





Version: V1.0	Release Date: 2019-03-25
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OGxx0572	
Vendor ID	780 (0x030c)
Vendor Name	ipf electronic gmbh
Vendor Text	High-End in High-Tech.
Vendor URL	<a href="http://www.ipf.de">www.ipf.de</a>
Device ID	3291905 (0x323b01)
DeviceFamily	Fork Light Barriers
<div>  </div>	
<b>Features</b>	
Block Parameter	yes
Data Storage	yes
Profile Characteristic	0x0001 (Device Profile: Smart Sensor), 0x8000 (Function Class: Device Identification), 0x8001 (Function Class: Binary Data Channel), 0x8002 (Function Class: Process Data Variables), 0x8003 (Function Class: Device Diagnosis), 0x8004 (Function Class: Teach-In Commands)
Supported Access Locks	Parameter: yes, Data Storage: yes, Local Parameterization: yes, Local User Interface: no
<b>Communication</b>	
IO-Link Revision	V1.1
Transmission Rate	38400 bit/s (COM2)
Minimum Cycle Time	2.3 ms
SIO Mode Supported	yes
M-Sequence Capability	PREOPERATE = TYPE_1_V with 8 octets on-request data OPERATE = TYPE_2_2 with 1 octet on-request data ISDU supported
Device Variant	OG500572
Description	50 mm, red light
Product ID	OG500572
Device Icon	
Device Symbol	
Connection Type	M8 connector
Connection Symbol	
- pin 1	brown; L+
- pin 3	(light) blue; L-
- pin 4	black; C/Q

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**ProcessData id=P\_ProcessData**

**ProcessDataIn "Process data input" id=PI\_ProcessDataIn**

bit length: 16

data type: 16-bit Record (subindex access not supported)

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	4	12-bit UInteger	0..255		ro			Measurement value	
2	2	Boolean	false = OK, true = Not OK		ro			Stability	
3	0	Boolean	false = Inactive, true = Active		ro			Switch state (BDC1, Q1)	

**Octet 0**

bit offset	15	14	13	12	11	10	9	8

subindex	1							
element bit	11	10	9	8	7	6	5	4

**Octet 1**

bit offset	7	6	5	4	3	2	1	0
subindex	1				/////	2	/////	3
element bit	3	2	1	0				

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## Standard Variable "Direct Parameters 1" index=0 id=V\_DirectParameters\_1

data type: 128-bit Record

access rights: rw

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	120	8-bit UInteger			ro			Reserved	
2	112	8-bit UInteger			ro			Master Cycle Time	
3	104	8-bit UInteger			ro			Min Cycle Time	
4	96	8-bit UInteger			ro			M-Sequence Capability	
5	88	8-bit UInteger		17	ro			IO-Link Version ID	
6	80	8-bit UInteger			ro			Process Data Input Length	
7	72	8-bit UInteger			ro			Process Data Output Length	
8	64	8-bit UInteger			ro			Vendor ID 1	
9	56	8-bit UInteger			ro			Vendor ID 2	
10	48	8-bit UInteger			ro			Device ID 1	
11	40	8-bit UInteger			ro			Device ID 2	
12	32	8-bit UInteger			ro			Device ID 3	
13	24	8-bit UInteger			ro			Reserved	
14	16	8-bit UInteger			ro			Reserved	
15	8	8-bit UInteger			ro			Reserved	
16	0	8-bit UInteger	64 = Teach Apply, 65 = Setpoint 1 Single Value Teach, 66 = Setpoint 2 Single Value Teach, 67 = Two Value Teach TP1 SP1, 68 = Two Value Teach TP2 SP1, 69 = Two Value Teach TP1 SP2, 70 = Two Value Teach TP2 SP2, 71 = Setpoint 1 Dynamic Teach Sart, 72 = Setpoint 1 Dynamic Teach Stop, 73 = Setpoint 2 Dynamic Teach Sart, 74 = Setpoint 2 Dynamic Teach Stop, 79 = Teach Cancel, 130 = Restore Factory Settings, 160 = Adopt Local Adjustment, 163 = Reset Diagnosis Information, 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		wo	X		Standard Command	

