



# Watchdog Super Elite - WDC4 Modbus TCP Register Settings

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## Key

<b>Base Register</b>	30000
<b>Type</b>	Read Only
<b>Function Code</b>	Read Input Registers (04)
<b>Transmission Data Format</b>	Big Endian
<b>X</b>	Do Not Care Byte (Ignore)
<b>x</b>	Do Not Care Bit (Ignore)

## Section (Header)

### Table 1.0

Byte Order: (X:Device Type)

Base Register Address	Modbus Register	Setting
30000	0	Device Type

Device Type	Value
WDC4	1

### Table 1.1

Byte Order: (X:Protocol Version)

Base Register Address	Modbus Register	Setting
30000	1	Protocol Version

Protocol Version	Value
WDC4	1

### Table 1.2

Base Register Address	Modbus Register	Setting
30000	2	Main Microcontroller Firmware Version. Example Value 467 Decodes as 4.6.7

### Table 1.3

Base Register Address	Modbus Register	Setting
30000	3	Graphics Microcontroller Firmware Version. Example 467 Decodes as 4.6.7



**Table 1.4**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	4	Bottom Microcontroller Firmware Version. Example 439 Decodes as 4.3.9

## Section (System Status)

**Table 2.0**

Byte Order: (X:State)

Base Register Address	Modbus Register	Setting
30000	10	State

State	Value
INVALID	0
INITIALISING	1
STOPPED	2
STARTING	3
RUNNING	4
TEST_HBS	5
TEST_US	6
TEST_OS	7
TEST_ALIGN	8
TEST_ALM_RLY	9
STOPPING	10
NOT_CALIBRATED	11
CALIBRATION_WAIT	12
CALIBRATION_DELAY	13
CALIBRATING	14

**Table 2.1**

Byte Order: (X:SubState)

Base Register Address	Modbus Register	Setting
30000	11	Sub State

State	Value
NO_ALARMS	0
ALARM	1
SEE_MANUAL	2
START_ELEVATOR	3
STARTUP_TIMEOUT	4
CALIBRATION_IN_PROGRESS	5
CALIBRATION_ERROR	6
JOG_DELAY	7
INTERLOCK_OFF	8
COMMUNICATION_ERROR	9

**Table 2.2**

Base Register Address	Modbus Register	Setting
30000	12	Spare (Reserved)

**Table 2.3**

Byte Order: (X:xxxxx:Stop Rel:Alarm Rel: Interlock)

Base Register Address	Modbus Register	Setting
30000	13	Interlock & Relays

Flags	Bit position	Bit position meaning
Interlock	0	1 = ON; 0 = OFF
Alarm Relay	1	1 = Alarm; 0 = No Alarm
Stop Relay	2	1 = Running; 0 = Stopped

**Table 2.4**

Base Register Address	Modbus Register	Setting
30000	14	Time/Date: Year

Register format	Function
16 bit UINT	Year

**Table 2.5**

Base Register Address	Modbus Register	Setting
30000	15	Time/Date: Month

Register type	Function
16 bit UINT	Month

**Table 2.6**

Base Register Address	Modbus Register	Setting
30000	16	Time/Date: Day

Register type	Function
16 bit UINT	Day

**Table 2.7**

Base Register Address	Modbus Register	Setting
30000	17	Time/Date: Hour

Register type	Function
16 bit UINT	Hour

**Table 2.8**

Base Register Address	Modbus Register	Setting
30000	18	Time/Date: Minutes

Register type	Function
16 bit UINT	Minutes

**Table 2.9**

Base Register Address	Modbus Register	Setting
30000	19	Time/Date: Seconds

Register type	Function
16 bit UINT	Seconds

**Table 2.10**

Base Register Address	Modbus Register	Setting
30000	20	Machine Start Year*

Register type	Function
16 bit UINT	Year

**Table 2.11**

Base Register Address	Modbus Register	Setting
30000	21	Machine Start Month*

Register type	Function
16 bit UINT	Month

**Table 2.12**

Base Register Address	Modbus Register	Setting
30000	22	Machine Start Day*

Register type	Function
16 bit UINT	Day

**Table 2.13**

Base Register Address	Modbus Register	Setting
30000	23	Machine Start Hour*

Register type	Function
16 bit UINT	Hour

**Table 2.14**

Base Register Address	Modbus Register	Setting
30000	24	Machine Start Minutes*

Register type	Function
16 bit UINT	Minutes

**Table 2.15**

Base Register Address	Modbus Register	Setting
30000	25	Machine Start Seconds*

Register type	Function
16 bit UINT	Seconds

\*When first powered up the machine start time will be a default value until the system is started

