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P3PCxxx
P3ECxxx

Laser Distance Sensors Triangulation

IO-Link

Interface Description

Subject to change without notice
Available as PDF version only
Status: 21.07.2025
www.wenglor.com

P3PCxxx / P3ECxxx

Vendor ID

Product	hex	dec	hex (Bytes)	dec (Bytes)
wenglor sensoric GmbH	0x0057	87	00 57	0 87

Device ID

Product	hex	dec	hex (Bytes)	dec (Bytes)
P3PC001	0x3F1701	4134657	3F 17 01	63 23 1
P3PC002	0x3F1702	4134658	3F 17 02	63 23 2
P3PC011	0x3F170B	4134667	3F 17 0B	63 23 11
P3PC012	0x3F170C	4134668	3F 17 0C	63 23 12
P3PC041	0x3F1729	4134697	3F 17 29	63 23 41
P3PC042	0x3F172A	4134698	3F 17 2A	63 23 42
P3PC101	0x3F1765	4134757	3F 17 65	63 23 101
P3PC102	0x3F1766	4134758	3F 17 66	63 23 102
P3PC111	0x3F176F	4134767	3F 17 6F	63 23 111
P3PC112	0x3F1770	4134768	3F 17 70	63 23 112
P3PC141	0x3F178D	4134797	3F 17 8D	63 23 141
P3PC142	0x3F178E	4134798	3F 17 8E	63 23 142
P3PC181	0x3F17B5	4134837	3F 17 B5	63 23 181
P3PC201	0x3F17C9	4134857	3F 17 C9	63 23 201
P3PC202	0x3F17CA	4134858	3F 17 CA	63 23 202
P3PC211	0x3F17D3	4134867	3F 17 D3	63 23 211
P3PC212	0x3F17D4	4134868	3F 17 D4	63 23 212
P3PC211S01	0x000099	153	00 00 99	0 0 153
P3PC241	0x3F17F1	4134897	3F 17 F1	63 23 241

Product	hex	dec	hex (Bytes)	dec (Bytes)
P3PC242	0x3F17F2	4134898	3F 17 F2	63 23 242
P3PC301	0x3F175A	4134746	3F 17 5A	63 23 90
P3PC302	0x3F175B	4134747	3F 17 5B	63 23 91
P3PC303	0x000074	116	00 00 74	0 0 74
P3PC311	0x3F175C	4134748	3F 17 5C	63 23 92
P3PC312	0x3F175D	4134749	3F 17 5D	63 23 93
P3PC321	0x000031	49	00 00 31	0 0 49
P3PC341	0x3F175E	4134750	3F 17 5E	63 23 94
P3PC342	0x3F175F	4134751	3F 17 5F	63 23 95
P3PC361	0x3F1760	4134752	3F 17 60	63 23 96
P3PC362	0x3F1761	4134753	3F 17 61	63 23 97
P3EC401	0x3F1B01	4135681	3F 1B 01	63 27 1
P3EC402	0x3F1B02	4135682	3F 1B 02	63 27 2
P3EC411	0x3F1B0B	4135691	3F 1B 0B	63 27 11
P3EC412	0x3F1B0C	4135692	3F 1B 0C	63 27 12
P3EC413	0x00006D	109	00 00 6D	0 0 109
P3EC441	0x3F1B29	4135721	3F 1B 29	63 27 41
P3EC442	0x3F1B2A	4135722	3F 1B 2A	63 27 42

IO-Link-Information

IO-Link Version:	V1.1
Data Storage:	Yes
Blockparameter:	Yes
Min Cycle time:	800 μs
SIO-Mode:	Yes
COM-Mode:	COM3
ISDU:	Yes
Process data In (Device to Master):	48 Bit
Process data Out (Master to Device):	8 Bit

IO-Link-Profile

Common Profile
Function Class Identification
Function Class Diagnosis
Function Class Extended Identification
Smart Sensor Profil - Measuring Sensor, Type 3.2
Smart Sensor Profil - Transducer Disable

Process input data (Length: 48 Bit)