octet	0	1	2	3	4	5	6	7
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64
subindex	1	2	3	4	5	6	7	8
element bit	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0

octet	8	9	10	11	12	13	14	15
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0
subindex	9	10	11	12	13	14	15	16

element bit	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0
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### Standard Variable "Direct Parameters 2" index=1 id=V\_DirectParameters\_2

data type: 128-bit Record

access rights: rw

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	120	8-bit UInteger						Device Specific Parameter 1	
2	112	8-bit UInteger						Device Specific Parameter 2	
3	104	8-bit UInteger						Device Specific Parameter 3	
4	96	8-bit UInteger						Device Specific Parameter 4	
5	88	8-bit UInteger						Device Specific Parameter 5	
6	80	8-bit UInteger						Device Specific Parameter 6	
7	72	8-bit UInteger						Device Specific Parameter 7	
8	64	8-bit UInteger						Device Specific Parameter 8	
9	56	8-bit UInteger						Device Specific Parameter 9	
10	48	8-bit UInteger						Device Specific Parameter 10	
11	40	8-bit UInteger						Device Specific Parameter 11	
12	32	8-bit UInteger						Device Specific Parameter 12	
13	24	8-bit UInteger						Device Specific Parameter 13	
14	16	8-bit UInteger						Device Specific Parameter 14	
15	8	8-bit UInteger						Device Specific Parameter 15	
16	0	8-bit UInteger						Device Specific Parameter 16	

octet	0	1	2	3	4	5	6	7
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64
subindex	1	2	3	4	5	6	7	8
element bit	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0

octet	8	9	10	11	12	13	14	15
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0
subindex	9	10	11	12	13	14	15	16
element bit	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0	7 - 0

### Standard Variable "Standard Command" index=2 id=V\_SystemCommand

data type: 8-bit UInteger

allowed values: 64 = Teach Apply, 65 = Setpoint 1 Single Value Teach, 66 = Setpoint 2 Single Value Teach, 67 = Two Value Teach TP1 SP1, 68 = Two Value Teach TP2 SP1, 69 = Two Value Teach TP1 SP2, 70 = Two Value Teach TP2 SP2, 71 = Setpoint 1 Dynamic Teach Sart, 72 = Setpoint 1 Dynamic Teach Stop, 73 = Setpoint 2 Dynamic Teach Sart, 74 = Setpoint 2 Dynamic Teach Stop, 79 = Teach Cancel, 130 = Restore Factory Settings, 160 = Adopt Local Adjustment, 163 = Reset Diagnosis Information, 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

access rights: wo

modifies other variables

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

### Standard Variable "Device Access Locks" index=12 id=V\_DeviceAccessLocks

data type: 16-bit Record (subindex access not supported)

access rights: rw

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	0	Boolean		0				Parameter (write) Access Lock	
2	1	Boolean						Data Storage Lock	
3	2	Boolean		0				Local Parameterization Lock	
4	3	Boolean						Local User Interface Lock	

**Octet 0**

bit offset	15	14	13	12	11	10	9	8
subindex	/////	/////	/////	/////	/////	/////	/////	/////

**Octet 1**

bit offset	7	6	5	4	3	2	1	0
subindex	/////	/////	/////	/////	4	3	2	1

**Standard Variable "Vendor Name" index=16 id=V\_VendorName**

data type: 64-octet String UTF-8  
 default value: "ipf electronic gmbh"  
 access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

