thermoscientific

42iQ,42iQHL,42iQLS,42iQTL - 118206-00 Rev AJ

MODBUS Register Table V 01.06.17.35763

Register	Data Logging/Streaming Variables	Type	Default	Min	Max	Units	Precision	Description
1	NO Auto Concentration (ppb or ug/m3)	float	0					NO Auto Concentration (ppb or ug/m3) [not in 42iQD]
3	NO2 Auto Concentration (ppb or ug/m3)	float	0					NO2 Auto Concentration (ppb or ug/m3) [not in 42iQD]
5	NOx Auto Concentration (ppb or ug/m3)	float	0					NOx Auto Concentration (ppb or ug/m3)
7	NH3 Auto Concentration (ppb or ug/m3)	float	0					NH3 Auto Concentration (ppb or ug/m3)
9	NT Auto Concentration (ppb or ug/m3)	float	0					NT Auto Concentration (ppb or ug/m3)
11	NO Concentration (ppb or ug/m3)	float	0			Basic Units		NO Single/Low Range Concentration (ppb or ug/m3) [not in 42iQD]
13	NO2 Concentration (ppb or ug/m3)	float	0			Basic Units		NO2 Single/Low Range Concentration (ppb or ug/m3) [not in 42iQD]
15	NOx Concentration (ppb or ug/m3)	float	0			Basic Units		NOx Single/Low Range Concentration (ppb or ug/m3)
17	NH3 Concentration (ppb or ug/m3)	float	0			Basic Units		NH3 Single/Low Range Concentration (ppb or ug/m3) [in 17iQ only]
19	NT Concentration (ppb or ug/m3)	float	0			Basic Units		NT Single/Low Range Concentration (ppb or ug/m3) [in 17iQ only]
21	NO High Concentration (ppb or ug/m3)	float	0			Basic Units		NO High Range Concentration (ppb or ug/m3) [not in 42iQD]
23	NO2 High Concentration (ppb or ug/m3)	float	0			Basic Units		NO2 High Range Concentration (ppb or ug/m3) [not in 42iQD]
25	NOx High Concentration (ppb or ug/m3)	float	0			Basic Units		NOx High Range Concentration (ppb or ug/m3)
31	Range Level	unsigned16	0	0	1			Indicates which range is active in Auto Mode 1 = high range0 = low range
35	Instrument Temperature (Deg. C)	float	0	-273.15	273.15	°C	1	Instrument Temperature (°C)
41	Converter Temperature (Deg. C)	float	0	0	2.4	°C		NO2 converter tempeature
47	Ambient Pressure (mmHg)	float	0			mmHg		Ambient Pressure
49	Chamber Pressure (mmHg)	float	0			mmHg		Chamber Pressure (mmHg)
51	Flow (L/Min)	float	0			L/min	3	Sample Flow (L/min)
55	NO Background (ppb or ug/m3)	float	0			Basic Units		NO Background (ppb or ug/m3) [not in 42iQD]
57	NOx Background (ppb or ug/m3)	float	1			Basic Units		NOx Background (ppb or ug/m3)
59	NT Background	float	2			Basic Units		NT Background (ppb or ug/m3)
61	Prereactor Background (ppb or ug/m3)	float	0			Basic Units		Prereactor Background (ppb or ug/m3) [in 42iQTL only]
71	Ozonator Flow Status	unsigned16	0	0	1			Ozonator Flow Status 0 - Off1 - On
73	Pre Auto Concentration (ppb or ug/m3)	float	0			Basic Units		Prereactor Auto Concentration (ppb or ug/m3) [in 42iQTL only]
75	Prereactor Concentration (ppb or ug/m3)	float	0			Basic Units		Prereactor Single/Low Concentration (ppb or ug/m3) [in 42iQTL only]
77	Prereactor High Concentration (ppb or ug/m3)	float	0			Basic Units		Prereactor High Concentration (ppb or ug/m3) [in 42iQTL only]
79	NO Auto Corrected Concentration (ppb or ug/m3)	float	0					NO Auto Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
81	NO2 Auto Corrected Concentration (ppb or ug/m3)	float	0					NO2 Auto Corrected Conctration (ppb or ug/m3) [if O2 Sensor installed]
83	NOx Auto Corrected Concentration (ppb or ug/m3)	float	0					NOx Auto Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
89	NO Corrected Concentration (ppb or ug/m3)	float	0			Basic Units		NO Single/Low Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
91	NO2 Corrected Concentration (ppb or ug/m3)	float	0			Basic Units		NO2 Single/Low Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
93	NOx Corrected Concentration (ppb or ug/m3)	float	0			Basic Units		NOx Single/Low Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
99	NO High Corrected Concentration (ppb or ug/m3)	float	0			Basic Units		NO High Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
101	NO2 High CorrectedConcentration (ppb or ug/m3)	float	0			Basic Units		NO2 High Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
103	NOx High Corrected Concentration (ppb or ug/m3)	float	0			Basic Units		NOx High Range Corrected Concentration (ppb or ug/m3) [if O2 Sensor installed]
501		string		6	9	characters		Formatted Time: HH:MM(:SS)
506		string		9	11	characters		Formatted Date: MM/DD/(YY)YY
512	Last Calibration Time	unsigned16	0			sec		Last Calibration Time (Seconds from 01-Jan-1970)
513	Previous Calibration Time	unsigned16	0			sec		Previous Calibration Time (Seconds from 01-Jan-1970)
514	General Alarm	unsigned32	1	0				General Alarm Flag
516	Instrument Serial Number	string	empty	0	14	characters		Serial Number
524	Firmware Version	string	empty	0	32	characters		Firmware Version
540		string	iQSeries	0	16	characters		HostName
548	Alerts	unsigned32	1	0				General Warning Flag
550	Instrument Warmup Enable	unsigned16	0	0	1			Instrument Warmup Flag set to 1 initally if warm up is enabled and either after all the module alarms are cleared up or after 2 hours set to 0
651	Pressure Alarm Status	unsigned16	1	0				Pressure Alarm Status

652	Flow Pressure Faults 3	unsigned16	0	0	65535			Pressure Faults 3: Bit7 - Board Communication FailureBit14 - Power supplies Bit15 - General when any faults detected
653		unsigned16	0	0	65535			Pressure Cal Status0 - Do nothing1 - Reset all values to defaults2 - Update high point sensor 13 - Update low point sensor 14 - Update high point sensor 25 - Update low point sensor 26 - Update high point sensor 37 - Update low point sensor 391 - Reset all values to defaults done92 - Update high point sensor 1 done93 - Update low point sensor 1 done94 - Update high point sensor 2 done95 - Update low point sensor 2 done96 - Update high point sensor 3 done97 - Update low point sensor 3 done
654	Flow Pressure Cal Faults 1	unsigned16	0	0	65535			Pressure Calibration Faults 1 (LSB): Bit 0-1: High point sensor 1Offset is: 00=Ok 01=user input out of range 10=measurement out of range 11=No calBit2-3: Low point sensor 1Offset is: 00=Ok 01=user input out of range10=measurement out of range 11=No calBit4-5: High point sensor 2Offset is: 00=Ok 01=user input out of range10=measurement out of range 11=No calBit6-7: Low point sensor 2Offset is: 00=Ok 01=user input out of range10=measurement out of range 11=No calBit8-9: High point sensor 3Offset is: 00=Ok 01=user input out of range10=measurement out of range 11=No calBit10-11: Low point sensor 3Offset is: 00=Ok 01=user input out of range10=measurement out of range 11=No calBit12-15=N/A
655	Flow/Pressure Communication Alarm	unsigned16	0	0	1			Flow/Pressure Communication Alarm Status
656	Flow/Pressure Power Supply Alarm	unsigned16	0	0	1			Flow/Pressure Power Supply Alarm Status
701	Perm Oven Gas Temp (Deg. C)	float				°C		Permeation Oven Gas Temperature (deg C) [if Perm Oven installed]
703	Perm Oven Body Temp (Deg. C)	float				°C		Permeation Oven Oven Body Temperature (deg C) [if Perm Oven installed]
705	Permeation Oven Alarms	unsigned16	1	0				Permeation Oven Alarms [if Perm Oven installed]
706	Perm Oven Oven Tempature Alarm Status	unsigned16	0	0	1			Perm Oven Oven Tempature Alarm Status [if Perm Oven installed]
707	Perm Oven Board Communication Alarm Status	unsigned16	0	0	1			Perm Oven Board Communication Alarm Status [if Perm Oven installed]
708	Perm Oven 5V Alarm Status	unsigned16	0	0	1			Perm Oven 5V Alarm Status [if Perm Oven installed]
709	Perm Oven 3.3V Alarm Status	unsigned16	0	0	1			Perm Oven 3.3V Alarm Status [if Perm Oven installed]
710	Perm Oven 3V Alarm Status	unsigned16	0	0	1			Perm Oven 3V Alarm Status [if Perm Oven installed]
711	Perm Oven 2.5V Alarm Status	unsigned16	0	0	1			Perm Oven 2.5V Alarm Status [if Perm Oven installed]
712	Perm Oven 24V Alarm Status	unsigned16	0	0	1			Perm Oven 24V Alarm Status [if Perm Oven installed]
713		unsigned16	0	0				Perm Oven Bit-packed faults 4: [if Perm Oven installed]Bit0 = UnusedBit1 = Heater status faultBit2 = heater power fault.Bit3 = 5 volts power fault.Bit 4 = 3.3 volts power fault.Bit5 = 2.5 volts power fault.Bit6 = 3 volts power fault.Bit7=Board communication failureBit8= Calibration fault.Bit9-13 = UnusedBit14 = Power supply failureBit 15 = Any faults in Fault 0 or and Fault 1
714		float	25			°C		Min Oven temperature [if Perm Oven installed]
716		float	105			°C		Max Oven temperature [if Perm Oven installed]
718	Perm Oven Body Thermistor Short	unsigned16	0	0	1			Perm Oven Body Thermistor Short Alarm Status [if Perm Oven installed]
719	Perm Oven Gas Thermistor Short	unsigned16	0	0	1			Perm Oven Gas Thermistor Short Alarm Status [if Perm Oven installed]
720	Perm Oven Body Thermistor Open	unsigned16	0	0	1			Perm Oven Body Thermistor Open Alarm Status [if Perm Oven installed]
721	Perm Oven Gas Thermistor Open	unsigned16	0	0	1			Perm Oven Gas Thermistor Short Alarm Status [if Perm Oven installed]
751	PSB Alarms	unsigned16	1	0				PSB Alarms Count
752	Faults 0	unsigned16	0	0	65535			Zero Gas Alicat's MFC Status Faults 0:Bit0 = Temperature Overflow(TOV)BIT1 = Temperature Underflow(TOV)BIT2 = Volumetric Overflow (VOV)BIT3 = Volumetric Underflow (VOV)BIT4 = Mass Overflow (MOV)Bit5 = Mass Underflow (MOV)Bit6 = Pressure Overflow (POV)Bit7 = Totalizer Overflow (OVR)Bit8 = PID Loop in Hold (HLD)Bit9 = ADC Error (ADC)Bit10= PID Exhaust (EXH)Bit11= Over Pressure Limit (OPL)Bit12= Flow Overflow during totalize (TMF)Bit13= Measurement was aborted
753	Faults 1	unsigned16	0	0	65535			Span Gas #1 Alicat's MFC Status Faults 1:Bit0 = Temperature Overflow(TOV)BIT1 = Temperature Underflow(TOV)BIT2 = Volumetric Overflow (VOV)BIT3 = Volumetric Underflow (VOV)BIT4 = Mass Overflow (MOV)Bit5 = Mass Underflow (MOV)Bit6 = Pressure Overflow (POV)Bit7 = Totalizer Overflow (OVR)Bit8 = PID Loop in Hold (HLD)Bit9 = ADC Error (ADC)Bit10= PID Exhaust (EXH)Bit11= Over Pressure Limit (OPL)Bit12= Flow Overflow during totalize (TMF)Bit13= Measurement was aborted