Device to Master

Subindex	Name	Bit Offset	Length	Range
1	Measurement Value: Distance in µm Distance in Mil	16	Int32	P3PC0xx: 30.000...80.000 µm P3PC1xx: 40.000...240.000 µm P3PC2xx: 50.000...350.000 µm P3PC3xx: 60.000...660.000 µm P3EC4xx: 150.000...1.000.000 µm
2	Scale	8	Int8	– 6 = µm
3	Indication Error/Warning 4	7	1 Bit	0 = false 1 = true
4	Indication Error/Warning 3	6	1 Bit	0 = false 1 = true
5	Indication Error/Warning 2	5	1 Bit	0 = false 1 = true
6	Indication Error/Warning 1	4	1 Bit	0 = false 1 = true
7	Error	3	1 Bit	0 = false 1 = true
8	Warning	2	1 Bit	0 = false 1 = true
9	SSC2	1	1 Bit	0 = false 1 = true
10	SSC1	0	1 Bit	0 = false 1 = true

These values are outside the measurement range and show information about the measurement:

Measured Value =	0x80000008	–2147483640	Object too close
	0x7FFFFFF8	2147483640	Object too far
	0x7FFFFFFC	2147483644	No measurement data

	Octet 0 (MSB)								Octet 1								Octet 2								Octet 3							
Subindex	1																															
Bit Offset	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16
	Measurement value 32 bit																															

	Octet 2								Octet 3 (LSB)							
Subindex	2								**3**	**4**	**5**	**6**	**7**	**8**	**9**	**10**
Bit Offset	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0
	Scale															

Process output data (Length: 8 Bit)

Master to Device

Subindex	Name	Bit Offset	Length	Range
1	Control Signal (for Transducer)	0	1 Bit	0 = On 1 = Off
2	Find Me	1	1 Bit	0 = Off 1 = Blinking
3	Teach SSC1	3	1 Bit	0 → 1 Start Teach
4	Teach SSC2	4	1 Bit	0 → 1 Start Teach

	Octet 0 (MSB)							
Subindex				4	3		2	1
Bit Offset	7	6	5	4	3	2	1	0

Parameter

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Identification										
Vendor Name	0x0010	**16**	0	R	String				wenglor sensoric GmbH	
Vendor Text	0x0011	**17**	0	R	String				the innovative family	
Product Name	0x0012	**18**	0	R	String				P3PCxxx / P3ECxxx	
Product ID	0x0013	**19**	0	R	String				P3PCxxx / P3ECxxx	
Product Text	0x0014	**20**	0	R	String				Laser Distance Sensors Triangulation	
Serial Number	0x0015	**21**	0	R	String				—	
Hardware Version	0x0016	**22**	0	R	String				—	
Firmware Version	0x0017	**23**	0	R	String				—	
Tags										
Application Specific Tag	0x0018	**24**	0	R/W	String 32 Byte	X			***	
Function Tag	0x0019	**25**	0	R/W	String 32 Byte	X			***	
Location Tag	0x001A	**26**	0	R/W	String 32 Byte	X			***	
Sensor Localisation										
Find Me	0x1200	**4608**	0	R/W	Uint8		X		0 = Off	0 = Off 1 = Blinking
Device Settings										
System Command	0x0002	**2**	0	W	Uint8			X	—	Device Reset = 0x80 (128) Restore Factory Settings = 0x82 (130)
Device Access Locks.Data Storage Lock	0x000C	**12**	2	R/W	Bool	X			0 = unlocked	0 = unlocked 1 = Data Storage Locked
Device Access Locks.Local Parameterization Lock	0x000C	**12**	3	R/W	Bool	X			P3PC211S01: 1 = locked Rest: 0 = unlocked	0 = unlocked 1 = Local Parameterization locked
Language	0x00F0	**240**	0	R/W	Uint8	X			1 = English	0 = German 1 = English 5 = Chinese
Display Rotate	0x00A0	**160**	0	R/W	Uint8	X			0 = Off	0 = Off 1 = On
Measurement Value Settings										
Sensitivity	0x0115	**277**	0	R/W	Uint8	X			1 = Standard	1 = Standard 2 = High 4 = Maximum
Capture Mode	0x0202	**514**	0	R/W	Uint8	X			0 = Auto	0 = Auto 1 = Fixed
Maximum Exposure Time	0x07D3	**2003**	0	R/W	Uint16	X			Laser (red): 400 µs Laser (blue): 1600 µs	1…1600 µs
Fixed Exposure Time	0x07D4	**2004**	0	R/W	Uint32	X			Laser (red): 400 µs Laser (blue): 1600 µs	1…1600 µs
Current Exposure Time	0x2690	**9872**	0	R	Uint32		X		—	µs/6
Measurement Filter	0x0110	**272**	0	R/W	Uint8	X			3	0 = Off 1…9
Emitted Light	0x00E0	**224**	0	R/W	Uint8	X			0 = On	0 = On 1 = Off
Measurement Unit (Process Data)	0x0114	**276**	0	R/W	Uint8	X			0 = Micrometer	0 = Micrometer 1 = Mil
Detection Range Near	0x0112	**274**	0	R/W	Uint16	X			0 mm	P3PC0xx: 30…80 mm P3PC1xx: 40…240 mm P3PC2xx: 50…350 mm P3PC3xx: 60…660 mm P3EC4xx: 150…1000 mm 0 mm = No Limitation

