IO-Link Parameter Datasheet

Vibration

Vibration Sensor

VIM32PP-E7DC8-0RE-IO-1V1401

PEPPERL+FUCHS

IO-Link

General Information

Device Identification	
Vendor ID	1 (0x0001)
Device ID	5308673 (0x510101)

Features	
Data storage	Yes
Block parameterization	Yes

Communication Characteristics	
IO-Link revision	V1.1 (specification V1.1.3)
IO-Link backward compatibility	n/a
Data transmission rate	COM3 (230.4 kbit/s)
Min. cycle time	3.8 ms
Process data input	24 byte
Process data output	8 bit
SIO mode support	yes
Compatible master port type	Class A, Class B (see NOTE)

NOTE: For use at IO-Link master port Class B, use 3-pole adapter or 3-wire cable.

Device Profile	
BLOB transfer	48 (0x0030)
Identification and Diagnosis – I&D	16384 (0x4000)
Function Class – Product URI	33026 (0x8102)

Supported Product Variants

Product ID	Product Name	Description	Connector
70140695-100002	VIM32PP-E7DC8-0RE-IO-1V1401	Vibration Sensor, Medium housing size, Housing material AISI 303/V2A, External thread, 1 .. 12000 Hz, Vibration velocity (rms) + Vibration acceleration (rms) + Vibration acceleration (peak) + temperature and Crest and Bearing Condition and Vibration acceleration (raw via BLOB), 128 mm/s + 48 g peak and raw, IP66/IP67, M12 plug, 4-pin	Plug, M12, 4-pin

Connection

Connection Diagram	Description
	Plug, M12, 4-pin 1: Brown - +24V 2: White - I/Q 3: Blue - 0V 4: Black - C/Q

Process Data

Process Data Input

Octet	Bitoffs.	Name	Data type	Length	Value	Unit	Description
0 .. 1	176	MDC1 - vRMS	Integer	16 bit	0 .. 12800 *32764*	0.01 mm/s	Shows the current velocity rms measurement value of measurement data channel 1. *No Measurement Data*
2	168	MDC1 - Scale	Integer	8 bit	-2: 10e-2		Shows the multiplier for the velocity rms measurement value of measurement data channel 1 - 10exp(scale).
3	160	SSC1.1 - vRMS	Boolean	1 bit	*0* *1*		Indicates the current status of the velocity rms switching signal 1.1 for measurement data channel 1. *Low* *High*
	161	SSC1.2 - vRMS	Boolean	1 bit	*0* *1*		Indicates the current status of the velocity rms switching signal 1.2 for measurement data channel 1. *Low* *High*
	162	Reserved		6 bit			Reserved
4 .. 5	144	MDC2 - aRMS	Integer	16 bit	0 .. 3400 *32764*	0.01 g	Shows the current acceleration rms measurement value of measurement data channel 2. *No Measurement Data*
6	136	MDC2 - Scale	Integer	8 bit	-2: 10e-2		Shows the multiplier for the acceleration rms measurement value of measurement data channel 2 - 10exp(scale).
7	128	SSC2.1 - aRMS	Boolean	1 bit	*0* *1*		Indicates the current status of the acceleration rms switching signal 2.1 for measurement data channel 2. *Low* *High*
	129	SSC2.2 - aRMS	Boolean	1 bit	*0* *1*		Indicates the current status of the acceleration rms switching signal 2.2 for measurement data channel 2. *Low* *High*
	130	Reserved		6 bit			Reserved
8 .. 9	112	MDC3 - aPeak	Integer	16 bit	0 .. 4800 *32764*	0.01 g	Shows the current acceleration peak measurement value of measurement data channel 3. *No Measurement Data*
10	104	MDC3 - Scale	Integer	8 bit	-2: 10e-2		Shows the multiplier for the acceleration peak measurement value of measurement data channel 3 - 10exp(scale).
11	96	SSC3.1 - aPeak	Boolean	1 bit	*0* *1*		Indicates the current status of the acceleration peak switching signal 3.1 for measurement data channel 3. *Low* *High*
	97	SSC3.2 - aPeak	Boolean	1 bit	*0* *1*		Indicates the current status of the acceleration peak switching signal 3.2 for measurement data channel 3. *Low* *High*
	98	Reserved		6 bit			Reserved
12 .. 13	80	MDC4 - Temperature	Integer	16 bit	-50 .. 100 *32764*	°C	Shows the current temperature measurement value of measurement data channel 4. *No Measurement Data*
14	72	MDC4 - Scale	Integer	8 bit	0: 10e0		Shows the multiplier for the temperature measurement value of measurement data channel 4 - 10exp(scale).
15	64	SSC4.1 - Temperature	Boolean	1 bit	*0* *1*		Indicates the current status of the temperature switching signal 4.1 for measurement data channel 4. *Low* *High*
	65	SSC4.2 - Temperature	Boolean	1 bit			Indicates the current status of the temperature switching signal 4.2 for measurement data channel 4.