754	Faults 2	unsigned16	0	0	65535			Span Gas #2 (optional) Alicat's MFC StatusFaults 2:Bit0 = Temperature Overflow(TOV)BIT1 = Temperature Underflow(TOV)BIT2 = Volumetric Overflow (VOV)BIT3 = Volumetric Underflow (VOV)BIT4 = Mass Overflow (MOV)Bit5 = Mass Underflow (MOV)Bit6 = Pressure Overflow (POV)Bit7 = Totalizer Overflow (OVR)Bit8 = PID Loop in Hold (HLD)Bit9 = ADC Error (ADC)Bit10= PID Exhaust (EXH)Bit11= Over Pressure Limit (OPL)Bit12= Flow Overflow during totalize (TMF)Bit13= Measurement was aborted
755	Faults 3	unsigned16	0	0	65535			PSB Board most significant word Faults 3:Bit0..6=N/ABIT7=Board communication failureBIT8=Reset info block to defaultBIT9=Verfiy info block failBIT10=Reset calibration block to defaultBIT11=Verify calibration block failBit 12 - 13 = N/ABit14=Power Supply FailureBit15=General when any faults detected
756		unsigned16	0	0	65535			Status bits from STEP board 1:Bit Description0 Channel A 0=OK 1=Error (current>4A)1 Channel B 0=OK 1=Error (current>4A)2 Channel C 0=OK 1=Error (current>4A)3 Channel D 0=OK 1=Error (current>4A)4 Channel A 0=Off 1=On5 Channel B 0=Off 1=On6 Channel C 0=Off 1=On7 Channel D 0=Off 1=On8-11 5V Supply 0=Fail 0xa=Good12-15 24V Supply 0=Fail 0xa=Good
757		unsigned16	0	0	65535			Status bits from STEP board 2:Bit Description0 Channel A 0=OK 1=Error (current>4A)1 Channel B 0=OK 1=Error (current>4A)2 Channel C 0=OK 1=Error (current>4A)3 Channel D 0=OK 1=Error (current>4A)4 Channel A 0=Off 1=On5 Channel B 0=Off 1=On6 Channel C 0=Off 1=On7 Channel D 0=Off 1=On8-11 5V Supply 0=Fail 0xa=Good12-15 24V Supply 0=Fail 0xa=Good
758		unsigned16	0	0	65535			Status bits from STEP board 3:Bit Description0 Channel A 0=OK 1=Error (current>4A)1 Channel B 0=OK 1=Error (current>4A)2 Channel C 0=OK 1=Error (current>4A)3 Channel D 0=OK 1=Error (current>4A)4 Channel A 0=Off 1=On5 Channel B 0=Off 1=On6 Channel C 0=Off 1=On7 Channel D 0=Off 1=On8-11 5V Supply 0=Fail 0xa=Good12-15 24V Supply 0=Fail 0xa=Good
759		unsigned16	0	0	65535			Status bits from STEP board 4:Bit Description0 Channel A 0=OK 1=Error (current>4A)1 Channel B 0=OK 1=Error (current>4A)2 Channel C 0=OK 1=Error (current>4A)3 Channel D 0=OK 1=Error (current>4A)4 Channel A 0=Off 1=On5 Channel B 0=Off 1=On6 Channel C 0=Off 1=On7 Channel D 0=Off 1=On8-11 5V Supply 0=Fail 0xa=Good12-15 24V Supply 0=Fail 0xa=Good
760	PSB Communication Alarm	unsigned16	0	0	1			PSB Communication Status
761	PSB Power Supply Alarm	unsigned16	0	0	1			PSB Power Supply Status
762	STEP 1 Channel 1 Error	unsigned16	0	0	1			Channel 1 Error from STEP board
763	STEP 1 Channel 2 Error	unsigned16	0	0	1			Channel 2 Error from STEP board
764	STEP 1 Channel 3 Error	unsigned16	0	0	1			Channel 3 Error from STEP board
765	STEP 1 Channel 4 Error	unsigned16	0	0	1			Channel 4 Error from STEP board
766	STEP 1 5V Error	unsigned16	0	0	1			STEP 1 5V Error
767	STEP 1 24V Error	unsigned16	0	0	1			STEP 1 24V Error
768	STEP 2 Channel 1 Error	unsigned16	0	0	1			Channel 1 Error from STEP board
769	STEP 2 Channel 2 Error	unsigned16	0	0	1			Channel 2 Error from STEP board
770	STEP 2 Channel 3 Error	unsigned16	0	0	1			Channel 3 Error from STEP board
771	STEP 2 Channel 4 Error	unsigned16	0	0	1			Channel 4 Error from STEP board
772	STEP 2 5V Error	unsigned16	0	0	1			STEP 2 5V Error
773	STEP 2 24V Error	unsigned16	0	0	1			STEP 2 24V Error
774	STEP 3 Channel 1 Error	unsigned16	0	0	1			Channel 1 Error from STEP board
775	STEP 3 Channel 2 Error	unsigned16	0	0	1			Channel 2 Error from STEP board
776	STEP 3 Channel 3 Error	unsigned16	0	0	1			Channel 3 Error from STEP board
777	STEP 3 Channel 4 Error	unsigned16	0	0	1			Channel 4 Error from STEP board
778	STEP 3 5V Error	unsigned16	0	0	1			STEP 3 5V Error
779	STEP 3 24V Error	unsigned16	0	0	1			STEP 3 24V Error
780	STEP 4 Channel 1 Error	unsigned16	0	0	1			Channel 1 Error from STEP board
781	STEP 4 Channel 2 Error	unsigned16	0	0	1			Channel 2 Error from STEP board
782	STEP 4 Channel 3 Error	unsigned16	0	0	1			Channel 3 Error from STEP board
783	STEP 4 Channel 4 Error	unsigned16	0	0	1			Channel 4 Error from STEP board
784	STEP 4 5V Error	unsigned16	0	0	1			STEP 4 5V Error
785	STEP 4 24V Error	unsigned16	0	0	1			STEP 4 24V Error
801	Analog Input 1	float	0					Analog Input 1 Reading
803	Analog Input 2	float	0					Analog Input 2 Reading
805	Analog Input 3	float	0					Analog Input 3 Reading
807	Analog Input 4	float	0					Analog Input 4 Reading
809	Analog Alarms	unsigned16	1	0				Analog Alarms
810	Analog IO Faults 0	unsigned16	0	0	65535			Analog IO Faults 0: Bit-packed faults:Bit0 = 15V Status Diagnostic Failed Bit1 = Negative 15V Status Diagnostic Failed Bit2 = 5V Status Diagnostic Failed Bit3 = 3dot3V Status Diagnostic Failed Bit4 = 5V Reference Status Diagnostic Failed Bit5..15 = N/A

