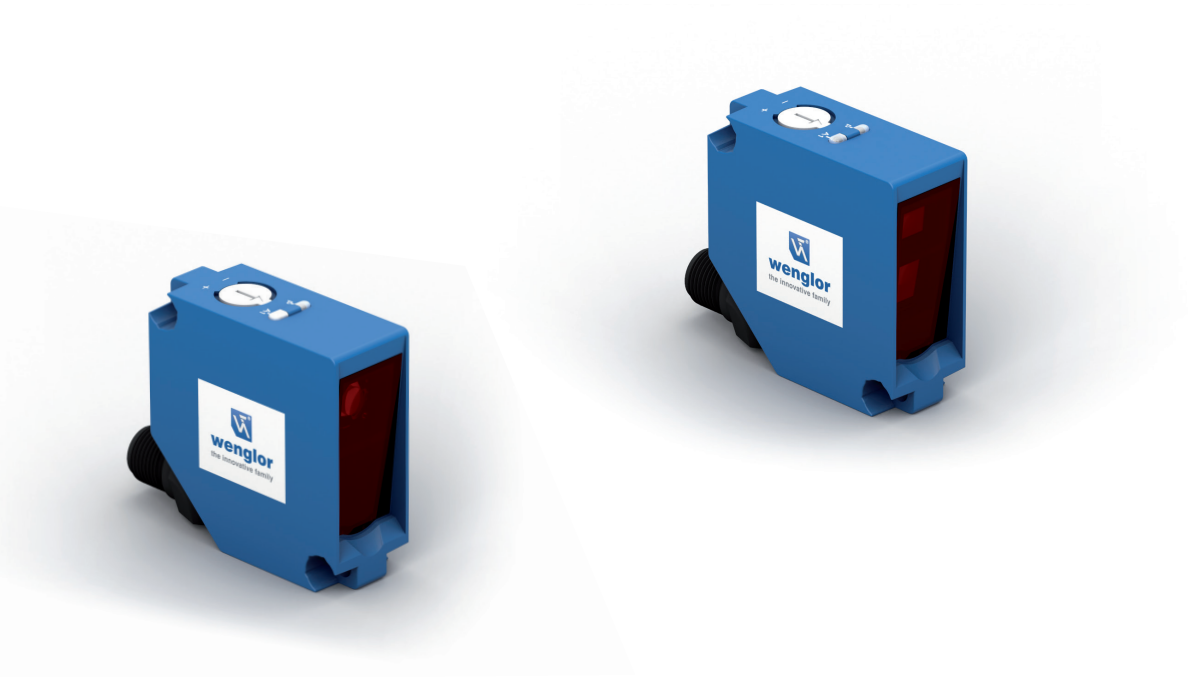
EN

P1PLxxx
P1PKxxx

Retro-Reflex Sensors
Retro-Reflex Sensors for Transparent Objects



IO-Link

Interface Description

Subject to change without notice
Available as PDF version only
Version: 1.2.0
Status: 20.11.2023
www.wenglor.com

IO-Link P1PLxxx/P1PKxxx

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)
P1PL101	0x2A0F01	2756353	2A 0F 01	42 15 1
P1PL102	0x2A0F06	2756358	2A 0F 06	42 15 6
P1PL103	0x2A0F0C	2756364	2A 0F 0C	42 15 12
P1PL201	0x2A0F02	2756354	2A 0F 02	42 15 2
P1PL202	0x2A0F07	2756359	2A 0F 07	42 15 7
P1PL301	0x2A0F03	2756355	2A 0F 03	42 15 3
P1PL302	0x2A0F08	2756360	2A 0F 08	42 15 8
P1PK101	0x2A0F04	2756356	2A 0F 04	42 15 4
P1PK103	0x2A0F09	2756361	2A 0F 09	42 15 9

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	Short Circuit	4	Bool	all	0 = off 1 = on
6	Laser Error		Bool	P1PL301, P1PL302	0 = off 1 = on
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	Valid for versions	Default value	Range
Identification								
Parameter.Serial number	0x0001	**1**	12...15	R	Uint32	all	-	-
Direct Parameters 1.Vendor ID 1	0x0000	**0**	8	R	Uint8	all	0	-
Direct Parameters 1.Vendor ID 2	0x0000	**0**	9	R	Uint8	all	87	-
Direct Parameters 1.Device ID1	0x0000	**0**	10	R	Uint8	all	-	-
Direct Parameters 1.Device ID2	0x0000	**0**	11	R	Uint8	all	-	-
Direct Parameters 1.Device ID3	0x0000	**0**	12	R	Uint8	all	-	-
Parameter								
Write parameters to OTP memory	0x0001	**1**	16	R/W	Uint8	all	0 = no action	0 = no action 148 = write parameters
Counter OTP memory	0x0001	**1**	5	R	Uint8	all	0	0…255
OFF Delay	0x0001	**1**	4 (Bit0...2)	R/W	Uint3	all	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	all	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	all	0 = Standard	0 = Standard 1 = Speed
Switch Point	0x0001	**1**	3	R/W	Uint8	all	250: P1PL101,P1PL102, P1PL103, P1PL201, P1PL202 255: P1PL301, P1PL302 225: P1PK101, P1PK103	0...250: P1PL101, P1PL102, P1PL103 P1PL201, P1PL202 0…255: P1PL301, P1PL302 0...225: P1PK101, P1PK103
A1 NO/NC	0x0001	**1**	2 (Bit0)	R/W	Boolean	all	0 = NO: P1PL101, P1PL201, P1PL301, P1PK101, P1PL102, P1PL202, P1PL302, P1PK103 1 = NC: P1PL103	0 = NO 1 = NC
A2 Pin Function	0x0001	**1**	2 (Bit1...2)	R/W	Uint2	all	0 = Antivalent Switching Output	0 = Antivalent Switching Output 1 = Error Output (NO) 2 = Error Output (NC) 3 = deactivated
PNP/NPN	0x0001	**1**	2 (Bit3...4)	R/W	Uint2	all	1 = PNP: P1PL101, P1PL103, P1PL201, P1PL301, P1PK101 2 = NPN: P1PL102, P1PL202, P1PL302, P1PK103	0 = Push-Pull 1 = PNP 2 = NPN 3 = deactivated
Source SwitchPoint	0x0001	**1**	2 (Bit5)	R/W	Boolean	all	0 = Potentiometer	0 = Potentiometer 1 = IO-Link
Hysteresis	0x0001	**1**	2 (Bit6)	R/W	Boolean	all	0 = small	0 = small 1 = large
Emitted Light	0x0001	**1**	2 (Bit7)	R/W	Boolean	all	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.