**Table 2.16**

Byte Order: (X:M3:M2:M1)

Base Register Address	Modbus Register	Setting
30000	26-27	Machine Runtime Minutes

**Table 2.17**

Base Register Address	Modbus Register	Setting
30000	28	Selected Profile

Modbus Register 28 is reserved for future expansion of the profiles.

**Table 2.18**

Byte Order: (X:Pre-Notification Flag)

Base Register Address	Modbus Register	Setting
30000	29	Pre-Notification Enabled/Disabled Flag

Value	Function
0	OFF
1	ON

## Section (System Alarm)

**Table 3.0**

Base Register Address	Modbus Register	Setting
30000	39	Alarm Source

Value	State
0	NO ALARM
1	SPEED
2	ALIGNMENT HEAD
3	ALIGNMENT TAIL
4	HBS1
5	HBS2
6	HBS3
7	HBS4
8	HBS5
9	HBS6
10	AMBIENT 1
11	AMBIENT 2
16	PLUG
17	PULLEY
18	RUB TAIL LEFT
19	RUB TAIL RIGHT
20	RUB HEAD LEFT
21	RUB HEAD RIGHT
22	STARTUP
23	ACCELERATION

**Table 3.1**

Base Register Address	Modbus Register	Setting
30000	40	Alarm Condition

Alarm source if Modbus Register (39) = SPEED (1)	State
0	HEALTHY
1	SEVERE UNDER SPEED ALARM
2	UNDER SPEED ALARM
3	SEVERE OVER SPEED ALARM
4	OVER SPEED ALARM

Alarm source if Modbus Register (39) =TEMPERATURE (4-11 & 18-21)	State
0	HEALTHY
1	OPEN CIRCUIT ALARM
2	SHORT CIRCUIT ALARM
3	ABSOLUTE ALARM
4	RELATIVE ALARM
5	RATE OF RISE ALARM
6	COMMUNICATION ALARM
7	PRE ABSOLUTE ALARM

**Table 3.2**

Base Register Address	Modbus Register	Setting
30000	41	Current Time to Shutdown (Seconds)

**Table 3.3**

Base Register Address	Modbus Register	Setting
30000	42	Total Number of Alarms

This register holds the value of Total Number of current Alarms detected by WDC4.



**Table 3.4**

Base Register Address	Modbus Register	Setting
30000	43	Current Alarm Number

**This register simply scrolls from 0/1 to the value held by register 42. If WDC4 has detected 5 alarms, this register will change its value between 1 - 5.**

## Section (System Shutdown)

**Table 4.0**

Base Register Address	Modbus Register	Setting
30000	48	Shutdown Cause

Value	State
1	SPEED
2	ALIGNMENT HEAD
3	ALIGNMENT TAIL
4	HBS1
5	HBS2
6	HBS3
7	HBS4
8	HBS5
9	HBS6
10	AMBIENT 1
11	AMBIENT 2
16	PLUG
17	PULLEY
18	RUB TAIL LEFT
19	RUB TAIL RIGHT
20	RUB HEAD LEFT
21	RUB HEAD RIGHT
22	STARTUP
23	ACCELERATION

**Table 4.1**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	49	Shutdown Condition

<b>Condition if Modbus Register (48) = SPEED (1)</b>	<b>State</b>
0	HEALTHY
1	SEVERE UNDER SPEED ALARM
2	UNDER SPEED ALARM
3	SEVERE OVER SPEED ALARM
4	OVER SPEED ALARM

<b>Condition if Modbus Register (48) = TEMPERATURE (4-11 &amp; 18-21)</b>	<b>State</b>
0	HEALTHY
1	OPEN CIRCUIT ALARM
2	SHORT CIRCUIT ALARM
3	ABSOLUTE ALARM
4	RELATIVE ALARM
5	RATE OF RISE ALARM
6	COMMUNICATION ALARM
7	PRE ABSOLUTE ALARM

