

Communication

IO-Link Revision	1.1			
Bit rate	COM2 (38.4 kbps)			
Minimum cycle time	8 ms			
SIO mode	Yes			
ISDU	Yes			
Block parameterization	Yes			
Data Storage	Yes			
Data length	PDout	2 byte	PDin	2 byte

[illegible]

Vendor Parameters

Parameter	Index	subindex	Data Type	Byte Length	Access	Default Value	Data Storage	Remarks
Operating Mode	810d (0x32A)	0	UIntegerT	1	R / W	0	Yes	0 - Color Specification Mode 1 - Level Mode 2 - Sensor Input Mode 3 - Digital Input Mode
LED Intensity	2000d (0x7D0)	0	UIntegerT	1	R / W	0x64	Yes	0x00 - 0x64 (0.. 100%)
Buzzer Sound Level	2001d (0x7D1)	0	UIntegerT	1	R / W	0x64	Yes	0x00 - 0x64 (0.. 100%)
SIO LED Color	2002d (0x7D2)	0	UIntegerT	1	R / W	7	Yes	0 - off 1 - red 2 - green 3 - amber 4 - blue 5 - purple 6 - cyan 7 - white
SIO LED Pattern	2003d (0x7D3)	0	UIntegerT	1	R / W	0	Yes	0 - Continuous Lighting 1 - Blinking Slow 2 - Blinking Middle 3 - Blinking Fast 4 - Flashing Single 5 - Flashing Double 6 - Flashing Triple 7 - Sine Slow 8 - Sine Fast
Touch Sensor LED Color	2004d (0x7D4)	0	UIntegerT	1	R / W	0	Yes	0 - off 1 - red 2 - green 3 - amber 4 - blue 5 - purple 6 - cyan 7 - white
Touch Sensor LED Pattern	2005d (0x7D5)	0	UIntegerT	1	R / W	0	Yes	0 - Continuous Lighting 1 - Blinking Slow 2 - Blinking Middle 3 - Blinking Fast 4 - Flashing Single 5 - Flashing Double 6 - Flashing Triple 7 - Sine Slow 8 - Sine Fast
Touch Sensor Buzzer Pattern	2006d (0x7D6)	0	UIntegerT	1	R / W	0	Yes	0 - Buzzer No.1 (off) 1 - Buzzer No.2 2 - Buzzer No.3 3 - Buzzer No.4 4 - Buzzer No.5 5 - Buzzer No.6 6 - Buzzer No.7 7 - Buzzer No.8 8 - Buzzer No.9
Digital Input LED Color	2007d (0x7D7)	0	UIntegerT	1	R / W	0	Yes	0 - off 1 - red 2 - green 3 - amber 4 - blue 5 - purple 6 - cyan 7 - white
Digital Input LED Pattern	2008d (0x7D8)	0	UIntegerT	1	R / W	0	Yes	0 - Continuous Lighting 1 - Blinking Slow 2 - Blinking Middle 3 - Blinking Fast 4 - Flashing Single 5 - Flashing Double 6 - Flashing Triple 7 - Sine Slow 8 - Sine Fast
Digital Input Buzzer Pattern	2009d (0x7D9)	0	UIntegerT	1	R / W	0	Yes	0 - Buzzer No.1 (off) 1 - Buzzer No.2 2 - Buzzer No.3 3 - Buzzer No.4 4 - Buzzer No.5 5 - Buzzer No.6 6 - Buzzer No.7 7 - Buzzer No.8 8 - Buzzer No.9

