Modbus Register
5500sc + 961x sc Silica - Phosphate Analyzer

V1.09

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5500sc + 961x sc Silica - Phosphate Analyzer V1.09

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Silica-Channel 1	40001	Float	2	R			Silica Measurement Sample Stream channel 1
1-PHOSPHATE	40001	Float	2	R			Silica Measurement Sample Stream channel 1
Silica-Channel 2	40003	Float	2	R			Silica Measurement Sample Stream channel 2
2-PHOSPHATE	40003	Float	2	R			Silica Measurement Sample Stream channel 2
Silica-Channel 3	40005	Float	2	R			Silica Measurement Sample Stream channel 3
3-PHOSPHATE	40005	Float	2	R			Silica Measurement Sample Stream channel 3
Silica-Channel 4	40007	Float	2	R			Silica Measurement Sample Stream channel 4
4-PHOSPHATE	40007	Float	2	R			Silica Measurement Sample Stream channel 4
Silica-Channel 5	40009	Float	2	R			Silica Measurement Sample Stream channel 5
5-PHOSPHATE	40009	Float	2	R			Silica Measurement Sample Stream channel 5
Silica-Channel 6	40011	Float	2	R			Silica Measurement Sample Stream channel 6
6-PHOSPHATE	40011	Float	2	R			Silica Measurement Sample Stream channel 6
CALCULATION	40013	Float	2	R		-999999999 /999999999	The calculated value
Silica-Channel 1 Integer	40015	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 1
Silica-Channel 2 Integer	40016	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 2
Silica-Channel 3 Integer	40017	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 3
Silica-Channel 4 Integer	40018	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 4
Silica-Channel 5 Integer	40019	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 5
Silica-Channel 6 Integer	40020	Unsigned Integer	1	R		0 /9999	Silica Measurement (Integer) Sample Stream channel 6
Data Log Interval	40021	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7		Data log interval
FUNCTION CODE	40022	Unsigned Integer	1	R/W		0 /65535	
NEXT STATE	40023	Unsigned Integer	1	R		0 /65535	
Location String	40024	String	8	R/W			User editable string for naming the analyzer
Serial Number	40032	String	6	R			Serial number for the anaylzer
EventInteger	40038	Unsigned Integer	1	R		0 /65535	
LastCalDate	40039	Time2	2	R			
NextCalDate	40041	Time2	2	R			
LastCalTime	40043	Time2	2	R			
NextCalTime	40045	Time2	2	R			
CalSlope	40047	Float	2	R/W		0.5 /1.5	
CalZero	40049	Float	2	R/W		-999.999 /999.999	
CalStdValue	40051	Float	2	R/W			
MeasUnits	40053	Unsigned Integer	1	R/W	U38 /2 /0 /39		
LastMeasTime	40054	Time2	2	R			
NextMeasTime	40056	Time2	2	R			
ABSORBANCE	40058	Float	2	R		0 /9.9999	
CONCENTRATION	40060	Float	2	R			
DARK COUNTS	40062	Integer	2	R		-2147483648 /2147483647	
DARK STD DEV	40064	Unsigned Integer	1	R		0 /65535	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
REF COUNTS	40065	Integer	2	R		-2147483648 /2147483647	
REF STD DEV	40067	Unsigned Integer	1	R		0 /65535	
SAMPLE COUNTS	40068	Integer	2	R		-2147483648 /2147483647	
SAMPLE STD DEV	40070	Unsigned Integer	1	R		0 /65535	
CHANNEL	40071	Unsigned Integer	1	R		0 /65535	
CurMeasChannel	40072	Unsigned Integer	1	R		0 /65535	
CycleType	40073	Unsigned Integer	1	R/W	0 /1		
CycleInterval	40074	Unsigned Integer	1	R/W		10 /240	
AutoCalEnable	40075	Unsigned Integer	1	R/W	0 /1		
AutoCalBase	40076	Unsigned Integer	1	R/W	0 /1		
AutoCalWeekDays	40077	Unsigned Integer	1	R/W		0 /65535	
AutoCalTime	40078	Time2	2	R/W			
AutoCalInterval	40080	Unsigned Integer	1	R/W		2 /999	
SampleChannels	40081	Unsigned Integer	1	R/W		0 /65535	
Sample Stream 1 Name	40082	String	6	R			User editable string for naming sample stream 1
Sample Stream 2 Name	40088	String	6	R			User editable string for naming sample stream 2
Sample Stream 3 Name	40094	String	6	R			User editable string for naming sample stream 3
Sample Stream 4 Name	40100	String	6	R			User editable string for naming sample stream 4
Sample Stream 5 Name	40106	String	6	R			User editable string for naming sample stream 5
Sample Stream 6 Name	40112	String	6	R			User editable string for naming sample stream 6
Sample Stream 6 Name	40118	String	6	R			User editable string for naming sample stream 6
SeqNum1	40124	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum2	40125	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum3	40126	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum4	40127	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum5	40128	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum6	40129	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum7	40130	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
SeqNum8	40131	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
SeqNum9	40132	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11		
Sequence1	40133	Unsigned Integer	1	R		0 /0	
Sequence2	40134	Unsigned Integer	1	R		0 /0	
Sequence3	40135	Unsigned Integer	1	R		0 /0	
Sequence4	40136	Unsigned Integer	1	R		0 /0	
Sequence5	40137	Unsigned Integer	1	R		0 /0	
Sequence6	40138	Unsigned Integer	1	R		0 /0	
Sequence7	40139	Unsigned Integer	1	R		0 /0	
Sequence8	40140	Unsigned Integer	1	R		0 /0	
Sequence9	40141	Unsigned Integer	1	R		0 /0	
SeqHiddenTag	40142	Unsigned Integer	1	R		0 /65535	
SeqHighlightTag	40143	Unsigned Integer	1	R		0 /65535	
Service1Date	40144	Time2	2	R			
Service1Time	40144	Time2	2	R			
Service2Date	40146	Time2	2	R			
Service2Time	40146	Time2	2	R			
Service3Date	40148	Time2	2	R			
Service3Time	40148	Time2	2	R			
Service4Date	40150	Time2	2	R			
Service4Time	40150	Time2	2	R			
Service5Date	40152	Time2	2	R			
Service5Time	40152	Time2	2	R			
Service6Date	40154	Time2	2	R			
Service6Time	40154	Time2	2	R			
Service7Date	40156	Time2	2	R			
Service7Time	40156	Time2	2	R			
Service8Date	40158	Time2	2	R			
Service8Time	40158	Time2	2	R			
Service9Date	40160	Time2	2	R			
Service9Time	40160	Time2	2	R			
ServiceHiddenTag	40162	Unsigned Integer	1	R		0 /65535	
ServiceHighlightTag	40163	Unsigned Integer	1	R		0 /65535	
LastCalType	40164	Unsigned Integer	1	R	0 /1 /2		
StartCalType	40165	Unsigned Integer	1	R/W		0 /65535	
ColorimerTemp	40166	Float	2	R		-20 /100	
ScriptType	40168	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /255		