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Detection Range Far	0x0113	**275**	0	R//W	Uint16	X			30.000 mm	P3PC0xx: 30…80 mm P3PC1xx: 40…240 mm P3PC2xx: 50…350 mm P3PC3xx: 60…660 mm P3EC4xx: 150…1000 mm 30.000 mm = No Limitation
Offset	0x0116	**278**	0	R/W	Sint32	X			0 µm	
Offset Preset	0x04FE	**1278**	0	R/W	Sint32	X			0 µm	0µm, P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…660.000 µm P3EC4xx: 150.000…1000.000 µm
Apply Offest Preset	0x0500	**1280**	0	W	Uint8			X	---	1 = Apply
Laser Class	0x00E2	**226**	0	R/W	Uint8				0	P3xCx0x, P3xCx1x, P3xCx2x: 0 = Laser Class 1 1 = Laser Class 2 P3xCx4x, P3xCx6x: 0 = Laser Class 2
License Active	0x00E4	**228**	0	R	Uint8					P3xCx0x, P3xCx1x, P3xCx2x: 0 = No (Laser Class 1) 1 = Yes (Laser Class 2) P3xCx4x, P3xCx6x: 0 = No (Laser Class 2)
Laser Class License Key	0x00E3	**227**	0	R/W	String 232 Byte			X	---	
SSC1										
SSC1 Teach-Mode	0x0290	**656**	0	R/W	Uint8	X		X	0 = Foreground	0 = Foreground 1 = Background 2 = Window 3= Jump Detection 4= Distance+Intensity
SSC1 Switch Point	0x0270	**624**	0	R/W	Sint32	X			80.000 µm 240.000 µm 350.000 µm 660.000 µm 1000.000 µm	P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…660.000 µm P3EC4xx: 150.000…1000.000 µm
SSC1 Hysteresis Mode	0x0230	**560**	0	R/W	Uint8	X			0 = Automatic	0 = Automatic 1 = Manual
SSC1 Hysteresis	0x0300	**768**	0	R/W	Uint32	X			P3PC0xx: 300 µm P3PC1xx: 700 µm P3PC2xx: 1000 µm P3PC3xx: 1800 µm P3EC4xx: 1800 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm
SSC1 Window (SSC1 Mode = Window)										
SSC1 Window Near	0x0271	**625**	0	R/W	Uint32	X			30.000 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm
SSC1 Window Far	0x0272	**626**	0	R/W	Uint32	X			30.000 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
SSC1 Jump (SSC1 Mode = Jump Detection)										
SSC1 Jump Height min.	0x02A0	**672**	0	R/W	Uint32	X			0	0 = Automatic, P3PC0xx: 3 µm…50.000 µm P3PC1xx: 5 µm…200.000 µm P3PC2xx: 6 µm…300.000 µm P3PC3xx: 8 µm…600.000 µm P3EC4xx: 8 µm…850.000 µm
SSC1 Jump Height max.	0x02A1	**673**	0	R/W	Uint32	X			4294967295 = No Limitation	4294967295 = No Limitation, P3PC0xx: 3 µm…50.000 µm P3PC1xx: 5 µm…200.000 µm P3PC2xx: 6 µm…300.000 µm P3PC3xx: 8 µm…600.000 µm P3EC4xx: 8 µm…850.000 µm
SSC1 Jump Direction	0x02A2	**674**	0	R/W	Uint8	X			1	0=Positive 1=Negative 2=Booth
SSC1 Jump Time Delta	0x02A4	**676**	0	R/W	Uint16	X			50	1..256 Cycles
SSC1 Jump Impulse	0x02A3	**675**	0	R/W	Uint32	X			0	0 = Hold 1 = 1 ms … 10.000 ms
SSC1 Intensity (SSC1 Mode = Distance+Intensity)										
SSC1 Distance Window	0x0275	**629**	0	R/W	Uint32	x			P3PC0xx: 300 µm P3PC1xx: 700 µm P3PC2xx: 1000 µm P3PC3xx: 1800 µm P3EC4xx: 1800 µm	P3PC0xx: 2 µm…10.000 µm P3PC1xx: 3 µm…10.000 µm P3PC2xx: 4 µm…10.000 µm P3PC3xx: 5 µm…10.000 µm P3EC4xx: 5 µm…10.000 µm
SSC1 Intensity Switch Point	0x0276	**630**	0	R/W	Uint32	x			30.000	1...1.000.000
SSC1 Intensity Window	0x0277	**631**	0	R/W	Uint8	x			4	1…50 %
SSC2										
SSC2 Teach Mode	0x0291	657	0	R/W	Uint8	X			0 = Foreground	0 = Foreground 1 = Background 2 = Window 3= Jump Detection 4= Distance+Intensity
SSC2 Switch Point	0x0280	640	0	R/W	Uint16	X			80.000 µm 240.000 µm 350.000 µm 660.000 µm 1000.000 µm	P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…600.000 µm P3EC4xx: 150.000…1000.000 µm
SSC2 Hysteresis Mode	0x0231	561	0	R/W	Uint8	X			0 = Automatic	0 = Automatic 1 = Manual
SSC2 Hysteresis	0x0301	769	0	R/W	Uint32	X			P3PC0xx: 300 µm P3PC1xx: 700 µm P3PC2xx: 1000 µm P3PC3xx: 1800 µm P3EC4xx: 1800 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm
SSC2 Window (SSC2 Mode = Window)										
SSC2 Window Near	0x0281	641	0	R/W	Uint32	X			30.000 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm
SSC2 Window Far	0x0282	642	0	R/W	Uint32	X			30.000 µm	P3PC0xx: 2 µm…50.000 µm P3PC1xx: 3 µm…200.000 µm P3PC2xx: 4 µm…300.000 µm P3PC3xx: 5 µm…600.000 µm P3EC4xx: 5 µm…850.000 µm

