Register List Modbus RTU – Universal Field Controller FSC-UFC24

Version: March 2016

Slave 1-127, Time Out 100mS, Baud 9600, Parity none, 8 bit, 1 stop bit

All Registers Signed Integer 16 bit (Holding Registers 4XXXX)

Commands: 0x03 = Read Holding Registers / 0x06 = Preset Single Register / 0x10 = Preset Multiple Registers.

Registers Dec.(Hex)	Value	Description	R/W	Default	Remarks	Function Fire Damper in the UFC24 Software	Function Smoke Damper in the UFC24 Software
0 (0000)	102.....102	Software_Version	R				
1 (0001)	1-On , 0-Off	DI_Close	R		effective, override		
2 (0002)	1-On , 0-Off	DI_Open	R		efffective, override		
3 (0003)	1-On , 0-Off	SelectTwoOneInput	R		read only	If fire damper with only one end switch is used this functionality can be chosen.	
4 (0004)	1-On , 0-Off	RelayDamper	R/W	0-Off	Relay in the UFC indicating power	If relay off - actuator is moving to open position, if relay on - damper closing, if power off - damper closing (spring)	If relay on (power) the damper is moving over the end switch and goes back to close position. Once UFC24 got a control signal - this is stored and the smoke damper after power loss will always move to the position of the last command as soon as power is back
5 (0005)	0...10 V	Analoge Output Status Controller	R		0...10V analog output, signal is always available even if the unit is operated on bus		
6 (0006)	1-On , 0-Off	DI1_ManualOverride-Physical Input	R		read only	If the manual override is activated the a relais is switched off, the power is interrupted and the damper is closing	If the manual override is activated the signal for the damper actuator is changed and the damper actuator is moving to the opposite position
7 (0007)	1-On , 0-Off	DI2_SmokeDetector-Physical Input	R		read only	The smoke detector indicates alarm	The smoke detector indicates alarm
8 (0008)	1-On , 0-Off	DI3_ThermoElectric-Physical Input	R		read only	The thermoelectric tripping device is activated - relais is switched off - the fire damper is closing	No functionality for the smoke damper, only message to the controller
9 (0009)	1-On , 0-Off	LED_Close	R		Indication LED		
10 (000A)	1-On , 0-Off	LED_Open	R		Indication LED		
11 (000B)	1-On , 0-Off	LED_Status	R		Indication LED		
12 (000C)	1-On , 0-Off	LED_Error	R		Indication LED		
13 (000D)	1-On , 0-Off	Relay Damper	R/W	0-Off	Relay in the UFC indicating power	If relay off - actuator is moving to open position, if relay on - damper closing, if power off - damper closing (spring)	If relay on (power) the damper is moving over the end switch and goes back to close position. Once UFC24 got a control signal - this is stored and the smoke damper after power loss will always move to the position of the last command as soon as power is back
14 (000E)	1-NC , 0-NO	DI1_ManualOverride_Normally Close/Open	R/W	0-N.Open	digitally open/close damper	If the manual override is activated the a relais is switched off, the power is interrupted and the damper is closing	If the manual override is activated the signal for the damper actuator is changed and the damper actuator is moving to the opposite position. In case of power loss the last command is stored. As soon as power is back the actuator will continue to move to the position of the last command.
15 (000F)	1-NC , 0-NO	DI2_SmokeDetector_Normally Close/Open	R/W	1-N.Close	Position can be changed by software. UFC24 will be delivered with a jumper (bridge) as plug and play solution	The smoke detector indicates alarm - the signal is sent to the controller. With dipswitch no. 7 one can choose whether the signal is only sent to the controller (as FC24) and the set up in the controller will start any activities (dipswitch off) or whether the actuator connected to the UFC24 will close immediately(dipswitch on) .	The smoke detector indicates alarm to the controller. For smoke detection always the controller has to give the command. Dipswitch no. 7 does not have any functionality for smoke extraction.
16 (0010)	1-NC , 0-NO	DI3_ThermoElectric_Normally Close/Open	R/W	1-N.Close	Position can be changed by software. UFC24 will be delivered with a jumper (bridge) as plug and play solution	The thermoelectric tripping device is activated - relais is switched off - the fire damper is closing	No functionality for the smoke damper, only message to the controller
17 (0011)	1-On , 0-Off	Dip Switch Selection – Fire Application	R		Selection functionality on Conf dip switch bar		
18 (0012)	1-On , 0-Off	Dip Switch Selection – Smoke Application	R		Selection functionality on Conf dip switch bar		
19, (0013)	1-On , 0-Off	Dip Switch Selection – Bus Application	R		Selection functionality on Conf dip switch bar		
20 (0014)	1-On , 0-Off	Dip Switch Selection - Analogue Application	R		Selection functionality on Conf dip switch bar		
21 (0015)	1-On , 0-Off	ManualOverride_Effective	R		Shows the real position		
22 (0016)	1-On , 0-Off	SmokeDetector_Effective	R		Shows the real position		
23 (0017)	1-On , 0-Off	ThermoElectric_Effective	R		Shows the real position		
24 (0018)	1-On , 0-Off	DamperMoving	R		Damper is between the two end switches		
25 (0019)	1-On , 0-Off	TestButton	R		Test button on the UFC24 for on site testing	- Power on the UFC24: actuator (damper) opening until end position is reached - Pushing test button will interrupt the power supply (UFC24 relais) to the actuator. Spring is closing the actuator - As soon as test button is released the power comes back and the damper will open again	- Pushing test button: the smoke damper is moving in the opposite direction - release the test button: the smoke damper is moving back into original position
26 (001A)	1-On , 0-Off	Damper Close	R		Feedback damper position, indicated by the end switches of the actuator		
