

P1PHxxx

Reflex Sensors with Background Suppression

High-End with Teach-in



Interface Description

Subject to change without notice

Available as PDF version only

Status: 1.0.0

Status: 22.11.2019

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IO-Link P1PHxxx High-End

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)
P1PH302	0x290F08	2690824	29 0F 08	41 15 8
P1PH304	0x290F09	2690825	29 0F 09	41 15 9
P1PH701	0x290F0F	2690831	29 0F 0F	41 15 15
P1PH702	0x290F10	2690832	29 0F 10	41 15 16

IO-Link Version:	V 1.1
Data Storage:	Yes
Blockparameter:	Yes
Min Cycle Time:	3,6 ms
SIO-Mode:	Yes
COM-Mode:	COM2
ISDU:	Yes
Process data In (Device to Master):	24 Bit
Process data Out (Master to Device):	—

Process data

Subindex	Name	Bit Offset	Datatype	Valid for Versions	Range
1	A1 Output	0	1 Bit	all	0 = Off 1 = On
2	Contamination Output	1	1 Bit	all	0 = Off 1 = On
3	A2 Output	2	1 Bit	all	0 = Off 1 = On
4	No Signal	3	1 Bit	all	0 = Off 1 = On
5	Short Circuit	4	1 Bit	all	0 = Off 1 = On
6	Laser Error	5	1 Bit	P1PH701, P1PH702	0 = Off 1 = On
7	Overtemperature	6	1 Bit	all	0 = Off 1 = On
8	—	7	1 Bit	—	
9	Signal	8	Uint16	all	0...511 1...510 = Distance 0 = False 511 = Distance measurement off

Octet 0

Subindex	9							
Bit Offset	23	22	21	20	19	18	17	16

Octet 1

Subindex	9							
Bit Offset	15	14	13	12	11	10	9	8

Octet 2

Subindex	8	7	6	5	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	Dyna-mic	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	
Produkt Name	0x0012	18	0	R	String				P1PHxxx	
Product ID	0x0013	19	0	R	String				P1PHxxx	
Product Text	0x0014	20	0	R	String				Reflex Sensor with Background Suppression	
Serial Number	0x0015	21	0	R	String				—	
Hardware Revision	0x0016	22	0	R	String				—	
Firmware Revision	0x0017	23	0	R	String				—	
Application Specific Name	0x0018	24	0	R/W	String 32 Byte	X			***	

Parameter										
Device Settings										
System Command	0x0002	2	0	W	UInt8			X	—	Factory Reset = 0x82 (130)
Device Access Locks. Parameter (write) Access Lock	0x000C	12	1	R/W	Bool	X			0	0 = unlocked 1 = Parameter Access locked
Device Access Locks. Data Storage Lock	0x000C	12	2	R/W	Bool	X			0	0 = unlocked 1 = Data Storage locked
Device Access Locks. Local Parameterization	0x000C	12	3	R/W	Bool	X			0	0 = unlocked 1 = Local Parameterization locked
NFC Lock	0x0305	77	0	R/W	UInt8	X			0	0 = read/write 1 = read only 2 = locked

Mesasured Value Settings										
Distance measurement	0x301	769	0	R/W	UInt8	X			1	0 = On 1 = Off
Emitted Light	0x00E0	224	0	R/W	UInt8	X			0	0 = Light on 1 = Light off
Operating Mode	0x0110	272	0	R/W	UInt8	X			0	0 = Standard 1 = Interference-free
Hysteresis	0x0300	768	0	R/W	UInt8	X			0	0 = Small 1 = Large

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data-type	Data Storage	Dyna-mic	Modify others	Default value	Range
Pin Function										
A1 Pin Function	0x0040	64	0	R/W	Uint8	X		X	0 = Switching Output	0 = Switching Output 1 = Error Output 2 = Contamination Output
E/A2 Pin Function	0x0041	65	0	R/W	Uint8	X		X	0 = Switching Output	0 = Switching Output 1 = Error Output 2 = Contamination Output 4 = Extern Teach A1 Input 5 = Deactivated 6 = Antivalent Switching Output
A1 (Switching Output)										
A1 Teach-In	0x0200	512	0	W	Uint8			X	—	1 = Do Teach
A1 Teach Mode	0x0290	656	0	W	Uint8	X		X	0 = Foreground	0 = Foreground 1 = Background
A1 Switch Point	0x0270	624	0	R/W	Uint8	X			510	1...510
A1 ON Delay	0x0050	80	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 OFF Delay	0x0060	96	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 NO/NC	0x0210	528	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
A1 PNP/NPN	0x0220	544	0	R/W	Uint8	X			P1PH302, P1PH701: 1 P1PH304, P1PH702: 2	0 = PushPull 1 = PNP 2 = NPN
A1 (Error or Contamination Output)										
A1 ON Delay	0x0050	80	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 OFF Delay	0x0060	96	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 NO/NC	0x0210	528	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
A1 PNP/NPN	0x0220	544	0	R/W	Uint8	X			P1PH302, P1PH701: 1 P1PH304, P1PH702: 2	0 = PushPull 1 = PNP 2 = NPN
E/A2 (Switching Output)										
E/A2 Teach-In	0x0201	513	0	W	Uint8			X	—	1 = Do Teach
E/A2 Teach Mode	0x0291	657	0	R/W	Uint8	X		X	0 = Foreground	0 = Foreground 1 = Background
E/A2 Switch Point	0x0280	640	0	R/W	Uint8	X		X	1	1...510
E/A2 ON Delay	0x0051	81	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 OFF Delay	0x0061	97	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 NO/NC	0x0211	529	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
E/A2 PNP/NPN	0x0221	545	0	R/W	Uint8	X			P1PH302, P1PH701: 1 P1PH304, P1PH702: 2	0 = PushPull 1 = PNP 2 = NPN
E/A2 (Error or Contamination Output)										
E/A2 ON Delay	0x0051	81	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 OFF Delay	0x0061	97	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 NO/NC	0x0211	529	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
E/A2 PNP/NPN	0x0221	545	0	R/W	Uint8	X			P1PH302, P1PH701: 1 P1PH304, P1PH702: 2	0 = PushPull 1 = PNP 2 = NPN
E/A2 (Antivalent)										
E/A2 PNP/NPN	0x0221	545	0	R/W	Uint8	X			P1PH302, P1PH701: 1 P1PH304, P1PH702: 2	0 = PushPull 1 = PNP 2 = NPN
E2 (Teach Input)										
Input Ub active/inactive	0x0260	608	0	R/W	Uint8	X			0 = Ub active	0 = Ub active 1 = Ub inactive
Device Test										

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data-type	Data Storage	Dyna-mic	Modify others	Default value	Range
Test Mode	0x0310	784	0	R/W	UInt8		X		0	0 = OFF 1 = ON
Test Output A1	0x0317	791	0	R/W	UInt8		X		0	0 = OFF 1 = ON
Test Output A2	0x0311	785	0	R/W	UInt8		X		0	0 = OFF 1 = ON
Test Input E2	0x0313	787	0	R	UInt8		X		0	0 = OFF 1 = ON
Test Error	0x0314	788	0	R/W	UInt8		X		0	0 = OFF 1 = ON
Test Contamination	0x0315	789	0	R/W	UInt8		X		0	0 = OFF 1 = ON
Test Measured Value	0x0316	790	0	R/W	UInt8		X		510	1...510