811	Analog IO Faults 2	unsigned16	0	0	65535			Analog IO Faults 2: Bit-packed faults:Bit0 = Voltage Output Channel 1 Failed Bit1 = Voltage Output Channel 2 Failed Bit2 = Voltage Output Channel 3 Failed Bit3 = Voltage Output Channel 4 Failed Bit4 = Voltage Output Channel 5 Failed Bit5 = Voltage Output Channel 6 Failed Bit6 = Current Output Channel 1 Failed Bit7 = Current Output Channel 2 Failed Bit8 = Current Output Channel 3 Failed Bit9 = Current Output Channel 4 Failed Bit10 = Current Output Channel 5 Failed Bit11 = Current Output Channel 6 Failed Bit12 = AD5755 Temperautre Too HighBit13 = AD5755-1 SPI Communications AlertBit14 = AD5755-2 SPI Communications Alert Bit15 = AD5755-3 SPI Communications Alert
812	Analog IO Faults 3	unsigned16	0	0	65535			Analog IO Faults 3: Bit-packed faults:Bit0..6 = N/ABit7 = Board Communication FailureBit8 = Information block set defaultBit9 = Information block corruptedBit10 = Calibration block set defaultBit11 = Calibration block corruptedBit12..13 = N/ABit14 = Power Supply FailureBit15 = General when any faults detected
813		unsigned16	0	0	65535			Analog IO Calibration Status: 0 = Calibration IdleVoltage Input Calibration 1 = Calculate voltage input start2 = Calculate voltage input stop3 = Calculate voltage input default4 = Calibration voltage input done Voltage Output Calibration 5 = Calculate voltage output start6 = Calculate voltage output stop7 = Calculate voltage output default8 = Calibration voltage output done Currrent Output Calibration 9 = Calculate currrent output start10 = Calculate current output stop11 = Calculate current output default12 = Calibration voltage output done
814	Analog IO Cal Faults 1	unsigned16	0	0	65535			Analog IO Cal Faults 1: Bit-packed faults for voltage input calibration:Bit0-1 = Channel 1 voltage input calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit2-3 = Channel 2 voltage input calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit4-5 = Channel 3 voltage input calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit6-7= Channel 4 voltage input calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit8..15 = N/A
815	Analog IO Cal Faults 2	unsigned16	0	0	65535			Analog IO Cal Faults 2: Bit-packed faults for voltage output 5V range calibration:Bit0-1 = Channel 1 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit2-3 = Channel 2 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit4-5 = Channel 3 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit6-7 = Channel 4 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit8-9 = Channel 5 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit10-11 = Channel 6 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit12..15=N/A
816	Analog IO Cal Faults 3	unsigned16	0	0	65535			Analog IO Cal Faults 3: Bit-packed faults for voltage output 10V range calibration:Bit0-1 = Channel 1 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit2-3 = Channel 2 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit4-5 = Channel 3 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit6-7 = Cahnnel 4 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit8-9 = Channel 5 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit10-11 = Channel 6 voltage output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit12..15=N/A
817	Analog IO Cal Faults 4	unsigned16	0	0	65535			Analog IO Cal Faults 4: Bit-packed faults for current output calibration:Bit0-1= Channel 1 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit2-3= Channel 2 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit4-5= Channel 3 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit6-7= Channel 4 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit8-9= Channel 5 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit10-11= Channel 6 current output calibration failureOffset is: 00 = Ok 01 = Low 10 = High 11 = No calBit12..15=N/A
818	Analog IO Voltage Output Channel 1 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 1 Alarm Status
819	Analog IO Voltage Output Channel 2 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 2 Alarm Status
820	Analog IO Voltage Output Channel 3 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 3 Alarm Status
821	Analog IO Voltage Output Channel 4 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 4 Alarm Status
822	Analog IO Voltage Output Channel 5 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 5 Alarm Status
823	Analog IO Voltage Output Channel 6 Alarm	unsigned16	0	0	1			Analog IO Voltage Output Channel 6 Alarm Status
824	Analog IO Current Output Channel 1 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 1 Alarm Status

825	Analog IO Current Output Channel 2 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 2 Alarm Status
826	Analog IO Current Output Channel 3 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 3 Alarm Status
827	Analog IO Current Output Channel 4 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 4 Alarm Status
828	Analog IO Current Output Channel 5 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 5 Alarm Status
829	Analog IO Current Output Channel 6 Alarm	unsigned16	0	0	1			Analog IO Current Output Channel 6 Alarm Status
830	Analog IO Chip Temperatures Alarm	unsigned16	0	0	1			Analog IO Chip Temperatures Alarm Status
831	Analog IO Chip 1 Communication Alarm	unsigned16	0	0	1			Analog IO Chip 1 Communication Alarm Status
832	Analog IO Chip 2 Communication Alarm	unsigned16	0	0	1			Analog IO Chip 2 Communication Alarm Status
833	Analog IO Chip 3 Communication Alarm	unsigned16	0	0	1			Analog IO Chip 3 Communication Alarm Status
834	Analog IO Communication Alarm	unsigned16	0	0	1			Analog IO Communication Alarm Status
835	Analog IO Power Supply Alarm	unsigned16	0	0	1			Analog IO Power Supply Alarm Status
951	Digital IO Alarms	unsigned16	1	0				Digital IO Alarms
952	Digital IO Faults 0	unsigned16	0	0	65535			Digital IO Board fault register 1 least significant wordBit 0 = Solenoid1 above 500mA shut down and alarmBit 1 = Solenoid1 below 10mA and output is onBit 2 = Solenoid2 above 500mA shut down and alarmBit 3 = Solenoid2 below 10mA and output is onBit 4 = Solenoid3 above 500mA shut down and alarmBit 5 = Solenoid3 below 10mA and output is onBit 6 = Solenoid4 above 500mA shut down and alarmBit 7 = Solenoid4 below 10mA and output is onBit 8 = Solenoid5 above 500mA shut down and alarmBit 9 = Solenoid5 below 10mA and output is onBit 10 = Solenoid6 above 500mA shut down and alarmBit 11 = Solenoid6 below 10mA and output is onBit 12 = Solenoid7 above 500mA shut down and alarmBit 13 = Solenoid7 below 10mA and output is onBit 14 = Solenoid8 above 500mA shut down and alarmBit 15 = Solenoid8 below 10mA and output is on
953	Digital IO Faults 1	unsigned16	0	0	65535			Digital IO Board fault register 2
954	Digital IO Faults 3	unsigned16	0	0	65535			Digital IO Board fault register 4 most significant wordBit0..9= N/A Bit 7 = Board Communication FailureBit8 = Information block set defaultBit9 = Information block corruptedBit10 = Calibration block set defaultBit11 = Calibration block corruptedBit12..13 = N/ABit14 = Power Supply Bit15 = General when any faults detected
955	External Alarm 1	unsigned16	0	0	1			Digital IO External Alarm 1
956	External Alarm 2	unsigned16	0	0	1			Digital IO External Alarm 2
957	External Alarm 3	unsigned16	0	0	1			Digital IO External Alarm 3
958	Digital IO Fault Reset	unsigned16	0	0	255			Reset the solenoid faultsBit0 = 24V Switchable Output 0 Bit1 = 24V Switchable Output 1 Bit2 = 24V Switchable Output 2Bit3 = 24V Switchable Output 3Bit4 = 24V Switchable Output 4Bit5 = 24V Switchable Output 5Bit6 = 24V Switchable Output 6Bit7 = 24V Switchable Output 7Bit8..15 = N/A
959	Digital IO Solenoid1 High Alarm	unsigned16		0	1			Digital I/O solenoid1 above 500mA alarm
960	Digital IO Solenoid1 Low Alarm	unsigned16		0	1			Digital I/O solenoid1 below 10mA alarm
961	Digital IO Solenoid2 High Alarm	unsigned16		0	1			Digital I/O solenoid2 above 500mA alarm
962	Digital IO Solenoid2 Low Alarm	unsigned16		0	1			Digital I/O solenoid2 below 10mA alarm
963	Digital IO Solenoid3 High Alarm	unsigned16		0	1			Digital I/O solenoid3 above 500mA alarm
964	Digital IO Solenoid3 Low Alarm	unsigned16		0	1			Digital I/O solenoid3 below 10mA alarm
965	Digital IO Solenoid4 High Alarm	unsigned16		0	1			Digital I/O solenoid4 above 500mA alarm
966	Digital IO Solenoid4 Low Alarm	unsigned16		0	1			Digital I/O solenoid4 below 10mA alarm
967	Digital IO Solenoid5 High Alarm	unsigned16		0	1			Digital I/O solenoid5 above 500mA alarm
968	Digital IO Solenoid5 Low Alarm	unsigned16		0	1			Digital I/O solenoid5 below 10mA alarm
969	Digital IO Solenoid6 High Alarm	unsigned16		0	1			Digital I/O solenoid6 above 500mA alarm
970	Digital IO Solenoid6 Low Alarm	unsigned16		0	1			Digital I/O solenoid6 below 10mA alarm
971	Digital IO Solenoid7 High Alarm	unsigned16		0	1			Digital I/O solenoid7 above 500mA alarm
972	Digital IO Solenoid7 Low Alarm	unsigned16		0	1			Digital I/O solenoid7 below 10mA alarm
973	Digital IO Solenoid8 High Alarm	unsigned16		0	1			Digital I/O solenoid8 above 500mA alarm
974	Digital IO Solenoid8 Low Alarm	unsigned16		0	1			Digital I/O solenoid8 below 10mA alarm
975	Digital IO Power Supply Alarm	unsigned16		0	1			Digital I/O power supply alarm
976	Digital IO Communication Alarm	unsigned16	0	0	1			Digital IO Communication Alarm
977		unsigned16	0	0	1			Digital IO Relay Test Mode Alarm
978		unsigned16	0	0	1			Digital IO Solenoid Test Mode Alarm
1001		integer16	0	-99	60			Maintenance History Calculated Months Left Reaction Chamber/Cooler Module
1002		integer16	0	-99	60			Maintenance History Calculated Months Left PMT
1003		integer16	0	-99	60			Maintenance History Calculated Months Left PMT Base Socket

