Version V1.0.7 Release date 2015-08-04

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O5D

Vendor ID	310 / 0x0136 - Bytes: 01 54 / 0x01 0x36
Device ID	372 / 0x000174 - Bytes: 00 01 116 / 0x00 0x01 0x74
Vendor name	ifm electronic gmbh
Vendor text	www.ifm.com
Vendor URL	http://www.ifm.com/ifmgb/web/io-link_down.htm

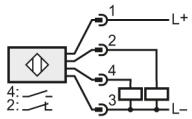
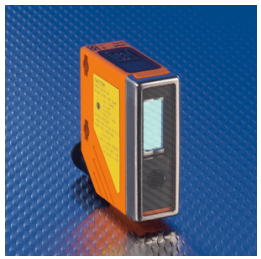
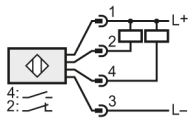
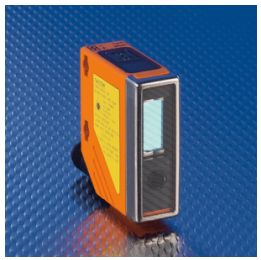
Communication

IO-Link revision	V1.1
Bit rate	COM2
Minimum cycle time	6.400 ms
SIO mode supported	Yes

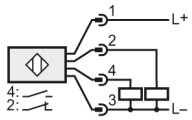
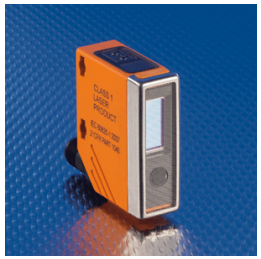
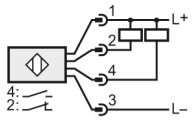
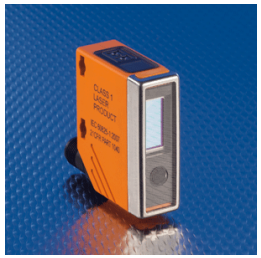
Features

Block parametrization	Yes
Data storage	Yes

Device variant

O5D100	Optical distance sensor. Visible laser light, protection class 2 laser. Connection: 2 switching outputs normally open / closed complementary DC PNP		
O5D102	Optical distance sensor. Visible laser light, protection class 2 laser. Connection: 2 switching outputs normally open / closed complementary DC NPN		

Device variant

O5D150	Optical distance sensor. Visible laser light, protection class 1 laser. Connection: 2 switching outputs normally open / closed complementary DC PNP		
O5D152	Optical distance sensor. Visible laser light, protection class 1 laser. Connection: 2 switching outputs normally open / closed complementary DC NPN		

Process data

Total bit length = 16

(Process data input)

Name	Description	Data type	Bit offset	Bit length	Value range	Gradient	Offset	Unit
Distance	Fig. PDV1. Current distance.	UIntegerT	4	12	**5 to 200**	1	0	cm
Switch state [OUT1]	Fig. BDC1. State depends on settings for BDC1.	BooleanT	0		(false) Inactive (true) Active			

Variables

Name	Description	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
Standard Command		**2**	**Sub 0**	**UIntegerT**	**8 Bit**	**wo**		(130) Restore Factory Settings (240) Command triggers Event 8DFE to appear (241) Command triggers Event 8DFE to disappear (242) Command triggers Event 8DFF to appear (243) Command triggers Event 8DFF to disappear			
Device Access Locks		**12**	**Sub 0**	**RecordT**	**16 Bit**	**rw**					
Data Storage			bitOffs 1	BooleanT	1 Bit		(0)	(false) Unlocked (true) Locked			
Local Parameterization			bitOffs 2	BooleanT	1 Bit		(0)	(false) Unlocked (true) Locked			
Vendor Name		**16**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**	**ifm electronic gmbh**				
Vendor Text		**17**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**	**www.ifm.com**				
Product Name		**18**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**					
Product ID		**19**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**					