## Section (Speed)

**Table 5.0**

Base Register Address	Modbus Register	Setting
30000	56	Speed Monitoring Source

Enumeration	State
0	DISABLED
1	PULSED
2	DEDICATED
3	DIFFERENTIAL

**Table 5.1**

Base Register Address	Modbus Register	Setting
30000	57	Speed Status

Value	State
0	HEALTHY
1	SEVERE UNDER SPEED
2	UNDER SPEED
3	SEVERE OVER SPEED
4	OVER SPEED

**Table 5.2**

Base Register Address	Modbus Register	Setting
30000	58	Calibrated Speed Value

**Table 5.3**

Base Register Address	Modbus Register	Setting
30000	59	Running Speed in PPM

**Table 5.4**

Base Register Address	Modbus Register	Setting
30000	60	% of calibrated Speed

When speed source is set to differential this is the % ratio of the two speeds.

**Table 5.5**

Base Register Address	Modbus Register	Setting
30000	61	Scaling Factor * 100

**Table 5.6**

Base Register Address	Modbus Register	Setting
30000	62	Scaled Speed

**Table 5.7**

Base Register Address	Modbus Register	Setting
30000	63	% Under-speed before Alarm

**Table 5.8**

Base Register Address	Modbus Register	Setting
30000	64	% Severe Under-Speed before Alarm

**Table 5.9**

Base Register Address	Modbus Register	Setting
30000	65	% Over-speed before Alarm

**Table 5.10**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	66	% Severe Over-Speed before Alarm

## Section (Alignment)

**Table 6.0**

Base Register Address	Modbus Register	Setting
30000	<b>77</b>	Head Monitoring Type

Value	State
0	OFF
1	PULSED
2	CONTACT
3	RUB BLOCK

**Table 6.1**

Byte Order: (X:Left/Right)

Base Register Address	Modbus Register	Setting
30000	<b>78</b>	Head Status (Left/Right)

Value	State
0	HEALTHY
1	HEAD IN ALARM

**Table 6.2**

Base Register Address	Modbus Register	Setting
30000	<b>79</b>	Head Pair % Difference

The % difference between the left and right when alignment is set to pulsed.

**Table 6.3**

Base Register Address	Modbus Register	Setting
30000	<b>80</b>	Head Left Value

The PPM seen by the head left when alignment is pulsed. When alignment is Contact the value of this register is

0.

**Table 6.4**

Base Register Address	Modbus Register	Setting
30000	<b>81</b>	Head Right Value

The PPM seen by the head right when alignment is pulsed. When alignment is Contact the value of this register is 0.

**Table 6.5**

Base Register Address	Modbus Register	Setting
30000	<b>82</b>	Tail Monitoring Type

Value	State
0	OFF
1	PULSED
2	CONTACT
3	RUB BLOCK

**Table 6.6**

Byte Order: (X:Left/Right)

Base Register Address	Modbus Register	Setting
30000	<b>83</b>	Tail Status (Left/Right)

Value	State
0	HEALTHY
1	TAIL IN ALARM

**Table 6.7**

Base Register Address	Modbus Register	Setting
30000	<b>84</b>	Tail Pair % Difference

The % difference between the Left and Right when alignment is set to pulsed.



**Table 6.8**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>85</b>	Tail Left Value

The PPM value seen by the Tail Left when alignment is pulsed. When alignment is Contact the value of this register is 0.

**Table 6.9**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>86</b>	Tail Right Value

The PPM value seen by the Tail Right when alignment is pulsed. When alignment is Contact the value of this register is 0.