1004		integer16	0	-99	60			Maintenance History Calculated Months Left Converter Cartridge
1005		integer16	0	-99	60			Maintenance History Calculated Months Left Ozonator Assembly
1006		integer16	0	-99	60			Maintenance History Calculated Months Left NH3 Scrubber
1007		integer16	0	-99	60			Maintenance History Calculated Months Left Sample Permeation Dryer
1008		integer16	0	-99	60			Maintenance History Calculated Months Left Flow System
1009		integer16	0	-99	60			Maintenance History Calculated Months Left Sample Pump
1010		integer16	0	-99	60			Maintenance History Calculated Months Left Capillary (Sample)
1011		integer16	0	-99	60			Maintenance History Calculated Months Left Capillary (Ozone)
1012		integer16	0	-99	60			Maintenance History Calculated Months Left DC Power Supply
1013		integer16	0	-99	60			Maintenance History Calculated Months Left Foam Fan Filter
1014		integer16	0	-99	60			Maintenance History Calculated Months Left System Components
1015		integer16	0	-99	60			Maintenance History Calculated Months Left Purafil
1016		integer16	0	-99	60			Maintenance History Calculated Months Left Charcoal
1017		integer16	0	-99	60			Maintenance History Calculated Months Left Dri-Rite
1018		integer16	0	-99	60			Maintenance History Calculated Months Left Permeation Tube
1019		integer16	0	-99	60			Maintenance History Calculated Months Left Ozone Permeation Dryer
1020		integer16	0	-99	60			Maintenance History Calculated Months Left O2 Sensor
1021		integer16	0	-99	60			Maintenance History Calculated Months Left Bypass Pump
1022		integer16	0	-99	60			Maintenance History Calculated Months Left 22
1023		integer16	0	-99	60			Maintenance History Calculated Months Left 23
1024		integer16	0	-99	60			Maintenance History Calculated Months Left 24
1025		integer16	0	-99	60			Maintenance History Calculated Months Left 25
1026		integer16	0	-99	60			Maintenance History Calculated Months Left 26
1027		integer16	0	-99	60			Maintenance History Calculated Months Left 27
1028		integer16	0	-99	60			Maintenance History Calculated Months Left 28
1029		integer16	0	-99	60			Maintenance History Calculated Months Left 29
1030		integer16	0	-99	60			Maintenance History Calculated Months Left 30
1031		integer16	0	-99	60			Maintenance History Calculated Months Left 31
1032		integer16	0	-99	60			Maintenance History Calculated Months Left 32
1033		integer16	0	-99	60			Maintenance History Calculated Months Left 33
1034		integer16	0	-99	60			Maintenance History Calculated Months Left 34
1035		integer16	0	-99	60			Maintenance History Calculated Months Left 35
1036		integer16	0	-99	60			Maintenance History Calculated Months Left 36
1037		integer16	0	-99	60			Maintenance History Calculated Months Left 37
1038		integer16	0	-99	60			Maintenance History Calculated Months Left 38
1039		integer16	0	-99	60			Maintenance History Calculated Months Left 39
1040		integer16	0	-99	60			Maintenance History Calculated Months Left 40
1041		integer16	0	-99	60			Maintenance History Calculated Months Left 41
1042		integer16	0	-99	60			Maintenance History Calculated Months Left 42
1043		integer16	0	-99	60			Maintenance History Calculated Months Left 43
1044		integer16	0	-99	60			Maintenance History Calculated Months Left 44
1045		integer16	0	-99	60			Maintenance History Calculated Months Left 45
1046		integer16	0	-99	60			Maintenance History Calculated Months Left 46
1047		integer16	0	-99	60			Maintenance History Calculated Months Left 47
1048		integer16	0	-99	60			Maintenance History Calculated Months Left 48
1049		integer16	0	-99	60			Maintenance History Calculated Months Left 49
1050		integer16	0	-99	60			Maintenance History Calculated Months Left 50
1051	Maintenance History Alert	unsigned16	0	0	1			Maintenance History Alert
1101	Predictive Diagnostics Alerts List	string		0	300			Predictive Diagnostics Alerts List
1301	Predictive Diagnostic Alert 1	unsigned16	0	0	1			Predictive Diagnostic Alert 1
1302	Predictive Diagnostic Alert 2	unsigned16	0	0	1			Predictive Diagnostic Alert 2
1303	Predictive Diagnostic Alert 3	unsigned16	0	0	1			Predictive Diagnostic Alert 3
1304	Predictive Diagnostic Alert 4	unsigned16	0	0	1			Predictive Diagnostic Alert 4
1305	Predictive Diagnostic Alert 5	unsigned16	0	0	1			Predictive Diagnostic Alert 5
1306	Predictive Diagnostic Alert 6	unsigned16	0	0	1			Predictive Diagnostic Alert 6
1307	Predictive Diagnostic Alert 7	unsigned16	0	0	1			Predictive Diagnostic Alert 7
1308	Predictive Diagnostic Alert 8	unsigned16	0	0	1			Predictive Diagnostic Alert 8
1309	Predictive Diagnostic Alert 9	unsigned16	0	0	1			Predictive Diagnostic Alert 9
1310	Predictive Diagnostic Alert 10	unsigned16	0	0	1			Predictive Diagnostic Alert 10
1311	Predictive Diagnostic Alert 11	unsigned16	0	0	1			Predictive Diagnostic Alert 11
1312	Predictive Diagnostic Alert 12	unsigned16	0	0	1			Predictive Diagnostic Alert 12
1313	Predictive Diagnostic Alert 13	unsigned16	0	0	1			Predictive Diagnostic Alert 13
1314	Predictive Diagnostic Alert 14	unsigned16	0	0	1			Predictive Diagnostic Alert 14
1315	Predictive Diagnostic Alert 15	unsigned16	0	0	1			Predictive Diagnostic Alert 15
1316	Predictive Diagnostic Alert 16	unsigned16	0	0	1			Predictive Diagnostic Alert 16
1317	Predictive Diagnostic Alert 17	unsigned16	0	0	1			Predictive Diagnostic Alert 17
1318	Predictive Diagnostic Alert 18	unsigned16	0	0	1			Predictive Diagnostic Alert 18
1319	Predictive Diagnostic Alert 19	unsigned16	0	0	1			Predictive Diagnostic Alert 19

1320	Predictive Diagnostic Alert 20	unsigned16	0	0	1			Predictive Diagnostic Alert 20
1321	Predictive Diagnostic Alerts	unsigned16	0	0	1			Predictive Diagnostic Alerts
1551	Cooler Voltage (Volts)	float	0	0	18.536	Volts	1	Cooler Voltage
1553	Bench Temperature Short Alarm	unsigned16	0	0	1			Bench Temperature Short Alarm Status
1554	Bench Temperature Open Alarm	unsigned16	0	0	1			Bench Temperature Open Alarm Status
1555	Bench Cooler Temperature Sensor Short Alarm	unsigned16	0	0	1			Cooler Temperature Sensor Short Alarm Status
1556	Bench Cooler Temperature Sensor Open Alarm	unsigned16	0	0	1			Cooler Temperature Sensor OpenAlarm Status
1561	Bench PMT Voltage Too Low Alarm	unsigned16	0	0	1			PMT Voltage Too Low Alarm Status
1562	Bench PMT Voltage Too High Alarm	unsigned16	0	0	1			PMT Voltage Too High Alarm Status
1563	Bench Frequency Too Low Alarm	unsigned16	0	0	1			Frequency Too Low Alarm Status
1564	Bench Frequency Too High Alarm	unsigned16	0	0	1			Frequency Too High Alarm Status
1565	Bench Communication Alarm	unsigned16	0	0	1			Bench Communication Alarm Status
1566	Bench Power Supply Alarm	unsigned16	0	0	1			Bench Power Supply Alarm Status
1567	Chamber Temperature Alarm	unsigned16	0	0	1			Chamber Temperature Alarm Status
1568	PMT42 Bench Temperature (Deg. C)	float	0	-26	80	°C	1	Bench Temperature:Coarse if oustide range.Fine if within range
1570	PMT42 Cooler Temperature (Deg. C)	float	0	-26	80	°C	1	Cooler Temperature:Coarse if oustide range.Fine if within range
1572	Cooler Temp Alarm	unsigned16	0	0	1			Cooler Temperature Alarm Status
1573	PMT42 cooler current (Amps)	float	0	0	7.748	Amps	1	Cooler Current (Amps)
1575	PMT Current in pico-Amps	float	0	0	999.9	picoAmps	1	PMT Current in pico-Amps
1577	Frequency	float	0	0	300000	Hz	1	Frequency
1579		unsigned16	1000	10	1000			PMT Low Gain Value
1580	PMT Gain Value	unsigned16	1	1	100			PMT Gain Value
1581	PMT42 Alarms	unsigned16	1	0				Number of active alarms
1582	Cooler Temp Minimum	float	-10	-40	10	°C	1	Cooler Temp Min
1584	Cooler Temp Maximum	float	-1	-40	10	°C	1	Cooler Temp Max
1586	Minimum Bench Temperature Alarm	float	48	45	55	°C	1	Min Bench Temp Alarm
1588	Maximum Bench Temperature Alarm	float	52	45	55	°C	1	Max Bench Temp Alarm
1590	PMT High Voltage (Volts)	float	0	-1515	0	Volts	1	PMT High Voltage
1651		string	0	0	11			NO Single/Low Range Concentration Reading(String in User Selected Units for GUI) [not in 42iQD]
1657		string	0	0	11			NO2 Single/Low Range Concentration Reading(String in User Selected Units for GUI) [not in 42iQD]
1663		string	0	0	11			NOx Single/Low Range Concentration Reading(String in User Selected Units for GUI)
1669		string	0	0	11			NH3 Single/Low Range Concentration Reading(String in User Selected Units for GUI) [in 17iQ only]
1675		string	0	0	11			NT Single/Low Range Concentration Reading(String in User Selected Units for GUI) [in 17iQ only]
1681		string	0	0	11			Pre Single/Low Range Concentration Reading(String in User Selected Units for GUI) [in 42iQTL only]
1687		string	0	0	11			NO High Range Concentration Reading(String in User Selected Units for GUI) [not in 42iQD]
1693		string	0	0	11			NO2 High Range Concentration Reading(String in User Selected Units for GUI) [not in 42iQD]
1699		string	0	0	11			NOx High Range Concentration Reading(String in User Selected Units for GUI)
1705		string	0	0	11			NH3 High Range Concentration Reading(String in User Selected Units for GUI) [in 17iQ only]
1711		string	0	0	11			NT High Range Concentration Reading(String in User Selected Units for GUI) [in 17iQ only]
1717		string	0	0	11			Pre High Range Concentration Reading(String in User Selected Units for GUI) [in 42iQTL only]
1723	NO Concentration Alarm	unsigned16	0	0	1			NO Concentration Alarm Status [not in 42iQD]
1724	NO2 Concentration Alarm	unsigned16	0	0	1			NO2 Concentration Alarm Status [not in 42iQD]
1725	NOx Concentration Alarm	unsigned16	0	0	1			NOx Concentration Alarm Status
1726	Pressure Alarm	unsigned16	0	0	1			Pressure Alarm Status
1727	Flow Alarm	unsigned16	0	0	1			Flow Alarm Status
1728	Temperature Alarm	unsigned16	0	0	1			Instrument Temperature Alarm Status
1729	Auto Zero Alarm	unsigned16	0	0	1			Auto Zero Cal/Check Alarm Status
1730	Auto Span Alarm	unsigned16	0	0	1			Auto Span Cal/Check Alarm Status
1731	NH3 Concentration Alarm	unsigned16	0	0	1			NH3 Concentration Alarm Status [in 17iQ only]
1732	NT Concentration Alarm	unsigned16	0	0	1			NT Concentration Alarm Status [in 17iQ only]
1733		unsigned16	0	0	1			1=NO single range home screen
1734		unsigned16	0	0	1			1=NO Dual low range home screen
1735		unsigned16	0	0	1			1=NO Dual high range home screen
1736		unsigned16	0	0	1			1=NO Auto low range home screen
1737		unsigned16	0	0	1			1=NO Auto high range home screen
1738		unsigned16	0	0	1			1=NOx single range home screen
1739		unsigned16	0	0	1			1=NOx Dual low range home screen
1740		unsigned16	0	0	1			1=NOx Dual high range home screen
1741		unsigned16	0	0	1			1=NOx Auto low range home screen
1742		unsigned16	0	0	1			1=NOx Auto high range home screen
1743		unsigned16	0	0	1			1=NO/NOx single range home screen
1744		unsigned16	0	0	1			1=NO/NOx Dual low range home screen
1745		unsigned16	0	0	1			1=NO/NOx Dual high range home screen
1746		unsigned16	0	0	1			1=NO/NOx Auto low range home screen
1747		unsigned16	0	0	1			1=NO/NOx Auto high range home screen

