Version: V3.2.1 Release Date: 2013-11-05

SD

Vendor ID	310 / 0x0136 - Bytes: 01 54 / 0x01 0x36
Vendor Name	ifm electronic gmbh
Vendor Text	www.ifm.com
Vendor URL	http://www.ifm.com/ifmgb/web/io-link_down.htm
Device ID	267 / 0x00010B - Bytes: 00 01 11 / 0x00 0x01 0x0B

Communication

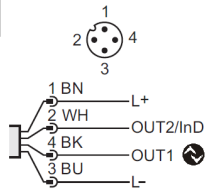
IO-Link Revision	V1.1
Bitrate	COM2
Minimum Cycle Time	4.100 ms
SIO Mode Supported	Yes

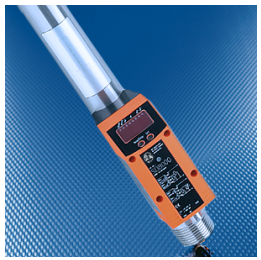
Features

Block parametrization	Yes
Data storage	Yes

Device Variant

SD8000	SD8000 compressed air meter

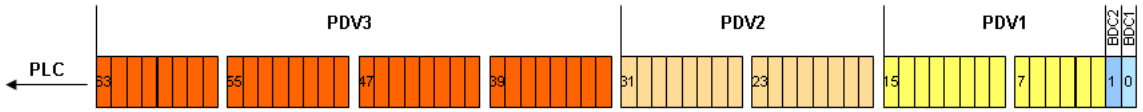




Process Data
(ProcessDataIn)

Total BitLength = 64

Name	Description	Datatype	Bitoffset	Bitlength	Value Range	Gradient	Offset	Unit
Totalizer	[PDV3]. Quantity meter which continuously totals the volumetric flow since the last reset	Float32T	32		**0 to 9999999**			
Flow rate	[PDV2]. The flow rate is monitored by a calorimetric measuring system	IntegerT	16	16	**0 to 2700** 2701 to 2925 (OL)	0.1	0	m^3/h std.
Temperature	[PDV1]. Current system temperature. To get the real temperature, [PDV1] must be shifted two bits to the right, then the 'Gradient-Offset' values shall be applied as a linear equation. E.g. T_real = (PDV1 >> 2) * Gradient + Offset.	IntegerT	2	14	-180 to -121 (UL) **-120 to 720** 721 to 780 (OL)	0.1	0	°C
Switchstate OUT2	[BDC2]. State depends on [OU2], inactive if [OU2] is set to [I] or [In.D]	BooleanT	1		(false) inactive (true) active			
Switchstate OUT1	[BDC1]. State depends on [OU1], inactive if [OU1] is set to [ImP]	BooleanT	0		(false) inactive (true) active			



Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
Standard Command		**2**	**Sub 0**	**UIntegerT**	**8 Bit**	**wo**		(130) Restore Factory Setting (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 (255) Internal command			
Device Access Lock		**12**	**Sub 0**	**RecordT**	**16 Bit**	**rw**					
Data Storage Lock			bitOffs 1	BooleanT	1 Bit		(0)				
Local User Interface Lock			bitOffs 3	BooleanT	1 Bit		(0)				
Vendor Name		**16**	**Sub 0**			**ro**	**ifm electronic gmbh**				
Vendor Text		**17**	**Sub 0**			**ro**	**www.ifm.com**				
Product Name		**18**	**Sub 0**			**ro**	**SD8000**				
Product ID		**19**	**Sub 0**			**ro**	**SD8000**				
Product Text		**20**	**Sub 0**			**ro**	**Compressed air meter**				
Serial Number		**21**	**Sub 0**			**ro**					

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
Hardware Version		**22**	**Sub 0**			**ro**					
Firmware Version		**23**	**Sub 0**			**ro**					
Application Specific Tag		**24**	**Sub 0**		**16 Byte**	**rw**					
SP1	**Switch point 1. [SP1] must be above [rP1]**	**70**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**450**	**18 to 2250**	**0.1**	**0**	**m³/h std.**
rP1	**Reset point 1. [rP1] must be below [SP1]**	**71**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**439**	**7 to 2239**	**0.1**	**0**	**m³/h std.**
ImPS	**Pulse value**	**72**	**Sub 0**	**UIntegerT**	**64 Bit**	**rw**	**3**	**3 to 3000000000**	**0.001**	**0**	**m³ std.**
ImPR	**Pulse repetition active (= pulse output) or not active (= function preset meter).**	**73**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) yes**	(0) no (1) yes			
OU1	**Output configuration 1. Setting [ImP] deactivates IO-Link BDC1**	**74**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(3) Hno**	(3) Hno (4) Hnc (5) Fno (6) Fnc (9) ImP			

