting Value range	0 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 3	Index 12008	Subindex 0	RecordT (160 Bit)	ReadWrite
13th LED		Subindex 13	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre Factory setting Value range	ference Select for 13t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
14th LED		Subindex 14	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre Factory setting Value range	ference Select for 14t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
15th LED		Subindex 15	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre Factory setting Value range	ference Select for 15t 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
16th LED		Subindex 16	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre Factory setting Value range	ference Select for 16t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



User preference color Bank 3	Index 12008	Subindex 0	RecordT (160 Bit)	ReadWrite
17th LED		Subindex 17	IntegerT (8 Bit)	
Select LED color (incl. off) in User Prei Factory setting Value range	ference Select for 17t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
18th LED		Subindex 18	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre- Factory setting Value range	ference Select for 18t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
19th LED		Subindex 19	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pre Factory setting Value range	ference Select for 19t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
20th LED		Subindex 20	IntegerT (8 Bit)	
Select LED color (incl. off) in User Pres Factory setting Value range	ference Select for 20t 0 1 2 4 6 8 10 12 14 16 17 19 21	h LED. (Off) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



Select user color	Index 12009	Subindex 0	IntegerT (8 Bit)	ReadWrite
Select User Color (incl. off) which c	can be used in Signal Light	Mode.		
Factory setting Value range	7 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		

Size of segment	Index 12010	Subindex 0	RecordT (40 Bit)	ReadWrite
Determine size of each segment. Total	must not exceed 20.			
Segment 1		Subindex 1	IntegerT (8 Bit)	
Size of 1st segment.				
Factory setting Value range	<b>4</b> (0 to 20)			
Segment 2		Subindex 2	IntegerT (8 Bit)	
Size of 2nd segment.				
Factory setting Value range	<b>4</b> (0 to 20)			
Segment 3		Subindex 3	IntegerT (8 Bit)	
Size of 3rd segment.				
<b>Factory setting</b> Value range	<b>4</b> (0 to 20)			
Segment 4		Subindex 4	IntegerT (8 Bit)	
Size of 4th segment.				
<b>Factory setting</b> Value range	<b>4</b> (0 to 20)			
Segment 5		Subindex 5	IntegerT (8 Bit)	
Size of 5th segment.				
Factory setting Value range	<b>4</b> (0 to 20)			
Blank between Segments	Index 12011	Subindex 0	UIntegerT (8 Bit)	ReadWrite
Whether one LED is turned off betweer	n different seaments.			
Factory setting Value range	<b>0</b> 0 1	<b>(Disable)</b> (Disable) (Enable)		
Direction of flow	Index 12012	Subindex 0	IntegerT (8 Bit)	ReadWrite
Level Meter Mode: Whether LEDs light	up from the bottom (0)	or from the top (1).		
Factory setting Value range	0 0 1	(Bottom up) (Bottom up) (Top down)		



Level meter thresholds	Index 12013	Subindex 0	RecordT (160 Bit)	ReadWrite
Thresholds which must be exceeded	d to turn on corresponding			
1st LED		Subindex 1	IntegerT (8 Bit)	
Level Meter Mode: Threshold for	1st LED.			
Factory setting Value range	<b>0</b> (0 to 100)			
Level meter thresholds	Index 12013	Subindex 0	RecordT (160 Bit)	ReadWrite
2nd LED		Subindex 2	IntegerT (8 Bit)	
Level Meter Mode: Threshold for				
Factory setting Value range	<b>5</b> (0 to 100)			
3rd LED		Subindex 3	IntegerT (8 Bit)	
Level Meter Mode: Threshold for				
Factory setting Value range	<b>10</b> (0 to 100)			
4th LED		Subindex 4	IntegerT (8 Bit)	
Level Meter Mode: Threshold for				
<b>Factory setting</b> Value range	<b>15</b> (0 to 100)			
5th LED		Subindex 5	IntegerT (8 Bit)	
Level Meter Mode: Threshold for	5th LED.			
Factory setting Value range	<b>20</b> (0 to 100)			
6th LED		Subindex 6	IntegerT (8 Bit)	
Level Meter Mode: Threshold for Factory setting Value range	6th LED. 25 (0 to 100)			
7th LED		Subindex 7	IntegerT (8 Bit)	
Level Meter Mode: Threshold for				
Factory setting Value range	<b>30</b> (0 to 100)			
8th LED		Subindex 8	IntegerT (8 Bit)	
Level Meter Mode: Threshold for				
Factory setting Value range	<b>35</b> (0 to 100)			
9th LED		Subindex 9	IntegerT (8 Bit)	
Level Meter Mode: Threshold for Factory setting Value range	9th LED. <b>40</b> (0 to 100)			
10th LED		Subindex 10	IntegerT (8 Bit)	
Level Meter Mode: Threshold for	10th LED.			
Factory setting Value range	<b>45</b> (0 to 100)			
11th LED		Subindex 11	IntegerT (8 Bit)	
Level Meter Mode: Threshold for	11th LED.			
<b>Factory setting</b> Value range	<b>50</b> (0 to 100)			
12th LED		Subindex 12	IntegerT (8 Bit)	
Level Meter Mode: Threshold for Factory setting Value range	12th LED. 55 (0 to 100)			