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
NumChannels	40169	Unsigned Integer	1	R/W	1 /2 /4 /6		
SOFTWARE VERS	40170	Float	2	R		0 /100.0	
DD FIRMWARE	40172	Unsigned Integer	1	R		0 /1000	
DD CONTENT	40173	Unsigned Integer	1	R		0 /1000	
BOOTLOADER VERS	40174	Float	2	R		0 /9.99	
SCRIPT VERSION	40176	Unsigned Integer	1	R		0 /100	
SCRIPT CONTENT	40177	Unsigned Integer	1	R		0 /100	
I2CVersion	40178	String	1	R			
AnalyzerType	40179	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5		
Last Cal Abs	40180	Float	2	R		0 /9.9999	
Last Cal Conc	40182	Float	2	R		0 /9999.9	
ReminderDisable	40184	Unsigned Integer	2	R/W		0 /4294967295	To disable the alerts
AutoStart	40186	Unsigned Integer	1	R/W	0 /1		
EditSmp1String	40187	String	5	R/W			
EditSmp2String	40192	String	5	R/W			
EditSmp3String	40197	String	5	R/W			
EditSmp4String	40202	String	5	R/W			
EditSmp5String	40207	String	5	R/W			
EditSmp6String	40212	String	5	R/W			
SignalAverage	40217	Unsigned Integer	1	R/W		1 /5	The signal average
ActivateChannels	40218	Unsigned Integer	1	R/W		0 /65535	
ReagentType	40219	Unsigned Integer	1	R/W	0 /1		The reagent type for open silica.
AirPumpPressure	40220	Float	2	R		1 /9.99	
Reagent1Level	40222	Unsigned Integer	1	R		0 /100	
Reagent2Level	40223	Unsigned Integer	1	R		0 /100	
Reagent3Level	40224	Unsigned Integer	1	R		0 /100	
Reagent4Level	40225	Unsigned Integer	1	R		0 /100	
Standard1Level	40226	Unsigned Integer	1	R		0 /100	
Standard2Level	40227	Unsigned Integer	1	R		0 /100	
Reagent1Days	40228	Unsigned Integer	1	R		0 /65535	The days remaining for reagent 1
Reagent2Days	40229	Unsigned Integer	1	R		0 /65535	The days remaining for reagent 2
Reagent3Days	40230	Unsigned Integer	1	R		0 /65535	The days remaining for reagent 3
Reagent4Days	40231	Unsigned Integer	1	R		0 /65535	The days remaining for reagent 4
ReagentTemp	40232	Float	2	R		-20.0 /100.0	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Reagent1DelTime	40234	Unsigned Integer	1	R		0 /65535	The reagent delivery time in mS.
Reagent2DelTime	40235	Unsigned Integer	1	R		0 /65535	The reagent delivery time in mS.
Reagent3DelTime	40236	Unsigned Integer	1	R		0 /65535	The reagent delivery time in mS.
Reagent4DelTime	40237	Unsigned Integer	1	R		0 /65535	The reagent delivery time in mS.
LED LEVEL	40238	Unsigned Integer	1	R/W		0 /65535	
AmbientTemp	40239	Float	2	R		-20 /100	The ambient temperature
FanSpeed	40241	Unsigned Integer	1	R		0 /65535	The fan speed
ColorimeterType	40242	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5		The colorimeter type
FirmwareSourceError	40243	Unsigned Integer	1	R		0 /65535	The source for firmware error
AnalyzerStopType	40244	Unsigned Integer	1	R/W	0 /1		To select the analyzer stop type
PowerSourceVoltage	40245	Unsigned Integer	1	R		0 /65535	The power source voltage
PowerSourceFrequency	40246	Unsigned Integer	1	R		0 /65535	The power source frequency
LowerDoorOpen	40247	Unsigned Integer	1	R		0 /1	The lower door open state
MeasMinValue	40248	Float	2	R		0 /9999.9	The mininum measurement value
MeasMaxValue	40250	Float	2	R		0 /9999.9	The maxinum measurement value
MeasParam	40252	Unsigned Integer	1	R	P80 /14		The measurement parameter
ScriptFileType	40253	Unsigned Integer	1	R/W	0 /1		To select the analyzer script file type
LeakCounts	40254	Unsigned Integer	1	R		0 /65535	The counts form leak sensor
SampleVolume	40255	Unsigned Integer	1	R		0 /9999	
SamplePressure	40256	Float	2	R		0 /99.99	
Sample1Pressure	40258	Float	2	R		0 /99.99	
Sample2Pressure	40260	Float	2	R		0 /99.99	
Sample3Pressure	40262	Float	2	R		0 /99.99	
Sample4Pressure	40264	Float	2	R		0 /99.99	
Sample5Pressure	40266	Float	2	R		0 /99.99	
Sample6Pressure	40268	Float	2	R		0 /99.99	
SampleFlow	40270	Unsigned Integer	1	R		0 /5000	
Sample1Flow	40271	Unsigned Integer	1	R		0 /5000	
Sample2Flow	40272	Unsigned Integer	1	R		0 /5000	
Sample3Flow	40273	Unsigned Integer	1	R		0 /5000	
Sample4Flow	40274	Unsigned Integer	1	R		0 /5000	
Sample5Flow	40275	Unsigned Integer	1	R		0 /5000	
Sample6Flow	40276	Unsigned Integer	1	R		0 /5000	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
SampleTemp	40277	Float	2	R		-20 /100	The sample temperature
SamplePressure2	40279	Float	2	R		0 /99.99	
ErrorCode1	40281	Integer	1	R		0 /32767	
ErrorCode2	40282	Integer	1	R		0 /32767	
HeaterDutyCycle	40283	Unsigned Integer	1	R		0 /100	
FluidLevel	40284	Unsigned Integer	1	R/W		0 /100	
ServiceItem	40285	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /21 /22		
LastServiceDate	40286	Time2	2	R			
NextServiceDate	40288	Time2	2	R			
NextServiceDays	40290	Unsigned Integer	1	R		0 /65535	
Link2scJobNum	40291	Unsigned Integer	1	R		0 /65535	The job number for Link2sc
Link2scSampleNum	40292	Unsigned Integer	1	R		0 /65535	The sample number for Link2sc
ProcessStepText	40299	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
ProcessCompletion	40300	Unsigned Integer	1	R		0 /100	
ProcessStepTime	40301	Unsigned Integer	1	R		0 /65000	
CalOutputMode	40302	Unsigned Integer	1	R/W	0 /1 /2		
SoftwareResetData	40303	Unsigned Integer	2	R		0 /4294967295	
Maintenance Stack Left	40305	Unsigned Integer	1	R		0 /65535	Remaining stack size
System Stack Left	40306	Unsigned Integer	1	R		0 /65535	Remaining stack size
Smart Sensor Stack Left	40307	Unsigned Integer	1	R		0 /65535	Remaining stack size
Scheduler Stack Left	40308	Unsigned Integer	1	R		0 /65535	Remaining stack size
Script Engine Stack Left	40309	Unsigned Integer	1	R		0 /65535	Remaining stack size
Script Engine 2 Stack Left	40310	Unsigned Integer	1	R		0 /65535	Remaining stack size
A2D Measurement Stack Left	40311	Unsigned Integer	1	R		0 /65535	Remaining stack size
Delay Timer Stack Left	40312	Unsigned Integer	1	R		0 /65535	Remaining stack size
Mixer/Heater Stack Left	40313	Unsigned Integer	1	R		0 /65535	Remaining stack size
Reagent Delivery Stack Left	40314	Unsigned Integer	1	R		0 /65535	Remaining stack size
Sample Delivery Stack Left	40315	Unsigned Integer	1	R		0 /65535	Remaining stack size