## Section (Rub Block)

**Table 7.0**

Base Register Address	Modbus Register	Setting
30000	<b>92</b>	Head Left Rub Block Status

Value	Status
-20000	OFF
0	HEALTHY
1	OPEN CIRCUIT ALARM
2	SHORT CIRCUIT ALARM
3	ABSOLUTE ALARM
4	RELATIVE ALARM
5	RATE OF RISE ALARM
6	COMMUNICATION ALARM
7	PRE ABSOLUTE ALARM

**Table 7.1**

Base Register Address	Modbus Register	Setting
30000	<b>93</b>	Head Left Rub Block Absolute Alarm Temperature

**Table 7.2**

Base Register Address	Modbus Register	Setting
30000	<b>94</b>	Head Left Rub Block Temperature

**Table 7.3**

Base Register Address	Modbus Register	Setting
30000	95	Head Right Rub Block Status

Value	Status
Refer to Values/Status definitions for the setting in Table 7.0	

**Table 7.4**

Base Register Address	Modbus Register	Setting
30000	96	Head Right Rub Block Absolute Alarm Temperature

**Table 7.5**

Base Register Address	Modbus Register	Setting
30000	97	Head Right Rub Block Temperature

**Table 7.6**

Base Register Address	Modbus Register	Setting
30000	98	Tail Left Rub Block Status

Value	Status
Refer to Values/Status definitions for the setting in Table 7.0	

**Table 7.7**

Base Register Address	Modbus Register	Setting
30000	99	Tail Left Rub Block Absolute Alarm Temperature

**Table 7.8**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>100</b>	Tail Left Rub Block Temperature

**Table 7.9**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>101</b>	Tail Right Rub Block Status

<b>Value</b>	<b>Status</b>
<b>Refer to Values/Status definitions for the setting in Table 7.0</b>	

**Table 7.10**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>102</b>	Tail Right Rub Block Absolute Alarm Temperature

**Table 7.11**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>103</b>	Tail Right Rub Block Temperature

## Section (Temperature)

**Table 8.0**

Base Register Address	Modbus Register	Setting
30000	110	HBS1 Status

Value	Status
-20000	OFF
0	HEALTHY
1	OPEN CIRCUIT ALARM
2	SHORT CIRCUIT ALARM
3	ABSOLUTE ALARM
4	RELATIVE ALARM
5	RATE OF RISE ALARM
6	COMMUNICATION ALARM
7	PRE ABSOLUTE ALARM

**Table 8.1**

Base Register Address	Modbus Register	Setting
30000	111	HBS1 Absolute Alarm Value

**Table 8.2**

Base Register Address	Modbus Register	Setting
30000	112	HBS1 Value

**Table 8.3**

Base Register Address	Modbus Register	Setting
30000	113	HBS2 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.4**

Base Register Address	Modbus Register	Setting
30000	114	HBS2 Absolute Alarm Value

**Table 8.5**

Base Register Address	Modbus Register	Setting
30000	115	HBS2 Value

**Table 8.6**

Base Register Address	Modbus Register	Setting
30000	116	HBS3 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.7**

Base Register Address	Modbus Register	Setting
30000	117	HBS3 Absolute Alarm Value

**Table 8.8**

Base Register Address	Modbus Register	Setting
30000	118	HBS3 Value

**Table 8.9**

Base Register Address	Modbus Register	Setting
30000	119	HBS4 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.10**

Base Register Address	Modbus Register	Setting
30000	120	HBS4 Absolute Alarm Value

**Table 8.11**

Base Register Address	Modbus Register	Setting
30000	121	HBS4 Value

**Table 8.12**

Base Register Address	Modbus Register	Setting
30000	122	HBS5 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.13**

Base Register Address	Modbus Register	Setting
30000	123	HBS5 Absolute Alarm Value

**Table 8.14**

Base Register Address	Modbus Register	Setting
30000	124	HBS5 Value

**Table 8.15**

Base Register Address	Modbus Register	Setting
30000	125	HBS6 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.16**

Base Register Address	Modbus Register	Setting
30000	126	HBS6 Absolute Alarm Value

**Table 8.17**

Base Register Address	Modbus Register	Setting
30000	127	HBS6 Value

**Table 8.18**

Base Register Address	Modbus Register	Setting
30000	128	AMB1 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	

**Table 8.19**

Base Register Address	Modbus Register	Setting
30000	129	AMB1 Absolute Alarm Value

**Table 8.20**

Base Register Address	Modbus Register	Setting
30000	130	AMB1 Value

**Table 8.21**

Base Register Address	Modbus Register	Setting
30000	131	AMB2 Status

Value	Status
Refer to Values/Status definitions for the setting in Table 8.0	



**Table 8.22**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>132</b>	AMB2 Absolute Alarm Value

**Table 8.23**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>133</b>	AMB2 Value

## Section 9 (Auxiliary)

**Table 9.0**

Byte Order: (X:xxxxx>Status:Alarm Condition:Enabled/Disable)