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
SSC2 Jump (SSC2 Mode = Jump Detection)										
SSC2 Jump Height min.	0x02B0	688	0	R/W	Uint32	X			0	0 = Automatic, P3PC0xx: 3 µm…50.000 µm P3PC1xx: 5 µm…200.000 µm P3PC2xx: 6 µm…300.000 µm P3PC3xx: 8 µm…600.000 µm P3EC4xx: 8 µm…850.000 µm
SSC2 Jump Height max.	0x02B1	689	0	R/W	Uint32	X			4294967295 = No Limitation	4294967295 = No Limitation, P3PC0xx: 3 µm…50.000 µm P3PC1xx: 5 µm…200.000 µm P3PC2xx: 6 µm…300.000 µm P3PC3xx: 8 µm…600.000 µm P3EC4xx: 8 µm…850.000 µm
SSC2 Jump Direction	0x02B2	690	0	R/W	Uint8	X			1	0 = Positive 1 = Negative 2 = Booth
SSC2 Jump Time Delta	0x02B4	692	0	R/W	Uint16	X			50	1..256 Cycles
SSC2 Jump Impulse	0x02B3	691	0	R/W	Uint32	X			0	0 = Hold 1 = 1 ms … 10.000 ms
SSC2 Intensity (SSC2 Mode = Distance+Intensity)										
SSC2 Distance Window	0x0285	645	0	R/W	Uint32	x			P3PC0xx: 300 µm P3PC1xx: 700 µm P3PC2xx: 1000 µm P3PC3xx: 1800 µm P3EC4xx: 1800 µm	P3PC0xx: 2 µm…10.000 µm P3PC1xx: 3 µm…10.000 µm P3PC2xx: 4 µm…10.000 µm P3PC3xx: 5 µm…10.000 µm P3EC4xx: 5 µm…10.000 µm
SSC2 Intensity Switch Point	0x0286	646	0	R/W	Uint32	x			30000	1...1.000.000
SSC2 Intensity Window	0x0287	647	0	R/W	Uint8	x			4	1…50 %
Teach-In										
SSC1 Teach-In	0x0200	**512**	0	W	Uint8			X	—	1 = Teach-In
SSC2 Teach-In	0x0201	**513**	0	W	Uint8			X	—	1 = Teach-In
Pin Function										
E/A1 Pin Function	0x0040	**64**	0	R/W	Uint8	X	X	X	P3xCx1x, P3xCx4x: 1 = Error Output Rest: 0 = Switching Output	0 = Switching Output SSC1 1 = Error Output 2 = Warning Output 3 = Emitted Light Disengageable 4 = Extern Teach 5 = Disabled
E/A2 Pin Function (Only Digital Versions)	0x0041	**65**	0	R/W	Uint8	X		X	P3xCx1x, P3xCx4x, P3xCx8x: not available Rest: 0 = Switching Output P3PC303: 6 = Antivalent Switching Output	0 = Switching Output SSC2 1 = Error Output 2 = Warning Output 3 = Emitted Light Disengageable 4 = Extern Teach 5 = Disabled 6 = Antivalent Switching Output
E3 Pin Function	0x0042	**66**	0	R/W	Uint8	X		X	3 = Emitted Light Disengageable	3 = Emitted Light Disengageable 4 = Extern Teach 5 = Disabled
Digital Outputs										
A1 (SSC, Error or Warning Output)										
A1 On Delay	0x0050	**80**	0	R/W	Uint16	X			0 ms	0...10.000 ms
A1 Off Delay	0x0060	**96**	0	R/W	Uint16	X			0 ms	0...10.000 ms
A1 NO/NC	0x0210	**528**	0	R/W	Uint8	X			0 = NO	0 = NO 1= NC
A1 NPN/PNP/P-P	0x0220	**544**	0	R/W	Uint8	X			0 = PNP	0 = PNP 1 = NPN 2 = Push-Pull

