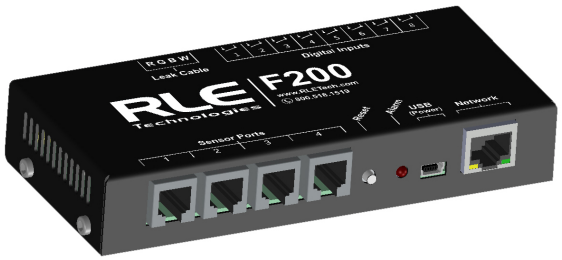
F200 - Modbus Communications



Thank you for purchasing a Falcon F200 monitoring appliance. Use this guide to configure the F200's Modbus communications feature.

If, after referencing this guide, you need further assistance with the F200 or its Modbus capabilities, please contact RLE Technologies via our website - rletech.com/support/ or call us at 800.518.1519.

Falcon

v06.21
Compatible with firmware version 4100.1 and above

RLE Technologies

Modbus Registers

The F200 uses Modbus TCP to communicate via Modbus. The F200 is configured to act as a Modbus Server device on a common network and is a Server device only – it will never initiate a communications sequence.

Read Output Registers			
Register	Description	Units	Range
40006	Sensors Connected Status	1 = Connected; 0 = Not connected	0-1
40009	Family Code (External Sensor 1)	None	0-65535
40010	Current Temperature Reading (External Sensor 1)	Celsius x 100	0-65535
40011	High Temperature Threshold (External Sensor 1)	Celsius x 100	0-65535
40012	Low Temperature Threshold (External Sensor 1)	Celsius x 100	0-65535
40013	Current Humidity Reading (External Sensor 1)	% Relative Humidity	0-65535
40014	High Humidity Threshold (External Sensor 1)	% Relative Humidity	0-65535
40015	Low Humidity Threshold (External Sensor 1)	% Relative Humidity	0-65535
40016	Family Code (External Sensor 2)	None	0-65535
40017	Current Temperature Reading (External Sensor 2)	Celsius x 100	0-65535
40018	High Temperature Threshold (External Sensor 2)	Celsius x 100	0-65535
40019	Low Temperature Threshold (External Sensor 2)	Celsius x 100	0-65535
40020	Current Humidity Reading (External Sensor 2)	% Relative Humidity	0-65535
40021	High Humidity Threshold (External Sensor 2)	% Relative Humidity	0-65535
40022	Low Humidity Threshold (External Sensor 2)	% Relative Humidity	0-65535
40023	Family Code (External Sensor 3)	None	0-65535
40024	Current Temperature Reading (External Sensor 3)	Celsius x 100	0-65535
40025	High Temperature Threshold (External Sensor 3)	Celsius x 100	0-65535

Read Output Registers			
40026	Low Temperature Threshold (External Sensor 3)	Celsius x 100	0-65535
Register	Description	Units	Range
40027	Current Humidity Reading (External Sensor 3)	% Relative Humidity	0-65535
40028	High Humidity Threshold (External Sensor 3)	% Relative Humidity	0-65535
40029	Low Humidity Threshold (External Sensor 3)	% Relative Humidity	0-65535
40030	Family Code (External Sensor 4)	None	0-65535
40031	Current Temperature Reading (External Sensor 4)	Celsius x 100	0-65535
40032	High Temperature Threshold (External Sensor 4)	Celsius x 100	0-65535
40033	Low Temperature Threshold (External Sensor 4)	Celsius x 100	0-65535
40034	Current Humidity Reading (External Sensor 4)	% Relative Humidity	0-65535
40035	High Humidity Threshold (External Sensor 4)	% Relative Humidity	0-65535
40036	Low Humidity Threshold (External Sensor 4)	% Relative Humidity	0-65535
40038	Current Temperature Reading (External Sensor 1)	Fahrenheit x 100	0-65535
40039	High Temperature Threshold (External Sensor 1)	Fahrenheit x 100	0-65535
40040	Low Temperature Threshold (External Sensor 1)	Fahrenheit x 100	0-65535
40045	Current Temperature Reading (External Sensor 2)	Fahrenheit x 100	0-65535
40046	High Temperature Threshold (External Sensor 2)	Fahrenheit x 100	0-65535
40047	Low Temperature Threshold (External Sensor 2)	Fahrenheit x 100	0-65535
40052	Current Temperature Reading (External Sensor 3)	Fahrenheit x 100	0-65535
40053	High Temperature Threshold (External Sensor 3)	Fahrenheit x 100	0-65535
40054	Low Temperature Threshold (External Sensor 3)	Fahrenheit x 100	0-65535
40059	Current Temperature Reading (External Sensor 4)	Fahrenheit x 100	0-65535
40060	High Temperature Threshold (External Sensor 4)	Fahrenheit x 100	0-65535
40061	Low Temperature Threshold (External Sensor 4)	Fahrenheit x 100	0-65535
40071	Leak is Detected	1 = Leak detected; 0 = No leak	0-1
40072	No Sensing Cable is Connected to Controller	1 = No cable; 0 = Cable is connected	0-1
40073	Cable Break Alarm	1 = Cable break; 0 = No cable break	0-1

