

# EN

# OPT21xx

Reflex Sensors with Background Suppression

Electronic



## Interface Description

# IO-Link OPT21xx

## 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)
OPT2147	0x3B0F12	3870482	3B 0F 12	59 15 18
OPT2148	0x3B0F13	3870483	3B 0F 13	59 15 19
OPT2149	0x3B0F14	3870484	3B 0F 14	59 15 20
OPT2150	0x3B0F15	3870485	3B 0F 15	59 15 21
OPT2153	0x3B0F18	3870488	3B 0F 18	59 15 24
OPT2154	0x3B0F19	3870489	3B 0F 19	59 15 25
OPT2157	0x3B0F1C	3870492	3B 0F 1C	59 15 28
OPT2158	0x3B0F1D	3870493	3B 0F 1D	59 15 29

IO-Link Version:	V 1.1
Data Storage:	Yes
Blockparameter:	Yes
Min Cycle Time:	3,6 ms
SIO-Mode:	Yes
COM-Mode:	COM2
ISDU:	Yes
Process data In (Device to Master):	24 Bit
Process data Out (Master to Device):	—

## Process data

Subindex	Name	Bit Offset	Datatype	Valid for Versions	Range
1	A1 Output	0	1 Bit	all	0 = Off 1 = On
2	Contamination Output	1	1 Bit	all	0 = Off 1 = On
3	—	2	1 Bit	—	—
4	No Signal	3	1 Bit	all	0 = Off 1 = On
5	Short Circuit	4	1 Bit	all	0 = Off 1 = On
6	Laser Error	5	1 Bit	OPT2157, OPT2158	0 = Off 1 = On
7	Overtemperature	6	1 Bit	all	0 = Off 1 = On
8	—	7	1 Bit	—	—
9	Signal	8	Uint16	all	0...511 1...510 = Distance 0 = False 511 = Distance measurement off

## Octet 0

Subindex	9							
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	Dyna-mic	Modify others	Default value	Range
<b>Identification</b>										
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				OPT21xx	
Product ID	0x0013	19	0	R	String				OPT21xx	
Product Text	0x0014	20	0	R	String				Reflex Sensor with Background Suppression	
Serial Number	0x0015	21	0	R	String				—	
Hardware Revision	0x0016	22	0	R	String				—	
Firmware Revision	0x0017	23	0	R	String				—	
Application Specific Name	0x0018	24	0	R/W	String 32 Byte	X			***	
<b>Parameter</b>										
<b>Device Settings</b>										
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
<b>Mesasured Value Settings</b>										
Distance measurement	0x0301	769	0	R/W	UInt8	X			1	0 = On 1 = Off
Emitted Light	0x00E0	224	0	R/W	UInt8	X			0	0 = Light on 1 = Light off
Operating Mode	0x0110	272	0	R/W	UInt8	X			0	0 = Standard 1 = Interference-free
Hysteresis	0x0300	768	0	R/W	UInt8	X			0	0 = Small 1 = Large
<b>Pin Function</b>										
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 Switching Output	1 = Error Output 2 = Contamination Output 6 = Antivalent Switching Output

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data-type	Data Storage	Dyna-mic	Modify others	Default value	Range
<b>A1 (Switching Output)</b>										
Source Swith Point	0x0230	<b>560</b>	0	R/W	Uint8	X			0	0 = Potentiometer 1 = IO-Link
A1 Teach-In	0x0200	<b>512</b>	0	W	Uint8			X	—	1 = Teach-in
A1 Teachmode	0x0290	<b>656</b>	0	R/W	Uint8	X		X	0 = Foreground	0 = Foreground 1 = Background
A1 Switch Point	0x0270	<b>624</b>	0	R/W	Uint16	X			510	1...510
A1 ON Delay	0x0050	<b>80</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 OFF Delay	0x0060	<b>96</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 NO/NC	0x0210	<b>528</b>	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
A1 PNP/NPN	0x0220	<b>544</b>	0	R/W	Uint8	X			OPT2147, OPT2149, OPT2153, OPT2157: 1 OPT2148, OPT2150, OPT2154, OPT2158: 2	0 = PushPull 1 = PNP 2 = NPN
<b>A1 (Error or Contamination Output)</b>										
A1 ON Delay	0x0050	<b>80</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 OFF Delay	0x0060	<b>96</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
A1 NO/NC	0x0210	<b>528</b>	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
A1 PNP/NPN	0x0220	<b>544</b>	0	R/W	Uint8	X			OPT2147, OPT2149, OPT2153, OPT2157: 1 OPT2148, OPT2150, OPT2154, OPT2158: 2	0 = PushPull 1 = PNP 2 = NPN
<b>E/A2 (Error or Contamination Output)</b>										
E/A2 ON Delay	0x0051	<b>81</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 OFF Delay	0x0061	<b>97</b>	0	R/W	Uint16	X			0 ms	0...10000 ms
E/A2 NO/NC	0x0211	<b>529</b>	0	R/W	Uint8	X			0 = NO	0 = NO 1 = NC
E/A2 PNP/NPN	0x0221	<b>545</b>	0	R/W	Uint8	X			OPT2147, OPT2149, OPT2153, OPT2157: 1 OPT2148, OPT2150, OPT2154, OPT2158: 2	0 = PushPull 1 = PNP 2 = NPN
<b>Device Test</b>										
Test Mode	0x0310	<b>784</b>	0	R/W	Uint8		X		0	0 = OFF 1 = ON
Test Output A1	0x0317	<b>791</b>	0	R/W	Uint8		X		0	0 = OFF 1 = ON
Test Error	0x0314	<b>788</b>	0	R/W	Uint8		X		0	0 = OFF 1 = ON
Test Contamination	0x0315	<b>789</b>	0	R/W	Uint8		X		0	0 = OFF 1 = ON
Test Measured Value	0x0316	<b>790</b>	0	R/W	Uint16		X		0	0...511