13th LED		Subindex 13	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 13th LED.			
Factory setting	<b>60</b> (0 to 100)			
Value range	(018 100)			
Level meter thresholds	Index 12013	Subindex 0	RecordT (160 Bit)	ReadWrite
14th LED		Subindex 14	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 14th LED.			
Factory setting	65			
Value range	(0 to 100)			
15th LED		Subindex 15	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 15th LED.			
Factory setting	70			
Value range	(0 to 100)			
16th LED		Subindex 16	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 16th LED.			
Factory setting	75			
Value range	(0 to 100)			
17th LED		Subindex 17	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 17th LED.			
Factory setting	80			
Value range	(0 to 100)			
18th LED		Subindex 18	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 18th LED.			
Factory setting	85			
Value range	(0 to 100)			
19th LED		Subindex 19	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 19th LED.			
Factory setting	90			
Value range	(0 to 100)			
20th LED		Subindex 20	IntegerT (8 Bit)	
Level Meter Mode: Thresho	old for 20th LED.			
Factory setting	95 (0 to 100)			
Value range	(0 to 100)			

LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite			
Color (incl. off) of each LED in Lev	Color (incl. off) of each LED in Level Meter Mode.						
1st LED		Subindex 1	IntegerT (8 Bit)				
Color (incl. off) in Level Meter N	Color (incl. off) in Level Meter Mode for 1st LED.						
Factory setting Value range	<b>13</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)					



LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite
2nd LED		Subindex 2	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Moc Factory setting Value range	le for 2nd LED. <b>13</b> 0 1 2 4 6 8 10 12 14 16 17 19	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20)		
3rd LED	21	(White) Subindex 3	IntegerT (9 Dit)	
Color (incl. off) in Level Meter Moc	la for 2rd LED	Subindex 3	IntegerT (8 Bit)	
Factory setting Value range	<b>13</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
4th LED		Subindex 4	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Moc Factory setting Value range	le for 4th LED. <b>13</b> 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
5th LED		Subindex 5	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Moc Factory setting Value range	le for 5th LED. 11 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite
6th LED		Subindex 6	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mode fo Factory setting Value range	r 6th LED. 11 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
7th LED		Subindex 7	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mode fo	r 7th I ED		integer (o bit)	
Factory setting Value range	11 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
8th LED		Subindex 8	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mode for Factory setting Value range	r 8th LED. 11 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
9th LED		Subindex 9	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mode fo Factory setting Value range	r 9th LED. 9 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite
10th LED		Subindex 10	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mod Factory setting Value range	e for 10th LED. 9 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
11th LED		Subindex 11	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mod Factory setting Value range	e for 11th LED. 9 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
12th LED		Subindex 12	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mod Factory setting Value range	e for 12th LED. 9 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
13th LED		Subindex 13	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mod Factory setting Value range	e for 13th LED. 5 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite
14th LED		Subindex 14	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mo Factory setting Value range	de for 14th LED. 5 0 1 2 4 6 8 10 12 14 16 17 19	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20)		
15th LED	21	(White) Subindex 15	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mo	do for 15th LED	Subindex 15	integer (o bit)	
Factory setting Value range	5 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
16th LED		Subindex 16	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mo Factory setting Value range	de for 16th LED. 5 0 1 2 4 6 8 10 12 14 16 17 19 21	(Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
17th LED		Subindex 17	IntegerT (8 Bit)	
Color (incl. off) in Level Meter Mo	de for 17th LED.			
Factory setting Value range	1 0 1 2 4 6 8 10 12 14 16 17 19 21	(Red) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		