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
OU2	**Output configuration 2. Settings [I] or [In.D] deactivate IO-Link BDC2**	**75**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) I**	(1) I (3) Hno (4) Hnc (5) Fno (6) Fnc (14) In.D			
SP2 (FLOW)	**Switch point 2 (FLOW). [SP2] must be above [rP2]. SP2 (FLOW) is only available if [SEL2] = FLOW**	**76**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**900**	**18 to 2250**	**0.1**	**0**	**m³/h std.**
rP2 (FLOW)	**Reset point 2 (FLOW). [rP2] must be below [SP2]. rP2 (FLOW) is only available if [SEL2] = FLOW**	**77**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**889**	**7 to 2239**	**0.1**	**0**	**m³/h std.**
SP2 (TEMP)	**Switch point 2 (TEMP). [SP2] must be above [rP2]. SP2 (TEMP) is only available if [SEL2] = TEMP**	**78**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**240**	**4 to 600**	**0.1**	**0**	**°C**
rP2 (TEMP)	**Reset point 2 (TEMP). [rP2] must be below [SP2]. rP2 (TEMP) is only available if [SEL2] = TEMP**	**79**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**238**	**2 to 598**	**0.1**	**0**	**°C**
ASP (FLOW)	**Analog start point (FLOW) (the distance of AEP - ASP shall be at least 25% of the measurement range). ASP (FLOW) is only available if [SEL2] = FLOW**	**80**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**0**	**0 to 1688**	**0.1**	**0**	**m³/h std.**

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
AEP (FLOW)	**Analog end point (FLOW) (the distance of AEP - ASP shall be at least 25% of the measurement range). AEP (FLOW) is only available if [SEL2] = FLOW**	**81**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**2250**	**563 to 2250**	**0.1**	**0**	**m³/h std.**
ASP (TEMP)	**Analog start point (TEMP) (the distance of AEP - ASP shall be at least 25% of the measurement range). ASP (TEMP) is only available if [SEL2] = TEMP**	**82**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**0**	**0 to 450**	**0.1**	**0**	**°C**
AEP (TEMP)	**Analog end point (TEMP) (the distance of AEP - ASP shall be at least 25% of the measurement range). AEP (TEMP) is only available if [SEL2] = TEMP**	**83**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**600**	**150 to 600**	**0.1**	**0**	**°C**
DIn2	**Digital input for resetting totalizer**	**84**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(2) +EDG**	(0) HIGH (1) LOW (2) +EDG (3) -EDG			
HI (FLOW)	**Highest measured flow value**	**88**	**Sub 0**	**IntegerT**	**16 Bit**	**ro**	**0**	**0 to 2700** 2701 to 2925 (OL)	**0.1**	**0**	**m³/h std.**

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
LO (FLOW)	**Lowest measured flow value**	**89**	**Sub 0**	**IntegerT**	**16 Bit**	**ro**	**2250**	**0 to 2700** 2701 to 2925 (OL)	**0.1**	**0**	**m³/h std.**
HI (TEMP)	**Highest measured temperature value**	**90**	**Sub 0**	**IntegerT**	**14 Bit**	**ro**	**0**	-180 to -121 (UL) **-120 to 720** 721 to 780 (OL)	**0.1**	**0**	**°C**
LO (TEMP)	**Lowest measured temperature value**	**91**	**Sub 0**	**IntegerT**	**14 Bit**	**ro**	**600**	-180 to -121 (UL) **-120 to 720** 721 to 780 (OL)	**0.1**	**0**	**°C**
FOU1	**OUT1 behaviour in case of fault**	**92**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(4) OFF**	(1) OU (2) On (4) OFF			
FOU2	**OUT2 behaviour in case of fault**	**93**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(4) OFF**	(1) OU (2) On (4) OFF			