Process Data Input							
Octet	*Bitoffs.*	*Name*	*Data type*	*Length*	*Value*	*Unit*	*Description*
					0 *1*		*Low* *High*
	66	Reserved		2 bit			Reserved
	68	DSC.2 - Device Status	UInteger	4 bit			Indicator for the current device condition and diagnosis state.
					0 *1* *2* *3* *4*		*Device is OK* *Maintenance required* *Out of specification* *Functional check* *Failure*
16 .. 17	48	MDC5 - Crest	Integer	16 bit	0 .. 10000 *32764*	0.01	Shows the current crest measurement value of measurement data channel 5 (Crest = aPeak/aRMS). *No Measurement Data*
18	40	MDC5 - Scale	Integer	8 bit	-2: 10e-2		Shows the multiplier for the crest measurement value of measurement data channel 5 - 10exp(scale).
19	32	SSC5.1 - Crest	Boolean	1 bit	*0* *1*		Indicates the current status of the crest switching signal 5.1 for measurement data channel 5. *Low* *High*
	33	SSC5.2 - Crest	Boolean	1 bit	*0* *1*		Indicates the current status of the crest switching signal 5.1 for measurement data channel 5. *Low* *High*
	34	Reserved		3 bit			Reserved
	37	DSC.3 - BLOB Status	UInteger	3 bit	*0* *1* *2* *3* *4*		Shows the current status of raw data recording and BLOB transfer. If 'DSC.3 - BLOB Status' is not 'Idle', all BLOB triggers are rejected except for a Parameter trigger with BLOB_ID = -4096, which leads to the memory being deleted and a change to 'Idle'. *Idle, no BLOB transfer active* *Raw data recording* *Recording finished, wait for transfer* *Transfer active* *Deleting memory*
20 .. 21	16	MDC6 - Bearing Condition	Integer	16 bit	0 .. 500 *32764*		Shows the current bearing condition measurement value of measurement data channel 6 as defined in DIN ISO 13373-3. *No Measurement Data*
22	8	MDC6 - Scale	Integer	8 bit	-2: 10e-2		Shows the multiplier for the bearing condition measurement value of measurement data channel 6 - 10exp(scale).
23	0	SSC6.1 - Bearing Condition	Boolean	1 bit	*0* *1*		Indicates the current status of the bearing condition switching signal 6.1 for measurement data channel 6. *Low* *High*
	1	SSC6.2 - Bearing Condition	Boolean	1 bit	*0* *1*		Indicates the current status of the bearing condition switching signal 6.2 for measurement data channel 6. *Low* *High*
	2	Reserved		2 bit			Reserved
	4	DSC.6 - Bearing Condition	UInteger	2 bit	*0* *1* *2* *3*		Shows a 4-level diagnosis information for the currently detected vibration condition at bearings as defined in DIN ISO 13373-3. *1 - Exceptional low (blue)* *2 - Normal (green)* *3 - Warning (yellow)* *4 - Alarm (red)*
	6	Reserved		2 bit			Reserved

Process Data Output

Octet	Bitoffs.	Name	Data type	Length	Value	Unit	Description
0	0	BLOB Trigger – Raw Data Recording	Boolean	1 bit			Defines an additional trigger for raw data recording based on PD Output. The trigger is executed on a 0-to-1 transition.
							BLOB_ID = -4098
							If 'DSC.3 - BLOB Status' is not 'Idle', this PDO trigger is rejected.
					0		*Idle*
					1		*Execute*
	1	Reserved		7 bit			Reserved

NOTE: The process data input content can also be read via parameter 'Process Data Input' at index 40 (0x28).
The process data output content can also be read via parameter 'Process Data Output' at index 41 (0x29).

Parameter Data

Identification

Index	Parameter	Access	Data type	Length	Default	Description	DS	R
16 (0x10)	Vendor Name	ro	String	13 byte	Pepperl+Fuchs	The vendor name that is assigned to a Vendor ID.		
17 (0x11)	Vendor Text	ro	String	29 byte	www.pepperl-fuchs.com/io-link	Additional information about the vendor.		
18 (0x12)	Product Name	ro	String	max. 30 byte	VIM32PP-E7DC8-0RE-IO-1V1401	Complete product name.		
19 (0x13)	Product ID	ro	String	15 byte	70140695-100002	Vendor-specific product or type identification (e.g., item number or model number).		
20 (0x14)	Product Text	ro	String	max. 30 byte	Vibration Sensor	Additional product information for the device.		
21 (0x15)	Serial Number	ro	String	14 byte		Unique, vendor-specific identifier of the individual device.		
22 (0x16)	Hardware Revision	ro	String	7 byte	HW**.**	Unique, vendor-specific identifier of the hardware revision of the individual device.		
23 (0x17)	Firmware Revision	ro	String	7 byte	FW**.**	Unique, vendor-specific identifier of the firmware revision of the individual device.		
24 (0x18)	Application Specific Tag	rw	String	max. 32 byte	Your automation, our passion.	Possibility to mark a device with user- or application-specific information.	Y	F
25 (0x19)	Function Tag	rw	String	max. 32 byte	***	Possibility to mark a device with function-specific information.	Y	F
26 (0x1A)	Location Tag	rw	String	max. 32 byte	***	Possibility to mark a device with location-specific information.	Y	F
27 (0x1B)	Product URI	ro	String	31 byte	https://pefu.de/70140695-100002	Provides a unique instance identification compliant to DIN-SPEC 91406.		

NOTE 1: The parameter data provide the attributes DS (Data Storage) and R (Reset behavior). The following rules apply:
    DS: Parameter marked with 'Y' (yes) are exchanged with the master via the data storage mechanism.
    R: Parameter marked with 'F' are reset to the default value upon reception of the command 'Back-to-Box'.
    R: Parameter marked with 'A' are reset to the default value upon reception of the command 'Application Reset'.
    R: Parameter marked with 'M' are reset to the default value upon reception of the command 'Maintenance Reset'.

NOTE 2: Parameter with datatype Record or Array, which are marked with 'S0' can only be accessed over subindex 0 (whole parameter object). Subindex access to single items is not possible.

BLOB Transfer Profile

Index	Parameter	Access	Data type	Length	Default	Value	Description	DS	R
49 (0x31)	BLOB_ID	ro	Integer	16 bit	0		ID of the BLOB that is currently transferred		FA
						0	*Idle, no BLOB transfer active*		
						-4096	*Parameter trigger*		
						-4097	*SSC trigger on switching edge*		
						-4098	*PDO trigger via IO-Link Master*		
50 (0x32)	BLOB_CH	rw	Octetstr	variable			Provides an interface for reading raw data and for a trigger for raw data recording based on parameter. The trigger and reading are executed according to the BLOB transfer profile. BLOB_ID = -4096 Note: This profile parameter is not described in the IODD.		FA