**Standard Variable "Vendor Text" index=17 id=V\_VendorText**

data type: 64-octet String UTF-8  
 default value: "High-End in High-Tech."  
 access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Product Name" index=18 id=V\_ProductName

data type: 64-octet String UTF-8

access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Product ID" index=19 id=V\_ProductID

data type: 64-octet String UTF-8

access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Product Text" index=20 id=V\_ProductText

data type: 64-octet String UTF-8

access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Firmware Version" index=23 id=V\_FirmwareRevision

data type: 64-octet String UTF-8

access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	511 - 504	503 - 496	495 - 488	487 - 480	479 - 472	471 - 464	463 - 456	455 - 448

octet	8	9	10	11	12	13	14	15
bit offset	447 - 440	439 - 432	431 - 424	423 - 416	415 - 408	407 - 400	399 - 392	391 - 384

octet	16	17	18	19	20	21	22	23
bit offset	383 - 376	375 - 368	367 - 360	359 - 352	351 - 344	343 - 336	335 - 328	327 - 320

octet	24	25	26	27	28	29	30	31
bit offset	319 - 312	311 - 304	303 - 296	295 - 288	287 - 280	279 - 272	271 - 264	263 - 256

octet	32	33	34	35	36	37	38	39
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	40	41	42	43	44	45	46	47
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	48	49	50	51	52	53	54	55
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	56	57	58	59	60	61	62	63
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Application Specific Tag" index=24 id=V\_ApplicationSpecificTag

data type: 32-octet String UTF-8

access rights: rw

octet	0	1	2	3	4	5	6	7
bit offset	255 - 248	247 - 240	239 - 232	231 - 224	223 - 216	215 - 208	207 - 200	199 - 192

octet	8	9	10	11	12	13	14	15
bit offset	191 - 184	183 - 176	175 - 168	167 - 160	159 - 152	151 - 144	143 - 136	135 - 128

octet	16	17	18	19	20	21	22	23
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	24	25	26	27	28	29	30	31
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Standard Variable "Error Count" index=32 id=V\_ErrorCount

data type: 16-bit UInteger

access rights: ro

dynamic

octet	0	1	
bit offset	15 - 8	7 - 0	
element bit	15 - 8	7 - 0	

### Standard Variable "Device Status" index=36 id=V\_DeviceStatus

data type: 8-bit UInteger

allowed values: 0 = Device is OK, 1 = Maintenance required, 2 = Out of specification, 3 = Functional check, 4 = Failure, 5..255 = Reserved

access rights: ro

dynamic

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

### Standard Variable "Process Data Input" index=40 id=V\_ProcessDataInput

data type: see ProcessDataIn!

access rights: ro

dynamic

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### Variable "Teach State" index=59 id=V\_TeachState

description: indication of the current state of the teach-in procedure and teach point setting

data type: 8-bit Record (subindex access not supported)

access rights: ro

dynamic

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	4	2-bit UInteger	0 = Teachpoint 1 and 2 not taught or not successful, 1 = Teachpoint 1 successfully taught, 2 = Teachpoint 2 successfully taught, 3 = Teachpoint 1 and 2 successfully taught	0				SP1 teach point Status	indication for the success of a teach point setting
2	0	4-bit UInteger	0 = Idle, 1 = Switchpoint Set, 2 = Switchpoint 2 Set, 3 = Switchpoint 1+2 Set, 4 = Wait for Command, 5 = Busy, 6 = Reserved, 7 = Error	0				Teach State	indication of the current state of the teach-in procedure

#### Octet 0

bit offset	7	6	5	4	3	2	1	0
subindex	/////	/////	1				2	
element bit			1	0	3	2	1	0

### Variable "Setpoint" index=60 id=V\_SetPointsBDC1

description: threshold measurement value of a sensor for the edge of a binary output signal

data type: 32-bit Record

access rights: rw

dynamic

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	16	16-bit UInteger	4..86	50				(1) (BDC1, Q1)	threshold measurement value
2	0	16-bit UInteger	4..86					(2) (BDC1, Q1)	threshold measurement value

octet	0	1	2	3	
bit offset	31 - 24	23 - 16	15 - 8	7 - 0	
subindex	1	1	2	2	
element bit	15 - 8	7 - 0	15 - 8	7 - 0	

