

Modbus TCP Register List

BoxManager for Exhaust fans

Valid for firmware version 3.0 or later

Overview

Modbus can access single addresses or multiple addresses simultaneously; either reading or writing single bit values or 16-bit values.

A Modbus address contains either a 1-bit discrete value or a 16-bit integer value.

Modbus ID

The default Modbus ID for BoxManager is **60**.

Modbus Addressing

1-based: Modbus registers and bit numbers are assumed to start the numbering from 1.

Modbus data types

1-bit values or 16-bit values

Modbus Type	Description	Reference
Coil Status	Discrete Output (R/W)	0x
Input Status	Discrete Input (RO)	1x
Input Register	16-bit Register (RO)	3x
Holding Register	16-bit Register (R/W)	4x

Supported Modbus commands

The BoxManager Control Unit support these Modbus commands:

Function code	Description
01	Read Coil Status
02	Read Input Status
03	Read Holding Registers
04	Read Input Registers
05	Force Single Coil
06	Present Single Registers
08	Diagnostics
15	Force Multiple Colis
16	Preset Multiple Registers

Modbus	Designation	Min/Max	Note
000273	Activation of Manual Operation for Output - F.GQ1 Fan 0=Auto, 1=Manual	0-1	
000433	Alarm Reset - Fire Write 1 to this bit to reset Fire Alarm	0-1	
000434	Alarm Reset - F.BT1 Sensor Alarm Write 1 to this bit to reset F.BT1 Sensor Alarm	0-1	
000435	Alarm Reset - BT1 Sensor Alarm Write 1 to this bit to reset BT1 Sensor Alarm	0-1	
000436	Alarm Reset - F.BP1/F.BF1 Regulator Deviation Alarm Write 1 to this bit to reset Regulator Deviation Alarm	0-1	
000437	Alarm Reset - F.GQ1 Fan Alarm Write 1 to this bit to reset Fan Alarm	0-1	
000438	Alarm Reset - Smoke Detector Service Alarm Write 1 to this bit to reset Smoke Detector Service Alarm	0-1	
000446	Alarm Reset - F.QM1 Damper Alarm Write 1 to this bit to reset F.QM1 Damper Alarm	0-1	
000447	Alarm Reset - QM Damper Sum Alarm Write 1 to this bit to reset QM1 Damper Sum Alarm	0-1	
002017	Activation of Manual Operation for Digital Output - DO 1 (Reserve) 0=Auto, 1=Manual	0-1	
002018	Activation of Manual Operation for Digital Output - DO 2 (Reserve) 0=Auto, 1=Manual	0-1	
002019	Activation of Manual Operation for Digital Output - DO 3 (Reserve) 0=Auto, 1=Manual	0-1	
002020	Activation of Manual Operation for Digital Output - DO 4 (Reserve) 0=Auto, 1=Manual	0-1	
002021	Activation of Manual Operation for Digital Output - DO 5 (Reserve) 0=Auto, 1=Manual	0-1	
002022	Activation of Manual Operation for Digital Output - DO 6 (Reserve) 0=Auto, 1=Manual	0-1	
002023	Activation of Manual Operation for Digital Output - DO 7 F.QM1 (Damper) 0=Auto, 1=Manual	0-1	
002033	DO 1 Manual Override Manual operation for DO 1 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
002034	DO 2 Manual Override Manual operation for DO 2 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
002035	DO 3 - Activate Heat Pump Manual Override Manual operation for DO 3 must be activated to be able to write to this parameter (0=OFF, 1=ON)		

Modbus	Designation	Min/Max	Note
002036	DO 4 Manual Override Manual operation for DO 4 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
002037	DO 5 Manual Override Manual operation for DO 5 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
002038	DO 6 Manual Override Manual operation for DO 6 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
002039	DO 7 F.QM1 - Fire Bypass Damper Manual Override Manual operation for F.QM1 must be activated to be able to write to this parameter (0=OFF, 1=ON)	0-1	
006169	Alarm Reset - Smoke Detector in SC2 address 21 Write 1 to this bit to reset Smoke Detector Alarm in SC2.21	0-1	
006170	Alarm Reset - Smoke Detector in SC2 address 22 Write 1 to this bit to reset Smoke Detector Alarm in SC2.22	0-1	
006171	Alarm Reset - Smoke Detector in SC2 address 23 Write 1 to this bit to reset Smoke Detector Alarm in SC2.23	0-1	
006172	Alarm Reset - Smoke Detector in SC2 address 24 Write 1 to this bit to reset Smoke Detector Alarm in SC2.24	0-1	

DISCRETE STATUS - 1-bit (RO)