BLOB Raw Data Recording

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
97 (0x61)	BLOB Config – Raw Data Sampling Rate	rw	UInteger	8 bit		0			Defines the internal sampling rate at which the oscillation signal is sampled and the associated low pass that is applied to the oscillation signal. A high sampling rate leads to a small recording time.	Y	FA
							0		*64 kHz sampling rate, 12 kHz low-pass*		
							1		*32 kHz sampling rate, 6 kHz low-pass*		
							2		*16 kHz sampling rate, 3 kHz low-pass*		
							3		*8 kHz sampling rate, 1.5 kHz low-pass*		
							4		*4 kHz sampling rate, 0.75 kHz low-pass*		
							5		*2 kHz sampling rate, 0.3 kHz low-pass*		
98 (0x62)	BLOB Config – Raw Data Memory Size	rw	UInteger	16 bit		320	1 .. 320		Defines the number of thousand samples, which defines the memory size for raw data recording. Each sample has a size of 32 bit, where 18 bit are measurement data and the remaining 14 bit are statically zero. LSB = 0.005g	Y	FA
							1		*1000 samples*		
							2		*2000 samples*		
							..		*..*		
							320		*320000 samples*		
99 (0x63)	BLOB – Raw Data Recording Time	ro	UInteger	32 bit			0 .. 65535	s	Shows the estimated raw data recording time, which results from the configured sampling rate and configured memory size. A high sampling rate and a small memory size leads to a small recording time.		FA
100 (0x64)	BLOB – Raw Data Transfer Time	ro	UInteger	16 bit			0 .. 65535	s	Shows the estimated raw data transfer time for the BLOB transfer from sensor to master, which results from the configured memory size. A higher memory size leads to a higher transfer time.		FA

BLOB Raw Data Recording										
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
101 (0x65)	BLOB Config – SSC Trigger	rw	UInteger	8 bit		0			Defines additional triggers for raw data recording based on switching signal channels (SSCs). A trigger is executed on a falling or rising edge of the selected SSC.

BLOB_ID = -4097
If 'DSC.3 - BLOB Status' is not 'Idle', the SSC trigger is rejected. | Y | FA |
							0		*Inactive*		
							1		*SSC1.1 - vRMS*		
							2		*SSC1.2 - vRMS*		
							3		*SSC2.1 - aRMS*		
							4		*SSC2.2 - aRMS*		
							5		*SSC3.1 - aPeak*		
							6		*SSC3.2 - aPeak*		
							7		*SSC4.1 - Temperature*		
							8		*SSC4.2 - Temperature*		
							9		*SSC5.1 - Crest*		
							10		*SSC5.2 - Crest*		
							11		*SSC6.1 - Bearing Condition*		
							12		*SSC6.2 - Bearing Condition*		
102 (0x66)	BLOB Active ID	ro	UInteger	16 bit					Shows the active BLOB_ID resulting from a successful BLOB trigger. If 'DSC.3 - BLOB Status' is not 'Idle', all BLOB triggers are rejected except for a Parameter trigger with BLOB_ID = -4096, which leads to the memory being deleted and a change to 'Idle'.		FA
							0		*Idle, no BLOB transfer active*		
							-4096		*Parameter trigger*		
							-4097		*SSC trigger on switching edge*		
							-4098		*PDO trigger via IO-Link Master*		

Diagnosis										
Index .sub	*Parameter*	*Access*	*Data type*	*Length*	*Bitoffs.*	*Default*	*Value*	*Unit*	*Description*	*DS*	*R*
36 (0x24)	Device Status	ro	UInteger	8 bit		0			Indicator for the current device condition and diagnosis state.		FA
							0 1 2 3 4		*Device is OK* *Maintenance required* *Out of Specification* *Functional check* *Failure*		
37 (0x25)	Detailed Device Status	ro	Array S0	12 byte					List of all currently pending events in the device.		FA
.1	Element 1		Octetstr	3 byte	72						FA
.2	Element 2		Octetstr	3 byte	48						FA
.3	Element 3		Octetstr	3 byte	24						FA
.4	Element 4		Octetstr	3 byte	0						FA
224 (0xE0)	Operating Hours	ro	UInteger	32 bit			$0 .. 2^{32}-1$	h	Shows the overall hours of operation since initial commissioning.		
225 (0xE1)	Temperature Indicator	ro	UInteger	8 bit		0			Indicates the operation at ambient temperatures close to or in excess of specification limits.		
							0 1 2 3 4		*Operating condition OK* *Close to upper limit* *Upper limit exceeded* *Close to lower limit* *Lower limit exceeded*		
226 (0xE2)	Temperature Monitor	ro	Record	9 byte					Contains parameters showing current and past conditions of temperature exposure since initial commissioning.		
.1	Overtemperature Operating Hours	ro	UInteger	32 bit	40		$0 .. 2^{32}-1$	h	Shows the overall hours of powered operation above the specified temperature limit since initial commissioning.		
.2	Overtemperature Exceeded Counter	ro	UInteger	16 bit	24		0 .. 65535		Shows the number of transitions to operating temperatures above the specified limit in powered operation since initial commissioning.		
.3	Maximum Temperature	ro	Integer	8 bit	16		-50 .. 100	°C	Shows the maximum observed temperature in powered operation since initial commissioning.		
.4	Minimum Temperature	ro	Integer	8 bit	8		-50 .. 100	°C	Shows the minimum observed temperature in powered operation since initial commissioning.		
.5	Device Operating Temperature	ro	Integer	8 bit	0		-50 .. 100	°C	Shows the currently observed operating temperature of the device.		
227 (0xE3)	Power Monitor	ro	Record	16 byte					Contains parameters showing current and past conditions of power cycles since initial commissioning.		
.1	Power Cycles	ro	UInteger	32 bit	96		$0 .. 2^{32}-1$		Shows the number of power cycles since initial commissioning.		
.2	Maximum Uptime	ro	UInteger	32 bit	64		$0 .. 2^{32}-1$	s	Shows the maximum observed powered operating time between power cycles in seconds since initial commissioning.		
.3	Average Uptime	ro	UInteger	32 bit	32		$0 .. 2^{32}-1$	s	Shows the average observed powered operating time between power cycles in seconds since initial commissioning.		
.4	Uptime	ro	UInteger	32 bit	0		$0 .. 2^{32}-1$	s	Shows the current operating time since the last power cycle in seconds.		
176 (0xB0)	Device Characteristics	ro	Record	6 byte					Shows relevant key characteristics of the device for use in applications.		
.1	Measurement Range	ro	Integer	16 bit	32	1			Shows the maximum measurement range for vibration measurements as specified.		
							0 1		*0 .. 128 mm/s / 0 .. 14 g (peak)* *0 .. 128 mm/s / -48 .. 48 g (peak)*		

