BALLUFF

Data sheet

IO-Link

BOD 24K-LI04-S92
BOD 24K-LI05-S92

937887 L17 EN

www.balluff.com

Identification

Vendor-ID: 888	Device-ID: 2064	Vendor: BALLUFF
IODD Version: V1.1	File Creation Date: 2016-08-12	Copyright: BALLUFF GmbH
IO-Link Revision: V1.0	Minimal Cycle Time: 2.2ms	COM2: 38.4kBaud, SIO not supported

Device Variants

BOD0023	BOD 24K-LI04-S92	Photoelectric distance sensor (measuring range 50 … 100 mm)
BOD0026	BOD 24K-LI05-S92	Photoelectric distance sensor (measuring range 50 … 650 mm)

Process Data

Input Image		
Label:	**Measured Value**	
Value Range:	0 **...** 10500	
Value:	65533	**Laser error**
Value:	65535	**Signal too low**
Data Format:	unsigned integer 16 bit	

Variables

Index:	0	
Label:	**Direct Parameters 1**	
Description:		
Data Format:	record 128 bit, Access via Subindex	
Subindex:	1	Bit-Offset = 120
Label:	**Reserved**	
Data Format:	unsigned integer 8 bit	
Subindex:	2	Bit-Offset = 112
Label:	**Master Cycle Time**	
Data Format:	unsigned integer 8 bit	
Subindex:	3	Bit-Offset = 104
Label:	**Min Cycle Time**	
Data Format:	unsigned integer 8 bit	
Subindex:	4	Bit-Offset = 96
Label:	**Frame Capability**	
Data Format:	unsigned integer 8 bit	
Subindex:	5	Bit-Offset = 88
Label:	**IO-Link Version ID**	
Data Format:	unsigned integer 8 bit	
Default Value:	16	
Subindex:	6	Bit-Offset = 80
Label:	**Process Data Input Length**	
Data Format:	unsigned integer 8 bit	
Subindex:	7	Bit-Offset = 72
Label:	**Process Data Output Length**	
Data Format:	unsigned integer 8 bit	
Subindex:	8	Bit-Offset = 64
Label:	**Vendor ID 1**	
Data Format:	unsigned integer 8 bit	
Subindex:	9	Bit-Offset = 56
Label:	**Vendor ID 2**	
Data Format:	unsigned integer 8 bit	

Subindex:	10	Bit-Offset = 48
Label:	**Device ID 1**	
Data Format:	unsigned integer 8 bit	
Subindex:	11	Bit-Offset = 40
Label:	**Device ID 2**	
Data Format:	unsigned integer 8 bit	
Subindex:	12	Bit-Offset = 32
Label:	**Device ID 3**	
Data Format:	unsigned integer 8 bit	
Access Rights:	read only	

Index:	2	
Label:	**System Command**	
Description:		
Value:	130	**Restore Factory Setting**
Value:	176	**Turn Transmitter (laser diode) on**
Value:	177	**Turn Transmitter (laser diode) off**
Data Format:	unsigned integer 8 bit	
Access Rights:	write only	

Index:	16
Label:	**Vendor Name**
Description:	
Data Format:	string 40 Byte
Default Value:	BALLUFF
Access Rights:	read only

Index:	17
Label:	**Vendor Text**
Description:	
Data Format:	string 64 Byte
Default Value:	www.balluff.com
Access Rights:	read only

Index:	18
Label:	**Product Name**
Description:	
Data Format:	string 64 Byte
Access Rights:	read only

Index:	19
Label:	**Product ID**
Description:	
Data Format:	string 64 Byte
Access Rights:	read only

Index:	20
Label:	**Product Text**
Description:	
Data Format:	string 64 Byte
Default Value:	Optical distance sensor
Access Rights:	read only

Index:	21
Label:	**Serial Number**
Description:	
Data Format:	string 16 Byte
Access Rights:	read only

Index:	22
Label:	**Hardware Version**
Description:	
Data Format:	string 64 Byte
Access Rights:	read only