### Variable "Switchpoint" index=61 id=V\_SwitchPointBDC1

description: mode, logic and hysteresis for binary data channel 1

data type: 32-bit Record

access rights: rw

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	24	8-bit UInteger	0 = NO, 1 = NC	0				Logic	switching information is transmitted in inverted or not inverted manner
2	16	8-bit UInteger	0 = na, 1 = na, 2 = na, 3 = na	1				na	na
3	0	16-bit UInteger	0..20	0				na	

octet	0	1	2	3	
bit offset	31 - 24	23 - 16	15 - 8	7 - 0	
subindex	1	2	3	3	
element bit	7 - 0	7 - 0	15 - 8	7 - 0	

### Variable "Lot" index=64 id=V\_Lot

description: production lot

data type: 16-octet String UTF-8

access rights: ro

octet	0	1	2	3	4	5	6	7
bit offset	127 - 120	119 - 112	111 - 104	103 - 96	95 - 88	87 - 80	79 - 72	71 - 64

octet	8	9	10	11	12	13	14	15
bit offset	63 - 56	55 - 48	47 - 40	39 - 32	31 - 24	23 - 16	15 - 8	7 - 0

### Variable "Device Adjustment" index=65 id=V\_Control

description: Selection of local / remote adjustment

data type: 8-bit UInteger

allowed values: 0 = Remote, 1 = Local

default value: 1

access rights: rw

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

### Variable "On Delay" index=66 id=V\_DS

description: on delay for the binary data channel

data type: 16-bit UInteger

allowed values: 0..10000

default value: 0

access rights: rw

octet	0	1	
bit offset	15 - 8	7 - 0	
element bit	15 - 8	7 - 0	



**Variable "Off Delay" index=67 id=V\_DR**

description: off delay for the binary data channel  
 data type: 16-bit UInteger  
 allowed values: 0..10000  
 default value: 0  
 access rights: rw

octet	0	1	
bit offset	15 - 8	7 - 0	
element bit	15 - 8	7 - 0	

**Variable "Switching Output" index=70 id=V\_OutputModeinSIOMode**

description: polarity of the switching output  
 data type: 8-bit UInteger  
 allowed values: 0 = PP, 1 = NPN, 2 = PNP  
 default value: 0  
 access rights: rw

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

**Variable "Sensor Mode" index=73 id=V\_OperatingMode**

description: sensor tuning  
 data type: 8-bit UInteger  
 allowed values: 0 = Standard, 1 = High Resolution, 2 = Power, 3 = Speed  
 default value: 0  
 access rights: rw

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

**Variable "Teachpoint" index=80 id=V\_TeachvaluesBDC1SP1**

description: Values detected during teach  
 data type: 32-bit Record  
 access rights: ro  
 dynamic

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	16	16-bit UInteger			ro			TP1 SP1	detected lower limit during teach-in procedure
2	0	16-bit UInteger			ro			TP2 SP1	detected upper limit during teach-in procedure

octet	0	1	2	3	
bit offset	31 - 24	23 - 16	15 - 8	7 - 0	
subindex	1	1	2	2	
element bit	15 - 8	7 - 0	15 - 8	7 - 0	

**Variable "Process data limits" index=84 id=V\_ProcessDataLimits**

description: Process data limit values  
 data type: 32-bit Record  
 access rights: ro  
 dynamic

subindex	bit offset	data type	allowed values	default value	acc. restr.	mod. other var.	excl. from DS	name	description
1	16	16-bit UInteger			ro			lower	lower limit after power-up or reset
2	0	16-bit UInteger			ro			upper	upper limit after power-up or reset

octet	0	1	2	3	
bit offset	31 - 24	23 - 16	15 - 8	7 - 0	

subindex	1	1	2	2	
element bit	15 - 8	7 - 0	15 - 8	7 - 0	

### Variable "Switch counter" index=85 id=V\_Switchcounter

description: number of switching after power-up or reset  
data type: 32-bit UInteger  
access rights: ro  
dynamic

octet	0	1	2	3	
bit offset	31 - 24	23 - 16	15 - 8	7 - 0	
element bit	31 - 24	23 - 16	15 - 8	7 - 0	