Diagnosis											
Index .sub	*Parameter*	*Access*	*Data type*	*Length*	*Bitoffs.*	*Default*	*Value*	*Unit*	*Description*	*DS*	*R*
.2	Measurement Bandwidth	ro	Integer	16 bit	16	1	0 1		Shows the maximum frequency range for vibration measurements as specified. *10 .. 1000 Hz* *1 .. 12000 Hz*		
.3	Supply Current Requirement	ro	UInteger	16 bit	0		320	mA	Shows the maximum specified supply current for the device excluding load.		
177 (0xB1)	MDC1 Descriptor vRMS	ro	Record	11 byte					Descriptor for the characteristic of the measurement data channel 1 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		0		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		12800		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1062		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		-2		Shows the multiplier for measurement value - 10exp(scale).		
178 (0xB2)	MDC2 Descriptor aRMS	ro	Record	11 byte					Descriptor for the characteristic of the measurement data channel 2 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		0		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		3400		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1658		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		-2		Shows the multiplier for measurement value - 10exp(scale).		
179 (0xB3)	MDC3 Descriptor aPeak	ro	Record	11 byte					Descriptor for the characteristic of the measurement data channel 3 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		0		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		4800		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1658		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		-2		Shows the multiplier for measurement value - 10exp(scale).		
180 (0xB4)	MDC4 Descriptor Temperature	ro	Record	11 byte					Descriptor for the characteristic of the measurement data channel 4 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		-50		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		100		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1001		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		0		Shows the multiplier for measurement value - 10exp(scale).		
181 (0xB5)	MDC5 Descriptor Crest	ro	Record	11 byte					Descriptor for the characteristic of the measurement data channel 5 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		0		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		10000		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1997		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		-2		Shows the multiplier for measurement value - 10exp(scale).		

Diagnosis											
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
182 (0xB6)	MDC6 Descriptor Bearing Condition		Record						Descriptor for the characteristic of the measurement data channel 6 (process data MV).		
.1	Lower Value	ro	Integer	32 bit	56		0		Shows the lower value of measurement range.		
.2	Upper Value	ro	Integer	32 bit	24		500		Shows the upper value of measurement range.		
.3	Unit Code	ro	UInteger	16 bit	8		1997		Shows the unique code for the physical unit.		
.4	Scale	ro	Integer	8 bit	0		-2		Shows the multiplier for measurement value - 10exp(scale).		

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
Maintenance Functions											
208 (0xD0)	Maintenance Config vRMS	rw	Record	8 byte					Provides settings for configuration of vRMS maintenance monitoring.	Y	FA
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 12800 0	0.01 mm/s	Defines the threshold for triggering of vRMS maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 0		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000 0	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
209 (0xD1)	Maintenance Config aRMS	rw	Record	8 byte					Provides settings for configuration of aRMS maintenance monitoring.	Y	FA
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 3400 0	0.01 g	Defines the threshold for triggering of aRMS maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 0		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000 0	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
210 (0xD2)	Maintenance Config aPeak	rw	Record	8 byte					Provides settings for configuration of aPeak maintenance monitoring.	Y	FA
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 4800 0	0.01 g	Defines the threshold for triggering of aPeak maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 0		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000 0	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
211 (0xD3)	Maintenance Config Temperature	rw	Record	8 byte					Provides settings for configuration of temperature maintenance monitoring.	Y	FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
Maintenance Functions											
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 100 *0*	°C	Defines the threshold for triggering of temperature maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 *0*		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000 *0*	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
212 (0xD4)	Maintenance Config Crest	rw	Record	8 byte					Provides settings for configuration of crest maintenance monitoring.	Y	FA
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 10000 *0*		Defines the threshold for triggering of crest maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 *0*		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000 *0*	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
213 (0xD5)	Maintenance Config Operating Time	rw	UInteger	16 bit		0	1 .. 10000 *0*		Defines the limit for the accumulated operating time for a planned maintenance cycle in hours. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA
214 (0xD6)	Maintenance Config Bearing Condition	rw	Record	8 byte					Provides settings for configuration of bearing condition maintenance monitoring.	Y	FA
.1	Overrun Threshold	rw	Integer	32 bit	32	0	1 .. 500 *0*		Defines the threshold for triggering of bearing condition maintenance monitoring. *Disabled*	Y	FA
.2	Incident Count Limit	rw	UInteger	16 bit	16	0	1 .. 2^{16}-1 *0*		Defines the limit for the number of transitions above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded. *Disabled*	Y	FA

Maintenance Functions										
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
.3	Incident Operating Limit	rw	UInteger	16 bit	0	0	1 .. 10000	h	Defines the limit for the accumulated operating time in hours above the 'Overrun Threshold'. The according maintenance alarm will be set, if this limit is exceeded.	Y	FA
							0		*Disabled*		
216 (0xD8)	Maintenance Monitor vRMS	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the vRMS measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured threshold since the last maintenance reset.		FAM
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
217 (0xD9)	Maintenance Monitor aRMS	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the aRMS measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured threshold since the last maintenance reset.		FAM
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
218 (0xDA)	Maintenance Monitor aPeak	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the aPeak measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured threshold since the last maintenance reset.		FAM
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
219 (0xDB)	Maintenance Monitor Temperature	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the temperature measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured threshold since the last maintenance reset.		FAM
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
220 (0xDC)	Maintenance Monitor Crest	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the crest measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured Threshold since the last maintenance reset.		FAM