Base Register Address	Modbus Register	Setting
30000	151	Plug Monitoring

Flags	Bit Position	Bit position meaning
Enabled/Disabled	0	1 = Enabled; 0 = Disabled
Alarm Condition*	1	1 = ON; 0 = OFF
Status	2	1 = Healthy; 0 = Alarm

**Table 9.1**

Byte Order: (X:xxxxx>Status:Alarm Condition:Enabled/Disable)

Base Register Address	Modbus Register	Setting
30000	152	Pulley Monitoring

Flags	Bit Position	Bit position meaning	
Enabled/Disabled	0	1 = Enabled; 0 = Disabled	
Alarm Condition*	1	1 = ON; 0 = OFF	<b>When</b>
Status	2	1 = Healthy; 0 = Alarm	

\*  
Alarm

Condition is set to 1 (ON), the Status will change to Alarm if the +24 VDC signal is applied to the input terminal and vice versa.

## Section 10 (Test Mode)

**Table 10.0**

Byte Order: (X:xxx:ALIGN:HBS:US:OS:ALR)

Base Register Address	Modbus Register	Setting
30000	158	Test State

Flags	Bit Position
Alarm Relay Test	0
Over Speed Test	1
Under speed Test	2
HBS Test	3
Alignment Test	4

## Section 11 (Ethernet)

**Table 11.0**

Byte Order: (X:DHCP Status)

Base Register Address	Modbus Register	Setting
30000	164	DHCP Status

Value	State
0	DHCP disabled
1	DHCP Enabled

**Table 11.1a**

Base Register Address	Modbus Register	Setting
30000	165	IP Address (High)
<b>Note:</b> Two most significant octets of the IP address.		

**Table 11.1b**

Base Register Address	Modbus Register	Setting
30000	166	IP Address (Low)
<b>Note:</b> Two least significant octets of the IP address.		

**Table 11.2a**

Base Register Address	Modbus Register	Setting
30000	167	Subnet Mask (High)
<b>Note:</b> Two most significant octets of the Subnet Mask.		

**Table 11.2b**

Base Register Address	Modbus Register	Setting
30000	168	Subnet Mask (Low)
<b>Note:</b> Two least significant octets of the Subnet Mask.		

**Table 11.3a**

Base Register Address	Modbus Register	Setting
30000	169	Gateway (High)
<b>Note:</b> Two most significant octets of the Gateway.		

**Table 11.3b**

Base Register Address	Modbus Register	Setting
30000	170	Gateway (Low)
<b>Note:</b> Two least significant octets of the Gateway.		

**Table 11.4a**

Base Register Address	Modbus Register	Setting
30000	171	DNS Server 1 (High)
<b>Note:</b> Two most significant octets of the DNS1.		

**Table 11.4b**

Base Register Address	Modbus Register	Setting
30000	172	DNS Server 1 (Low)
<b>Note:</b> Two least significant octets of the DNS1.		

**Table 11.5a**

Base Register Address	Modbus Register	Setting
30000	173	DNS Server 2 (High)
<b>Note:</b> Two most significant octets of the DNS2.		

**Table 11.5b**

Base Register Address	Modbus Register	Setting
30000	174	DNS Server 2 (Low)
<b>Note:</b> Two least significant octets of the DNS2.		

**Table 11.6a**

Base Register Address	Modbus Register	Setting
30000	175	MAC Address (High)
<b>Note:</b> Two most significant octets of the MAC address.		

**Table 11.6b**

Base Register Address	Modbus Register	Setting
30000	176	MAC Address (Medium)
<b>Note:</b> Two medium octets of the MAC address.		

**Table 11.6c**

Base Register Address	Modbus Register	Setting
30000	177	MAC Address (Low)
<b>Note:</b> Two least significant octets of the MAC address.		

**Table 11.7a**

Base Register Address	Modbus Register	Setting
30000	178	UDF ID (High)
<b>Note:</b> Two most significant octets of the UDF ID.		