LED Colors	Index 12014	Subindex 0	RecordT (160 Bit)	ReadWrite
18th LED		Subindex 18	IntegerT (8 Bit)	
Color (incl. off) in Level Meter M	ode for 18th LED.			
Factory setting Value range	1 0 1 2 4 6 8 10 12 14 16 17 19 21	(Red) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
19th LED		Subindex 19	IntegerT (8 Bit)	
Color (incl. off) in Level Meter M	ode for 19th LED.			
Factory setting Value range	1 0 1 2 4 6 8 10 12 14 16 17 19 21	(Red) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		
20th LED		Subindex 20	IntegerT (8 Bit)	
Color (incl. off) in Level Meter M				
Factory setting Value range	1 0 1 2 4 6 8 10 12 14 16 17 19 21	(Red) (Off) (Red) (3) (5) (7) (9) (11) (13) (15) (Purple) (18) (20) (White)		

LED appearance	Index 12015	Subindex 0	RecordT (160 Bit)	ReadWrite	
Select appearance for each LED in Level Meter Mode.					
1st LED		Subindex 1	IntegerT (8 Bit)		
Appearance in Level Meter Mode for	1st LED.				
Factory setting Value range	<b>0</b> 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)			



LED appearance	Index 12015	Subindex 0	RecordT (160 Bit)	ReadWrite
2nd LED		Subindex 2	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 2nd LED.			
Factory setting Value range	0 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
3rd LED		Subindex 3	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 3rd LED.			
Factory setting Value range	0 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
4th LED		Subindex 4	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 4th LED.			
Factory setting Value range	0 0 1 2 3 4 5 6	(Continuous) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
5th LED		Subindex 5	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 5th LED.			
Factory setting Value range	1 0 1 2 3 4 5 6	(Blinking slow) (Continuous) (Blinking slow) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
6th LED		Subindex 6	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 6th LED.			
Factory setting Value range	<b>1</b> 0 1 2 3 4 5 6	(Blinking slow) (Continuous) (Blinking slow) (Blinking fast) (Flashing slow) (Flashing slow) (Flashing fast)		
7th LED		Subindex 7	IntegerT (8 Bit)	
Appearance in Level Meter Mod	e for 7th LED.			
Factory setting Value range	1 0 1 2 3 4 5 6	(Blinking slow) (Continuous) (Blinking slow) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		



LED appearance	Index 12015	Subindex 0	RecordT (160 Bit)	ReadWrite
8th LED	Index 12015	Subindex 8	IntegerT (8 Bit)	Readwrite
Appearance in Level Meter Mod	le for 8th LED	Subindex 0	integer (o bit)	
Factory setting Value range	1 0 1 2 3 4 5 6	(Blinking slow) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
9th LED		Subindex 9	IntegerT (8 Bit)	
Appearance in Level Meter Mod	le for 9th LED.			
Factory setting Value range	<b>3</b> 0 1 2 3 4 5 6	(Blinking fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
10th LED		Subindex 10	IntegerT (8 Bit)	
Appearance in Level Meter Mod	le for 10th LED.			
Factory setting Value range	<b>3</b> 0 1 2 3 4 5 6	(Blinking fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
11th LED		Subindex 11	IntegerT (8 Bit)	
Appearance in Level Meter Mod	le for 11th LED.			
Factory setting Value range	<b>3</b> 0 1 2 3 4 5 6	(Blinking fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
12th LED		Subindex 12	IntegerT (8 Bit)	
Appearance in Level Meter Mod	le for 12th LED.			
Factory setting Value range	<b>3</b> 0 1 2 3 4 5 6	(Blinking fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
13th LED		Subindex 13	IntegerT (8 Bit)	
Appearance in Level Meter Mod	le for 13th LED.			
Factory setting Value range	<b>5</b> 0 1 2 3 4 5 6	(Flashing mid) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		



ED appearance	Index 12015	Subindex 0	RecordT (160 Bit)	ReadWrite
14th LED		Subindex 14	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 14th LED.			
Factory setting Value range	<b>5</b> 0 1 2 3 4 5 6	(Flashing mid) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
15th LED		Subindex 15	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 15th LED.			
Factory setting Value range	<b>5</b> 0 1 2 3 4 5 6	(Flashing mid) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
16th LED		Subindex 16	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 16th LED.			
Factory setting Value range	<b>5</b> 0 1 2 3 4 5 6	(Flashing mid) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
17th LED		Subindex 17	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 17th LED.			
Factory setting Value range	<b>6</b> 0 1 2 3 4 5 6	(Flashing fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
18th LED		Subindex 18	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 18th LED.			
Factory setting Value range	<b>6</b> 0 1 2 3 4 5 6	(Flashing fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		
19th LED		Subindex 19	IntegerT (8 Bit)	
Appearance in Level Meter M	lode for 19th LED.			
Factory setting Value range	<b>6</b> 0 1 2 3 4 5 6	(Flashing fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)		



