

DI

Vendor ID 310 / 0x0136 - Bytes: 01 54 / 0x01 0x36
 Device ID 911 / 0x00038F - Bytes: 00 03 143 / 0x00 0x03 0x8F
 Vendor name ifm electronic gmbh
 Vendor text www.ifm.com
 Vendor URL <http://www.ifm.com/ifmgb/web/io-link-download.htm>

**Communication**

IO-Link revision V1.1
 Bit rate COM2
 Minimum cycle time 3.200 ms
 SIO mode supported Yes

Features

Block parametrization Yes
 Data storage Yes

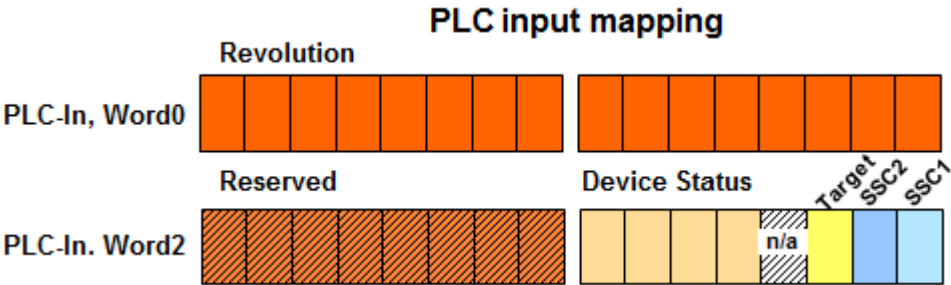
Device variant

DI5027	Speed Monitor		
DI5028	Speed Monitor		
DI5029	Speed Monitor		
DI5030	Speed Monitor		

Process data
(Process data input)

Total bit length = 32

Name	Description	Data type	Bit length	Value range	Gradient	Offset	Unit
Revolution	Current revolution value	IntegerT	16	1 to 30000 (-32760) UL (32760) OL (32764) NoData	1	0	1/min
Device status	Current device status, a copy of the variable [Device Status] in the process data channel	UIntegerT	4	(0) Device is OK (1) Maintenance required (2) Out of specification (3) Functional check (4) Failure			
Target	Indicates a detected target	BooleanT		(false) No target detected (true) Target detected			
SSC2	Status depends on SSC2-Config.Logic and SSC2-Config.Mode	BooleanT		(false) inactive (true) active			
SSC1	Status depends on SSC1-Config.Logic and SSC1-Config.Mode	BooleanT		(false) inactive (true) active			



Variables

Name	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 (65) Teach SP1 (66) Teach SP2 (208) BACKGROUND-COMPENSATION (240) IO-Link 1.1 system test command 240, Event 8DFE appears (241) IO-Link 1.1 system test command 241, Event 8DFE disappears (242) IO-Link 1.1 system test command 242, Event 8DFF appears (243) IO-Link 1.1 system test command 243, Event 8DFF disappears			
Device Access Locks										
	12	Sub 0	RecordT	16 Bit	rw					
<i>Data Storage</i>		bitOffs 1	BooleanT	1 Bit		(false)	(false) Unlocked (true) Locked			
Vendor Name										
	16	Sub 0	StringT	max 19 Byte	ro	ifm electronic gmbh				
Vendor Text										
	17	Sub 0	StringT	max 11 Byte	ro	www.ifm.com				
Product Name										
	18	Sub 0	StringT	max 6 Byte	ro					

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
Product ID										
	19	Sub 0	StringT	max 6 Byte	ro					
Product Text										
	20	Sub 0	StringT	max 13 Byte	ro	Speed Monitor				
Serial Number										
	21	Sub 0	StringT	max 12 Byte	ro					
Hardware Version										
	22	Sub 0	StringT	max 32 Byte	ro					
Firmware Version										
	23	Sub 0	StringT	max 3 Byte	ro					
Application Specific Tag										
	24	Sub 0	StringT	max 32 Byte	rw	***				
Device Status										
	36	Sub 0	UIntegerT	8 Bit	ro	(0) Device is OK	(0) Device is OK (1) Maintenance required (2) Out of specification (3) Functional check (4) Failure 5 to 255 (Reserved)			
Detailed Device Status										
	37	Sub 0	ArrayT	24 Byte	ro	00 00 00 h				

