

EN

P2KExxx

Through-Beam Sensors



Interface Description

IO-Link P2KExxx

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)
P2KE004	0x351801	3479553	35 18 01	53 24 1
P2KE009	0x351802	3479554	35 18 02	53 24 2
P2KE007	0x351803	3479555	35 18 03	53 24 3
P2KE010	0x351804	3479556	35 18 04	53 24 4

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	A1 Output	0	Bool	all	0 = off 1 = on
2	Signal Warning	1	Bool	all	0 = off 1 = on
3	---	2	---	---	---
4	---	3	---	---	---
5	---	4	---	---	---
6	---	5	---	---	---
7	Overtemperature	6	Bool	all	0 = off 1 = on
8	Memory Busy	7	Bool	all	0 = off 1 = on
9	Signal	8	Uint8	all	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
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	0x0001	1	3	R/W	UInt8	244	0...255
A1 NO/NC	0x0001	1	2 (Bit0)	R/W	Boolean	1 = NC	0 = NO 1 = NC
PNP/NPN	0x0001	1	2 (Bit3...4)	R/W	UInt2	1 = PNP: P2KE004, P2KE007 2 = NPN: P2KE009, P2KE010	0 = Push-Pull 1 = PNP 2 = NPN 3 = deactivated
Source SwitchPoint	0x0001	1	2 (Bit5)	R/W	Boolean	0 = Potentiometer	0 = Potentiometer 1 = IO-Link
Hysteresis	0x0001	1	2 (Bit6)	R/W	Boolean	1 = large	0 = small 1 = large

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