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
A2 (SSC, Error or Warning Output))										
A2 On Delay	0x0051	**81**	0	R/W	Uint16	X			0 ms	0...10.000 ms
A2 Off Delay	0x0061	**97**	0	R/W	Uint16	X			0 ms	0...10.000 ms
A2 NO/NC	0x0211	**529**	0	R/W	Uint8	X			0 = NO	0 = NO 1= NC
A2 NPN/PNP/P-P	0x0221	**545**	0	R/W	Uint8	X			0 = PNP	0 = PNP 1 = NPN 2 = Push-Pull
Digital Inputs										
E1 (Teach Input or Emitted Light)										
E1 Input Ub Active/Inactive	0x0260	**608**	0	R/W	Uint8	X			0 = Ub active	0 = Ub Active 1 = Ub Inactive
E2 (Teach Input or Emitted Light)										
E2 Input Ub Active/Inactive	0x0261	**609**	0	R/W	Uint8	X			0 = Ub active	0 = Ub Active 1 = Ub Inactive
E3 (Teach Input or Emitted Light)										
E3 Input Ub Active/Inactive	0x0262	**610**	0	R/W	Uint8	X			0 = Ub active	0 = Ub Active 1 = Ub Inactive
Analog Outputs										
O Analog Output (Only Analog Versions)										
O Analog Teach-In	0x0080	**128**	0	W	Uint8			X	–	1 = Teach 0 V / 4 mA 2 = Teach 10 V / 20 mA 3 = Teach 5 V / 12 mA
O Analog Teach Mode	0x0085	**133**	0	R/W	Uint8	X			0 = Distance	0 = Distance 1 = Tolerance
O Analog Output Mode	0x0083	**131**	0	R/W	Uint8	X			P3xCx11, P3xCx13, P3xCx81: 1 = 4…20 mA P3xCx12: 0 = 0…10 V P3xCx41: 1 = 4…20 mA P3xCx42: 0 = 0…10 V	0 = 0…10 V 1 = 4…20 mA
O Analog Substitute Values (Only Analog Current Variants)	0x0084	**132**	0	R/W	Uint8	X			P3xCx11, P3xCx41, P3xCx81, P3xCx13: 1 = Enabled P3xCx12, P3xCx42: not available	0 = Disabled 1 = Enabled
O Distance (O Analog Output Mode = Distance)										
O Analog 0 V / 4 mA	0x0081	**129**	0	R/W	Uint32	X			30.000 µm 40.000 µm 50.000 µm 60.000 µm 150.000 µm	P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…660.000 µm P3EC4xx: 150.000…1000.000 µm
O Analog 10 V / 20 mA	0x0082	**130**	0	R/W	Uint32	X			80.000 µm 240.000 µm 350.000 µm 660.000 µm 1000.000 µm	P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…660.000 µm P3EC4xx: 150.000…1000.000 µm
O Tolerance (O Analog Output Mode = Tolerance)										
O Tolerance Range	0x0087	**135**	0	R/W	Uint32	X			P3PC0xx: 25.000 µm P3PC1xx: 100.000 µm P3PC2xx: 150.000 µm P3PC3xx: 300.000 µm P3EC4xx: 425.000 µm	P3PC0xx: 1000...80.000 µm P3PC1xx: 1000…240.000 µm P3PC2xx: 1000…350.000 µm P3PC3xx: 1000…660.000 µm P3EC4xx: 1000…1000.000 µm
O Tolerance Characteristic	0x0088	**136**	0	R/W	Uint8	X			0 = Positive Slope	0 = Positive slope 1 = Negative Slope