Maintenance Functions										
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
221 (0xDD)	Operating Time Since Maintenance	ro	UInteger	32 bit			$0 .. 2^{32}-1$	h	Shows the time in hours in powered operation since the last maintenance reset.		FAM
222 (0xDE)	Maintenance Monitor Bearing Condition	ro	Record	6 byte					Shows the accumulated monitor data since the last maintenance reset for the bearing condition measurement channel.		FAM
.1	Overrun Time	ro	UInteger	32 bit	16		$0 .. 2^{32}-1$	h	Shows the accumulated operating time in hours of operation above the configured threshold since the last maintenance reset.		FAM
.2	Overrun Count	ro	UInteger	16 bit	0		$0 .. 2^{16}-1$		Shows the number of transitions above the configured threshold since the last maintenance reset.		FAM
223 (0xDF)	Maintenance Status Diag	ro	Record S0	2 byte					Shows the diagnosis status of the different maintenance evaluation channels.		FAM
.1	Operating Time Alarm vRMS	ro	Boolean	1 bit	0	0	0 1		Indicates if the configured maximum time for operation above the vRMS threshold has been exceeded. Inactive Active		FAM
.2	Count Alarm vRMS	ro	Boolean	1 bit	1	0	0 1		Indicates if the configured maximum count for operation above the vRMS threshold has been exceeded. Inactive Active		FAM
.3	Operating Time Alarm aRMS	ro	Boolean	1 bit	2	0	0 1		Indicates if the configured maximum time for operation above the aRMS threshold has been exceeded. Inactive Active		FAM
.4	Count Alarm aRMS	ro	Boolean	1 bit	3	0	0 1		Indicates if the configured maximum count for operation above the aRMS threshold has been exceeded. Inactive Active		FAM
.5	Operating Time Alarm aPeak	ro	Boolean	1 bit	4	0	0 1		Indicates if the configured maximum time for operation above the aPeak threshold has been exceeded. Inactive Active		FAM
.6	Count Alarm aPeak	ro	Boolean	1 bit	5	0	0 1		Indicates if the configured maximum count for operation above the aPeak threshold has been exceeded. Inactive Active		FAM
.7	Operating Time Alarm Temperature	ro	Boolean	1 bit	6	0			Indicates if the configured maximum time for operation above the temperature threshold has been exceeded.		FAM

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
							0		*Inactive*		
							1		*Active*		
.8	Count Alarm Temperature	ro	Boolean	1 bit	7	0			Indicates if the configured maximum count for operation above the temperature threshold has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		
.9	Operating Time Alarm Crest	ro	Boolean	1 bit	8	0			Indicates if the configured maximum time for operation above the crest threshold has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		
.10	Count Alarm Crest	ro	Boolean	1 bit	9	0			Indicates if the configured maximum count for operation above the crest threshold has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		
.11	Operating Time Alarm Bearing Condition	ro	Boolean	1 bit	10	0			Indicates if the configured maximum time for operation above the bearing condition threshold has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		
.12	Count Alarm Bearing Condition	ro	Boolean	1 bit	11	0			Indicates if the configured maximum count for operation above the bearing condition threshold has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		
.13 .. .15	Reserved				12 .. 14				Reserved		
.16	Operating Time Alarm	ro	Boolean	1 bit	15	0			Indicates if the configured operating time for a maintenance cycle has been exceeded.		FAM
							0		*Inactive*		
							1		*Active*		

Parameterization & Configuration											
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
64 (0x40)	SSC1.1 Param vRMS	rw	Record	8 byte					Defines the setpoint values for switching signal channel 1.1 vRMS.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 12800	0.01 mm/s	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 12800	0.01 mm/s	Defines the setpoint 2 value for the switching signal channel.	Y	FA
65 (0x41)	SSC1.1 Config vRMS	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 1.1 vRMS.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 1		High active Low active		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 1 2		Deactivated Single point Window		
.3	Hysteresis	rw	UInteger	32 bit	0	0			Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
							0		Fix		
66 (0x42)	SSC1.2 Param vRMS	rw	Record	8 byte					Defines the setpoint values for switching signal channel 1.2 vRMS.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 12800	0.01 mm/s	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 12800	0.01 mm/s	Defines the setpoint 2 value for the switching signal channel.	Y	FA
67 (0x43)	SSC1.2 Config vRMS	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 1.2 vRMS.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 1		High active Low active		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 1 2		Deactivated Single point Window		
.3	Hysteresis	rw	UInteger	32 bit	0	0			Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
							0		Fix		
68 (0x44)	SSC2.1 Param aRMS	rw	Record	8 byte					Defines the setpoint values for switching signal channel 2.1 aRMS.	Y	FA

	Parameterization & Configuration										
Index .sub	*Parameter*	*Access*	*Data type*	*Length*	*Bitoffs.*	*Default*	*Value*	*Unit*	*Description*	*DS*	*R*
.1	SP1	rw	Integer	32 bit	32	0	0 .. 3400	0.01 g	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 3400	0.01 g	Defines the setpoint 2 value for the switching signal channel.	Y	FA
69 (0x45)	SSC2.1 Config aRMS	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 2.1 aRMS.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data. *High active* *Low active*	Y	FA
							0 *1*				
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC. *Deactivated* *Single point* *Window*	Y	FA
							0 *1* *2*				
.3	Hysteresis	rw	UInteger	32 bit	0	0			Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications. *Fix*	Y	FA
							0				
70 (0x46)	SSC2.2 Param aRMS	rw	Record	8 byte					Defines the setpoint values for switching signal channel 2.2 aRMS.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 3400	0.01 g	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 3400	0.01 g	Defines the setpoint 2 value for the switching signal channel.	Y	FA
71 (0x47)	SSC2.2 Config aRMS	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 2.2 aRMS.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data. *High active* *Low active*	Y	FA
							0 *1*				
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC. *Deactivated* *Single point* *Window*	Y	FA
							0 *1* *2*				
.3	Hysteresis	rw	UInteger	32 bit	0	0			Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications. *Fix*	Y	FA
							0				
72 (0x48)	SSC3.1 Param aPeak	rw	Record	8 byte					Defines the setpoint values for switching signal channel 3.1 aPeak.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 4800	0.01 g	Defines the setpoint 1 value for the switching signal channel.	Y	FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
.2	SP2	rw	Integer	32 bit	0	0	0 .. 4800	0.01 g	Defines the setpoint 2 value for the switching signal channel.	Y	FA
73 (0x49)	SSC3.1 Config aPeak	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 3.1 aPeak.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0	*0* *1*		Defines the logical representation of the switching signal SSC in the process data. *High active* *Low active*	Y	FA
.2	Mode	rw	UInteger	8 bit	32	0	*0* *1* *2*		Defines the evaluation mode for the switching signal SSC. *Deactivated* *Single point* *Window*	Y	FA
.3	Hysteresis	rw	UInteger	32 bit	0	0	*0*		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications. *Fix*	Y	FA
74 (0x4A)	SSC3.2 Param aPeak	rw	Record	8 byte					Defines the setpoint values for switching signal channel 3.2 aPeak.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 4800	0.01 g	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 4800	0.01 g	Defines the setpoint 2 value for the switching signal channel.	Y	FA
75 (0x4B)	SSC3.2 Config aPeak	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 3.2 aPeak.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0	*0* *1*		Defines the logical representation of the switching signal SSC in the process data. *High active* *Low active*	Y	FA
.2	Mode	rw	UInteger	8 bit	32	0	*0* *1* *2*		Defines the evaluation mode for the switching signal SSC. *Deactivated* *Single point* *Window*	Y	FA
.3	Hysteresis	rw	UInteger	32 bit	0	0	*0*		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications. *Fix*	Y	FA
76 (0x4C)	SSC4.1 Param Temperature	rw	Record	8 byte					Defines the setpoint values for switching signal channel 4.1 Temperature.	Y	FA
.1	SP1	rw	Integer	32 bit	32	50	-50 .. 100	°C	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	80	-50 .. 100	°C	Defines the setpoint 2 value for the switching signal channel.	Y	FA