Analog Input Value Threshold	2010d (0x7DA)	0	Array	20 (2x10)	R / W	0	Yes	0x000 - 0x1F4 (0..500)
		1	UIntegerT	2	R / W	0		
		2	UIntegerT	2	R / W	0		
		3	UIntegerT	2	R / W	0		
		4	UIntegerT	2	R / W	0		
		5	UIntegerT	2	R / W	0		
		6	UIntegerT	2	R / W	0		
		7	UIntegerT	2	R / W	0		
		8	UIntegerT	2	R / W	0		
		9	UIntegerT	2	R / W	0		
		10	UIntegerT	2	R / W	0		
Analog Input LED Color	2011d (0x7DB)	0	Array	11 (1x11)	R / W	0	Yes	0 - off 1 - red 2 - green 3 - amber 4 - blue 5 - purple 6 - cyan 7 - white
		1	UIntegerT	1	R / W	0		
		2	UIntegerT	1	R / W	0		
		3	UIntegerT	1	R / W	0		
		4	UIntegerT	1	R / W	0		
		5	UIntegerT	1	R / W	0		
		6	UIntegerT	1	R / W	0		
		7	UIntegerT	1	R / W	0		
		8	UIntegerT	1	R / W	0		
		9	UIntegerT	1	R / W	0		
		10	UIntegerT	1	R / W	0		
		11	UIntegerT	1	R / W	0		
Analog Input LED Pattern	2012d (0x7DC)	0	Array	11 (1x11)	R / W	0	Yes	0 - Continuous Lighting 1 - Blinking Slow 2 - Blinking Middle 3 - Blinking Fast 4 - Flashing Single 5 - Flashing Double 6 - Flashing Triple 7 - Sine Slow 8 - Sine Fast
		1	UIntegerT	1	R / W	0		
		2	UIntegerT	1	R / W	0		
		3	UIntegerT	1	R / W	0		
		4	UIntegerT	1	R / W	0		
		5	UIntegerT	1	R / W	0		
		6	UIntegerT	1	R / W	0		
		7	UIntegerT	1	R / W	0		
		8	UIntegerT	1	R / W	0		
		9	UIntegerT	1	R / W	0		
		10	UIntegerT	1	R / W	0		
		11	UIntegerT	1	R / W	0		
Analog Input Buzzer Pattern	2013d (0x7DD)	0	Array	11 (1x11)	R / W	0	Yes	0 - Buzzer No.1 (off) 1 - Buzzer No.2 2 - Buzzer No.3 3 - Buzzer No.4 4 - Buzzer No.5 5 - Buzzer No.6 6 - Buzzer No.7 7 - Buzzer No.8 8 - Buzzer No.9
		1	UIntegerT	1	R / W	0		
		2	UIntegerT	1	R / W	0		
		3	UIntegerT	1	R / W	0		
		4	UIntegerT	1	R / W	0		
		5	UIntegerT	1	R / W	0		
		6	UIntegerT	1	R / W	0		
		7	UIntegerT	1	R / W	0		
		8	UIntegerT	1	R / W	0		
		9	UIntegerT	1	R / W	0		
		10	UIntegerT	1	R / W	0		
		11	UIntegerT	1	R / W	0		
Test Mode	2014d (0x7DE)	0	UIntegerT	1	R / W	0	Yes	0 - off 1 - on

Events

Code	Name	Type	Description
0x0000	No error	Notification	No error
0x5000	Hardware error in the unit	Error	Replace the unit
0x6320	Parameter error	Error	Check the data sheet and the value

Error Types

Error	Name	Discription
0x8000	Device application error – no	There is no detailed information available
0x8011	Index not available	Access to a non-existent index
0x8012	Subindex not available	Access to a non-existent subindex
0x8020	Service temporarily not available	On the parameters just cannot be accessed.
0x8023	Access denied	The device does not allow this in the current state
0x8030	Parameter value out of range	Write access to a read-only parameter
0x8033	Parameter length overrun	Written parameter value is out of range
0x8034	Parameter length underrun	Written parameter length is greater than allowed
0x8035	Function not available	Written parameter length is smaller than allowed
0x8036	Function temporarily unavailable	Written command is not supported by the device
0x8040	Invalid parameter set	Written command is not supported by the device in its current state
0x8041	Inconsistent parameter set	Typed single parameter value collides with the other parameter settings
0x8082	Application not ready	At the end of the block parameter transfer inconsistencies were detected.

Process Data

PDout : Color Specification Mode (Index 810)

	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
Byte 1	Buzzer Pattern				N/N	N/N	N/N	Buzzer On/Off
Byte 0	LED Pattern				N/N	LED Color		

PDout : Level mode (Index 810)

	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
Byte 1	N/N	N/N	N/N	N/N	N/N	N/N	N/N	Analog Input Value (Upper 1 bit of 9 bits)
Byte 0	Analog Input Value (Lower 8 bits of 9 bits)							

PDin : Common

	bit 7	bit 6	bit 5	bit 4	bit 3	bit 2	bit 1	bit 0
Byte 1	Touch Sensor	Digital Input	Status 3	Status 2	Status 1	Analog Input Value (Upper 3 bit of 11 bits)		
Byte 0	Analog Input Value (Lower 8 bits of 11 bits)							

*1 On = 1, Off = 0

*2 Pattern List

Buzzer

Value	Configuration
0	Buzzer No.1(off)
1	Buzzer No.2
2	Buzzer No.3
3	Buzzer No.4
4	Buzzer No.5
5	Buzzer No.6
6	Buzzer No.7
7	Buzzer No.8
8	Buzzer No.9

LED

Value	Configuration
0	Continuous Lightnng
1	Blinking Slow
2	Blinking Middle
3	Blinking Fast
4	Flashing Single
5	Flashing Double
6	Flashing Triple
7	Sine Slow
8	Sine Fast

*3 Status

Status No.	Configuration
1	Touch Sensor Error
2	Memory Error
3	Reserve

Revision History

Revision	Date	Details
-	30.Mar.'19	First Release
A	01.Jul.'20	Additional models (NE-ILNN-M, NE-ILTN-M)
B	09.Mar.'23	Changed sheet format, updated "Firmware Version" (1.00 to 1.01), modified Default Value of "Operating Mode" (4 to 0)