**Table 11.7b**

Base Register Address	Modbus Register	Setting
30000	179	UDF ID (Low)
<b>Note:</b> Two least significant octets of the UDF ID.		

**Table 11.8**

<b>Base Register Address</b>	<b>Modbus Register</b>	<b>Setting</b>
30000	<b>180</b>	HazardMon.com Status

<b>Value</b>	<b>State</b>
0	Disconnected
1	Connected

## Section 12 (SD Card)

**Table 12.0**

Byte Order: (X:SD Card Status)

Base Register Address	Modbus Register	Setting
30000	192	SD Card Status

Flags	Bit position	Bit position meaning
R/W ERROR	1	1 = R/W Error; 0 = No Error
SD CARD PRESENT	8	1 = Card Present; 0 = Card Not Present



## Section 13 (Add-On Cards)

**Table 13.0**

Byte Order: (xxxxxxx>Status: xxxx:R4:R3:R2:R1)

Base Register Address	Modbus Register	Setting
30000	<b>206</b>	EXP1, PLC Board 1

Flags	Bit Position	Bit position meaning
RLY 1 (SPEED)	0	1 = HEALTHY, 0 = ALARM
RLY 2 (ALIGN)	1	1 = HEALTHY, 0 = ALARM
RLY 3 (TEMP)	2	1 = HEALTHY, 0 = ALARM
RLY 4 (AUX)	3	1 = HEALTHY, 0 = ALARM
PLC CARD STATUS	8	1 = CONNECTED, 0 = NOT CONNECTED

**Table 13.1**

Byte Order: (xxxxxxx>Status: xxxx:R4:R3:R2:R1)

Base Register Address	Modbus Register	Setting
30000	<b>207</b>	EXP2, PLC Board 2

Flags	Bit Position	Bit position meaning
RLY 1 (SPEED)	0	1 = HEALTHY, 0 = ALARM
RLY 2 (ALIGN)	1	1 = HEALTHY, 0 = ALARM
RLY 3 (TEMP)	2	1 = HEALTHY, 0 = ALARM
RLY 4 (AUX)	3	1 = HEALTHY, 0 = ALARM
PLC CARD STATUS	8	1 = CONNECTED, 0 = NOT CONNECTED