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
O Analog 5 V / 12 mA	0x0086	**134**	0	R/W	Sint32	X			P3PC0xx: 55.000 µm P3PC1xx: 140.000 µm P3PC2xx: 200.000 µm P3PC3xx: 360.000 µm P3EC4xx: 575.000 µm	P3PC0xx: 30.000…80.000 µm P3PC1xx: 40.000…240.000 µm P3PC2xx: 50.000…350.000 µm P3PC3xx: 60.000…660.000 µm P3EC4xx: 150.000…1000.000 µm
Difference and Thickness Measurement (Coupled)										
Sensor Mode	0x0111	**273**	0	R/W	Uint8	X			4 = Automatic	0=Stand-Alone 1=Secondary 2=Main Thickness 3=Main Difference 4=Automatic
Sensor Mode Effective	0x0117	**279**	0	R	Uint8				---	0=Stand-Alone 1=Secondary 2=Main Thickness 3=Main Difference 4=Detecting
Reference	0x04FF	**1279**	0	W	Uint8					1 = Reference
Sensor Alignment Offset (Difference)	0x0501	**1281**	0	RW	Sint32	X			0 µm	
Sensor Gap (Thickness)	0x0502	**1282**	0	RW	Uint32	X			P3PC0xx: 160.000 µm P3PC1xx: 480.000 µm P3PC2xx: 700.000 µm P3PC3xx: 1320.00 µm P3EC4xx: 2000.000 µm	
Reference Value	0x0503	**1283**	0	R/W	Uint32	X			0 µm	
SSC1 Switch Point Coupled	0x0504	**1284**	0	R/W	Sint32	X			0 µm	
SSC2 Switch Point Coupled	0x0505	**1285**	0	R/W	Sint32	X			0 µm	
O Coupled Tolerance Range	0x0506	**1286**	0	R/W	Uint32	X			P3PC0xx: 50.000 µm P3PC1xx: 200.000 µm P3PC2xx: 300.000 µm P3PC3xx: 600.000 µm P3EC4xx: 850.000 µm	P3PC0xx: 1000 µm…50.000 µm P3PC1xx: 1000 µm…200.000 µm P3PC2xx: 1000 µm…300.000 µm P3PC3xx: 1000 µm…600.000 µm P3EC4xx: 1000 µm…850.000 µm
O Coupled Characteristic	0x0507	**1287**	0	R/W	Uint8	X			0 = Positive Slope	0 = Positive slope 1 = Negative Slope
Bluetooth										
Bluetooth	0x0306	**774**	0	R/W	Uint8	X			0 = On	0 = On 1 = Off
Password Protection	0x0100	**255**	0	R/W	Uint8	X			0 = Disabled	0 = Disabled 1 = Enabled
Password change	0x0101	**256**	0	R/W	String 32 Byte	X			***	

