

P1NHxxx

Reflex Sensors with Background Suppression

Electronic



Interface Description

IO-Link P1NHxxx

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)
P1NH304	0x290E1C	2690588	29 0E 1C	41 14 28
P1NH307	0x290E1D	2690589	29 0E 1D	41 14 29
P1NH309	0x290E2B	2690603	29 0E 2B	41 14 43
P1NH310	0x290E2C	2690604	29 0E 2C	41 14 44
P1NH501	0x290E0C	2690572	29 0E 0C	41 14 12
P1NH503	0x290E20	2690592	29 0E 20	41 14 32
P1NH703	0x290E0E	2690574	29 0E 0E	41 14 14
P1NH705	0x290E26	2690598	29 0E 26	41 14 38

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	—	2	1 Bit	—	—
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	all	0 = Off 1 = On
7	Overtemperature	6	1 Bit	P1NH703, P1NH705	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	
Product Name	0x0012	18	0	R	String				P1NHxxx P1NHxxx	
Product ID	0x0013	19	0	R	String				P1NHxxx P1NHxxx	
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 = read/write 1 = read only 2 = locked
Mesasured Value Settings										
Distance measurement	0x0301	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
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	6 = Antivalent Switching Output	1 = Error Output 5 = deactivated 2 = Contamination Output 6 = Antivalent Switching Output

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data-type	Data Storage	Dyna-mic	Modify others	Default value	Range
A1 (Switching Output)										
Source Switch Point	0x0230	560	0	R/W	Uint8	X			0	0 = Potentiometer 1 = IO-Link
A1 Teach-In	0x0200	512	0	W	Uint8			X	—	1 = Teach-in
A1 Teachmode	0x0290	656	0	R/W	Uint8	X		X	0 = Foreground	0 = Foreground 1 = Background
A1 Switch Point	0x0270	624	0	R/W	Uint16	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			P1NH304, P1NH309, P1NH501, P1NH703: 1 P1NH307, P1NH310, P1NH503, P1NH705: 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			P1NH304, P1NH309, P1NH501, P1NH703: 1 P1NH307, P1NH310, P1NH503, P1NH705: 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			P1NH304, P1NH309, P1NH501, P1NH703: 1 P1NH307, P1NH310, P1NH503, P1NH705: 2	0 = PushPull 1 = PNP 2 = NPN
Device Test										
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 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	Uint16		X		0	0...511