Read Output Registers			
Register	Description	Units	Range
40080	Digital Input 1 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40081	Digital Input 2 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40082	Digital Input 3 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40083	Digital Input 4 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40084	Digital Input 5 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40085	Digital Input 6 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40086	Digital Input 7 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40087	Digital Input 8 State (Digital Input Current State)	1 = Input is closed; 0 = Input is open	0-1
40090*	Digital Input 1 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40091*	Digital Input 2 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40092*	Digital Input 3 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40093*	Digital Input 4 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40094*	Digital Input 5 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40095*	Digital Input 6 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40096*	Digital Input 7 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
40097*	Digital Input 8 Alarm (Digital Input Alarm Status)	1 = Currently in alarm; 0 = Normal	0-1
* NOTE: Readings for registers 40090 to 40097 will only = 1 if the dropdown option in the digital inputs notification dropdown in the web interface is set to an option other than "Disabled."			
40100	Digital Input 1 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40101	Digital Input 2 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40102	Digital Input 3 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40103	Digital Input 4 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40104	Digital Input 5 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40105	Digital Input 6 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40106	Digital Input 7 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1
40107	Digital Input 8 Normally Open (Digital Input Alarm Condition)	1 = Alarm when input closed; 0 = Alarm when input open	0-1

Digital Input Alarm Condition - Register 40003			
Register	Description	Units	Range
40003	Alarm Condition	1 or 0 (1 = when closed; 0 = when open)	0-1
Bit	Input	Setting	
00	Digital Input 1	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
01	Digital Input 2	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
02	Digital Input 3	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
03	Digital Input 4	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
04	Digital Input 5	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
05	Digital Input 6	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
06	Digital Input 7	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
07	Digital Input 8	1 = Alarms when contact is closed. 0 = Alarms when contact is open.	
08-15	Spare		

Digital Input Alarm Status - Register 40004			
Register	Description	Units	Range
40004	Digital Input Alarm Status	1 or 0 (1 = alarm; 0 = normal)	0-1
Bit	Input	Setting	
00	Digital Input 1	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
01	Digital Input 2	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
02	Digital Input 3	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
03	Digital Input 4	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
04	Digital Input 5	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
05	Digital Input 6	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
06	Digital Input 7	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
07	Digital Input 8	1 = Currently in alarm. 0 = In normal (non-alarm) condition.	
08-15	Spare		

Digital Input Current State - Register 40005			
Register	Description	Units	Range
40005	Digital Input Current State	1 or 0 (1 = closed; 0 = open)	0-1
Bit	Input	Setting	
00	Digital Input 1	1 = Input is closed. 0 = Input is open.	
01	Digital Input 2	1 = Input is closed. 0 = Input is open.	
02	Digital Input 3	1 = Input is closed. 0 = Input is open.	
03	Digital Input 4	1 = Input is closed. 0 = Input is open.	
04	Digital Input 5	1 = Input is closed. 0 = Input is open.	
05	Digital Input 6	1 = Input is closed. 0 = Input is open.	
06	Digital Input 7	1 = Input is closed. 0 = Input is open.	
07	Digital Input 8	1 = Input is closed. 0 = Input is open.	
08-15	Spare		