## APPENDIX A

Section	Settings	Reference	Data Type	Byte Order	Total Reg	Start Reg	End Reg	
<b>1 (Header)</b>	Device Type	Table 1.0	UINT16	(X:Device Type)	1	0	0	
	Protocol Version	Table 1.1	UINT16	(X:Protocol Version)	1	1	1	
	Main Microcontroller Firmware Version	Table 1.2	UINT16		1	2	2	
	Graphic Microcontroller Firmware Version	Table 1.3	UINT16		1	3	3	
	Bottom Microcontroller Firmware Version	Table 1.4	UINT16		1	4	4	
	<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>5</b>	<b>5</b>	<b>9</b>	
<b>2 (System Status)</b>	State	Table 2.0	UINT16	(X:State)	1	10	10	
	Sub State	Table 2.1	UINT16	(X:SubState)	1	11	11	
	Spare (Reserved)	Table 2.2	UINT16		1	12	12	
	Interlock & Relays	Table 2.3	UINT16	(X:xxxx:Stop Rel:Alarm Rel: Interlock)	1	13	13	
	Time/Date: Year	Table 2.4	UINT16		1	14	14	
	Time/Date: Month	Table 2.5	UINT16		1	15	15	
	Time/Date: Day	Table 2.6	UINT16		1	16	16	
	Time/Date: Hour	Table 2.7	UINT16		1	17	17	
	Time/Date: Minute	Table 2.8	UINT16		1	18	18	
	Time/Date: Seconds	Table 2.9	UINT16		1	19	19	
	Machine Start Year	Table 2.10	UINT16		1	20	20	
	Machine Start Month	Table 2.11	UINT16		1	21	21	
	Machine Start Day	Table 2.12	UINT16		1	22	22	
	Machine Start Hour	Table 2.13	UINT16		1	23	23	
	Machine Start Minute	Table 2.14	UINT16		1	24	24	
	Machine Start Seconds	Table 2.15	UINT16		1	25	25	
	Machine Run Time Minutes	Table 2.16	UINT32	(X:M3:M2:M1)	2	26	27	
Selected Profile	Table 2.17	UINT16		1	28	28		
Pre-Notification Enabled/Disabled Flag	Table 2.18	UINT16	(X:Pre-Notification Flag)	1	29	29		
	<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>9</b>	<b>30</b>	<b>38</b>	
<b>3 (System Alarm)</b>	Alarm Source	Table 3.0	UINT16		1	39	39	
	Alarm Condition	Table 3.1	UINT16		1	40	40	
	Current Time To Shutdown	Table 3.2	UINT16		1	41	41	
	Total Number of Alarms	Table 3.3	UINT16		1	42	42	
	Current Alarm number	Table 3.4	UINT16		1	43	43	
		<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>4</b>	<b>44</b>	<b>47</b>
		<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>6</b>	<b>50</b>	<b>55</b>
<b>4 (System Shutdown)</b>	Shutdown Cause	Table 4.0	UINT16		1	48	48	
	Shutdown Condition	Table 4.1	UINT16		1	49	49	
		<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>6</b>	<b>50</b>	<b>55</b>
	Speed Monitoring Source	Table 5.0	UINT16		1	56	56	
	Speed Status	Table 5.1	UINT16		1	57	57	
	Calibrated Speed Value	Table 5.2	UINT16		1	58	58	
	Running Speed in PPM	Table 5.3	UINT16		1	59	59	
	% of calibrated speed	Table 5.4	UINT16		1	60	60	
	Scaling Factor * 100	Table 5.5	UINT16		1	61	61	
	Scaled Speed	Table 5.6	UINT16		1	62	62	
	Under Speed % Alarm	Table 5.7	UINT16		1	63	63	
	Severe Under Speed % Alarm	Table 5.8	UINT16		1	64	64	
	Over Speed % Alarm	Table 5.9	UINT16		1	65	65	
Severe Over Speed % Alarm	Table 5.10	UINT16		1	66	66		
	<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>10</b>	<b>67</b>	<b>76</b>	
<b>6 (Alignment)</b>	Head Monitoring Type	Table 6.0	UINT16		1	77	77	
	Contact/Pulsed	Table 6.1	UINT16	(X:Left/Right)	1	78	78	
	Head Pair Value % Difference	Table 6.2	UINT16		1	79	79	
	Head Left Value	Table 6.3	UINT16		1	80	80	
	Head Right Value	Table 6.4	UINT16		1	81	81	
	Tail Monitoring Type	Table 6.5	UINT16		1	82	82	
	Tail Status (Left OR Right)	Table 6.6	UINT16	(X:Left/Right)	1	83	83	
	Tail Pair Value % Difference	Table 6.7	UINT16		1	84	84	
	Tail Left Value	Table 6.8	UINT16		1	85	85	
	Tail Right Value	Table 6.9	UINT16		1	86	86	
	<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>5</b>	<b>87</b>	<b>91</b>	
<b>7 (Rub Block)</b>	Head Left Rub Block Status	Table 7.0	INT16		1	92	92	
	Head Left Rub Block Absolute Alarm Temp.	Table 7.1	INT16		1	93	93	
	Head Left Rub Block Temp.	Table 7.2	INT16		1	94	94	
	Head Right Rub Block Status	Table 7.3	INT16		1	95	95	
	Head Right Rub Block Absolute Alarm Temp.	Table 7.4	INT16		1	96	96	
	Head Right Rub Block Temp.	Table 7.5	INT16		1	97	97	
	Tail Left Rub Block Status	Table 7.6	INT16		1	98	98	
	Tail Left Rub Block Absolute Alarm Temp.	Table 7.7	INT16		1	99	99	
	Tail Left Rub Block Temp.	Table 7.8	INT16		1	100	100	
	Tail Right Rub Block Status	Table 7.9	INT16		1	101	101	
	Tail Right Rub Block Absolute Alarm Temp.	Table 7.10	INT16		1	102	102	
	Tail Right Rub Block Temp.	Table 7.11	INT16		1	103	103	
		<b>Reserved Registers</b>	<b>Reserved</b>	<b>UINT16</b>		<b>6</b>	<b>104</b>	<b>109</b>
	<b>8 (Temperature)</b>	HBS 1 Status	Table 8.0	INT16		1	110	110
HBS 1 Absolute Alarm Value		Table 8.1	INT16		1	111	111	
HBS 1 Value		Table 8.2	INT16		1	112	112	
HBS 2 Status		Table 8.3	INT16		1	113	113	
HBS 2 Absolute Alarm Value		Table 8.4	INT16		1	114	114	
HBS 2 Value		Table 8.5	INT16		1	115	115	
HBS 3 Status		Table 8.6	INT16		1	116	116	
HBS 3 Absolute Alarm Value		Table 8.7	INT16		1	117	117	
HBS 3 Value		Table 8.8	INT16		1	118	118	
HBS 4 Status		Table 8.9	INT16		1	119	119	
HBS 4 Absolute Alarm Value		Table 8.10	INT16		1	120	120	
HBS 4 Value		Table 8.11	INT16		1	121	121	
HBS 5 Status	Table 8.12	INT16		1	122	122		
HBS 5 Absolute Alarm Value	Table 8.13	INT16		1	123	123		

