EN

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P1KHxxx

Reflex Sensors with Background Suppression



IO-Link

Interface Description

Subject to change without notice
Available as PDF version only
Status: 13.04.2026
www.wenglor.com

IO-Link P1KHxxx

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)
P1KH001	0x290B01	2689793	29 0B 01	41 11 1
P1KH002	0x290B02	2689794	29 0B 02	41 11 2
P1KH003	0x290B03	2689795	29 0B 03	41 11 3
P1KH004	0x290B04	2689796	29 0B 04	41 11 4
P1KH005	0x290B05	2689797	29 0B 05	41 11 5
P1KH006	0x290B06	2689798	29 0B 06	41 11 6
P1KH007	0x290B07	2689799	29 0B 07	41 11 7
P1KH008	0x290B08	2689800	29 0B 08	41 11 8
P1KH009	0x290B09	2689801	29 0B 09	41 11 9
P1KH010	0x290B0A	2689802	29 0B 0A	41 11 10
P1KH011	0x290B0B	2689803	29 0B 0B	41 11 11
P1KH012	0x290B0C	2689804	29 0B 0C	41 11 12
P1KH013	0x290B0D	2689805	29 0B 0D	41 11 13
P1KH014	0x290B0E	2689806	29 0B 0E	41 11 14
P1KH015	0x290B0F	2689807	29 0B 0F	41 11 15
P1KH018	0x290B12	2689810	29 0B 12	41 11 18
P1KH019	0x290B13	2689811	29 0B 13	41 11 19
P1KH020	0x290B14	2689812	29 0B 14	41 11 20

Produkt	hex	dec	hex (Bytes)	dec (Bytes)
P1KH022	0x290B16	2689814	29 0B 16	41 11 22
P1KH023	0x290B17	2689815	29 0B 17	41 11 23
P1KH025	0x290B19	2689817	29 0B 19	41 11 25
P1KH026	0x290B1A	2689818	29 0B 1A	41 11 26
P1KH027	0x290B1B	2689819	29 0B 1B	41 11 27
P1KH028	0x290B1C	2689820	29 0B 1C	41 11 28
P1KH029	0x290B1D	2689821	29 0B 1D	41 11 29
P1KH030	0x290B1E	2689822	29 0B 1E	41 11 30
P1KH041	0x290B29	2689833	29 0B 29	41 11 41
P1KH043	0x0000A9	169	00 00 A9	00 00 169
P1KH044	0x0000AC	172	00 00 AC	00 00 172
P1KH045	0x290B35	2689845	29 0B 35	41 11 53
P1KH050	0x290B39	2689849	29 0B 39	41 11 57
P1KH052	0x00002F	47	00 00 2F	00 00 47
P1KH053	0x0000A8	168	00 00 A8	00 00 168
P1KH054	0x0000AB	171	00 00 AB	00 00 171
P1KH057	0x0000B1	177	00 00 B1	0 0 177
P1KH058	0x0000B2	178	00 00 B2	0 0 178

IO-Link Version:	V1.1
Parameter Server / Data Storage:	No
Blockparameter:	No
MinCycletime:	4,8 ms
SIO-Mode:	Yes
COM-Mode:	COM2
ISDU:	No

Process data (Length: 16 Bit)

Subindex	Name	Bit Offset	Data Type	Valid for versions	Range
1	O1 Output	0	Bool	all	0 = Off 1 = On
2	Signal Warning	1	Bool	all	0 = False 1 = True
3	---	2	---	---	---
4	No Signal	3	Bool	all	0 = False 1 = True
5	Short Circuit	4	Bool	all except: P1KH004 – P1KH005 P1KH008, P1KH012, P1KH027	0 = False 1 = True
6	Laser Error	5	Bool	P1KH006 – P1KH009 P1KH015, P1KH041, P1KH043, P1KH044, P1KH052, P1KH057, P1KH058	0 = False 1 = True
7	Overtemperature	6	Bool	all	0 = False 1 = True
8	Memory Busy	7	Bool	all	0 = False 1 = True
9	Signal	8	Uint8	all except: P1KH010 – P1KH012, P1KH025 – P1KH027, P1KH043 – P1KH044, P1KH053 – P1KH054	0...255