1751	Ozonator Flow Status Alarm	unsigned16	0	0	1			Ozonator Flow Status Alarm Status
1752	Ozonator Communication Alarm	unsigned16	0	0	1			Ozonator Communication Alarm Status
1753	Ozonator Power Supply Alarm	unsigned16	0	0	1			Ozonator Power Supply Alarm Status
1754	Ozonator Power On/Off Status Alarm	unsigned16	0	0	1			Ozonator Power On/Off Alarm Status
1755	Ozonator High/Low	unsigned16	0	0	1			Ozonator:0 - Low1 - High
1756	Ozonator Current Monitor	float	0	0	0.5	Amps		Ozonator Current Monitora. If Ozonator Hi low pin = logic 1. (For 200Hz (400pps):Minimum limit : 0.150ANormal conditions: 0.230AMaximum limit : 0.350A b. Ozonator Hi Low Pin = logic 0 (For 130Hz) For 130Hz (130pps):Minimum limit : 0.050ANormal conditions: 0.075AMaximum limit : 0.114A
1758	Ozonator Alarms	unsigned16	1	0				Number of active alarms
1759	Ozonator Current Status Alarm	unsigned16	0	0	1			Ozonator Current Alarm Status
1801	Converter Thermistor Open Alarm	unsigned16	0	0	1			NO2 Converter Thermistor Open Alarm Status
1802	Converter Thermistor Short Alarm	unsigned16	0	0	1			NO2 Converter Thermistor Short Alarm Status
1803	Converter Communication Alarm	unsigned16	0	0	1			NO2 Converter Communication Alarm Status
1804	Converter Power Supply Alarm	unsigned16	0	0	1			NO2 Converter Power Supply Alarm Status
1805	Converter Temperature Alarm	unsigned16	0	0	1			Converter Temperature Alarm Status
1806	Converter Alarms	unsigned16	1	0				Number of active alarms
1807		float	300	300	1000	°C	1	Min Converter Temperature Alarm
1809		float	350	300	1000	°C	1	Max Converter Temperature Alarm
1811		unsigned16	1	0	1			Enable/disable the module
1851	O_2 Alarms	unsigned16	0	0				Number of active oxygen alarms [if O2 Sensor installed]
1852	Oxygen Sensor Faults 0	unsigned16	0	0	65535			Bit-packed O2 Faults 0:Bit 0...7=UnusedBit8 = Ambient temp thermistor openBit9 = Ambient temp thermistor shortBit 10...15=Unused
1853	Oxygen Sensor Faults 1	unsigned16	0	0	65535			Bit-packed O2 Faults 1:Bit0...3 = UnusedBit4 = 5 volts Fault.Bit5 = 3.3 volts Fault.Bit6 = 2.5 volts Reference Fault.Bit7= 24 volts Fault.Bit 8...15=Unused
1854	Oxygen Sensor Faults 2	unsigned16	0	0	65535			Bit-packed O2 Faults 2:Bit0 = X - fail.Bit1 = E - fail.Bit 2 = B -fail.Bit 3 = C - fail.Bit 4 = S - fail.Bit 5 = M-fail.Bit 6 = O2 sensor not detected.Bi7...15 = Unused
1855	Oxygen Sensor Faults 3	unsigned16	0	0	65535			Bit-packed O2 Faults 3:Bit0...6 = UnusedBit7 = Board communication failureBit8 = Information block set defaultBit9 = Information block corruptedBit10 = Calibration block set defaultBit11 = Calibration block corruptedBit12...13 =N/ABit14 =Power Supply FailureBit15 =General in any faults detected
1856		unsigned16	0	0				Calibration Status0 = Calibration IdleAmbient Calibration Steps1 = Cal Ambient offset start2 = Cal Ambient offset stop3 = Cal Ambient offset default4 = Cal Ambient offset doneO2 Calibration Steps5 = Factory Cal1 (Offset) Start6 = Factory Cal1 (Offset) Stop7 = Factory Cal1 (Offset) Done8= Factory Cal2 (Span) Start9= Factory Cal2 (Span) Stop10= Factory Cal2 (Span) Done11 = User Cal (Span) Start12 = User Cal (Span) Stop13 = User Cal (Span) Default14 = User Cal (Span) Done
1857	Oxygen Sensor Cal Faults	unsigned16	0	0				Bit-packed O2 Calibration Faults:Bit 0 = Factory Calibration failure.(verify for 'C' in errors received from Oxygen sensor module.Bit 1 = User Cal (Span) Fail. (Calculated Cal coefficient <0.5 or >2)Bit2-3 = Ambient temperature calibration failure. Offset is: 00=Ok 01=Lo 10=Hi 11=No cal
1859	O_2 %	float	0	-10	110	%	3	O2 Concentration [if O2 Sensor installed]
1861	O_2 Temperature (Deg. C)	float	0	-10	100	°C	1	O2 Temperature [if O2 Sensor installed]
1863	O_2 Conc Alarm	unsigned16	0	0	1			O2 Concentration Alarm Status [if O2 Sensor installed]
1864	O_2 Thermistor Open	unsigned16	0	0	1			O2 Thermistor Open Status [if O2 Sensor installed]
1865	O_2 Thermistor short	unsigned16	0	0	1			O2 Thermistor short Status [if O2 Sensor installed]
1866	O_2 Sensor Malfunction	unsigned16	0	0	1			O2 Sensor Malfunction Status [if O2 Sensor installed]
1867	O_2 Outside Operational Spec	unsigned16	0	0	1			O2 Outside Operational Spec Status [if O2 Sensor installed]
1868	O_2 fault Sensor Communication	unsigned16	0	0	1			O2 Sensor Communication Fault Status [if O2 Sensor installed]
1869	O_2 fault Sensor Calibration	unsigned16	0	0	1			O2 Sensor Calibration Fault Status [if O2 Sensor installed]
1870	O_2 fault Photodiode Current Low	unsigned16	0	0	1			O2 Photodiode Current Low Fault Status [if O2 Sensor installed]
1871	O_2 fault Sensor not detected	unsigned16	0	0	1			O2 Sensor not detected Fault Status [if O2 Sensor installed]
1872	O_2 Board Communication fault	unsigned16	0	0	1			O2 Board Communication Fault Status [if O2 Sensor installed]
1873	O_2 fault Power Supply	unsigned16	0	0	1			O2 Power Supply Fault Status [if O2 Sensor installed]
1874	O_2 Communication Alarm	unsigned16	0	0	1			O2 Sensor Communication Alarm Status [if O2 Sensor installed]
1875	Oxygen Sensor Module Enable	unsigned16	0	0	1			Enable/disable the module
1951		string	0	0	11			NO Single/Low Range Corrected Concentration Reading(String in User Selected Units) [not in 42iQD]
1957		string	0	0	11			NO2 Single/Low Range Corrected Concentration Reading (String in User Selected Units) [not in 42iQD]

