

# IRxD00x IRxF00x

Inductive Ring Sensor



Interface Description

## 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)
IR2D001	0x275A07	2578951	27 5A 07	39 90 7
IR2D002	0x275a0d	2578957	27 5a 0d	39 90 13
IR3D001	0x275A05	2578949	27 5A 05	39 90 5
IR3D002	0x275a0f	2578959	27 5a 0f	39 90 15
IR5D001	0x275a09	2578953	27 5a 09	39 90 09
IR5D002	0x275a11	2578961	27 5a 11	39 90 17
IR8D001	0x275a0B	2578955	27 5a 0b	39 90 11
IR8D002	0x275a13	2578963	27 5a 13	39 90 19

Product	hex	dec	hex (Bytes)	dec (Bytes)
IR2F001	0x275A08	2578952	27 5a 08	39 90 8
IR2F002	0x275a0e	2578958	27 5a 0e	39 90 14
IR3F001	0x275A06	2578950	27 5a 06	39 90 6
IR3F002	0x275a10	2578960	27 5a 10	39 90 16
IR5F001	0x275a0a	2578954	27 5a 0a	39 90 10
IR5F002	0x275a12	2578962	27 5a 12	39 90 18
IR8F001	0x275a0c	2578956	27 5a 0c	39 90 12
IR8F002	0x275a14	2578964	27 5a 14	39 90 20

IO-Link Version: V1.1  
Data Storage: Yes  
Blockparameter: Yes  
MinCycleTime: 10,0 ms  
SIO-Mode: Yes  
COM-Mode: COM2  
ISDU: Yes  
Process Data Input (Device to Master) 128 Bit  
Process Data Output (Master to Device) -

## Process data Input (Device -> Master)

Subindex	Name	Bit Offset	Length	Range
1	Counter	96	Uint32	0...4294967295
2	Object signal width	64	Uint32	0...4294967295
3	Object signal amplitude	32	Uint32	0...4294967295
4	---	5	---	---
5	Counter output status	4	1 Bit	0 = off 1 = on
6	Error	3	1 Bit	0 = off 1 = on
7	Warning	2	1 Bit	0 = off 1 = on
8	SSC1 - Switching Signal 2	1	1 Bit	0 = off 1 = on
9	SSC1 - Switching Signal 1	0	1 Bit	0 = off 1 = on

	Octet 0 (MSB)	Octet 1	Octet 2	Octet 3																												
Subindex	1																															
Bit Offset	127	126	125	124	123	122	121	120	119	118	117	116	115	114	113	112	111	110	109	108	107	106	105	104	103	102	101	100	99	98	97	96
	Counter																															

	Octet 4	Octet 5	Octet 6	Octet 7																												
Subindex	2																															
Bit Offset	95	94	93	92	91	90	89	88	87	86	85	84	83	82	81	80	79	78	77	76	75	74	73	72	71	70	69	68	67	66	65	64
	Object signal width																															

	Octet 8	Octet 9	Octet 10	Octet 11																												
Subindex	3																															
Bit Offset	63	62	61	60	59	58	57	56	55	54	53	52	51	50	49	48	47	46	45	44	43	42	41	40	39	38	37	36	35	34	33	32
	object signal amplitude																															

	Octet 12	Octet 13	Octet 14	Octet 15 (LSB)																												
Subindex	4																															
Bit Offset	31	30	29	28	27	26	25	24	23	22	21	20	19	18	17	16	15	14	13	12	11	10	9	8	7	6	5	4	3	2	1	0

## Identification

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Default value	Range
<b>Information</b>							
Vendor Name	0x0010	16	0	R	String	wenglor sensoric GmbH	
Product Name	0x0012	18	0	R	String	IRxXxxx	
Product ID	0x0013	19	0	R	String	IRxXxxx	
Serial Number	0x0015	21	0	R	String	-	
Hardware Version	0x0016	22	0	R	String	-	
Firmware Version	0x0017	23	0	R	String	-	

## Parameter

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dyna-mic	Default value	Range
<b>Device Settings</b>									
Device Status	0x0024	36	0	R	UInt8			-	Device ok = 0, Device Maintenance = 1, Device Out-of-Specification = 2, Device Functional-Check = 3, Device Failure = 4
System Command	0x0002	2	0	W	UInt8			-	Device Reset = 0x80 (128) Restore Factory Settings = 0x82 (130)
Device Access Lock	0x000C	12	0	R/W	UInt16			0	0 = Unlocked 1 = Locked
Alternative Frequency	0x0290	656	0	R/W	UInt8	X		0	0 = Disabled 1 = Enabled <b>Note:</b> If "Enabled" is set, A2 PNP must not be set to "Input."
Teach Button (only valid for F-types)	0x0200	512	0	R/W	UInt8			0	1 = Teach / calibrate
<b>Sensitivity</b>									
Sensitivity Access	0x0043	67	0	R/W	UInt8	X		0	0 = Potentiometer 1 = Potentiometer locked 2 = IO-Link
Sensitivity Value	0x0270	624	0	R or R/W	UInt16	X	X	0	0...11500 0 = maximum sensitivity 11500 = minimum sensitivity
<b>Output Time Delay</b>									
Output-Time-Delay - Access	0x0223	547	0	R/W	UInt8	X		0	0 = Potentiometer 1 = Potentiometer locked 2 = IO-Link
Output-Time-Delay - Value	0x0271	625	0	R or R/W	UInt16	X	X	200	5...200 [ms]
<b>Counter</b>									
Counter	0x0500	1280	0	R/W	UInt32	X		0	0...4294967295
Counter Compare Value	0x0501	1281	0	R/W	UInt32	X		1000	0...4294967295
Counter Max Value (Period)	0x0502	1282	0	R/W	UInt32	X		1000	0...4294967295
Counter Period Counter	0x0503	1283	0	R/W	UInt32	X		0	0...4294967295
Counter Direction	0x0504	1284	0	R/W	UInt8	X		0	0 = up 1 = down
Config	0x0505	1285	0	R/W	UInt8	X		0	0 = disabled 1 = only counts 2 = compare mode 1 3 = compare mode 2 4 = compare mode 3 5 = overflow / underflow mode

Name	Index (hex)	Index (dec)	Sub-index	R/W	Data type	Data Storage	Dyna-mic	Default value	Range
One Pulse Status	0x0506	1286	0	R/W	Uint8			0	0 = Reset or no event 1 = Event detected
<b>Input Output Setting</b>									
A1 (SSC, Error or Warning Output)									
A1 NO/NC	0x0210	528	0	R/W	Uint8	X		0	0 = NO 1 = NC
A1 PNP	0x0220	544	0	R/W	Uint8	X		IRxx001: 0 = PNP IRxx002: 1 = NPN	0 = PNP 1 = NPN 2 = Push-Pull
A2 (SSC, Error or Warning Output)									
A2 Function	0x0231	561	0	R/W	Uint8	X		0	0 = Input Alternative Frequency 1 = Output Error 2 = Switching output 3 = Antivalent A1 4 = Counter
A2 NO NC	0x0211	529	0	R/W	Uint8	X		0	0 = NO 1 = NC
A2 PNP	0x0221	545	0	R/W	Uint8	X		3	0 = PNP 1 = NPN 2 = Push-Pull 3 = Input