Variables

Name	Description	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
Product Text		**20**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**	**Laser Sensor**				
Hardware Version		**22**	**Sub 0**	**StringT**	**max 32 Byte**	**ro**					
Firmware Version		**23**	**Sub 0**	**StringT**	**max 16 Byte**	**ro**					
Application Specific Tag		**24**	**Sub 0**	**StringT**	**max 16 Byte**	**rw**	*******				
SP	**Smart Sensor Profile: BDC1 Switchpoints**	**60**		**RecordT**	**32 Bit**	**rw**					
Switch Point 1			Sub 1	UIntegerT	16 Bit		(100)	5 to 200	1	0	cm
Switch Point 2			Sub 2	UIntegerT	16 Bit		(0) (Not used)	(0) (Not used)			
SP	**Smart Sensor Profile: BDC1 Switchpoint configuration**	**61**		**RecordT**	**32 Bit**	**rw**					
Switchpoint Logic			Sub 1	UIntegerT	8 Bit		(0) Closing Contact	(0) Closing Contact (1) Break Contact			
Switchpoint Mode			Sub 2	UIntegerT	8 Bit		(1) Single Point	(1) Single Point			
Switchpoint Hysteresis			Sub 3	UIntegerT	16 Bit		(0) (Not used)	(0) (Not used)			
Process data limits	**Process data limit values**	**64**		**RecordT**	**32 Bit**	**ro**					
Min			Sub 1	UIntegerT	16 Bit		(5)		1	0	cm
Max			Sub 2	UIntegerT	16 Bit		(200)		1	0	cm
Align	**Align Signal**	**69**	**Sub 0**	**UIntegerT**	**8 Bit**	**ro**		**0 to 100**	**1**	**0**	**%**
dFO	**Time delay after signal loss (100 ms steps)**	**74**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**100**	**0 to 2000**	**1**	**0**	**ms**
dS	**Switch-On delay**	**76**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**0**	**0 to 2000**	**1**	**0**	**ms**
dr	**Switch-Off delay**	**78**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**0**	**0 to 2000**	**1**	**0**	**ms**

Variables

Name	Description	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
Laser	**Laser configuration**	**80**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) Laser on**	(0) Laser off (1) Laser on			
Display	**Display configuration**	**96**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) Display on**	(0) Display off (1) Display on (2) Display rotated			
Keylock		**100**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) Unlocked**	(0) Locked (1) Unlocked			

Events

Code	Name	Type	Description
16928 d / 42 20 h	Device temperature under-run	Warning	Insulate device
36016 d / 8C B0 h	nEA	Warning	Object to near
36017 d / 8C B1 h	fAr	Warning	Object to far
36020 d / 8C B4 h	+	Error	Too much intensity
36021 d / 8C B5 h	-	Error	No Object
36004 d / 8C A4 h	ErP	Warning	Plausibility error
36350 d / 8D FE h	Test Event 1	Warning	Event appears by setting index 2 to value 240, Event disappears by setting index 2 to value 241
36351 d / 8D FF h	Test Event 2	Warning	Event appears by setting index 2 to value 242, Event disappears by setting index 2 to value 243

Error types

Error code	Name	Description
32768 d / 80 00 h	Device application error - no details	Service has been refused by the device application and no detailed information of the incident is available

Error types

Error code	Name	Description
32785 d / 80 11 h	Index not available	Access occurs to a not existing index
32786 d / 80 12 h	Subindex not available	Access occurs to a not existing subindex
32800 d / 80 20 h	Service temporarily not available	Parameter is not accessible due to the current state of the device application
32803 d / 80 23 h	Access denied	Write access on a read-only parameter
32816 d / 80 30 h	Parameter value out of range	Written parameter value is outside its permitted value range
32819 d / 80 33 h	Parameter length overrun	Written parameter length is above its predefined length
32820 d / 80 34 h	Parameter length underrun	Written parameter length is below its predefined length
32821 d / 80 35 h	Function not available	Written command is not supported by the device application
32822 d / 80 36 h	Function temporarily unavailable	Written command is not available due to the current state of the device application
32832 d / 80 40 h	Invalid parameter set	Written single parameter collides with other actual parameter settings
32833 d / 80 41 h	Inconsistent parameter set	Parameter inconsistencies were found at the end of block parameter transfer, device plausibility check failed
32898 d / 80 82 h	Application not ready	Read or write service is refused due to a temporarily unavailable application