	Parameterization & Configuration										
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
77 (0x4D)	SSC4.1 Config Temperature	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 4.1 Temperature.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 1		High active Low active		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 1 2		Deactivated Single point Window		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20	K	Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
78 (0x4E)	SSC4.2 Param Temperature	rw	Record	8 byte					Defines the setpoint values for switching signal channel 4.2 Temperature.	Y	FA
.1	SP1	rw	Integer	32 bit	32	50	-50 .. 100	°C	Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	80	-50 .. 100	°C	Defines the setpoint 2 value for the switching signal channel.	Y	FA
79 (0x4F)	SSC4.2 Config Temperature	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 4.2 Temperature.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 1		High active Low active		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 1 2		Deactivated Single point Window		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20	K	Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
80 (0x50)	SSC5.1 Param Crest	rw	Record	8 byte					Defines the setpoint values for switching signal channel 5.1 Crest.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 10000		Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 10000		Defines the setpoint 2 value for the switching signal channel.	Y	FA
81 (0x51)	SSC5.1 Config Crest	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 5.1 Crest.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
Parameterization & Configuration											
							0 *1*		*High active* *Low active*		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 *1* *2*		*Deactivated* *Single point* *Window*		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
82 (0x52)	SSC5.2 Param Crest	rw	Record	8 byte					Defines the setpoint values for switching signal channel 5.2 Crest.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 10000		Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 10000		Defines the setpoint 2 value for the switching signal channel.	Y	FA
83 (0x53)	SSC5.2 Config Crest	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 5.2 Crest.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 *1*		*High active* *Low active*		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 *1* *2*		*Deactivated* *Single point* *Window*		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
128 (0x80)	SSC6.1 Param Bearing Condition	rw	Record	8 byte					Defines the setpoint values for switching signal channel 6.1 Bearing Condition.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 500		Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 500		Defines the setpoint 2 value for the switching signal channel.	Y	FA
129 (0x81)	SSC6.1 Config Bearing Condition	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 6.1 Bearing Condition.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 *1*		*High active* *Low active*		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA

Parameterization & Configuration											
Index .sub	**Parameter**	**Access**	**Data type**	**Length**	**Bitoffs.**	**Default**	**Value**	**Unit**	**Description**	**DS**	**R**
							0 *1* *2*		*Deactivated* *Single point* *Window*		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
130 (0x82)	SSC6.2 Param Bearing Condition	rw	Record	8 byte					Defines the setpoint values for switching signal channel 6.2 Bearing Condition.	Y	FA
.1	SP1	rw	Integer	32 bit	32	0	0 .. 500		Defines the setpoint 1 value for the switching signal channel.	Y	FA
.2	SP2	rw	Integer	32 bit	0	0	0 .. 500		Defines the setpoint 2 value for the switching signal channel.	Y	FA
131 (0x83)	SSC6.2 Config Bearing Condition	rw	Record	6 byte					Defines the configuration parameter for switching signal channel 6.2 Bearing Condition.	Y	FA
.1	Logic	rw	UInteger	8 bit	40	0			Defines the logical representation of the switching signal SSC in the process data.	Y	FA
							0 *1*		*High active* *Low active*		
.2	Mode	rw	UInteger	8 bit	32	0			Defines the evaluation mode for the switching signal SSC.	Y	FA
							0 *1* *2*		*Deactivated* *Single point* *Window*		
.3	Hysteresis	rw	UInteger	32 bit	0	0	0 .. 20		Defines the hysteresis at the switchpoint. A higher hysteresis may help to increase stability in critical applications.	Y	FA
84 (0x54)	SSC1.1 Config Ext vRMS - Off Delay	rw	UInteger	16 bit		0	1 .. 60000 *0*	ms	Defines the minimum duration of a stable inactive state of the vRMS detection signal on the switching signal channel 1.1. Shorter inactive signals will be suppressed. *Disabled*	Y	FA
85 (0x55)	SSC1.2 Config Ext vRMS - Off Delay	rw	UInteger	16 bit		0	1 .. 60000 *0*	ms	Defines the minimum duration of a stable inactive state of the vRMS detection signal on the switching signal channel 1.2. Shorter inactive signals will be suppressed. *Disabled*	Y	FA
86 (0x56)	SSC2.1 Config Ext aRMS - Off Delay	rw	UInteger	16 bit		0	1 .. 60000 *0*	ms	Defines the minimum duration of a stable inactive state of the aRMS detection signal on the switching signal channel 2.1. Shorter inactive signals will be suppressed. *Disabled*	Y	FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
87 (0x57)	SSC2.2 Config Ext aRMS - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the aRMS detection signal on the switching signal channel 2.2. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
88 (0x58)	SSC3.1 Config Ext aPeak - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the aPeak detection signal on the switching signal channel 3.1. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
89 (0x59)	SSC3.2 Config Ext aPeak - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the aPeak detection signal on the switching signal channel 3.2. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
90 (0x5A)	SSC4.1 Config Ext Temperature - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the temperature detection signal on the switching signal channel 4.1. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
91 (0x5B)	SSC4.2 Config Ext Temperature - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the temperature detection signal on the switching signal channel 4.2. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
92 (0x5C)	SSC5.1 Config Ext Crest - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the crest detection signal on the switching signal channel 5.1. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
93 (0x5D)	SSC5.2 Config Ext Crest - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the crest detection signal on the switching signal channel 5.1. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		