LED appearance	Index 12015	Subindex 0	RecordT (160 Bit)	ReadWrite	
20th LED		Subindex 20	IntegerT (8 Bit)		
Appearance in Level Meter Mod	de for 20th LED.				
Factory setting Value range	6 0 1 2 3 4 5 6	(Flashing fast) (Continuous) (Blinking slow) (Blinking mid) (Blinking fast) (Flashing slow) (Flashing mid) (Flashing fast)			
Scope of appearance	Index 12016	Subindex 0	IntegerT (8 Bit)	ReadWrite	
Select Scope of Appearance in Le	Select Scope of Appearance in Level Meter Mode.				
Factory setting Value range	<b>0</b> 0	(All LEDs) (All LEDs) (Separate LEDs)			



# 4 Diagnosis

Device Status	Index 36	Subindex 0	UIntegerT (8 Bit)	ReadOnly
	ice condition and diagnosis state.			
Factory setting Value range	<b>0</b> 0	(Device is OK) (Device is OK)		
	1 2	(Maintenance requir (Out of specification		
	3	(Functional check)	)	
	4	(Failure)		
Detailed Device Status	Index 37	Subindex 0	OctetStringT (3 Byte) [5]	ReadOnly
List of all currently pending	events in the device.			
Active Events	Index 545	Subindex 0	RecordT (32 Bit)	ReadOnly
31 30 29			1 0	
bitOffset 31	Test Event 2. Device Stat	us = 1 (Maintenance	e required)	
bitOffset 30	Test Event 1. Device Stat	us = 1 (Maintenance	e required)	
bitOffset 29	Elach coguence active. D			
	Flash sequence active. D	evice Status = 1 (Ma	aintenance required)	
bitOffset 1	Parameter error	evice Status = 1 (Ma	aintenance required)	
bitOffset 1 bitOffset 0		evice Status = 1 (Ma	aintenance required)	
bitOffset 0	Parameter error Device hardware fault		aintenance required)	
	Parameter error Device hardware fault appropriate Event pendin	g	aintenance required)	
bitOffset 0 Value range true false	Parameter error Device hardware fault appropriate Event pendin appropriate Event inactive	g 9		
bitOffset 0 /alue range true false ParaConfig Fault Collectio	Parameter error Device hardware fault appropriate Event pendin appropriate Event inactive n Index 546	g Subindex 0	aintenance required) ArrayT	ReadOnly
bitOffset 0 Value range true false ParaConfig Fault Collectio Provides information about	Parameter error Device hardware fault appropriate Event pendin appropriate Event inactive n Index 546 errors occured during block transf	g Subindex 0		ReadOnly
bitOffset 0 /alue range true false ParaConfig Fault Collectio	Parameter error Device hardware fault appropriate Event pendin appropriate Event inactive n Index 546	g Subindex 0		ReadOnly
bitOffset 0 Value range true false ParaConfig Fault Collectio Provides information about	Parameter error Device hardware fault appropriate Event pendin appropriate Event inactive n Index 546 errors occured during block transf	g Subindex 0		ReadOnly ReadOnly
value range true false ParaConfig Fault Collectio Provides information about Factory setting	Parameter error Device hardware fault appropriate Event pendin- appropriate Event inactive n Index 546 errors occured during block transf 0 Index 542	g Subindex 0 ers.	ArrayT	
itOffset 0 'alue range true false ParaConfig Fault Collectio Provides information about Factory setting Operating Hours	Parameter error Device hardware fault appropriate Event pendin- appropriate Event inactive n Index 546 errors occured during block transf 0 Index 542	g Subindex 0 ers.	ArrayT	



#### 5 Events

Code	Device status	PQ*	Class	Name	Description
0x0 0d	0 (Device is OK)	valid	Notification	No malfunction	
0x5000 20480d	4 (Failure)	invalid	Error	Device hardware fault	Exchange device
0x6320 25376d	3 (Functional check)	invalid	Error	Parameter error	Check datasheet and values
0x8CDB 36059d	1 (Maintenance required)	valid	Warning	Flash sequence active \[Dash] Deactivate flash sequence	Check datasheet and values
0x8DFE 36350d	1 (Maintenance required)	valid	Warning	Test Event 1	Check datasheet and values
0x8DFF 36351d	1 (Maintenance required)	valid	Warning	Test Event 2	Check datasheet and values



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



# 6 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.
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.
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.