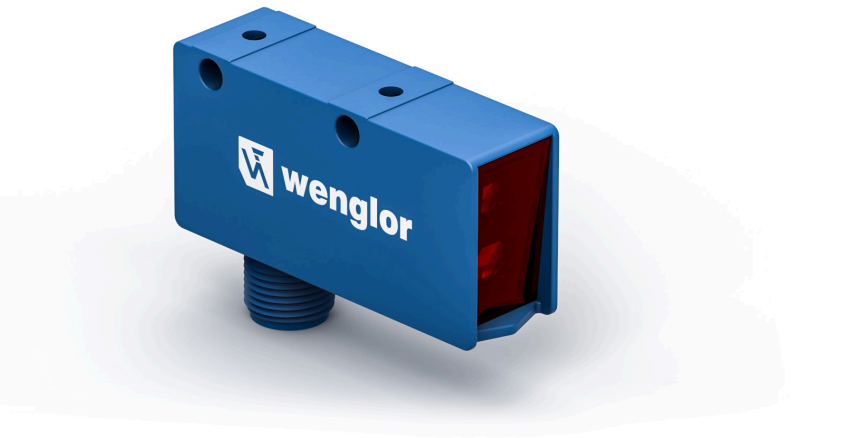
EN

P1MLxxx

Retro-Reflex Sensors



IO-Link

Interface Description

Subject to change without notice
Available as PDF version only
Version: 1.1.0
Status: 23.07.2026
www.wenglor.com

IO-Link P1MLxxx

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)
P1ML101	0x2A0C0A	2755594	2A 0C 0A	42 12 10
P1ML102	0x2A0C0B	2755595	2A 0C 0B	42 12 11
P1ML103	0x2A0C0E	2755598	2A 0C 0E	42 12 14
P1ML104	0x2A0C0F	2755599	2A 0C 0F	42 12 15
P1ML201	0x2A0C0C	2755596	2A 0C 0C	42 12 12
P1ML202	0x2A0C10	2755600	2A 0C 10	42 12 16
P1ML203	0x2A0C12	2755602	2A 0C 12	42 12 18

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 In (Device to Master)	16 Bit
Process data Out (Master to Device)	-

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	5	Bool	P1ML201, P1ML202, P1ML203	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	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 ID 1	0x0000	**0**	10	R	Uint8	-	-
Direct Parameters 1.Device ID 2	0x0000	**0**	11	R	Uint8	-	-
Direct Parameters 1.Device ID 3	0x0000	**0**	12	R	Uint8	-	-
Parameter							
Write parameters to OTP memory (available for P1ML101, P1ML104, P1ML201, P1ML202, P1ML203)	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 = Speed
Switch Point	0x0001	**1**	3	R/W	Uint8	248: P1ML101, P1ML104 238: P1ML102, P1ML103 253: P1ML201, P1ML202, P1ML203	0...248: P1ML101, P1ML104 0...238: P1ML102, P1ML103 0...253: P1ML201, P1ML202, P1ML203
O1 NO/NC	0x0001	**1**	2 (Bit0)	R/W	Boolean	0 = NO: P1ML101, P1ML104 1 = NC: P1ML102, P1ML103, P1ML203	0 = NO 1 = NC
O2 Pin Function (available for P1ML101, P1ML104, P1ML201, P1ML202, P1ML203)	0x0001	**1**	2 (Bit1...2)	R/W	Uint2	0 = Antivalent: P1ML101, P1ML104, P1ML201, P1ML202, P1ML203	0 = Antivalent 1 = Error Output (NO) 2 = Error Output (NC) 3 = deactivated
PNP/NPN/ Push-Pull	0x0001	**1**	2 (Bit3...4)	R/W	Uint2	1 = PNP: P1ML101, P1ML102, P1ML201, P1ML203 2 = NPN: P1ML104, P1ML103, P1ML202	0 = Push-Pull 1 = PNP 2 = NPN
Source SwitchPoint (available for P1ML101, P1ML104)	0x0001	**1**	2 (Bit5)	R/W	Boolean	0 = Potentiometer	0 = Potentiometer 1 = SWDIST
Hysteresis	0x0001	**1**	2 (Bit6)	R/W	Boolean	0 = Small	0 = Small 1 = Large
Emitted Light	0x0001	**1**	2 (Bit7)	R/W	Boolean	0 = On	0 = On 1 = Off
Teach Mode (available for P1ML102, P1ML103)	0x0001	**1**	1 (Bit 0)	R/W	Boolean	0 = Normal Teach: P1ML102, P1ML103	0 = Normal Teach 1 = Minimal Teach
Teach (available for P1ML102, P1ML103)	0x0001	**1**	1 (Bit 1)	R/W	Boolean	0 = No Action: P1ML102, P1ML103	0 = No Action 1 = Start Teach
Teach Button Lock (available for P1ML102, P1ML103)	0x0001	**1**	1 (Bit 5)	R/W	Boolean	0 = Button Not Locked: P1ML102, P1ML103	0 = Button Not Locked 1 = Button Locked

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.