Octet 0

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

Octet 1

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	Default value	Range
Identification							
Parameter.Serial number	0x0001	**1**	12...15	R	Uint32	-	-
Direct Parameters 1.Vendor ID 1	0x0000	**0**	8	R	Uint8	0	-
Direct Parameters 1.Vendor ID 2	0x0000	**0**	9	R	Uint8	87	-
Direct Parameters 1.Device ID1	0x0000	**0**	10	R	Uint8	-	-
Direct Parameters 1.Device ID2	0x0000	**0**	11	R	Uint8	-	-
Direct Parameters 1.Device ID3	0x0000	**0**	12	R	Uint8	-	-
Parameter							
Write parameters to OTP memory	0x0001	**1**	16	R/W	Uint8	0 = No action	0 = No action 148 = Write parameters
Counter OTP memory	0x0001	**1**	5	R	Uint8	0	0...255
OFF Delay	0x0001	**1**	4 (Bit0...2)	R/W	Uint3	0 = Off	0 = Off 1 = 2 ms 2 = 5 ms 3 = 10 ms 4 = 20 ms 5 = 50 ms 6 = 100 ms 7 = 200 ms

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Default value	Range
ON Delay	0x0001	**1**	4 (Bit3...5)	R/W	Uint3	0 = Off	0 = Off 1 = 2 ms 2 = 5 ms 3 = 10 ms 4 = 20 ms 5 = 50 ms 6 = 100 ms 7 = 200 ms
Operating Mode	0x0001	**1**	4 (Bit7)	R/W	Boolean	0 = Standard	0 = Standard 1 = Interference-free
Switch Point (available for all except P1KH010 – P1KH012, P1KH025 – P1KH027, P1KH043 – P1KH044, P1KH053 – P1KH054)	0x0001	**1**	3	R/W	Uint8	255	0...255
O1 NO/NC	0x0001	**1**	2 (Bit0)	R/W	Bool	0 = NO: P1KH001 – P1KH004, P1KH006 – P1KH015, P1KH018, P1KH019, P1KH022, P1KH023, P1KH025 – P1KH030, P1KH041, P1KH043, P1KH044, P1KH045, P1KH050, P1KH052, P1KH053, P1KH054, P1KH057, P1KH058 1 = NC: P1KH005, P1KH020	0 = NO 1 = NC
O2 Pin Function (available for all except P1KH004, P1KH005, P1KH008, P1KH012, P1KH018, P1KH020, P1KH027)	0x0001	**1**	2 (Bit1...2)	R/W	Uint2	0 = Antivalent: P1KH001 – P1KH003, P1KH006, P1KH007, P1KH009 – P1KH011, P1KH013 – P1KH015, P1KH019, P1KH022, P1KH023, P1KH025, P1KH026, P1KH028, P1KH030, P1KH041, P1KH043, P1KH044, P1KH045, P1KH050, P1KH053, P1KH054, P1KH052, P1KH057, P1KH058	0 = Antivalent Switching Output 1 = Error Output (NO) 2 = Error Output (NC) 3 = Deactivated
PNP/NPN	0x0001	**1**	2 (Bit3...4)	R/W	Uint2	1 = PNP: P1KH001 – P1KH012, P1KH019, P1KH041, P1KH043, P1KH045, P1KH050, P1KH052, P1KH053, P1KH057 2 = NPN: P1KH013 – P1KH018, P1KH020, P1KH022, P1KH023, P1KH025 – P1KH030, P1KH044, P1KH054, P1KH058	0 = Push-Pull 1 = PNP 2 = NPN 3 = Deactivated
Source SwitchPoint (available for all except P1KH010 – P1KH012, P1KH025 – P1KH027, P1KH043, P1KH044, P1KH053, P1KH054)	0x0001	**1**	2 (Bit5)	R/W	Bool	0 = Potentiometer	0 = Potentiometer 1 = IO-Link
Hysteresis	0x0001	**1**	2 (Bit6)	R/W	Bool	0 = Small	0 = Small 1 = Large
Emitted Light	0x0001	**1**	2 (Bit7)	R/W	Bool	0 = On	0 = On 1 = Off

Notes for the use of the IODD

RAM-memory
The changed parameters are stored in the volatile memory of the sensor. This could be used for testing and if the configuration of the sensor changes often (e. g. for different production batches).

Changes have the following effects:
• Sensor behavior is adjusted immediately without a restart according to the changed parameter.
• In case of a sensor restart (e. g. by turning power off and on) the settings are lost.
• Changes have no effects on the OTP-memory of the sensor.

OTP-memory
By writing the parameters, they are stored in the non-volatile memory. At every start-up the OTP parameters are loaded to the RAM of the sensor. The OTP-memory has limited write cycles. The wenglor sensoric GmbH can guarantee at least 240 writes to the OTP-memory at delivery.
The current number of writes is readable from the parameter “Counter OTP memory”.

Procedure to save parameters in the OTP-memory of the sensor:
1. Test the sensor settings within the application until the desired configuration is clear.
2. Set the parameter “Write parameters to OTP-memory” to “write parameters” and send it to the sensor.
3. The configuration is applied directly, and after a restart it is loaded from the OTP-memory.
4. New configuration is stored in the sensors RAM and OTP-memory.