Modbus Register
NH4D sc

V2.06

HACH®

Be Right™

NH4D sc V2.06

Name	Register	Data Type	Length	Access Mode	Discrete Range	Min / Max	Description
AMMONIUM NH4-N	40001	Float	2	R		0 /2000	Ammonium in mg/l
AMMONIUM NH4	40003	Float	2	R		0 /2576	Ammonium in mg/l
K+	40005	Float	2	R		0 /2000	k+ mg/l
TEMP DEG C	40007	Float	2	R		-30 /100	Temp in Deg Celsius
TEMP DEG F	40009	Float	2	R		-54 /180	Temp Fahrenheit
POTASS COMPENS	40013	Unsigned Integer	1	R/W	0 /1		potassium compesation (on / off)
DATALOG INTRVL	40014	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7 /8 /9		datalog interval
SENS INTERVAL	40015	Unsigned Integer	1	R/W		30 /300	response interval
TEMP SELECT	40016	Unsigned Integer	1	R/W	U25 /26		unit of temperature
PARAMETER SELECT	40017	Unsigned Integer	1	R/W	P19 /42		parameter (-N)
UNIT SELECT	40018	Unsigned Integer	1	R/W	U0 /2		measurment unit
TEMP. OFFSET C	40019	Float	2	R/W		-1.5 /1.5	adjust temeprature offset
TEMP. OFFSET F	40021	Float	2	R/W		-2.7 /2.7	adjust temeprature offset (F)
SENSOR NAME	40024	String	8	R/W			location of sensor
CAL CONFIG	40032	Unsigned Integer	1	R/W	0 /1 /2 /3 /4 /5 /6 /7		configration calibration type
SENSOR CODE	40033	String	8	R/W			cartridge sensorcode
Last Sensor Code [day]	40041	Unsigned Integer	1	R		0 /730	Last Sensor Code [day]
Last Calibration [day]	40042	Unsigned Integer	1	R		0 /730	Last Calibration [day]
SERIAL NUMBER	40043	String	6	R/W			serial number
SOFTWARE VERS	40049	Float	2	R		0 /655.35	Code version
DRIVER VERS	40051	Float	2	R		0 /655.35	Bootloader version
STRUCTURE VERSION	40053	Unsigned Integer	1	R		0 /65535	structure version
CONTENT VERSION	40054	Unsigned Integer	1	R		0 /65535	content version
FIRMWARE VERSION	40055	Unsigned Integer	1	R		0 /65535	firmware version
DATE SENSOR CODE	40068	Time2	2	R			date of sensorcode input
DATE CAL POINT 1	40070	Time2	2	R			date of calibration 2nd point
DATE CALPOINT 2	40072	Time2	2	R			date of calibration 1st point
CAL. TYPE	40074	Unsigned Integer	1	R	0 /1 /2 /3 /4 /5 /6 /7		calibration type
DATE	40075	Time2	2	R			date 1st point
NH4 N CONC 1	40077	Float	2	R		0 /2000	NH4-N concentration 1
NH4 CONC 1	40079	Float	2	R		0 /2576	NH4 concentration 1
NH4 mV CONC 1	40081	Float	2	R		-250 /400	NH4 mV concentration 1
NH4 mV drift CONC 1	40083	Float	2	R		-500 /500	NH4 mV drift concentration 1
K+ CONC 1	40085	Float	2	R		0 /2000	K+ concentration 1
K+ mV CONC 1	40087	Float	2	R		-300 /400	K+ mV concentration 1
K+ mV drift CONC 1	40089	Float	2	R		-500 /500	K+ mV drift concentration 1
TEMP CONC 1	40091	Float	2	R		0 /45	temperature concentration 1
DATE 2	40093	Time2	2	R			date 2nd point
NH4 N CONC 2	40095	Float	2	R		0 /2000	NH4-N concentration 2
NH4 CONC 2	40097	Float	2	R		0 /2576	NH4 concentration 2

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NH4 mV CONC 2	40099	Float	2	R		-250 /400	NH4 mV concentration 2
NH4 mV drift CONC 2	40101	Float	2	R		-500 /500	NH4 mV drift concentration 2
K+ CONC 2	40103	Float	2	R		0 /2000	K+ concentration 2
K+ mV CONC 2	40105	Float	2	R		-300 /400	K+ mV concentration 2
K+ mV drift CONC 2	40107	Float	2	R		-500 /500	K+ mV drift concentration 2
TEMP CONC 2	40109	Float	2	R		0 /45	temperature concentration 2
OFFSET BY AMMON	40111	Float	2	R		-70 /50	offset ammonium
SLOPE AMMON	40113	Float	2	R		20 /150	slope ammonium
OFFSET BY POTASS	40115	Float	2	R		-150 /50	offset potassium
SLOPE POTASS	40117	Float	2	R		20 /100	slope potassium
NH4NmV	40131	Float	2	R		-2500 /2500	signal NH4-N
AmmonMeasmV	40133	Float	2	R		-5000 /5000	signal NH4-N mV
AmmonmVDrift	40135	Float	2	R		-5000 /5000	Drift in mg/l 5sec
Ammon Noise	40137	Float	2	R		-100 /500	Noise in 10 seconds
K+mV	40139	Float	2	R		-5000 /5000	Signal K+
PotassMeasmV	40141	Float	2	R		-5000 /5000	signal K+ mV
Potass Drift mg/l	40143	Float	2	R		-5000 /5000	Drift in mg/l 5sec
Potass Noise	40145	Float	2	R		-100 /+500	Noise in 10 seconds
pHDmV	40147	Float	2	R		-5000 /5000	signal reference mV

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