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
	40316	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40317	Unsigned Integer	1	R		0 /100	
	40318	Unsigned Integer	1	R		0 /9999	
	40319	Unsigned Integer	1	R		0 /65535	
CurrentMeasTime1	40320	Time2	2	R			
	40322	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40323	Unsigned Integer	1	R		0 /100	
	40324	Unsigned Integer	1	R		0 /9999	
	40325	Unsigned Integer	1	R		0 /65535	
CurrentMeasTime1	40326	Time2	2	R			
ReagentR4Num	40328	Unsigned Integer	1	R/W	0 /1 /2 /3		
ReagentR3Num	40328	Unsigned Integer	1	R/W	0 /1 /2		
ReagentR2Num	40328	Unsigned Integer	1	R/W	0 /1		
ReagentR1Num	40328	Unsigned Integer	1	R/W	0		
StandardS2Num	40328	Unsigned Integer	1	R/W	0 /1		
StandardS1Num	40328	Unsigned Integer	1	R/W	0		
SampleChannels1	40328	Unsigned Integer	1	R/W	0		
SampleChannels2	40328	Unsigned Integer	1	R/W	0 /1		
SampleChannels2	40328	Unsigned Integer	1	R/W	0 /1		
SampleChannels4	40328	Unsigned Integer	1	R/W	0 /1 /2 /3		
SampleChannels6	40328	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5		
MixerSpeed	40328	Unsigned Integer	1	R/W		10 /500	
ReagentDeliveryType	40329	Unsigned Integer	1	R/W	0 /1		

