Modbus Register
pH/ORP sc Combination Digital Sensor Gateway

V3.10

HACH®

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pH/ORP sc Combination Digital Sensor Gateway V3.10

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
SENSOR	40001	Unsigned Integer	1	R		0 /65535	
pH	40002	Float	2	R/W		-2 /14	
ORP	40002	Float	2	R/W		-2100 /2100	
TEMPERATURE	40004	Unsigned Integer	1	R/W		0 /65535	
TEMP	40005	Float	2	R/W		-20 /200	
TEMP	40005	Float	2	R/W		-4 /392	
SensorName	40007	String	6	R/W			
FuncCode	40013	Unsigned Integer	1	R/W		0 /65535	
NextState	40014	Unsigned Integer	1	R		0 /65535	
MeasType	40015	Unsigned Integer	1	R/W	0 /1		
TempUnits	40016	Unsigned Integer	1	R/W	U25 /26		
PhFormat	40017	Unsigned Integer	1	R/W	0 /1		
TaggedPhFormat	40018	Unsigned Integer	2	R/W		0 /2000000000	
Filter	40020	Unsigned Integer	1	R/W		0 /60	
TempElementType	40021	Unsigned Integer	1	R/W	0 /1 /2 /4		
TempUserValueTag	40022	Unsigned Integer	1	R/W		0 /65535	
TempUserDegCValue	40023	Float	2	R/W		-20 /200	
TempUserDegFValue	40023	Float	2	R/W		-4 /392	
PhBuffer	40025	Unsigned Integer	1	R/W	0 /1		
PureWaterCompType	40026	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7 /8		
PureWaterCompUser	40027	Float	2	R/W		-0.1 /0.1	
OutputMode	40029	Unsigned Integer	1	R/W	0 /1 /2		
CalLeave	40030	Unsigned Integer	1	R/W	0 /1 /2		
CalAbort	40031	Unsigned Integer	1	R/W	0 /1		
CalEditValueTag	40032	Unsigned Integer	1	R/W		0 /65535	
CalEditPhValue	40033	Float	2	R/W		-2 /14	
CalEditOrpValue	40033	Float	2	R/W		-2100 /2100	
PhSlope	40035	Float	2	R/W		0 /100	
SoftwareVersion	40037	Float	2	R/W		0 /999.99	
SoftwareVersion1	40039	Float	2	R		0 /99.99	
SoftwareVersion2	40041	Float	2	R		0 /99.99	
SerialNumber	40043	String	6	R/W			
PhOffset	40049	Float	2	R/W		0 /8388608	
OrpOffset	40051	Float	2	R/W		-100 /100	
CalCode	40053	Unsigned Integer	1	R/W		0 /16	

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Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
SensorLogInterval	40054	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13		
TempLogInterval	40055	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7 /8 /9 /10 /11 /12 /13		
Signal	40056	Float	2	R/W		-2100 /2100	
ProdDate	40058	Time2	2	R/W			
ActiveElectrode	40060	Float	2	R/W		0 /10000	
RefElectrode	40062	Float	2	R/W		0 /10000	
LastCalDate	40064	Time2	2	R/W			
SensorDays	40066	Integer	1	R/W		0 /32000	
ElectrodeDays	40067	Integer	1	R/W		0 /32000	
ElectrodeStatus	40068	Unsigned Integer	1	R	0 /1		
SensorType	40069	Unsigned Integer	1	R	0 /1		
RejectFrequency	40070	Unsigned Integer	1	R/W	0 /1		
DeviceDriver	40071	Unsigned Integer	1	R		0 /255	
DeviceDriver1	40072	Unsigned Integer	1	R		0 /255	
DeviceDriver2	40073	Unsigned Integer	1	R		0 /255	
DeviceDriver3	40074	Unsigned Integer	1	R		0 /255	
DeviceDriver4	40075	Unsigned Integer	1	R		0 /255	
CalWarningDays	40076	Integer	1	R/W		0 /32000	
SensorWarningDays	40077	Integer	1	R/W		0 /32000	
SensorADCCnts	40078	Integer	2	R		0 /2147483647	
TempADCCnts	40080	Integer	2	R		0 /2147483647	
EditTempValue	40082	Float	2	R/W			
EditTempMin	40084	Float	2	R		-500 /500	
EditTempMax	40086	Float	2	R		-500 /500	
ImpOnOff	40088	Unsigned Integer	1	R/W	0 /1		
ImpedActCorr	40089	Float	2	R/W		0.1 /5	
ImpedActCnts	40091	Float	2	R/W		0 /256	
ImpedRefCorr	40093	Float	2	R/W		0.1 /5.0	
ImpedRefCnts	40095	Float	2	R/W		0 /256	
PH HIGH LIMIT	40097	Float	2	R		0 /256	
PH LOW LIMIT	40099	Float	2	R		0 /256	

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