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
dAP	**Measured value damping / damping constant in seconds (t value 63 %).**	**94**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**(6) 0.6 s**	(0) 0.0 s (2) 0.2 s (4) 0.4 s (6) 0.6 s (8) 0.8 s (10) 1.0 s			

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
rTo	**Meter reset: manual reset / time-controlled reset**	**95**	**Sub 0**	**RecordT**	**16 Bit**	**rw**					
Meter reset mode			bitOffs 15	BooleanT	1 Bit		(true) Meter reset OFF	(false) Meter reset after time (true) Meter reset OFF			
Meter reset time coarse adjustment			bitOffs 8	UIntegerT	3 Bit		(1) hours	(1) hours (2) days (4) weeks			
Meter reset time fine adjustment			bitOffs 0	UIntegerT	8 Bit		(1) 1	(1) 1 (2) 2 (3) 3 (4) 4 (5) 5 (6) 6 (7) 7 (8) 8 (9) 9 (10) 10 (11) 11 (12) 12 (13) 13 (14) 14 (15) 15 (16) 16 (17) 17 (18) 18 (19) 19 (20) 20 (21) 21 (22) 22 (23) 23			

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
diS	**Display settings**	**96**	**Sub 0**	**RecordT**	**16 Bit**	**rw**					
Display ON / OFF			bitOffs 7	BooleanT	1 Bit		(false) ON	(false) ON (true) OFF			
Display rotated yes / no			bitOffs 6	BooleanT	1 Bit		(false) Not rotated	(false) Not rotated (true) Rotated			
Display update rate			bitOffs 0	UIntegerT	3 Bit		(4) Slow update	(1) Fast update (2) Medium update (4) Slow update			
SELd	**Selection of displayed processdata unit**	**97**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**(1) FLOW**	(1) FLOW (2) TEMP (4) TOTALIZER			
SEL2	**Selection of OUT2 switching unit**	**98**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) FLOW**	(1) FLOW (2) TEMP			
rEF.P	**Reference pressure which refers to all measured and displayed values for flow**	**100**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**1013**	**950 to 1050**	**1**	**0**	**hPa**
rEF.T	**Reference temperature which refers to all measured and displayed values for flow**	**101**	**Sub 0**	**IntegerT**	**16 Bit**	**rw**	**15**	**0 to 25**	**1**	**0**	**°C**
LFC	**Low flow cutoff**	**102**	**Sub 0**	**UIntegerT**	**16 Bit**	**rw**	**3**	**3 to 23**	**0.1**	**0**	**m³/h std.**

Variables

Name	Description	Index	Subindex bitOffset	DataType	Length	Access Rights	Default	Value Range	Gradient	Offset	Unit
Uni	**Selection of unit on the sensor display**	**104**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) Nm³/h**	(0) Nl/min (1) Nm³/h (2) Nm/s			
Loc	**The local user interface can be locked to prevent unintentional changes, resettable at the device**	**112**	**Sub 0**	**UIntegerT**	**8 Bit**	**rw**	**(1) unlocked**	(0) locked (1) unlocked			
Stored meter count	**The stored value before the last reset (format: 32 bit floating point).**	**122**	**Sub 0**	**Float32T**		**ro**	**0**	**0 to 9999999**			
Message	**Performs action on the sensor**	**241**	**Sub 0**	**UIntegerT**	**8 Bit**	**wo**	**(253) Factory reset**	(16) Reset totalizer (17) Reset [HI] [LO] TEMP (18) Reset [LO] TEMP (19) Reset [HI] TEMP (245) Reset [HI] [LO] FLOW (246) Reset [LO] FLOW (247) Reset [HI] FLOW (253) Factory reset			

Events

Code	Name	Type	Description
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

ErrorCode	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
32816 d / 80 30 h	Parameter value out of range	Written parameter value is outside its permitted value range
32803 d / 80 23 h	Access denied	Write access on a read-only parameter
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
32832 d / 80 40 h	Invalid parameter set	Written single parameter collides with other actual parameter settings
32821 d / 80 35 h	Function not available	Written command is not supported by the device application
33025 d / 81 01 h	Parameter hidden	
33026 d / 81 02 h	Parameter currently not available	