Observation

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Coupled Mode Valuels										
Distance Main	0x1216	**4630**	0	R	Uint32		X			
Distance Secondary	0x1215	**4629**	0	R	Uint32		X			
Measurement Value (Difference/Thickness)	0x1217	**4631**	0	R	Sint32		X			
Intensity										
Intensity	0x1220	**4640**	0	R	Uint32		X			

Diagnosis

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Status										
Device Status	0x0024	**36**	0	R	Uint8		X		0	0 = Device is OK 1 = Maintenance required 2 = Out of specification 3 = Functional check 4 = Failure
Detailed Device Status	0x0025	**37**	0	R	4x Array of StringT3		X		0	Shows the pending Events (maximum 4)
Additional Status Information	0x1300	**4864**	0	R	Uint32		X		0	Value 0 = No Warning / Errors Measurement: Bit 0 = Signal Warning Bit 2 = Overexposure Bit 3 = Ambient light Bit 4 = Object to Close Bit 5 = Object to Far Bit 6 = No Measurement data Bit 8 = Emitted Light off Other: Bit 17 = Fatal Device Error Bit 18 = Temperature Error Bit 19 = Temperature Warning High Bit 20 = Temperature Warning Low Bit 28 = Undervoltage detection Bit 29 = Short Circuit
Self Check	0x2518	**9496**	0	R	Uint32		X		—	—
Condition Monitoring Functions										
Process Data Indication										
Indication Warning/Error 1	0x1310	**4880**	0	R//W	Uint8	X			Signal Warning	Measurement: 0 = Signal Warning 2 = Overexposure 3 = Ambient Light 4 = Object Too Close 5 = Object Too Far 6 = No Measurement Data 8 = Emitted Light Off Other: 17 = Fatal Error 18 = Temperature Error 19 = Temperature Warning High 20 = Temperature Warning Low 22 = Laser Error 28 = Undervoltage 29 = Short Circuit»
Indication Warning/Error 2	0x1311	**4881**	0	R//W	Uint8	X			Ambient Light	
Indication Warning/Error 3	0x1312	**4882**	0	R//W	Uint8	X			Temperature Warning High	
Indication Warning/Error 4	0x1313	**4883**	0	R//W	Uint8	X			Short Circuit	