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
TI Select	Teach selection									
	58	Sub 0	UIntegerT	8 Bit	rw	(1) SSC1	(1) SSC1 (2) SSC2			
TI Result	Teach result									
	59	Sub 0	RecordT	8 Bit	ro					
<i>State, Current teach state</i>		bitOffs 0	UIntegerT	4 Bit		(0) Idle	(0) Idle (1) SP1 Success (2) SP2 Success (5) Busy (7) Error			
SSC1 Param	Switching signal channel 1, parameter									
	60		RecordT	32 Bit	rw					
<i>SP1, Setpoint 1</i>		Sub 1	IntegerT	16 Bit		(5)	5 to 24000	1	0	1/min
<i>SP2, Setpoint 2</i>		Sub 2	IntegerT	16 Bit		(3)	3 to 21600	1	0	1/min
SSC1 Config	Switching signal channel 1, configuration									
	61		RecordT	32 Bit	rw					
<i>Logic, Setpoint logic / State for target detected</i>		Sub 1	UIntegerT	8 Bit		(0) High active	(0) High active (1) Low active			
<i>Mode, Setpoint mode</i>		Sub 2	UIntegerT	8 Bit		(1) Single point	(1) Single point (2) Window (3) Two point			
<i>Hyst, Setpoint hysteresis</i>		Sub 3	IntegerT	16 Bit		(10) 10 %	(10) 10 %			

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
SSC2 Param	Switching signal channel 2, parameter									
	62		RecordT	32 Bit	rw					
<i>SP1, Setpoint 1</i>		Sub 1	IntegerT	16 Bit		(5)	5 to 24000	1	0	1/min
<i>SP2, Setpoint 2</i>		Sub 2	IntegerT	16 Bit		(3)	3 to 21600	1	0	1/min
SSC2 Config	Switching signal channel 2, configuration									
	63		RecordT	32 Bit	rw					
<i>Logic, Setpoint logic / State for target detected</i>		Sub 1	UIntegerT	8 Bit		(0) High active	(0) High active (1) Low active			
<i>Mode, Setpoint mode</i>		Sub 2	UIntegerT	8 Bit		(1) Single point	(1) Single point (2) Window (3) Two point			
<i>Hyst, Setpoint hysteresis</i>		Sub 3	IntegerT	16 Bit		(10) 10 %	(10) 10 %			
SSC1 Switch-On delay	Switchching signal channel 1, Switch-On delay									
	370	Sub 0	UIntegerT	16 Bit	rw	0	0 to 60000	1	0	ms
SSC1 Switch-Off delay	Switchching signal channel 1, Switch-Off delay									
	371	Sub 0	UIntegerT	16 Bit	rw	0	0 to 60000	1	0	ms
SSC2 Switch-On delay	Switchching signal channel 2, Switch-On delay									
	372	Sub 0	UIntegerT	16 Bit	rw	0	0 to 60000	1	0	ms
SSC2 Switch-Off delay	Switchching signal channel 2, Switch-Off delay									
	373	Sub 0	UIntegerT	16 Bit	rw	0	0 to 60000	1	0	ms
Teach offset	Sets an offset between setpoint and current process data value									
	383	Sub 0	IntegerT	16 Bit	rw	80	1 to 200	1	0	%