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
MixerDirection	40329	Unsigned Integer	1	R/W	0 /1		
HeaterSetTemp	40330	Unsigned Integer	1	R		20 /99	
ReagentDeliveryTime	40330	Unsigned Integer	1	R/W		50 /65000	
	40330	Unsigned Integer	1	R/W		20 /9999	
EditDeliveryTime	40330	Unsigned Integer	1	R/W		1 /9999	
HeaterTemp	40330	Unsigned Integer	1	R/W		20 /60	
AnalyticDevice	40331	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15		
AnalyticTestTime	40332	Unsigned Integer	1	R		0 /9999	
LED0DutyCnts	40333	Integer	2	R		-2147483648 /2147483647	
LED25DutyCnts	40335	Integer	2	R		-2147483648 /2147483647	
LED50DutyCnts	40337	Integer	2	R		-2147483648 /2147483647	
LED0Duty	40339	Unsigned Integer	1	R/W		0 /200	The 0% LED duty cycle
LEDMidDuty	40340	Unsigned Integer	1	R		0 /200	The middle LED duty cycle
LEDHighDuty	40341	Unsigned Integer	1	R		0 /200	The highest LED duty cycle
	40342	Float	2	R/W		1 /9.99	
	40344	Float	2	R/W		0 /1.0	
	40346	Float	2	R/W		0 /1.0	
	40348	Float	2	R/W		5 /99.99	
	40350	Float	2	R/W		5 /99.99	
I2CReadRetry1	40352	Unsigned Integer	1	R		0 /65535	
I2CReadRetry2	40353	Unsigned Integer	1	R		0 /65535	
I2CWriteRetry1	40354	Unsigned Integer	1	R		0 /65535	
I2CWriteRetry2	40355	Unsigned Integer	1	R		0 /65535	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
LEDTestTime	40356	Unsigned Integer	1	R		0 /9999	
ServiceType	40357	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /21 /22 /23 /24 /25 /26 /27 /28 /29 /30 /31		
ServiceDate	40358	Time2	2	R			
ServiceTime	40358	Time2	2	R			
PrimeReagents	40363	Unsigned Integer	1	R/W		0 /65535	
OperationMinutesLeft	40364	Float	2	R		0 /240	The minutes left for current operation
CurSampleChnName	40366	Unsigned Integer	1	R		0 /0	
GrabSampleType	40367	Unsigned Integer	1	R/W	0 /1		The grab sample type
	40368	Float	2	R/W			The standard vale for grab sample in
	40370	Float	2	R		-9999.9 /9999.9	The difference for grab sample measurement
	40372	Float	2	R		-200.0 /200.0	The percent difference for gab sample in measurement
GrabSampleTimeDate	40374	Time2	2	R			The time and date for grab sample
ScreenTitle	40376	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10		The screen title string
MinSampleFlow	40378	Unsigned Integer	1	R		0 /5000	The minimum sample flow required
LogEventSet	40379	Unsigned Integer	1	R		0 /65535	The log event set or clear flag
Test Num	40380	Unsigned Integer	1	R/W		0 /20	
Clear Count	40381	Unsigned Integer	1	R/W		0 /1	
Count	40382	Unsigned Integer	2	R		0 /4294967295	
Max Count	40384	Unsigned Integer	2	R		0 /4294967295	
	40386	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40387	Unsigned Integer	1	R		0 /100	
	40388	Unsigned Integer	1	R		0 /9999	
	40389	Unsigned Integer	1	R		0 /65535	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
CurrentMeasTime3	40390	Time2	2	R			
	40392	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40393	Unsigned Integer	1	R		0 /100	
	40394	Unsigned Integer	1	R		0 /9999	
	40395	Unsigned Integer	1	R		0 /65535	
CurrentMeasTime4	40396	Time2	2	R			
	40398	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40399	Unsigned Integer	1	R		0 /100	
	40400	Unsigned Integer	1	R		0 /9999	
	40401	Unsigned Integer	1	R		0 /65535	
CurrentMeasTime5	40402	Time2	2	R			
	40404	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13 /14 /15 /16 /17 /18 /19 /20 /65535		
	40405	Unsigned Integer	1	R		0 /100	
	40406	Unsigned Integer	1	R		0 /9999	
	40407	Unsigned Integer	1	R		0 /65535	
CurrentMeasTime6	40408	Time2	2	R			
ServiceHistData	40410	Unsigned Integer	2	R		0 /9999	The service history associated data
ServiceHistData	40410	Unsigned Integer	2	R		0 /99999999	The service history associated data
ServiceHistData	40410	Unsigned Integer	2	R		0 /9999	The service history associated data
ServicePartRunTime	40412	Unsigned Integer	1	R		0 /65000	The service part run time