Index:	23
Label:	**Firmware Version**
Description:	
Data Format:	string 64 Byte
Access Rights:	read only

Index:	40	
Label:	**Process Data Input**	
Description:		
Data Format:	processDataIn 16 bit	
Access Rights:	read only	

Index:	190	
Label:	**Sensor Status**	
Description:	Sensor Status	
Data Format:	record 8 bit, Access via Subindex not supported	
Subindex:	1	Bit-Offset = 0
Label:	**Laser Status**	
Value:	false	**operational**
Value:	true	**error**
Data Format:	boolean	
Subindex:	2	Bit-Offset = 1
Label:	**Receiver Signal Quality**	
Value:	0	**good**
Value:	1	**too low**
Value:	2	**weak**
Value:	3	**too low**
Data Format:	unsigned integer 2 bit	
Subindex:	3	Bit-Offset = 3
Label:	**Transmitter (laser diode)**	
Value:	false	**active**
Value:	true	**inactive**
Data Format:	boolean	
Subindex:	4	Bit-Offset = 4
Label:	**Measured Values**	
Value:	false	**outside of the calibrated range**
Value:	true	**inside of the calibrated range**
Data Format:	boolean	
Default Value:	true	inside of the calibrated range
Access Rights:	read only	

Index:	193	
Label:	**Resolution**	
Description:	Distance = Measured Value * Resolution	
Value:	0	**1 mm**
Value:	1	**0.1 mm**
Value:	2	**0.01 mm**
Data Format:	unsigned integer 8 bit	
Default Value:	0	1 mm
Access Rights:	read only	

Index:	200	
Label:	**Measurement Mode**	
Description:	Measurement Mode defines the preferred detection behavior of the sensor.	
Value:	0	**Standard**
Value:	1	**Precision**
Value:	2	**Speed**
Value:	3	**Light Suppression**
Data Format:	unsigned integer 16 bit	
Default Value:	0	Standard
Access Rights:	read and write	

Index:	201	
Label:	**Filter Type**	
Description:	Averaging: Floating average calculation over n measurements; Center Filter: Average calculation with spike suppression	
Value:	0	**Off (no filtering)**
Value:	1	**Averaging**
Value:	2	**Center Filter**
Data Format:	unsigned integer 16 bit	
Default Value:	0	Off (no filtering)
Access Rights:	read and write	

Index:	202
Label:	**Measurement Count (Filter Type = Averaging)**
Description:	The floating average is calculated over 1 to 99 measured values. Output data is refreshed after each calculation. When the measured value changes stepwise, the output data will in-/decrease linearly to the new value.
Value Range:	1 ... 99
Data Format:	unsigned integer 16 bit
Default Value:	1
Access Rights:	read and write

Index:	203	
Label:	**Measurement Count (Filter Type = Center Filter)**	
Description:	The average calculation includes 10 to 50 single measured values. Spikes are suppressed.	
Value:	0	**10**
Value:	1	**20**
Value:	2	**30**
Value:	3	**40**
Value:	4	**50**
Data Format:	unsigned integer 16 bit	
Default Value:	0	10
Access Rights:	read and write	

Index:	204	
Label:	**Filter depth (Filter Type = Center Filter)**	
Description:	Filter depth defines the bandwidth of the spike suppression.	
Value:	0	**Coarse**
Value:	1	**Medium**
Value:	2	**Fine**
Data Format:	unsigned integer 16 bit	
Default Value:	0	Coarse
Access Rights:	read and write	

Index:	205	
Label:	**Sensor Display**	
Description:	Auto: Maximum intensity when button is pressed; dimmed to lower intensity while stand-by (after 1 minute).	
Value:	0	**On**
Value:	1	**Off**
Value:	2	**Auto**
Data Format:	unsigned integer 16 bit	
Access Rights:	read and write	

Index:	206	
Label:	**Key Lock**	
Description:	If activated, local control at the sensor device is disabled.	
Value:	0	**not activated**
Value:	1	**activated**
Data Format:	unsigned integer 16 bit	
Default Value:	0	not activated
Access Rights:	read and write	