Parameterization & Configuration											
Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
144 (0x90)	SSC6.1 Config Ext Bearing Condition - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the bearing condition detection signal on the switching signal channel 6.1. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
145 (0x91)	SSC6.2 Config Ext Bearing Condition - Off Delay	rw	UInteger	16 bit		0	1 .. 60000	ms	Defines the minimum duration of a stable inactive state of the bearing condition detection signal on the switching signal channel 6.2. Shorter inactive signals will be suppressed.	Y	FA
							0		*Disabled*		
96 (0x60)	Eval Config - Signal Filter MDC1, MDC2	rw	UInteger	8 bit		0			Defines the filter bandwidth for vibration signal evaluation. The filter is applied to MDC1 and MDC2 and has a 3rd order Butterworth characteristic. DIN ISO 10816/20816 requires 10 .. 1000 Hz.	Y	FA
							0 1 2 3 4 5 6 7		*10 .. 1000 Hz* *10 .. 500 Hz* *10 .. 100 Hz* *10 .. 50 Hz* *1 .. 1000 Hz* *1 .. 500 Hz* *1 .. 100 Hz* *1 .. 50 Hz*		
112 (0x70)	I/O Config - C/Q Output Function	rw	UInteger	8 bit		0			Defines the function of the output signal at C/Q (pin 4) in SIO mode.	Y	FA
							0 1 2 3 4 5 6 7 8 9 10 11 12		*Inactive* *SSC1.1 - vRMS* *SSC1.2 - vRMS* *SSC2.1 - aRMS* *SSC2.2 - aRMS* *SSC3.1 - aPeak* *SSC3.2 - aPeak* *SSC4.1 - Temperature* *SSC4.2 - Temperature* SSC5.1 - Crest SSC5.2 - Crest SSC6.1 - Bearing Cond. SSC6.2 - Bearing Cond.		
113 (0x71)	I/O Config - I/Q Output Function	rw	UInteger	8 bit		0			Defines the function of the output signal at I/Q (pin 2).	Y	FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
							0		*Inactive*		
							1		*SSC1.1 - vRMS*		
							2		*SSC1.2 - vRMS*		
							3		*SSC2.1 - aRMS*		
							4		*SSC2.2 - aRMS*		
							5		*SSC3.1 - aPeak*		
							6		*SSC3.2 - aPeak*		
							7		*SSC4.1 - Temperature*		
							8		*SSC4.2 - Temperature*		
							9		SSC5.1 - Crest		
							10		SSC5.2 - Crest		
							11		SSC6.1 - Bearing Cond.		
							12		SSC6.2 - Bearing Cond.		
							13		*Analog 4 .. 20mA - vRMS*		
							14		*Analog 4 .. 20mA - aRMS*		
							15		*Analog 4 .. 20mA - aPeak*		
							16		*Analog 4 .. 20mA - Temp.*		
							17		Analog 4 .. 20mA - Crest		
							18		Analog 4 .. 20mA - Bearing Cond.		
114 (0x72)	Analog Out Param vRMS - SP	rw	Integer	32 bit		12800	0 .. 12800	0.01 mm/s	Defines the setpoint value for the maximum value at the analog output.	Y	FA
115 (0x73)	Analog Out Param aRMS - SP	rw	Integer	32 bit		3400	0 .. 3400	0.01 g	Defines the setpoint value for the maximum value at the analog output.	Y	FA
116 (0x74)	Analog Out Param aPeak - SP	rw	Integer	32 bit		4800	0 .. 4800	0.01 g	Defines the setpoint value for the maximum value at the analog output.	Y	FA
117 (0x75)	Analog Out Param Temperature	rw	Record	8 byte					Defines the setpoint values for the minimum and maximum value at the analog output.	Y	FA
.1	SP1	rw	Integer	32 bit	32	-40	-50 .. 100	°C	Defines the setpoint 1 value for the analog output. The lower value of SP1 and SP2 corresponds to the minimum analog output value, the higher value to the maximum analog output value.	Y	FA
.2	SP2	rw	Integer	32 bit	0	80	-50 .. 100	°C	Defines the setpoint 2 value for the analog output. The lower value of SP1 and SP2 corresponds to the minimum analog output value, the higher value to the maximum analog output value.	Y	FA
118 (0x76)	Analog Out Param Crest - SP	rw	Integer	32 bit		10000	0 .. 10000		Defines the setpoint value for the maximum value at the analog output.	Y	FA

Observation										

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
236 (0xEC)	Observation Data	ro	Record	27 byte					Provides a set of relevant data suitable for observation purposes.		FA
.1	MDC1 - vRMS	ro	Integer	16 bit	200		0 .. 12800 *32764*	0.01 mm/s	Shows the current velocity rms measurement value of measurement data channel 1. *No Measurement Data*		FA
.2	SSC1.1 - vRMS	ro	UInteger	8 bit	192		*0* *1*		Indicates the current status of the velocity rms switching signal 1.1 for measurement data channel 1. *Low* *High*		FA
.3	SSC1.2 - vRMS	ro	UInteger	8 bit	184		*0* *1*		Indicates the current status of the velocity rms switching signal 1.2 for measurement data channel 1. *Low* *High*		FA
.4	MDC2 - aRMS	ro	Integer	16 bit	168		0 .. 3400 *32764*	0.01 g	Shows the current acceleration rms measurement value of measurement data channel 2. *No Measurement Data*		FA
.5	SSC2.1 - aRMS	ro	UInteger	8 bit	160		*0* *1*		Indicates the current status of the acceleration rms switching signal 2.1 for measurement data channel 2. *Low* *High*		FA
.6	SSC2.2 - aRMS	ro	UInteger	8 bit	152		*0* *1*		Indicates the current status of the acceleration rms switching signal 2.2 for measurement data channel 2. *Low* *High*		FA
.7	MDC3 - aPeak	ro	Integer	16 bit	136		0 .. 4800 *32764*	0.01 g	Shows the current acceleration peak measurement value of measurement data channel 3. *No Measurement Data*		FA
.8	SSC3.1 - aPeak	ro	UInteger	8 bit	128		*0* *1*		Indicates the current status of the acceleration peak switching signal 3.1 for measurement data channel 3. *Low* *High*		FA
.9	SSC3.2 - aPeak	ro	UInteger	8 bit	120		*0* *1*		Indicates the current status of the acceleration peak switching signal 3.2 for measurement data channel 3. *Low* *High*		FA
.10	MDC4 - Temperature	ro	Integer	16 bit	104		-50 .. 100 *32764*	°C	Shows the current temperature measurement value of measurement data channel 4. *No Measurement Data*		FA
.11	SSC4.1 - Temperature	ro	UInteger	8 bit	96		*0* *1*		Indicates the current status of the temperature switching signal 4.1 for measurement data channel 4. *Low* *High*		FA
.12	SSC4.2 - Temperature	ro	UInteger	8 bit	88		*0* *1*		Indicates the current status of the temperature switching signal 4.2 for measurement data channel 4. *Low* *High*		FA
.13	DSC.2 - Device Status	ro	UInteger	8 bit	80		*0* *1* *2* *3* *4*		Indicator for the current device condition and diagnosis state. *Device is OK* *Maintenance required* *Out of specification* *Functional check* *Failure*		FA