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
ServiceValveRunCycle	40413	Unsigned Integer	2	R		0 /99999999	The valve run cycles
	40415	Integer	1	R		0 /9999	The air pump total life time
RTCUpdateData	40416	Integer	2	R		-2147483648 /2147483647	The data - second difference when the RTC time is updated
ServiceHistFluidLevel	40418	Unsigned Integer	1	R		0 /100	
ServiceHistFluid1Level	40419	Unsigned Integer	1	R		0 /100	
ServiceHistFluid2Level	40420	Unsigned Integer	1	R		0 /100	
ServiceHistFluid3Level	40421	Unsigned Integer	1	R		0 /100	
ServiceHistFluid4Level	40422	Unsigned Integer	1	R		0 /100	
Link2scMeasValue	40447	Float	2	R			The measured vale for link2sc grab sample
Link2scLabValue	40449	Float	2	R			The lab vale for link2sc grab sample
Link2scDiffValue	40451	Float	2	R		-9999.9 /9999.9	The difference for link2sc grab sample measurement
Link2scDiffPercent	40453	Float	2	R		-200.0 /200.0	The percent difference for link2sc gab sample in measurement
AirPurge	40455	Unsigned Integer	1	R/W	0 /1		The air purge mode
UpperDoorState	40456	Unsigned Integer	1	R	0 /1		The upper door state - 0 - closed, 1 - open
NumOfReagents	40457	Unsigned Integer	1	R		0 /65535	The number of reagents
NumOfStandards	40458	Unsigned Integer	1	R		0 /65535	The number of standards
FanFilterDays	40459	Unsigned Integer	1	R/W		0 /999	The fan filter day threshold
FanSpeedRPM	40460	Unsigned Integer	1	R/W		0 /65535	The fan speed threshold
SampleMissingDelay	40463	Unsigned Integer	1	R/W	0 /1		Flag to enable/disable the sample missing delay
LastGrabSampleTime	40464	Time2	2	R			
LastGrabSampleDate	40464	Time2	2	R			
LastGrabSampleConc	40466	Float	2	R			
LastGrabSampleAbs	40468	Float	2	R		0 /9.9999	
LastGrabSampleType	40470	Unsigned Integer	1	R	0 /1		
	40471	Float	2	R/W		0.5 /5.0	The trigger value for the unstable reading
Calculated Value	41001	Float	2	R			A measurement calculated from sensor measurements
Language	41003	Unsigned Integer	1	R/W			Language to be used on the controller (0=GB, 1=D, 2=E, 3=F, 4=I, 5=NL, 6=DK, 7=SW, 8=CN, 9=PO, 10=JP, 11=KO, 12=PT, 13=SL, 14=RU, 15=HU, 16=BG, 17=RO, 18=CZ, 19=TR, 20=FI, 21=GR)
Data Format	41004	Unsigned Integer	1	R/W			Format used for the Data
Error Hold Mode	41005	Unsigned Integer	1	R/W			Hold mode when an error occurs

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Location String	41006	String	8	R/W			Location name for the controller
Display Contrast	41014	Unsigned Integer	1	R/W			Display contrast setting (0-100)
Calculation Log Mode	41015	Unsigned Integer	1	R/W			Calculated measurement logging mode (0=Snapshot, 1=Average, 2=Maximum, 3=Minimum)
Calculation Log Interval	41016	Unsigned Integer	1	R/W			Calculated measurement logging mode (0=5sec, 1=30sec, 2=1min, 3=2min, 4=5min, 5=10min, 6=15min, 7=30min)
Variable X Device Selection	41017	Unsigned Integer	1	R/W			Device selection to be used for the X variable in the calculations (0=Device 1, 1=Device 2)
Variable Y Device Selection	41018	Unsigned Integer	1	R/W			Device selection to be used for the Y variable in the calculations (0=Device 1, 1=Device 2)
Variable X Measurement Selection	41019	Unsigned Integer	1	R/W			Measurement selection to be used for the X variable in the calculations
Variable Y Measurement Selection	41020	Unsigned Integer	1	R/W			Measurement selection to be used for the Y variable in the calculations
Math Formula	41021	Unsigned Integer	1	R/W			Selection of the math formula used in the calculation
Units	41022	String	3	R/W			Units for the calculated value
Display Format	41025	Unsigned Integer	1	R/W			Display format for the calculated value
Parameter	41026	String	3	R/W			Parameter for the calculated value
Auto Range Selection X	41029	Unsigned Integer	1	R/W			Selection of which range (of auto range) measurement to use for variable X
Auto Range Selection Y	41030	Unsigned Integer	1	R/W			Selection of which range (of auto range) measurement to use for variable Y
Select Output	41033	Unsigned Integer	1	R/W			
Source	41034	Unsigned Integer	1	R/W			The source to use for this output (none or probe)
Sensor Select	41035	Unsigned Integer	1	R/W			The device to use for this output
Measurement Select	41036	Unsigned Integer	1	R/W			The measurement within the sensor for this output
Function Select	41037	Unsigned Integer	1	R/W			The output type (0=Linear, 1=PID, 2=Logrithmic, 3=Bilinear)
Transfer Value	41038	Float	2	R/W			The output value to be used for the transfer setting
Filter	41040	Unsigned Integer	1	R/W			Filter time (sec)
Zero Select	41041	Unsigned Integer	1	R/W			Selection of the zero level (0=0mA, 1=4mA)
Minimum Setting	41042	Float	2	R/W			The measurement value for the minimum output
Maximum Setting	41044	Float	2	R/W			The measurement value for the maximum output
Knee Value Setting	41046	Float	2	R/W			The measurement value for the knee point output
Knee Current Setting	41048	Float	2	R/W			The current value for the knee point output
50 Percent Setting	41050	Float	2	R/W			The measurement value for 50% output
Mode	41052	Unsigned Integer	1	R/W			The PID mode (0=Auto, 1=Manual)
Manual Setting	41053	Float	2	R/W			The manual setting for the output (0 to 100%)
Setpoint	41055	Float	2	R/W			Setpoint for the PID control
Phase	41057	Unsigned Integer	1	R/W			PID phase (0=Direct, 1=Reverse)
Proportional Band	41058	Float	2	R/W			Propotional Band
Integral Time	41060	Unsigned Integer	1	R/W			Integral Time (0 to 9999 sec)