1963		string	0	0	11			NOx Single/Low Range Corrected Concentration Reading (String in User Selected Units)
1969		string	0	0	11			NO High Range Corrected Concentration Reading(String in User Selected Units) [not in 42iQD]
1975		string	0	0	11			NO2 High Range Corrected Concentration Reading(String in User Selected Units) [not in 42iQD]
1981		string	0	0	11			NOx High Range Corrected Concentration Reading(String in User Selected Units)
1987		unsigned16	0	0	1			Auto Check NO Zero Alarm Status [not in 42iQD]
1988		unsigned16	0	0	1			Auto Check NOx Zero Alarm Status
1989		unsigned16	0	0	1			Auto Check NO Span Alarm Status [not in 42iQD]
1990		unsigned16	0	0	1			Auto Check NO2 Span Alarm Status [not in 42iQD]
1991		unsigned16	0	0	1			Auto Check NOx Span Alarm Status
1992		unsigned16	0	0	1			Auto Check NH3 Span Alarm Status [in 17iQ only]
1993		unsigned16	0	0	1			Auto Check NT Span Alarm Status [in 17iQ only]
1994		unsigned16	0	0	1			Auto Check NT Zero Alarm Status [in 17iQ only]
1995	Bypass Flow Alarm	unsigned16	0	0	1			Bypass Flow Alarm Status [in 42iQHL with bypass option only]
1996	Bypass Pres Alarm	unsigned16	0	0	1			Bypass Pressure Alarm Status [in 42iQHL with bypass option only]
1997	Bypass Pressure (mmHg)	float	0			mmHg		Bypass Pressure [in 42iQHL with bypass option only]
1999	Bypass Flow (L/Min)	float	0			L/min	3	Bypass Flow (L/min) [in 42iQHL with bypass option only]
2001		unsigned16	0	0	1			1=Prereactor single range home screen
2002		unsigned16	0	0	1			1=Prereactor Dual low range home screen
2003		unsigned16	0	0	1			1=Prereactor Dual high range home screen
2004		unsigned16	0	0	1			1=Prereactor Auto low range home screen
2005		unsigned16	0	0	1			1=Prereactor Auto high range home screen
2006		unsigned16	0	0	1			Auto Check Prereactor Zero Alarm Status [only in 42iQTL]
2023	Prereactor Concentration Alarm	unsigned16	0	0	1			Prereactor Concentration Alarm Status [in 42iQTL only]
2024	Concentration Alarms	unsigned16	0	0	1			PMT42CalcSW Alarm Count (non-zero if any alarms in this module are active) for Conc/AutoZero/AutoSpan
2025	Flow Pressure Module Alarms	unsigned16	0	0	1			PMT42CalcSW Alarm Count (non-zero if any alarms in this module are active) for Pres/Flow/Amb Temp
2251	Zero/Span Enable	unsigned16	0	0	1			Enable/Disable the Zero/Span valve module
2252		unsigned16	0	0	1			Trigger zero check or cal.
2253		unsigned16	0	0	1			Trigger span check or cal.
2254		unsigned16	0	0	1			Trigger purge
2255		unsigned16	0	0	1			Status of Ozonator Level 1 (0=Off; 1=On)
2256		unsigned16	0	0	1			Status of Ozonator Level 2 (0=Off; 1=On)
2257		unsigned16	0	0	1			Status of Ozonator Level 3 (0=Off; 1=On)
2258		unsigned16	0	0	1			Status of Ozonator Level 4 (0=Off; 1=On)
2259		unsigned16	0	0	1			Status of Ozonator Level 5 (0=Off; 1=On)
2260		unsigned16	0	0	1			Status of Ozonator Level 6 (0=Off; 1=On)
2351		unsigned16	0	0	1			Enable(1)/disable(0) the module
2352	Sample/Zero valve and Reference Mode	unsigned16	0	0	4			i0 Reference Mode [48iQTL only]
2451		string	0.0.0.0	7	15	characters		Dynamic IP Address
2459		string	0.0.0.0	7	15	characters		Dynamic Subnet Mask
2467		string	0.0.0.0	7	15	characters		Dynamic Gateway Address
2475		string	00:00:00:00	17	17	characters		Wired MAC Address
2484	Ethernet Configuration Alarm	unsigned16	0	0	1			Ethernet Configuration Alarm Flag
2485	Ethernet IP Address Configuration Alarm	unsigned16	0	0	1			Ethernet IP Address Configuration Alarm Flag
2486	Ethernet Subnet Mask Configuration Alarm	unsigned16	0	0	1			Ethernet Subnet Mask Configuration Alarm Flag
2487	Ethernet Gateway Configuration Alarm	unsigned16	0	0	1			Ethernet Gateway Configuration Alarm Flag
2488	Ethernet DNS Configuration Alarm	unsigned16	0	0	1			Ethernet DNS Configuration Alarm Flag
2489	Ethernet DNS Configuration Alarm	unsigned16	0	0	1			Ethernet DNS Configuration Alarm Flag
5158		string	0.0.0.0	7	15	characters		Wired DNS Address
5166		string	0.0.0.0	7	15	characters		Wired DNS Address 2
5174	Ethernet Configuration commit	unsigned16	0	0	1			Ethernet Configuration commit
5182		unsigned16	0	0	2			Date Format: 0=MM/DD/YYYY (US) 1=DD/MM/YYYY (EU)2=YYYY-MM-DD (ISO 8601)
5183		unsigned16	50	5	100	%		Screen Brightness
5184		unsigned16	0	0	1			Sleep Enable Status
5185		unsigned16	5	1	720	minutes		Sleep Timeout value in minutes
5186		unsigned16	0	0	23			Update clock time: Hours - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5187		unsigned16	0	0	59			Update clock time: Minutes - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5188		unsigned16	0	0	59			Update clock time: Seconds - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5189		unsigned16	1	1	12			Update clock time: Month - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5190		unsigned16	1	1	31			Update clock time: Day - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0

5191		unsigned16	2001	2001	2038			Update clock time: Year - set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5192		string	0	0	32	characters		Timezone Code (Hours from UTC):DLW+12NST+11HST+10YST+9PST+8PST+8PDTMST+7MST+7MDTCST+6CST+6CDTEST+5EST+5EDTCOT+4ART+3GST+2CVT+1UTC0CET-1CET-2BST-3DLT-4CET-5FOX-6GLF-7CCT-8JST-9GST-10 LMA-11DLE-12
5208		unsigned16	0	0	3			Allows setting of time/date: set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5209		unsigned16	0	0	2			Signal to set time/date
5210		unsigned32	0			seconds		Seconds from 1/1/1970
5212		unsigned16	1	0	2			Enable Time Server
5213		string		0	30			Set Time Server
5228		unsigned16	0					User Data Logging Treatment mode to use: Average=0 Current=1 Max=2 Min=3
5229		unsigned16	0					Data Logging database is ready
5230		string	0	0	2	characters		The number of digits to display after the decimal for concentration data
5231	DF Low Range Enable	unsigned16	0	0	1			Dynamic Filter Low Range Enable (1=On/0=Off)
5232	DF High Range Enable	unsigned16	0	0	1			Dynamic Filter High Range Enable (1=On/0=Off)
5233	Cal Background	unsigned16	0	0	1			Digital IO for Auto Background Calibration
5234	Cal Lo Span	unsigned16	0	0	1			Digital IO for Low Range Auto Span Calibration
5235	Cal Hi Span	unsigned16	0	0	1			Digital IO for High Range Auto Span Calibration
5236		unsigned16	0	0	2			Commit user time change: set 5208 to 2(GUI) or 3(Modbus) - set desired time registers - set 5236 to 1 - set 5208 to 0
5237		unsigned16	0	0	1			If any pop up is open on the GUI the register will read 1. To close the dialog set this register to 0.
5500	Digital IO Module Enable	unsigned16	0	0	1			Enable/disable the Digital IO module
5600		unsigned16	1	0	1			Allow Analog Outputs to go over or under range: 0 = Disable 1 = Enable
5601	Analog IO Module Enable	unsigned16	0	0	1			Enable/Disable the Analog IO module
5602		float	0					Voltage Output Minimum 1
5604		float	0					Voltage Output Minimum 2
5606		float	0					Voltage Output Minimum 3
5608		float	0					Voltage Output Minimum 4
5610		float	0					Voltage Output Minimum 5
5612		float	0					Voltage Output Minimum 6
5614		float	100					Voltage Output Maximum 1
5616		float	100					Voltage Output Maximum 2
5618		float	100					Voltage Output Maximum 3
5620		float	100					Voltage Output Maximum 4
5622		float	100					Voltage Output Maximum 5
5624		float	100					Voltage Output Maximum 6
5626		float	0					Current Output Minimum 1
5628		float	0					Current Output Minimum 2
5630		float	0					Current Output Minimum 3
5632		float	0					Current Output Minimum 4
5634		float	0					Current Output Minimum 5
5636		float	0					Current Output Minimum 6
5638		float	0					Current Output Maximum 1
5640		float	0					Current Output Maximum 2
5642		float	0					Current Output Maximum 3
5644		float	0					Current Output Maximum 4
5646		float	0					Current Output Maximum 5
5648		float	0					Current Output Maximum 6
5683		unsigned32	1	1	255			Serial Instrument ID
5700		unsigned16	1	0	1			Enable/Disable the Flow/Pressure module
6000	Purge Mode	unsigned16	0	0	1			Purge Mode
6001	Zero Mode	unsigned16	0	0	1			Zero Mode
6002	Span Mode	unsigned16	0	0	1			Span Mode
6003	Sample Mode	unsigned16	1	0	1			Sample Mode
6004	Ext Span Mode	unsigned16	0	0	1			Ext Span Mode (Optional)
6005		unsigned16	0	0	1			i0 Reference Mode [48iQTL only]
6006	Gas Mode	unsigned16	0	0	9			Gas Mode:SAMPLE=0; ZERO=1; SPAN=2; PURGE=3; AUTO ZERO=4; AUTO SPAN=5; AUTO PURGE=6; EXTSPAN=7; i0 REFERENCE=8; WARMUP=9;NOTE:Scheduled calibrations should not be set via Modbus (AUTO ZERO;AUTO SPAN ;AUTO PURGE)
6100	Dilution Module Enable	unsigned16	1	0	1			Enable/disable the Dilution module
6101		float	1	1	500			Dilution ratio
6200	Perm Oven Enable	unsigned16	0	0	1			Enable/disable the module
6201		string	--	0	12			Permeation Tube Gas Name [if Perm Oven installed]
6207		float	190	1	99999.9			Permeation Tube Rate [if Perm Oven installed]
6209		float	0.382	0.0001	9.999			Permeation Tube Molar Constant [if Perm Oven installed]
6900		unsigned16	0	0	1			Enable/disable the Communication module
7000		unsigned16	0	0	1			Enable/Disable the Predictive Diagnostics module
7100	NO Coefficient	float	1	0.5	2			NO Single/Low Range Span Coefficient [no in 42iQD]
7102	NO2 Coefficient	float	1	0.75	1.05			NO2 Single/Low Range Span Coefficient [no in 42iQD]
7104	NOx Coefficient	float	1	0.7	1.4			NOx Single/Low Range Span Coefficient
7106	NO High Coefficient	float	1	0.5	2			NO High Range Span Coefficient [not in 42iQD]
7108	NO2 High Coefficient	float	1	0.75	1.05			NO2 High Range Span Coefficient [not in 42iQD]
7110	NOx High Coefficient	float	1	0.7	1.4			NOx High Range Span Coefficient
7112		float	1	1				NO Single/Low Range Span Concentration [not in 42iQD]

