EN

P2KKxxx

Retro-Reflex Sensors for Transparent Objects

High-End with Teach-in

IO-Link

Interface Description

Subject to change without notice
Available as PDF version only
Status: 1.1.0
Status: 04.08.2025
www.wenglor.com

IO-Link P1KKxxx

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)
P2KK002	0x2A1807	2758663	2A 18 07	42 24 7
P2KK004	0x2A1808	2758664	2A 18 08	42 24 8
P2KK002C01	0x0000A1	161	00 00 A1	0 0 161

IO-Link Version:	V 1.1
Data Storage:	Yes
Blockparameter:	Yes
Min Cycle Time:	3,0 ms
SIO-Mode:	Yes
COM-Mode:	COM2

Process data (Length: 24 Bit)

Subindex	Name	Bit Offset	Datentyp	Range
1	A1 Output	0	Bool	0 = Off 1 = On
2	Signal Warning	1	Bool	0 = False 1 = True
3	---	2	---	---
4	---	3	---	---
5	Short Circuit	4	Bool	0 = False 1 = True
6	---	5	---	---
7	Overtemperature	6	Bool	0 = False 1 = True
8	---	7	---	---
9	Switchpoint	8	Uint8	0…245
10	Signal	16	Uint8	0…255

Octet 0

Subindex	10							
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	Dy-namic	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				P2KKxxx	
Product ID	0x0013	**19**	0	R	String				P2KKxxx	
Product Text	0x0014	**20**	0	R	String				Retro-Reflex Sen-sors for Transparent Objects	
Serial Number	0x0015	**21**	0	R	String				—	
Hardware Revision	0x0016	**22**	0	R	String				—	
Firmware Revision	0x0017	**23**	0	R	String				—	
Application Specific Tag	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
Measured Value Settings										
Emitted Light	0x00E0	**224**		R/W	Uint8	X			0	0 = Light on 1 = Light off
Operating Mode	0x0110	**272**		R/W	Uint8	X			0	0 = Standard 1 = Speed
Hysteresis	0x0300	**768**		R/W	Uint8	X			0	0 = Small 1 = Large
Gain	0x0301	**769**	0	R/W	Bool	X			1	0 = Low Gain 1 = High Gain
Dynamic Readjustment	0x0302	**770**	0	R/W	Bool	X			1	0 = Readjustment off 1 = Readjustment on
Dynamic Readjustment Storage	0x0303	**771**	0	R/W	Bool	X			1	0 = Non-volatile storage of adjusted Switch Point disabled 1 = Non-volatile storage of adjusted Switch Point enabled
Dynamic Readjustment Time	0x0304	**772**	0	R/W	Uint32	X			3600: P2KK002, P2KK004 5: P2KK002C01	5…3600 s
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 Switch-ing Output	1 = Error Output 2 = Contamination Output 4 = Extern Teach A1 Input 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 = Minimal	0 = Minimal 1 = Normal
A1 Teach Percentage	0x0291	**657**	0	R/W	Uint8	X			10	6…15 %
A1 Switch Point	0x0270	**624**	0	R/W	Sint16	X			245	0…245
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 P2KK002, P2KK004 1 = NC P2KK002C01	0 = NO 1 = NC

A1 Polarity	0x0220	**544**	0	R/W	Uint8	X			1 = PNP: P2KK002, P2KK002C01 2 = NPN: P2KK004	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 P2KK002, P2KK004 1 = NC P2KK002C01	0 = NO 1= NC
A1 Polarity	0x0220	**544**	0	R/W	Uint8	X			1 = PNP: P2KK002, P2KK002C01 2 = NPN: P2KK004	0 = PushPull 1 = PNP 2 = NPN
A2 (Error or Contamination Output)										
A2 ON Delay	0x0051	**81**	0	R/W	Uint16	X			0 ms	0...10000 ms
A2 OFF Delay	0x0061	**97**	0	R/W	Uint16	X			0 ms	0...10000 ms
A2 NO/NC	0x0211	**529**	0	R/W	Uint8	X			0 = NO	0 = NO 1= NC
A2 Polarity	0x0221	**545**	0	R/W	Uint8	X			1 = PNP: P2KK002, P2KK002C01 2 = NPN: P2KK004	0 = PushPull 1 = PNP 2 = NPN
A2 (Antivalent)										
A2 Polarity	0x0221	**545**	0	R/W	Uint8	X			1 = PNP: P2KK002, P2KK002C01 2 = NPN: P2KK004	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										
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 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		245	0…245