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Derivative Time	41061	Unsigned Integer	1	R/W			Derivative Time (0 to 9999 sec)
Auto Range Selection	41063	Unsigned Integer	1	R/W			Selection of which range (of auto range) measurement to use
Select Relay	41064	Unsigned Integer	1	R/W			
Source	41065	Unsigned Integer	1	R/W			The source to use for this relay (none, RTC, or probe)
Sensor Select	41066	Unsigned Integer	1	R/W			The device to use for this relay
Measurement Select	41067	Unsigned Integer	1	R/W			The measurement within the sensor for this relay
Function Select	41068	Unsigned Integer	1	R/W			The relay type (0=Alarm, 1=Control, 2=Status, 3=Timer, 4=Event, 5=PWM Ctrl, 6=Freq Ctrl, 7=Scheduler)
Transfer Value	41069	Unsigned Integer	1	R/W			The relay state to be used for the transfer setting (0=off, 1=on)
High Alarm	41070	Float	2	R/W			The high alarm setting
Low Alarm	41072	Float	2	R/W			The low alarm setting
High Alarm Deadband	41074	Float	2	R/W			The high alarm deadband setting
Low Alarm Deadband	41076	Float	2	R/W			The low alarm deadband setting
On Delay	41078	Unsigned Integer	1	R/W			The alarm on delay time (0 to 999 sec)
Off Delay	41079	Unsigned Integer	1	R/W			The alarm off delay time (0 to 999 sec)
Setpoint	41080	Float	2	R/W			The relay control setpoint
Phase	41082	Unsigned Integer	1	R/W			The controller action (0=direct, 1=reverse)
Deadband	41083	Float	2	R/W			The controller deadband
Overfeed Timer	41085	Unsigned Integer	1	R/W			The overfeed timer setting (0 to 999 sec)
On Delay	41086	Unsigned Integer	1	R/W			The controller on delay time (0 to 999 sec)
Off Delay	41087	Unsigned Integer	1	R/W			The controller off delay time (0 to 999 sec)
Overfeed Timer Reset	41088	Unsigned Integer	1	R/W			A write resets the overfeed timer
Setpoint	41089	Float	2	R/W			The event setpoint
Phase	41091	Unsigned Integer	1	R/W			The event action (0=direct, 1=reverse)
Deadband	41092	Float	2	R/W			The controller deadband
Max On Time	41094	Unsigned Integer	1	R/W			The event control max on time
Min On Time	41095	Unsigned Integer	1	R/W			The event control min on time
Max Off Time	41096	Unsigned Integer	1	R/W			The event control max off time
Min Off Time	41097	Unsigned Integer	1	R/W			The event control min off time
Sensor Hold Type	41098	Unsigned Integer	1	R/W			Selects the sensor hold type (0=None, 2= particular sensor held, 13= all sensors held)
Sensor Hold Select	41099	Unsigned Integer	1	R/W			Select probes to hold when this relay is on when the Hold Type is set for particular sensor. (0=sensor 1, 1=sensor 2)
Hold Mode	41100	Unsigned Integer	1	R/W			Selects the hold mode used (1=hold, 2=transfer)

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Duration	41101	Unsigned Integer	1	R/W			Relay on time
Interval Time	41102	Unsigned Integer	1	R/W			The interval time between triggering the relay on
Off Delay	41103	Unsigned Integer	1	R/W			The alarm off delay time (0 to 999 sec)
Warning Level	41104	Unsigned Integer	2	R/W			The warning level that triggers the relay
Range	41106	Unsigned Integer	1	R/W			Range selection for auto range tags
Fail Safe Mode	41107	Unsigned Integer	1	R/W			Fail Safe Mode (0= off, 1=On)
Start Time	41108	Time2	2	R/W			Start time for the schduler
Run days	41110	Unsigned Integer	1	R/W			Run day selection
Smart Sensor 1 Power	41111	Unsigned Integer	1	R/W			Smart Sensor 1 Power State (0=Off, 1=On)
Smart Sensor 2 Power	41112	Unsigned Integer	1	R/W			Smart Sensor 2 Power State (0=Off, 1=On)
DM STK LEFT	41113	Unsigned Integer	1	R			Device Manager Stack Entries Left
SCAN1 STK LEFT	41114	Unsigned Integer	1	R			Scan 1 Stack Entries Left
SCAN2 STK LEFT	41115	Unsigned Integer	1	R			Scan 2 Stack Entries Left
SCAN3 STK LEFT	41116	Unsigned Integer	1	R			Scan 3 Stack Entries Left
SCAN4 STK LEFT	41117	Unsigned Integer	1	R			Scan 4 Stack Entries Left
SCAN5 STK LEFT	41118	Unsigned Integer	1	R			Scan 5 Stack Entries Left
MT STK LEFT	41119	Unsigned Integer	1	R			Maintance Stack Entries Left
MB NET STK LFT	41120	Unsigned Integer	1	R			Modbus Net Stack Entries Left
MB AUX STK LFT	41121	Unsigned Integer	1	R			Modbus Aux Stack Entries Left
UI STK LEFT	41122	Unsigned Integer	1	R			UI Stack Entries Left
SYS STK LEFT	41123	Unsigned Integer	1	R			System Stack Entries Left
SD STK LEFT	41124	Unsigned Integer	1	R			SD card Stack Entries Left
Idle time	41125	Unsigned Integer	1	R			Microprocessor idle time (x100)
Clear Stats Count	41126	Unsigned Integer	1	R/W			Clear the Modbus port stats count
NetCard Good Msg	41127	Unsigned Integer	2	R			Number of good messages on the Network Card port
NetCard Bad Msg	41129	Unsigned Integer	2	R			Number of bad messages on the Network Card port
NetCard % Good	41131	Float	2	R			Percentage of good messages on the Network Card port
Service Port Good Msg	41133	Unsigned Integer	2	R			Number of good messages on the Service port
Service Port Bad Msg	41135	Unsigned Integer	2	R			Number of bad messages on the Service port
Service Port % Good	41137	Float	2	R			Percentage of good messages on the Service Port