Modbus	Designation	Min/Max	Note
100129	Digital Output - DO 1 (Reserve)	0-1	
100130	Digital Output - DO 2 (Reserve)	0-1	
100131	Digital Output - DO 3 (Reserve)	0-1	
100132	Digital Output - DO 4 (Reserve)	0-1	
100133	Digital Output - DO 5 (Reserve)	0-1	
100134	Digital Output - DO 6 (Reserve)	0-1	
100135	Digital Output - DO 7 (F.QM1 - Damper Output)	0-1	
100145	Digital Input Status - DI 1 (Reserve)	0-1	
100146	Digital Input Status - DI 2 (Fire)	0-1	
100147	Digital Input Status - DI 3 (Reserve)	0-1	
100148	Digital Input Status - DI 4 (Forced Fan Control)	0-1	
100149	Digital Input Status - DI 5 (F.GQ1 Fan Alarm)	0-1	
100150	Digital Input Status - DI 6 (Reserve)	0-1	
100151	Digital Input Status - DI 7 (F.QM1 Damper Closed)	0-1	
100152	Digital Input Status - DI 8 (F.QM1 Damper Open)	0-1	
100153	Digital Input Status - DI 9 (SF1 Extended Run)	0-1	
100241	F.GQ1 (EA) Fan is running	0-1	
100242	Alarm Status - Fire Alarm via Digital Input (DI2)	0-1	
100255	Copy of bit 100135 - DO 7 (F.QM1 - Damper Output)	0-1	
100287	Alarm Status - B-Alarm (Priority B)	0-1	
100288	Alarm Status - A-Alarm (Priority A)	0-1	
100401	Alarm Status - Fire Alarm This bit is set to 1 if the Fire Alarm is active, no matter what source it comes from	0-1	
100402	Alarm Status - F.BT1 (Extract Air) Sensor Alarm	0-1	
100403	Alarm Status - BT1 (Outdoor) Sensor Alarm	0-1	
100404	Alarm Status - F.BP1/F.BF1 Regulator Deviation Alarm	0-1	
100405	Alarm Status - F.GQ1 Fan Alarm	0-1	
100406	Alarm Status - Smoke Detector Service Alarm	0-1	
100414	Alarm Status - F.QM1 Damper Alarm	0-1	
100415	Alarm Status - QM Damper Sum Alarm	0-1	

INPUT REGISTER - 16-bit integer value (RO)

Modbus	Designation	Min/Max	Note
300032	Copy of Holding Parameter 400032 - Alarm Reset	0-1	
300033	F.BP1 - Extract Air Duct Pressure	0-9999	Pa
300034	F.BF1 - Differential Pressure	0-9999	Pa
300035	F.BF1 - Air Flow	0-9999	l/s
300036	F.BT1 - Extract Air Temperature	-55.0-125.0	°C
300041	BT1 - Outdoor Temperature	-55.0-125.0	°C
300049	F.GQ1 - Fan Output Value	0-4096	4096 = 100%
300079	Zero parameter This value will always be 0	0	
300177	Copy of Holding Parameter 400177 - Year	2000-2099	
300178	Copy of Holding Parameter 400178 - Month	1-12	
300179	Copy of Holding Parameter 400179 - Date	0-31	
300180	Copy of Holding Parameter 400180 - Hour	0-23	
300181	Copy of Holding Parameter 400181 - Minute	0-59	
300182	Copy of Holding Parameter 400182 - Second	0-59	
300183	Copy of Holding Parameter 400183 - Weekday	1-7	
300184	Copy of Holding Parameter 400184 - Control Register	0-3	
300289	F.BF1/F.BP1 Regulator Current Setpoint	0-9999	Pa (or l/s)
300576	F.BF1/F.BP1 Regulator Current Offset		
301153. 16H	Air Handling Unit Identity String containing 16 letters	ABCDEFGH...	String

HOLDING REGISTER - 16-bit integer value (R/W)

Modbus	Designation	Min/Max	Note
400032	Alarm Reset Write 1 to this parameter to reset all alarms in the unit	0-1	
400049	F.GQ1 - Fan Output Value Manual operation for F.GQ1 must be activated to be able to write to this parameter	0-4096	4096 = 100%
400177	Year Setting for the internal clock	2000-2099	
400178	Month Setting for the internal clock	1-12	
400179	Date Setting for the internal clock	0-31	
400180	Hour Setting for the internal clock	0-23	
400181	Minute Setting for the internal clock	0-59	
400182	Second Setting for the internal clock	0-59	
400183	Weekday Setting for the internal clock (1 = Monday, 7 = Sunday)	1-7	
400184	Control Register Write 1 to this register to stop the clock. Then you will be able to change the clock registers above. Write 3 to this register to start the clock again	0-3	
432772	Unit Start/Stop If the Air Handling unit is set to use Start/Stop via Modbus, this parameter can be used to start and stop the unit 0 = Air Handling Unit Stopped 1 = Air Handling Unit Running	0-1	
432782	F.GQ1 Max Limitation Value	0-4096	4096 = 100%
432783	F.GQ1 Max Limitation Value (during fire)	0-4096	4096 = 100%
432805	F.BP1 - Pressure Regulator - I-time	0-3600	s
432806	F.BP1 - Pressure Regulator - P-Band	0-9999	Pa
432807	F.BF1 - Air Flow Regulator - I-time	0-3600	s
432808	F.BF1 - Air Flow Regulator - P-Band	0-9999	l/s
432814	F.BP1 - Pressure Regulator - Deviation Alarm Level	0-9999	Pa
432816	F.BF1 - Air Flow Regulator - Deviation Alarm Level	0-9999	l/s
433163	External Fire Dampers Exercise Start Time (Hour)	0-23	h
433164	External Fire Dampers Exercise Start Time (Minute)	0-59	min
433165	External Fire Dampers Exercise Interval	0-20160	min
433282	F.BT1 Sensor - Alarm Delay	0-21600	s
433283	BT1 Sensor - Alarm Delay	0-21600	s
433284	F.BF1/F.BP1 Flow/Pressure Regulator - Alarm Delay	0-21600	s
433285	F.GQ1 Fan - Alarm Delay	0-21600	s
433286	Smoke Detector Service Alarm Delay	0-21600	s
433314	F.BP1 - Pressure Regulator - Setpoint (Setting)	0-9999	Pa
433315	F.BF1 - Air Flow Regulator - Setpoint (Setting)	0-9999	l/s
433326	F.GQ1 - Forced Fan Control When DI4 is active, F.GQ1 operates according to the Forced Fan Control value. Only Fire Alarm and Fan Alarm are handled in this operating mode.	0-4096	4096 = 100%