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Warning Output Configuration										
Warning Output Configuration	0x1314	**4884**	0	R//W	Uint32	X			Used as Warning: • Signal Warning • Overexposure • Ambient light • Temperature Warning High • Temperature Warning Low • Undervoltage detection	0 = Not use as Warning / Error 1 = Used as Warning / Error Measurement: Bit 0 = Signal Warning Bit 2 = Overexposure Bit 3 = Ambient Light Bit 4 = Object Too Close Bit 5 = Object Too Car Bit 6 = No Measurement Data Bit 8 = Emitted Light Off Other: Bit 17 = Fatal Error Bit 18 = Temperature Error Bit 19 = Temperature Warning High Bit 20 = Temperature Warning Low Bit 22 = Laser Error Bit 28 = Undervoltage Bit 29 = Short Circuit
Error Output Configuration										
Error Output Configuration	0x1315	**4885**	0	R//W	Uint32	X			Used as Error: • Object to close • Object to far • No Measure-ment data • Fatal Device Error • Temperature Error • Laser Error • Short Circuit	
Measuring Data Channel										
Lower Limit	0x4080	**16512**	1	R	Int32				-2147482880 / -214748.2880	µm / Inch
Upper Limit			2	R	Int32				2147482880 / 214748.2880	µm / Inch
Unit Code			3	R	Uint16				1010 = Meter	1010 = Meter 1019 = Inch
Scale			4	R	Int8				-6 /-3	
Device Simulation										
Simulation Mode	0x0310	**784**	0	R/W	Uint8		X		0	0 = Off 1 = On
Device Simulation Enabled (Simulation Mode= 1)										
Simulation Measurement Value	0x0315	**789**	0	R/W	Uint32		X		2147483647	Measurement value [µm] 2147483647 = Use Process Value, -2147483640 = Too Close, 2147483640 = Too Far, 2147483644 = No Measurement
Simulation Secondary Distance	0x0333	**819**	0	R/W	Int32		X			Measurement value [µm] 2147483644 = No Measurement
Simulation SSC1	0x0331	**817**	0	R/W	Uint8		X		2	0 = Off 1 = Active 2 = Use Process Value
Simulation SSC2	0x0332	**818**	0	R/W	Uint8		X		2	0 = Off 1 = Active 2 = Use Process Value
Simulation Analog Output Voltage (if implemented)	0x0316	**790**	0	R/W	Uint32		X		2	21,1 mA = Use Process Value 3,5…21,0 mA (values transfered in 1/10 mA)
Simulation Analog Output Current (if implemented)	0x0316	**790**	0	R/W	Uint32		X		2	10,1 V = Use Process Value 0,0…10,0 V (values transfered in 1/10 V)

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dynamic	Modify others	Default value	Range
Simulation Signal Warning	0x031B	**795**	0	R/W	Uint8		X		2	0 = Off 1 = Active 2 = Use Process Value
Simulation Overexposed Signal	0x031C	**796**	0	R/W	Uint8		X		2	
Simulation Ambient Light	0x031E	**798**	0	R/W	Uint8		X		2	
Simulation Fatal Error	0x0323	**803**	0	R/W	Uint8		X		2	
Simulation Temperature Error	0x0324	**804**	0	R/W	Uint8		X		2	
Simulation Temperature Warning High	0x0325	**805**	0	R/W	Uint8		X		2	
Simulation Temperature Warning Low	0x032F	**815**	0	R/W	Uint8		X		2	
Simulation Undervoltage	0x0327	**807**	0	R/W	Uint8		X		2	
Simulation Short Circuit	0x0328	**808**	0	R/W	Uint8		X		2	
Simulation Laser Error	0x032D	**813**	0	R/W	Uint8		X		2	

Events

Name	Event Code	Type	Specification
General malfunction – unknown error	0x1000	Error	IO-Link
Short circuit – Check installation	0x7710	Error	IO-Link
Device temperature over-run – Clear source of heat	0x4210	Warning	IO-Link
Device temperature under-run – Insulate device	0x4220	Warning	IO-Link
Temperature fault – Overload	0x4000	Error	IO-Link
Primary supply voltage under-run – Check tolerance	0x5111	Warning	IO-Link