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
Port1 Good Msg	41139	Unsigned Integer	2	R			Number of good messages on the Sensor port 1
Port1 Bad Msg	41141	Unsigned Integer	2	R			Number of bad messages on the Port1
Port1 % Good	41143	Float	2	R			Percentage of good messages on the Port1
Port2 Good Msg	41145	Unsigned Integer	2	R			Number of good messages on the Sensor port 2
Port2 Bad Msg	41147	Unsigned Integer	2	R			Number of bad messages on the Port2
Port2 % Good	41149	Float	2	R			Percentage of good messages on the Port2
Port3 Good Msg	41151	Unsigned Integer	2	R			Number of good messages on the Sensor port 3
Port3 Bad Msg	41153	Unsigned Integer	2	R			Number of bad messages on the Port3
Port3 % Good	41155	Float	2	R			Percentage of good messages on the Port3
Port4 Good Msg	41157	Unsigned Integer	2	R			Number of good messages on the Sensor port 4
Port4 Bad Msg	41159	Unsigned Integer	2	R			Number of bad messages on the Port4
Port4 % Good	41161	Float	2	R			Percentage of good messages on the Port4
Output 1 Cal Count - 4 mA	41163	Unsigned Integer	1	R/W			Calibration count for output 1 - 4mA value
Output 1 Cal Count - 20 mA	41164	Unsigned Integer	1	R/W			Calibration count for output 1 - 20mA value
Output 2 Cal Count - 4 mA	41165	Unsigned Integer	1	R/W			Calibration count for output 2 - 4mA value
Output 2 Cal Count - 20 mA	41166	Unsigned Integer	1	R/W			Calibration count for output 2 - 20mA value
Clear Event Log	41167	Unsigned Integer	1	R/W			Clears one of the device event logs (1=Sensor1, 2=Sensor2, 3=NetworkCard, 4=sc200)
Clear Data Log	41168	Unsigned Integer	1	R/W			Clears one of the device data logs (1=Sensor1, 2=Sensor2, 4=sc200)
Output 1 Test Enable	41169	Unsigned Integer	1	R/W			Enable Output 1 Test mode (0=Disabled, 1=Enabled)
Output 1 Value	41170	Float	2	R/W			Output 1 Value
Output 2 Test Enable	41172	Unsigned Integer	1	R/W			Enable Output 2 Test mode (0=Disabled, 1=Enabled)
Output 2 Value	41173	Float	2	R/W			Output 2 Value
Relay 1 Test Enable	41175	Unsigned Integer	1	R/W			Enable Relay 1 Test mode (0=Disabled, 1=Enabled)
Relay 1 Value	41176	Unsigned Integer	1	R/W			Relay 1 Value
Relay 2 Test Enable	41177	Unsigned Integer	1	R/W			Enable Relay 2 Test mode (0=Disabled, 1=Enabled)
Relay 2 Value	41178	Unsigned Integer	1	R/W			Relay 2 Value
Relay 3 Test Enable	41179	Unsigned Integer	1	R/W			Enable Relay 3 Test mode (0=Disabled, 1=Enabled)
Relay 3 Value	41180	Unsigned Integer	1	R/W			Relay 3 Value
Relay 4 Test Enable	41181	Unsigned Integer	1	R/W			Enable Relay 4 Test mode (0=Disabled, 1=Enabled)
Relay 4 Value	41182	Unsigned Integer	1	R/W			Relay 4 Value
Keyboard Test	41183	Unsigned Integer	1	R/W			Enter key stroke or see last key entry
Internal Temperature	41184	Float	2	R			Internal temperature of the unit