27 (001B)	1-On , 0-Off	Damper Open	R		Feedback damper position, indicated by the end switches of the actuator		
28 (001C)	1-On , 0-Off	Dip Switch - SelectTwoOneInputPosition	R		Dip switch for one actuator end switch functionality is activated		
29 (001D)	1-On , 0-Off	FullAutoTest	R/W	0-Normal	Activation of a full automatic test run of the actuator	The fire damper actuator is closing (spring) and remains in the closed position as long as the damper check time is set. After the time passed the actuator will open again until the end switch has been reached. If one of the end switches is not reached within the damper test time (register 39) - an error message is sent.	The fire damper actuator is moving to the opposite direction and remains in that position as long as the damper check time is set (i.e. 90 sec = the process has to be finished after 90 seconds) . After the time passed the actuator will move back to the original position until the end switch has been reached (90 seconds for the 2nd move again). If one of the end switches is not reached within the damper test time (register 39) in a test move - an error message is sent.
30 (001E)	1-On , 0-Off	Dip Switch Smoke Alarm Enable	R		Dip Switch no 7 - functionality see reg nr. 10	The smoke detector indicates alarm - the signal is sent to the controller. With dipswitch no. 7 one can choose whether the signal is only sent to the controller (as FC24) and the set up in the controller will start any activities (dipswitch off) or whether the actuator connected to the UFC24 will close immediately(dipswitch on) .	The smoke detector indicates alarm to the controller. For smoke detection always the controller has to give the command. Dipswitch no. 7 does not have any functionality for smoke extraction.
31 (001F)	1-On , 0-Off	Smoke Alarm Enable	R/W		Set same functionality as dip swith no. 7 by software	The smoke detector indicates alarm - the signal is sent to the controller. With dipswitch no. 7 one can choose whether the signal is only sent to the controller (as FC24) and the set up in the controller will start any activities (dipswitch off) or whether the actuator connected to the UFC24 will close immediately(dipswitch on) .	The smoke detector indicates alarm to the controller. For smoke detection always the controller has to give the command. Dipswitch no. 7 does not have any functionality for smoke extraction.
32 (0020)	1-On , 0-Off	Smoke Alarm Enable Effective	R		Shows the real position of 33 and/or 34		
33 (0021)	1-On , 0-Off	SetFactoryDefault	R/W		If activated all settings going back to factory default values		
34 (0022)	1-On , 0-Off	Clear Message	R/W		Reset messages indicated		
35 (0023)	0...180 Sec	DI1_ManualOverride_OnDelay	R/W	0-Sec		Delay functionality	
36 (0024)	0...180 Sec	DI2_SmokeDetector_ OnDelay	R/W	0-Sec			
37 (0025)	0...180 Sec	DI3_ThermoElectric_ OnDelay	R/W	0-Sec			
38 (0026)	960-1920-3840-7680	BaudRate	R				
39 (0027)	0-50-100 %	DamperPosition	R		Indicates damper position	0%= damper actuator end switch closed is active; 50% = no damper actuator switch is activated; actuator is moving or stands between the end switches; 100% damper actuator end switch open is active	0%= damper actuator end switch closed is active; 50% = no damper actuator switch is activated; actuator is moving or stands between the end switches; 100% damper actuator end switch open is active
40 (0028)	0...360 Sec	DamperCheckTime	R/W	90-Sec	Time to control running time of the actuator between the end switches, can be adapted.	Command by the controls that the actuator has to close/open. If the actuator does not reach the other end switch within the dedicated time an error message is sent. Automatic run time test done by activating the automatic test run - see detailed description of reg 32.	Command by the controls that the actuator has to close/open. If the actuator does not reach the other end switch within the dedicated time an error message is sent. Automatic run time test done by activating the automatic test run - see detailed description of reg 32.
41 (0029)	1....8	ErrorMessage 1. Normal 2. Actuator Not Reach End Position 3. Smoke Detector On 4. Tripping On 5. Any Other Error 6. Test In Progress 7. Test Report Normal 8. Test Report Error	R		Error messages 1-8 indicate the system message and activate the error LED: 1. Normal 2. Actuator Not Reache End Position 3. Smoke Detector On 4. Tripping On 5. Any Other Error 6. Test In Progress 7. Test Report Normal 8. Test Report Error		indicates normal position, it is not an error message but belongs as normal or standard value into this list indicates that the actuator has not reached the end position, the upper end switch of the actuator is not activated Smoke detector input has been triggered, alarm message sent to the building automation system, if dip switch 7 is activated the damper is closing Thermo el tripping device has been triggered, damper closed
42 (002A)	0...1024	InternalParameters	R	Internal Use Only			
43 (002B)	-------	Device Instant – Works ONLY in Bacnet	R				
44 (002C)	0....360	Delay Alarm Communication	R/W	120-Sec	Bus Monitoring delay	If reg 45 activated the damper will move into close position after the time indicated (sec) at reg 44 and remain there until the bus communication comes back	No functionality for the smoke damper
45 (002D)	0...1	Logic Alarm Communication	R/W	0-Disable	Bus Monitoring on/off	If reg 45 activated (1) the damper will move into close position after the time indicated (sec) at reg 44 and remain there until the bus communication comes back. If not activated the damper remains in open position until triggered from any other source (thermoel. tripping device, smoke detector, digital input)	No functionality for the smoke damper