7114		float	1	1				NO2 Single/Low Range Span Concentration [not in 42iQD]
7116		float	1	1				NO2_2 Single/Low Range Span Concentration [in 17iQ only]
7118		float	1	1				NOx Single/Low Range Span Concentration
7120		float	1	1				NH3 Single/Low Range Span Concentration [in 17iQ only]
7122		float	1	1				NH3_2 Single/Low Range Span Concentration [in 17iQ only]
7124		float	1	1				NT Single/Low Range Span Concentration [in 17iQ only]
7126		float	1	1				NO High Range Span Concentration [not in 42iQD]
7128		float	1	1				NO2 High Range Span Concentration [not in 42iQD]
7130		float	1	1				NO2_2 High Range Span Concentration [in 17iQ only]
7132		float	1	1				NOx High Range Span Concentration
7134		float	1	1				NH3 High Range Span Concentration [in 17iQ only]
7136		float	1	1				NH3_2 High Range Span Concentration [in 17iQ only]
7138		float	1	1				NT High Range Span Concentration [in 17iQ only]
7140		float				ppb		NO Range Value for Single/Low Range (ppb) [not in 42iQD]
7142		float				ppb		NO Range Value for High Range (ppb) [not in 42iQD]
7144		float				ppb		NO2 Range Value for Single/Low Range (ppb) [not in 42iQD]
7146		float				ppb		NO2 Range Value for High Range (ppb) [not in 42iQD]
7148		float				ppb		NOx Range Value for Single/Low Range (ppb)
7150		float				ppb		NOx Range Value for High Range (ppb)
7152		float				ppb		NH3 Range Value for Single/Low Range (ppb) [in 17iQ only]
7154		float				ppb		NH3 Range Value for High Range (ppb) [in 17iQ only]
7156		float				ppb		NT Range Value for Single/Low Range (ppb) [in 17iQ only]
7158		float				ppb		NT Range Value for High Range (ppb) [in 17iQ only]
7160		float				ppb		Pre Range Value for Single/Low Range (ppb) [in 42iQTL only]
7162		float				ppb		Pre Range Value for High Range (ppb) [in 42iQTL only]
7164		float				Basic Units		NO Range Value for Single/Low Range (ppb or ug/m3) [not in 42iQD]
7166		float				Basic Units		NO Range Value for High Range (ppb or ug/m3) [not in 42iQD]

7168		float				Basic Units		NO2 Range Value for Single/Low Range (ppb or ug/m3) [not in 42iQD]
7170		float				Basic Units		NO2 Range Value for High Range (ppb or ug/m3) [not in 42iQD]
7172		float				Basic Units		NOx Range Value for Single/Low Range (ppb or ug/m3)
7174		float				Basic Units		NOx Range Value for High Range (ppb or ug/m3)
7176		float				Basic Units		NH3 Range Value for Single/Low Range (ppb or ug/m3) [in 17iQ only]
7178		float				Basic Units		NH3 Range Value for High Range (ppb or ug/m3) [in 17iQ only]
7180		float				Basic Units		NT Range Value for Single/Low Range (ppb or ug/m3) [in 17iQ only]
7182		float				Basic Units		NT Range Value for High Range (ppb or ug/m3) [in 17iQ only]
7184		float				Basic Units		Pre Range Value for Single/Low Range (ppb or ug/m3) [in 42iQTL only]
7186		float				Basic Units		Pre Range Value for High Range (ppb or ug/m3) [in 42iQTL only]
7188	Concentration units	string	ppm	1	7			Concentration units
7192		unsigned16	1	0	1			Single Range Mode Request DEPRICATED.
7193		unsigned16	0	0	1			Dual Range Mode Request DEPRICATED.
7194		unsigned16	0	0	1			Auto Range Mode Request DEPRICATED.
7195	Mode Measure	unsigned16	3	1	6			Measure mode: NO/Nox mode (NO/NOx valve)1=NO 2=Nox 3=NO_NOx 4=NT 5=NO_NOx_NT 6=PRE
7600	O2 Calibration Coefficient	float	1	0.5	2		3	O2 Calibration Coefficient [if O2 Sensor installed]
7602	Minimum Conc Alarm	float	-0.5	-5	100	%	1	Min Conc Alarm limit [if O2 Sensor Installed]
7604	Maximum Conc Alarm	float	25	0	100	%	1	Max Conc Alarm limit [if O2 Sensor Installed]
7606		float	1	0.5	2		3	O2 Span user coef
7608		float	0	0	100	%	2	O2 Span user concentration
7610	Edit O2 Cal-1 Factory Offset	float	0			%		Edit O2 Cal-1 Factory Offset
7612	Edit O2 Cal-2 Factory Span	float	20.9			%		Edit O2 Cal-2 Factory Span
7614		unsigned16	0	0	5			Directions to perform O2 Calibrations using Modbus:Manual Span: set modbus register 7606 to desired O2 span coefficient value; after that set modbus register 7614 to 1Auto Span: set modbus register 7608 to desired O2 span concentration value; after that set modbus register 7614 to 2Reset Defaults: set modbus register 7614 to 3o2 point 1: set modbus register 7610 to desired o2 concentration; after that set modbus register 7614 to 4o2 point 2: set modbus register 7612 to desired o2 concentration; after that set modbus register 7614 to 5
7900	Minimum NO conc alarm	float	0			Basic Units		Min NO Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7902	Maximum NO conc alarm	float	0			Basic Units		Max NO Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7904	Minimum NO2 Conc Alarm	float	0			Basic Units		Min NO2 Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7906	Maximum NO2 Conc Alarm	float	0			Basic Units		Max NO2 Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7908	Minimum NOx Conc Alarm	float	0			Basic Units		Min NOx Conc Alarm(Basic Units ppb or ug/m3 for Protocols)
7910	Maximum NOx Conc Alarm	float	0			Basic Units		Max NOx Conc Alarm(Basic Units ppb or ug/m3 for Protocols)
7912		float	0			Basic Units		Min NH3 Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7914		float	0			Basic Units		Max NH3 Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7916		float	0			Basic Units		Min NT Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7918		float	0			Basic Units		Max NT Conc Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7920		float	0			Basic Units		Max NO Background Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7922		float	0			Basic Units		Max NOx Background Offset Alarm(Basic Units ppb or ug/m3 for Protocols)
7924		float	0			Basic Units		Max NT Background Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7926		float	0			Basic Units		Max NO Span Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7928		float	0			Basic Units		Max NO2 Span Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [not in 42iQD]
7930		float	0			Basic Units		Max NOx Span Offset Alarm(Basic Units ppb or ug/m3 for Protocols)
7932		float	0			Basic Units		Max NH3 Span Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7934		float	0			Basic Units		Max NT Span Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [in 17iQ only]
7936	Minimum Pressure Alarm	float	150	20	400	mmHg	1	Min Pressure Alarm
7938	Maximum Pressure Alarm	float	300	20	400	mmHg	1	Max Pressure Alarm
7940	Minimum Flow Alarm	float	0.35	0.005	2	L/min	3	Min Flow Alarm
7942	Maximum Flow Alarm	float	0.9	0.005	2	L/min	3	Max Flow Alarm
7944	Minimum Internal Temperature Alarm	float	8	0	50	°C	1	Min Internal Temperature Alarm
7946	Maximum Internal Temperature Alarm	float	45	0	50	°C	1	Max Internal Temperature Alarm
7948		float	0			Basic Units		Max Prereactor Background Offset Alarm(Basic Units ppb or ug/m3 for Protocols) [only in 42iQTL]