Section	Settings	Reference	Data Type	Byte Order	Total Reg	Start Reg	End Reg
	HBS 5 Value	Table 8.14	INT16		1	124	124
	HBS 6 Status	Table 8.15	INT16		1	125	125
	HBS 6 Absolute Alarm Value	Table 8.16	INT16		1	126	126
	HBS 6 Value	Table 8.17	INT16		1	127	127
	AMB 1 Status	Table 8.18	INT16		1	128	128
	AMB 1 Absolute Alarm Value	Table 8.19	INT16		1	129	129
	AMB 1 Value	Table 8.20	INT16		1	130	130
	AMB 2 Status	Table 8.21	INT16		1	131	131
	AMB 2 Absolute Alarm Value	Table 8.22	INT16		1	132	132
	AMB 2 Value	Table 8.23	INT16		1	133	133
	Reserved Registers	Reserved	UINT16		17	134	150
<b>9 (Auxiliary)</b>	Plug Monitoring	Table 9.0	UINT16	(X:xxxx:Status:Alarm Condition:Enabled/Disable)	1	151	151
	Pulley Monitoring	Table 9.1	UINT16	(X:xxxx:Status:Alarm Condition:Enabled/Disable)	1	152	152
	Reserved Registers	Reserved	UINT16		5	153	157
<b>10 (Test Mode)</b>	Test State (ALIGN, HBS, US, OS, ALR)	Table 10.0	UINT16	(X:xxx:ALIGN:HBS:US:OS:ALR)	1	158	158
	Reserved Registers	Reserved	UINT16		5	159	163
<b>11 (Ethernet)</b>	DHCP Status	Table 11.0	UINT16	(X:DHCP Status)	1	164	164
	IP Address	Table 11.1 a,b	UINT32	(OCTETS 4:3:2:1)	2	165	166
	Subnet Mask	Table 11.2 a,b	UINT32	(OCTETS 4:3:2:1)	2	167	168
	Gateway	Table 11.3 a,b	UINT32	(OCTETS 4:3:2:1)	2	169	170
	DNS Server 1	Table 11.4 a,b	UINT32	(OCTETS 4:3:2:1)	2	171	172
	DNS Server 2	Table 11.5 a,b	UINT32	(OCTETS 4:3:2:1)	2	173	174
	MAC Address	Table 11.6 a,b,c	UINT64	(OCTETS 6:5:4:3:2:1)	3	175	177
	UDF ID	Table 11.7 a,b	UINT32	(OCTETS 4:3:2:1)	2	178	179
	Hazard Mon Status	Table 11.8	UINT16		1	180	180
	Reserved Registers	Reserved	UINT16		11	181	191
<b>12 (SD card)</b>	SD Card Status	Table 12.0	UINT16	(X:SD Card Status)	1	192	192
	Reserved Registers	Reserved	UINT16		13	193	205
<b>13 (Add-On Cards)</b>	EXP1, PLC Board 1	Table 13.0	UINT16	(xxxxxxx:Status: xxxx:R4:R3:R2:R1)	1	206	206
	EXP2, PLC Board 2	Table 13.1	UINT16	(xxxxxxx:Status: xxxx:R4:R3:R2:R1)	1	207	207