### Variable "Temperature" index=86 id=V\_Temperature

description: Sensor temperature  
data type: 16-bit Integer  
access rights: ro  
dynamic

octet	0	1	
bit offset	15 - 8	7 - 0	
element bit	15 - 8	7 - 0	

### Variable "Teach-In Quality" index=87 id=V\_TeachQuality

description: Last teach in Quality  
data type: 8-bit Integer  
allowed values: 0 = OK, 1 = OK, 2 = Not OK, 3 = Not OK  
default value: 0  
access rights: ro  
dynamic

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

### Variable "Switchpoint Potentiometer" index=90 id=V\_SensibilitySwitch

description: position of the local sensibility switch  
data type: 8-bit UInteger  
access rights: ro  
dynamic

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

### Variable "NO/NC Switch" index=91 id=V\_NoNcSwitch

description: position of the local NO/NC switch  
data type: 8-bit UInteger  
allowed values: 0 = NO, 1 = NC  
access rights: ro  
dynamic

octet	0	
bit offset	7 - 0	
element bit	7 - 0	

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### ErrorTypes

Code	Additional code	Name	Description
128 (0x80)	0 (0x00)	Device application error - no details	Service has been refused by the device application and no detailed information of the incident is available
128			

128 (0x80)	17 (0x11)	Index not available	Access occurs to a not existing index
128 (0x80)	18 (0x12)	Subindex not available	Access occurs to a not existing subindex
128 (0x80)	32 (0x20)	Service temporarily not available	Parameter is not accessible due to the current state of the device application
128 (0x80)	35 (0x23)	Access denied	Write access on a read-only parameter
128 (0x80)	48 (0x30)	Parameter value out of range	Written parameter value is outside its permitted value range
128 (0x80)	49 (0x31)	Parameter value above limit	Written parameter value is above its specified value range
128 (0x80)	50 (0x32)	Parameter value below limit	Written parameter value is below its specified value range
128 (0x80)	51 (0x33)	Parameter length overrun	Written parameter length is above its predefined length
128 (0x80)	52 (0x34)	Parameter length underrun	Written parameter length is below its predefined length
128 (0x80)	53 (0x35)	Function not available	Written command is not supported by the device application
128 (0x80)	54 (0x36)	Function temporarily unavailable	Written command is not available due to the current state of the device application
128 (0x80)	64 (0x40)	Invalid parameter set	Written single parameter collides with other actual parameter settings
128 (0x80)	65 (0x41)	Inconsistent parameter set	Parameter inconsistencies were found at the end of block parameter transfer, device plausibility check failed
128 (0x80)	130 (0x82)	Application not ready	Read or write service is refused due to a temporarily unavailable application

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## Events

Code	Type	Name	Description
36350 (0x8dfe)	Warning	Test Event 1	Event appears by setting index 2 to value 240, Event disappears by setting index 2 to value 241
36351 (0x8dff)	Warning	Test Event 2	Event appears by setting index 2 to value 242, Event disappears by setting index 2 to value 243

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## Process Data Formatting

Formatting for Process Data id=PI_ProcessDataIn			
Subindex 1:	%		
Subindex 2:			
Subindex 3:			

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## Observer Menus

Identification Menu			
Identification			
V_VendorName			
V_VendorText			
V_ProductName			
V_ProductID			
V_ProductText			
V_Lot			
V_FirmwareRevision			
V_ApplicationSpecificTag, ro			

Parameter Menu			
Parameter			
Main Functions			
V_Control, ro			
V_SwitchPointBDC1.Logic, ro			

Observation Menu			
Observation			

V_ProcessDataInput.1 %
V_ProcessDataInput.2
V_ProcessDataInput.3

<b>Diagnosis Menu</b>
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<b>Diagnosis</b>
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V_DeviceStatus
V_Switchcounter