7964		float	150	100	400	mmHg	1	Min Bypass Pressure Alarm [in 42iQHL with bypass option only]
7966		float	300	100	400	mmHg	1	Max Bypass Pressure Alarm [in 42iQHL with bypass option only]
7968		float	0.35	0	1.5	L/min	3	Min Bypass Flow Alarm [in 42iQHL with bypass option only]
7970		float	0.9	0	1.5	L/min	3	Max Bypass Flow Alarm [in 42iQHL with bypass option only]
7972		float	0			ppb		Min Prereactor Alarm (ppb Units) [in 42iQTL only]
7974		float	0			ppb		Max Prereactor Alarm (ppb Units) [in 42iQTL only]
8300		unsigned16	0	0	65535			Directions to perform Calibrations using Modbus:Manual NO Bkg: set modbus register 8301 to the desired NO background value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 3Manual NOx Bkg: set modbus register 8301 to the desired NOx background value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 5Manual Prereactor Bkg: set modbus register 8301 to the desired Prereactor background value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 9 (42iQTL Only)Auto NO Bkg: set modbus register 8300 to 2Auto NOx Bkg: set modbus register 8300 to 4Auto Prereactor Bkg: set modbus register 8300 to 8 (42iQTL Only)Manual NO Span or Manual NO Span Low: set modbus register 8301 to desired NO span coefficient value; after that set modbus register 8300 to 11Manual NO2 Span or Manual NO2 Span Low: set modbus register 8301 to desired NO2 span coefficient value; after that set modbus register 8300 to 13Manual NOx Span or Manual NOx Span Low: set modbus register 8301 to desired NOx span coefficient value; after that set modbus register 8300 to 15Manual NO Span High: set modbus register 8301 to desired NO span coefficient value; after that set modbus register 8300 to 25Manual NO2 Span High: set modbus register 8301 to desired NO2 span coefficient value; after that set modbus register 8300 to 27Manual NOx Span High: set modbus register 8301 to desired NOx span coefficient value; after that set modbus register 8300 to 29Auto NO Span or Auto NO Span Low: set modbus register 8301 to desired NO span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 10Auto NO2 Span or Auto NO2 Span Low: set modbus register 8301 to desired NO2 span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 12Auto NOx Span or Auto NOx Span Low: set modbus register 8301 to desired NOx span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register 8300 to 14Auto NO Span High: set modbus register 8301 to desired high NO span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register to 8300 to 24Auto NO2 Span High: set modbus register 8301 to desired high NO2 span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register to 8300 to 26Auto NOx Span High: set modbus register 8301 to desired high NOx span concentration value in Base Gas Units (PPB or ug/m3); after that set modbus register to 8300 to 28Reset Defaults: set modbus register 8300 to 1To see the new concentration value in Base Gas Units (PPB or ug/m3) use modbus registers 11 for NO 13 for NO2 15 for NOx single range or low range or modbus registers 21 for NO 23 for NO2 25 for NOx high range; Read 75 for Prereactor conc value (42iQTL Only)
8301		float	0	0				Remote target calibration
8303		float	0	0	5E+09	ppb		NO span concentration

8305		float	0	0	5E+09	ppb		NO2 span concentration
8307		float	0	0	5E+09	ppb		NO2_2 span concentration
8309		float	0	0	5E+09	ppb		NOx span concentration
8311		float	0	0	5E+09	ppb		NH3 span concentration
8313		float	0	0	5E+09	ppb		NH3_2 span concentration
8315		float	0	0	5E+09	ppb		NT span concentration
8317		float	0	0	5E+09	ppb		NO high span concentration
8319		float	0	0	5E+09	ppb		NO2 high span concentration
8321		float	0	0	5E+09	ppb		NO2_2 high span concentration
8323		float	0	0	5E+09	ppb		NOx High span concentration
8325		float	0	0	5E+09	ppb		NH3 high span concentration
8327		float	0	0	5E+09	ppb		NH3_2 high span concentration
8329		float	0	0	5E+09	ppb		NT high span concentration
8331		float	0	0	5E+09			NO Virtual span concentration
8333		float	0	0	5E+09			NO2 Virtual span concentration
8335		float	0	0	5E+09			NO2_2 Virtual span concentration
8337		float	0	0	5E+09			NOx Virtual span concentration
8339		float	0	0	5E+09			NH3 Virtual span concentration
8341		float	0	0	5E+09			NH3_2 Virtual span concentration
8343		float	0	0	5E+09			NT Virtual span concentration
8345		float	0	0	5E+09			NO high Virtual span concentration
8347		float	0	0	5E+09			NO2 high Virtual span concentration
8349		float	0	0	5E+09			NO2_2 high Virtual span concentration
8351		float	0	0	5E+09			NOx High Virtual span concentration
8353		float	0	0	5E+09			NH3 high Virtual span concentration
8355		float	0	0	5E+09			NH3_2 high Virtual span concentration
8357		float	0	0	5E+09			NT high Virtual span concentration
8359		float	1	0.5	2			NO Virtual span coefficient
8361		float	1	0.75	1.05			NO2 Virtual span coefficient
8363		float	1	0.5	2			NO2_2 Virtual span coefficient
8365		float	1	0.7	1.4			NOx Virtual span coefficient
8367		float	1	0.5	2			NH3 Virtual span coefficient
8369		float	1	0.5	2			NH3_2 Virtual span coefficient
8371		float	1	0.5	2			NT Virtual span coefficient
8373		float	1	0.5	2			NO high Virtual span coefficient
8375		float	1	0.75	1.05			NO2 high Virtual span coefficient
8377		float	1	0.5	2			NO2_2 high Virtual span coefficient
8379		float	1	0.7	1.4			NOx high Virtual span coefficient
8381		float	1	0.5	2			NH3 high Virtual span coefficient
8383		float	1	0.5	2			NH3_2 high Virtual span coefficient
8385		float	1	0.5	2			NT Virtual span high coefficient

8387		unsigned16	0	0				0=NOT_DONE 1=RESET_DONE 2=AUTO_BKG_NO_DONE 3=MAN_BKG_NO_DONE 4=AUTO_BKG_NOX_DONE 5=MAN_BKG_NOX_DONE 6=AUTO_BKG_NT_DONE 7=MAN_BKG_NT_DONE 8=AUTO_BKG_PRE_DONE 9=MAN_BKG_PRE_DONE 10=AUTO_SPAN_NO_DONE 11=MAN_SPAN_NO_DONE 12=AUTO_SPAN_NO2_DONE 13=MAN_SPAN_NO2_DONE 14=AUTO_SPAN_NOX_DONE 15=MAN_SPAN_NOX_DONE 16=AUTO_SPAN_NO2_2_DONE 17=MAN_SPAN_NO2_2_DONE 18=AUTO_SPAN_NH3_DONE 19=MAN_SPAN_NH3_DONE 20=AUTO_SPAN_NH3_2_DONE 21=MAN_SPAN_NH3_2_DONE 22=AUTO_SPAN_NT_DONE 23=MAN_SPAN_NT_DONE 24=AUTO_HI_SPAN_NO_DONE 25=MAN_HI_SPAN_NO_DONE 26=AUTO_HI_SPAN_NO2_DONE 27=MAN_HI_SPAN_NO2_DONE 28=AUTO_HI_SPAN_NOX_DONE 29=MAN_HI_SPAN_NOX_DONE 30=AUTO_HI_SPAN_NO2_2_DONE 31=MAN_HI_SPAN_NO2_2_DONE 32=AUTO_HI_SPAN_NH3_DONE 33=MAN_HI_SPAN_NH3_DONE 34=AUTO_HI_SPAN_NH3_2_DONE 35=MAN_HI_SPAN_NH3_2_DONE 36=AUTO_HI_SPAN_NT_DONE 37=MAN_HI_SPAN_NT_DONE 100=AUTO_PMT_VOLTAGE_DONE 101=AUTO_PMT_VOLTAGE_STOP_DONE 102=AUTO_PMT_VOLTAGE_EXIT_DONE 103=MAN_PMT_VOLTAGE_DONE 104=DEFAULT_PMT_VOLTAGE_DONE 150 = SCHED_AUTO_BKG_CHECK_DONE 151 = SCHED_AUTO_SPAN_CHECK_DONE 152 = SCHED_AUTO_BKG_CAL_DONE 153 = SCHED_AUTO_SPAN_CAL_DONE
8388		unsigned16	0	0				0=Undefined1=Pass2=Too low3=Too high
8389		unsigned16	0	0	1			0=No action1=Set to new value
10000		string		0	50	characters		SMTP Server address for emails
10025		unsigned16	25	0				SMPT port for sending emails
10026		string		0	255	characters		E-mail From address for sending emails
10154		string		0	16	characters		E-mail password for sending emails
10162		string		0	255	characters		PCP email address
10290		string		0	255	characters		Contact Information: To: User email address
10418		string		0	255	characters		Contact Information: CC: User email address 1
10546		string		0	255	characters		Contact Information: CC: User email address 2
10674		string		0	255	characters		Contact Information: CC: User email address 3
10802		string		0	255	characters		Contact Information: CC: User email address 4
10930		string		0	255	characters		Contact Information: CC: User email address 5
11058		string		0	255	characters		Contact Information: CC: User email address 6
11186		string		0	255	characters		Contact Information: CC: User email address 7
11314		string		0	255	characters		Contact Information: CC: User email address 8
11442		string		0	255	characters		Contact Information: CC: User email address 9
11570		string		0	255	characters		Contact Information: CC: User email address 10
11442		string		0	255	characters		Contact Information: CC: User email address 9
11570		string		0	255	characters		Contact Information: CC: User email address 10
11186		string		0	255	characters		Contact Information: CC: User email address 7
11314		string		0	255	characters		Contact Information: CC: User email address 8
11442		string		0	255	characters		Contact Information: CC: User email address 9
11570		string		0	255	characters		Contact Information: CC: User email address 10
11442		string		0	255	characters		Contact Information: CC: User email address 9
11570		string		0	255	characters		Contact Information: CC: User email address 10

USA
27 Forge Parkway
Franklin, MA 02038
Ph: (508) 520-0430
Toll Free: (866) 282-0430
orders.aqi@thermofisher.com
Find out more at **thermofisher.com/iQSeries**