Index .sub	Parameter	Access	Data type	Length	Bitoffs.	Default	Value	Unit	Description	DS	R
.14	MDC5 - Crest	ro	Integer	16 bit	64		0 .. 10000 32764		Shows the current crest measurement value of measurement data channel 5 (Crest = aPeak/aRMS). *No Measurement Data*		FA
.15	SSC5.1 - Crest	ro	UInteger	8 bit	56		 0 1		Indicates the current status of the crest switching signal 5.1 for measurement data channel 5. *Low* *High*		FA
.16	SSC5.2 - Crest	ro	UInteger	8 bit	48		 0 1		Indicates the current status of the crest switching signal 5.2 for measurement data channel 5. *Low* *High*		FA
.17	DSC.3 - BLOB Status	ro	UInteger	8 bit	40		 0 1 2 3 4		Shows the current status of raw data recording and BLOB transfer. If 'DSC.3 - BLOB Status' is not 'Idle', all BLOB triggers are rejected except for a Parameter trigger with BLOB_ID = -4096, which leads to the memory being deleted and a change to 'Idle'. *Idle, no BLOB transfer active* *Raw data recording* *Recording finished, wait for transfer* *Transfer active* *Deleting memory*		FA
.18	MDC6 - Bearing Condition	ro	Integer	16 bit	24		0 .. 500 32764		Shows the current bearing condition measurement value of measurement data channel 6 as defined in DIN ISO 13373-3. *No Measurement Data*		FA
.19	SSC6.1 - Bearing Condition	ro	UInteger	8 bit	16		 0 1		Indicates the current status of the bearing condition switching signal 6.1 for measurement data channel 6. *Low* *High*		FA
.20	SSC6.2 - Bearing Condition	ro	UInteger	8 bit	8		 0 1		Indicates the current status of the bearing condition switching signal 6.2 for measurement data channel 6. *Low* *High*		FA
.21	DSC.6 - Bearing Condition	ro	UInteger	8 bit	0		 0 1 2 3		Shows a 4-level diagnosis information for the currently detected vibration condition at bearings as defined in DIN ISO 13373-3. *1 - Exceptional low (blue)* *2 - Normal (green)* *3 - Warning (yellow)* *4 - Alarm (red)*		FA

Command Interface

Index	Parameter	Access	Data type	Length	Value	Description
2 (0x02)	System Command	wo	UInteger	8 bit	See command value	Command interface for applications. A positive acknowledge indicates the complete and correct finalization of the requested function.

Command Value	Command	Description
129 (0x81)	Application Reset	The parameter of the technology-specific application are set to default values. Identification parameter remain unchanged. An upload to the data storage of the master will be executed, if activated in the port configuration of the master.
131 (0x83)	Back-To-Box	The parameter of the device are set to factory default values and communication will be inhibited until the next power cycle. Note: Directly detach the device from the master port!
176 (0xB0)	Maintenance Reset	The maintenance status and monitor data are reset.
177 (0xB1)	BLOB Reset	The BLOB state machine is reset.

Error Codes

Code	Additional code	Name	Description
128 (0x80)	17 (0x11)	Index not available	Read or write access attempt to a non-existing index.
128 (0x80)	18 (0x12)	Subindex not available	Read or write access attempt to a non-existing subindex of an existing index.
128 (0x80)	32 (0x20)	Service temporarily not available	Parameter not accessible due to the current state of the technology-specific application.
128 (0x80)	33 (0x21)	Service temporarily not available - local control	Parameter not accessible. The device is currently in an ongoing, locally controlled operation.
128 (0x80)	34 (0x22)	Service temporarily not available - device control	Parameter not accessible. The technology-specific application is currently in a remotely triggered operation.
128 (0x80)	35 (0x23)	Access denied	Write access to a read-only parameter or read access to write-only parameter.
128 (0x80)	48 (0x30)	Parameter value out of range	Written parameter value is outside of the permitted value range.
128 (0x80)	49 (0x31)	Parameter value above limit	Written parameter value is above its specified value range.
128 (0x80)	50 (0x32)	Parameter value below limit	Written parameter value is below its specified value range.
128 (0x80)	51 (0x33)	Parameter length overrun	Written parameter is longer than specified.
128 (0x80)	52 (0x34)	Parameter length underrun	Written parameter is shorter than specified.
128 (0x80)	53 (0x35)	Function not available	Written command is not supported by the technology-specific application.
128 (0x80)	54 (0x36)	Function temporarily unavailable	Written command is unavailable due to the current state of the technology-specific application.
128 (0x80)	64 (0x40)	Invalid parameter set	Written single parameter value collides with other existing parameter settings.
128 (0x80)	65 (0x41)	Inconsistent parameter set	Parameter set inconsistencies at the end of block parameter transfer. Device plausibility check failed.

Event Codes

Code	Type	Name	Description
20480 (0x5000)	Error	Device hardware fault	Exchange device
36097 (0x8D01)	Warning	Maintenance request	The limit for a configured maintenance cycle has been reached. Perform the required maintenance actions and apply the 'Maintenance Reset' command.
36163 (0x8D43)	Warning	Ambient temperature outside specified temperature range	Check sensor environment.