## Maintenance Menus

<b>Identification Menu</b>
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<b>Identification</b>
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V_VendorName
V_VendorText
V_ProductName
V_ProductID
V_ProductText
V_Lot
V_FirmwareRevision
V_ApplicationSpecificTag

<b>Parameter Menu</b>
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<b>Parameter</b>
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<b>Main Functions</b>
V_OperatingMode
V_Control

<i>If V_Control = 0:</i>
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<b>Remote Adjustment</b>
--------------------------

V_SetPointsBDC1.(1) (BDC1, Q1) %
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<i>If V_Control = 1:</i>
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<b>Local Adjustment</b>
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V_NoNcSwitch
V_SensibilitySwitch %
V_SystemCommand, Button:=160

<i>If V_Control = 0:</i>
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<b>Teach Status</b>
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V_TeachState.Teach State
--------------------------

<i>If V_Control = 0:</i>
--------------------------

<b>Single Value Teach</b>
---------------------------

V_SystemCommand, Button:=65
-----------------------------

<i>If V_Control = 0:</i>
--------------------------

<b>Dynamic Teach (Autoteach)</b>
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V_SystemCommand, Button:=71
V_SystemCommand, Button:=72
V_SystemCommand, Button:=79

<b>Observation Menu</b>
-------------------------

<b>Observation</b>
--------------------

V_ProcessDataInput.1 %
V_ProcessDataInput.2
V_ProcessDataInput.3

<b>Diagnosis Menu</b>
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<b>Diagnosis</b>
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V_DeviceStatus
V_Switchcounter

## Specialist Menus

<b>Identification Menu</b>
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<b>Identification</b>
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V_VendorName
V_VendorText
V_ProductName

V\_ProductID  
V\_ProductText  
V\_Lot  
V\_FirmwareRevision  
V\_ApplicationSpecificTag

#### Parameter Menu

##### Parameter

###### Setup

V\_DeviceAccessLocks.Parameter (write) Access Lock  
V\_DeviceAccessLocks.Local Parameterization Lock  
V\_SystemCommand, Button:=130

###### Main Functions

V\_OperatingMode  
V\_Control  
V\_OutputModeinSIOMode

If V\_Control = 0:

###### Remote Adjustment

V\_SwitchPointBDC1.Logic  
V\_SetPointsBDC1.(1) (BDC1, Q1) %

If V\_Control = 1:

###### Local Adjustment

V\_NoNcSwitch  
V\_SensibilitySwitch %  
V\_SystemCommand, Button:=160

If V\_Control = 0:

###### Teach Status

V\_TeachQuality  
V\_TeachState.SP1 teach point Status  
V\_TeachState.Teach State

If V\_Control = 0:

###### Teach Values

V\_TeachvaluesBDC1SP1.TP1 SP1 %  
V\_TeachvaluesBDC1SP1.TP2 SP1 %

###### Specific Functions

V\_DS ms  
V\_DR ms

If V\_Control = 0:

###### Single Value Teach

V\_SystemCommand, Button:=65

If V\_Control = 0:

###### Dynamic Teach (Autoteach)

V\_SystemCommand, Button:=71  
V\_SystemCommand, Button:=72  
V\_SystemCommand, Button:=79

If V\_Control = 0:

###### Two Value Teach

V\_SystemCommand, Button:=67  
V\_SystemCommand, Button:=68  
V\_SystemCommand, Button:=64  
V\_SystemCommand, Button:=79

#### Observation Menu

##### Observation

V\_ProcessDataInput.1 %  
V\_ProcessDataInput.2  
V\_ProcessDataInput.3

#### Diagnosis Menu

##### Diagnosis

V\_DeviceStatus  
V\_Switchcounter  
V\_Temperature °C  
V\_ProcessDataLimits.lower %  
V\_ProcessDataLimits.upper %

V\_SystemCommand, Button:=163

Note: This page shows the content of an IODD file transformed into HTML format. In the case of disparity between this and the XML view, the content of the XML file takes precedence.  
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