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
12V Supply	41186	Float	2	R			Current 12V supply measurement
3.3V CURRENT	41188	Float	2	R			Total 3.3V Supply current (A)
12V CURRENT	41190	Float	2	R			Total 12V Supply current (A)
SMART SENSOR 1 CUR	41192	Float	2	R			Smart Sensor 1 - 12V Supply current (A)
SMART SENSOR 2 CUR	41194	Float	2	R			Smart Sensor 2 - 12V Supply current (A)
ANALOG SENSOR 1 CUR	41196	Float	2	R			Analog Sensor 1 - 12V Supply current (A)
ANALOG SENSOR 2 CUR	41198	Float	2	R			Analog Sensor 2 - 12V Supply current (A)
PID 1 Prop Component	41200	Float	2	R			The proporational component of PID1 output
PID 1 Intg Component	41202	Float	2	R			The intg component of PID1 output
PID 1 Derv Component	41204	Float	2	R			The derv component of PID1 output
PID 1 Total	41206	Float	2	R			The total of all component of PID1 output
Max Temperature	41208	Float	2	R			Daily max temperature
Min Temperature	41210	Float	2	R			Daily min temperature
Network Error	41227	Unsigned Integer	1	R			Error word for the network (bit0 = Sensor1 communications error, bit1 = Sensor 2 communications error, bits2-15 not used = 0)
Network Status	41228	Unsigned Integer	1	R			Status word for the network (bit0 = Sensor1 connected, bit1 = Sensor 2 connected, bit2 = Relay A active, bit3 = Relay B active, bit4 = RelayC active, bit5 = RelayC active, bits6-15 not used = 0)
Sd Board Status	41229	Unsigned Integer	1	R			
12V Gound	41232	Float	2	R			Current 12V ground measurement
Set Defaults	41237	Unsigned Integer	1	R/W			Sets the configurations settings to default conditions
Slot 0 Mapping	41238	Unsigned Integer	1	R			Bit field mapping of relay and analog output mapping of the sensor installed in slot 0
Slot 0 Mapping	41239	Unsigned Integer	1	R			Bit field mapping of relay and analog output mapping of the sensor installed in slot 0
Telegram Configuration Mode	41240	Unsigned Integer	1	R/W			Sets the Profibus Telegram configuration to Auto Mode (0) or Manual Mode (1)
DisplayUpdateState	41242	Unsigned Integer	1	R			The display updatte state of sdram code update
MeasQualityIndicator	41243	Unsigned Integer	1	R			The measurement quality
ServiceDaysIndicator	41244	Unsigned Integer	1	R			The service due days
Output 3 Cal Count - 4 mA	41245	Unsigned Integer	1	R/W		0 /25000	Calibration count for output 3 - 4mA value
Output 3 Cal Count - 20 mA	41246	Unsigned Integer	1	R/W		35000 /65533	Calibration count for output 3 - 20mA value
Output 4 Cal Count - 4 mA	41247	Unsigned Integer	1	R/W		0 /25000	Calibration count for output 4 - 4mA value
Output 4 Cal Count - 20 mA	41248	Unsigned Integer	1	R/W		35000 /65533	Calibration count for output 4 - 20mA value
Output 3 Test Enable	41249	Unsigned Integer	1	R/W		0 /1	Enable Output 3 Test mode (0=Disabled, 1=Enabled)
OUTPUT 3 VALUE	41250	Float	2	R/W		0 /25.0	Output 3 Value
Output 4 Test Enable	41252	Unsigned Integer	1	R/W		0 /1	Enable Output 4 Test mode (0=Disabled, 1=Enabled)
Output 4 Value	41253	Float	2	R/W		0 /25.0	Output 4 Value

ALL Sensors and Analyzer: Classified ERROR Word - Register 49930

Table 2 Error register

Bit	Error	Description
0	Calibration error	Faulty calibration detected
1	Electronic settings error	Faulty electronic calibration/settings
2	Cleaning error	Error in cleaning cycle detected
3	Measuring module error	Error in measuring module detected
4	System initialization	Inconsistent settings detected, reset to factory settings
5	Hardware error	Faulty hardware detected
6	Internal communication error	Internal communication error detected
7	Humidity error	Excessive humidity detected
8	Excessive temperature	Excessive temperature detected
9		
10	Sample feed warning	Error in sample feed detected
11	Questionable calibration warning	Accuracy of previous calibration inadequate
12	Questionable measurement warning	Accuracy of previous measurement inadequate/out of range
13	Safety warning	Safety equipment error detected
14	Reagent warning	Reagent warning, e.g. fill level < min detected
15	Service request warning	Service request detected

ALL Sensors and Analyzer: Classified STATUS Word - Register 49931

Table 3 Status register

Bit	Status 1	Description
0	Calibration activated	Calibration in progress, measurement value not up to date
1	Cleaning activated	Cleaning in progress, measurement value not up to date
2	Service mode activated	Device in "Service" mode, measurement value not up to date
3	General error message	General error detected, refer to error text for details
4	Measurement value channel 0, poor quality	Measurement accuracy is not within specified limits
5	Measurement value channel 0, range short-fall	Measurement value falls short of the specified range
6	Measurement value channel 0, range exceeded	Measurement value exceeds the specified range
7	Measurement value channel 1, poor quality	Measurement accuracy is not within specified limits
8	Measurement value channel 1, range short-fall	Measurement value falls short of the specified range
9	Measurement value channel 1, range exceeded	Measurement value exceeds the specified range
10	Measurement value channel 2, poor quality	Measurement accuracy is not within specified limits
11	Measurement value channel 2, range short-fall	Measurement value falls short of the specified range
12	Measurement value channel 2, range exceeded	Measurement value exceeds the specified range
13	Measurement value channel 3, poor quality	Measurement accuracy is not within specified limits
14	Measurement value channel 3, range short-fall	Measurement value falls short of the specified range
15	Measurement value channel 3, range exceeded	Measurement value exceeds the specified range