HOLDING REGISTER - 16-bit integer value (R/W)

Modbus	Designation	Min/Max	Note
433329	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 1	-9999-9999	Pa (or l/s)
433330	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 2	-9999-9999	Pa (or l/s)
433331	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 3	-9999-9999	Pa (or l/s)
433332	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 4	-9999-9999	Pa (or l/s)
433333	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 5	-9999-9999	Pa (or l/s)
433334	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 6	-9999-9999	Pa (or l/s)
433335	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 7	-9999-9999	Pa (or l/s)
433336	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 8	-9999-9999	Pa (or l/s)
433337	F.BP1/F.BF1 Setpoint Offset Curve - Pressure/Flow 9	-9999-9999	Pa (or l/s)
433345	F.BP1/F.BF1 Setpoint Offset Curve - Temp 1	-40.0-99.0	°C
433346	F.BP1/F.BF1 Setpoint Offset Curve - Temp 2	-40.0-99.0	°C
433347	F.BP1/F.BF1 Setpoint Offset Curve - Temp 3	-40.0-99.0	°C
433348	F.BP1/F.BF1 Setpoint Offset Curve - Temp 4	-40.0-99.0	°C
433349	F.BP1/F.BF1 Setpoint Offset Curve - Temp 5	-40.0-99.0	°C
433350	F.BP1/F.BF1 Setpoint Offset Curve - Temp 6	-40.0-99.0	°C
433351	F.BP1/F.BF1 Setpoint Offset Curve - Temp 7	-40.0-99.0	°C
433352	F.BP1/F.BF1 Setpoint Offset Curve - Temp 8	-40.0-99.0	°C
433353	F.BP1/F.BF1 Setpoint Offset Curve - Temp 9	-40.0-99.0	°C
433358	F.QM1 Exercise Start Time (Hour)	0-23	h
433359	F.QM1 Exercise Start Time (Minute)	0-59	min
433365	F.QM1 Exercise Interval	0-20160	min
433366	F.QM1 Exercise Time	0-600	s
433366	F.BT1 Fire Alarm Temperature	38.0-45.0	°C
433393	Time Channel Monday - Start Hour	0-24	h
433394	Time Channel Monday - Stop Hour	0-24	h
433395	Time Channel Tuesday - Start Hour	0-24	h
433396	Time Channel Tuesday - Stop Hour	0-24	h
433397	Time Channel Wednesday - Start Hour	0-24	h
433398	Time Channel Wednesday - Stop Hour	0-24	h
433399	Time Channel Thursday - Start Hour	0-24	h
433400	Time Channel Thursday - Stop Hour	0-24	h
433401	Time Channel Friday - Start Hour	0-24	h
433402	Time Channel Friday - Stop Hour	0-24	h
433403	Time Channel Saturday - Start Hour	0-24	h
433404	Time Channel Saturday - Stop Hour	0-24	h
433405	Time Channel Sunday - Start Hour	0-24	h
433406	Time Channel Sunday - Stop Hour	0-24	h
433505	Time Channel Monday - Start Minute	0-59	min
433506	Time Channel Monday - Stop Minute	0-59	min
433507	Time Channel Tuesday - Start Minute	0-59	min
433508	Time Channel Tuesday - Stop Minute	0-59	min
433509	Time Channel Wednesday - Start Minute	0-59	min
433510	Time Channel Wednesday - Stop Minute	0-59	min
433511	Time Channel Thursday - Start Minute	0-59	min
433512	Time Channel Thursday - Stop Minute	0-59	min
433513	Time Channel Friday - Start Minute	0-59	min
433514	Time Channel Friday - Stop Minute	0-59	min
433515	Time Channel Saturday - Start Minute	0-59	min
433516	Time Channel Saturday - Stop Minute	0-59	min
433517	Time Channel Sunday - Start Minute	0-59	min
433518	Time Channel Sunday - Stop Minute	0-59	min

HOLDING REGISTER - 16-bit integer value (R/W)

Modbus	Designation	Min/Max	Note
433921. 16H	Air Handling Unit Identity String containing 16 letters	ABCDEFGH...	String