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
P-n	Output polarity for the switching outputs									
	500	Sub 0	UIntegerT	8 Bit	rw	(0) PnP	(0) PnP (1) nPn			
Power cycles	Number of power cycles since delivery									
	541	Sub 0	IntegerT	32 Bit	ro	0	0 to 2147483647	1	0	
Operating hours	Counter of the operating hours since delivery									
	542	Sub 0	IntegerT	32 Bit	ro	0	0 to 2147483647	1	0	h
Active Events	Bit mask for current pending events									
	545	Sub 0	RecordT	32 Bit	ro					
<i>Bit_31, Bit 31 indicates the assigned pending event</i>		bitOffs 31	BooleanT	1 Bit		(0) noEv	(0) noEv (1) 0x8DFF			
<i>Bit_30, Bit 30 indicates the assigned pending event</i>		bitOffs 30	BooleanT	1 Bit		(0) noEv	(0) noEv (1) 0x8DFE			
<i>Bit_9, Bit 9 indicates the assigned pending event</i>		bitOffs 9	BooleanT	1 Bit		(0) noEv	(0) noEv (1) 0x8C30			
<i>Bit_8, Bit 8 indicates the assigned pending event</i>		bitOffs 8	BooleanT	1 Bit		(0) noEv	(0) noEv (1) 0x8C10			
<i>Bit_0, Bit 0 indicates the assigned pending event</i>		bitOffs 0	BooleanT	1 Bit		(0) noEv	(0) noEv (1) 0x5000			

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
Param configuration fault	Displays the wrongly set parameters									
	546	Sub 0	ArrayT	10 * 32 Bit	ro	0	(0) OK (3801088) TI-Select (3932160) SSC1-Param (3932161) SSC1-Param.SP1 (3932162) SSC1-Param.SP2 (3997696) SSC1-Config (3997697) SSC1-Config.Logic (3997698) SSC1-Config.Mode (3997699) SSC1-Config.Hyst (4063232) SSC2-Param (4063233) SSC2-Param.SP1 (4063234) SSC2-Param.SP2 (4128768) SSC2-Config (4128769) SSC2-Config.Logic (4128770) SSC2-Config.Mode (4128771) SSC2-Config.Hyst (24248320) SSC1_dS (24313856) SSC1_dr (24379392) SSC2_dS (24444928) SSC2_dr (32768000) P-n (25100288) TeachOffset (35782656) ParaConfigFaultCollection (196804608) dSt (262602752) PrSC			

Variables

Name	Index	Subindex	Data type	Length	Access rights	Default	Value range	Gradient	Offset	Unit
dSt	Delay Startup									
	3003	Sub 0	UIntegerT	16 Bit	rw	15000	0 to 30000	1	0	ms
PrSC	Prescaler, Indicates the number of targets to calculate current revolution									
	4007	Sub 0	UIntegerT	16 Bit	rw	1	1 to 99	1	0	
MDC Descr	Description of the measurement data channel									
	16512		RecordT	88 Bit	ro					
<i>lowerLimit, Lower value measurement range</i>		Sub 1	IntegerT	32 Bit		(1) 1	(1) 1			
<i>upperLimit, Upper value measurement range</i>		Sub 2	IntegerT	32 Bit		(30000) 30000	(30000) 30000			
<i>unitCode, Unit code of the measurement data</i>		Sub 3	UIntegerT	16 Bit		0	(1083) 1/min			
<i>scale, Range shifting (10 scale)</i>		Sub 4	IntegerT	8 Bit		(0) 0	(0) 0			

Events

Code	Name	Type	Description
20480 d / 50 00 h	Device hardware fault, Device Status = 4 (Failure)	Error	Device Exchange
35856 d / 8C 10 h	Process variable range over-run, Device Status = 2 (Out of specification)	Warning	Process data uncertain. Note: This Event will not be transmitted via IO-Link Event mechanism. It is only available by reading Index 37 (DetailedDeviceStatus) oder 545 (BitCoded_ActiveEvents)
35888 d / 8C 30 h	Process variable range under-run, Device Status = 2 (Out of specification)	Warning	Process data uncertain. Note: This Event will not be transmitted via IO-Link Event mechanism. It is only available by reading Index 37 (DetailedDeviceStatus) oder 545 (BitCoded_ActiveEvents)
36350 d / 8D FE h	Test Event 1. Device Status = 1 (Maintenance required)	Warning	Event appears by setting index 2 to value 240, Event disappears by setting index 2 to value 241

Events

Code	Name	Type	Description
36351 d / 8D FF h	Test Event 2. Device Status = 1 (Maintenance required)	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
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