



Models

CMMB106

Description

The CMMB extends your BACnet or Modbus network when your application requires additional inputs and outputs on a physical controller. Combining the 20 inputs and outputs of the CMMB with your Building Automation System provides simple expansion of a new or existing controller and reduces unnecessary costs of additional components.

Features

Power & Communication

- 24Vac or 30Vdc supply
- BACnet® MS/TP or Modbus communication port (selectable)

Inputs & Outputs

- 8 universal inputs
- 2 digital inputs
- 2 universal outputs (supervised)
- 2 analog outputs (supervised)
- 6 digital outputs (supervised)

Installation

- 10 override switches to manually control each output
- LED status indication of each input and output
- DIN rail mounting
- Removable, non-strip, raising clamp terminals



CMMB106

Network Communication

- BACnet® MS/TP or Modbus communication port (selectable via DIP switch)
- Select MAC address via DIP switch or via network

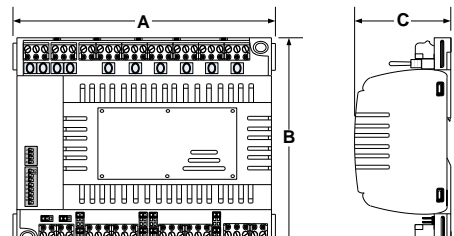
BACnet®

- MS/TP @ 9600, 19200, 38400 or 76800 bps
- Automatic baud rate detection
- Automatic device instance configuration
- Copy & broadcast configuration to other CMMB modules

Modbus

- Modbus @ 9600, 19200, 38400 or 57600 bps
- RTU Slave, 8 bits (configurable parity and stop bits)
- Connects to any Modbus master

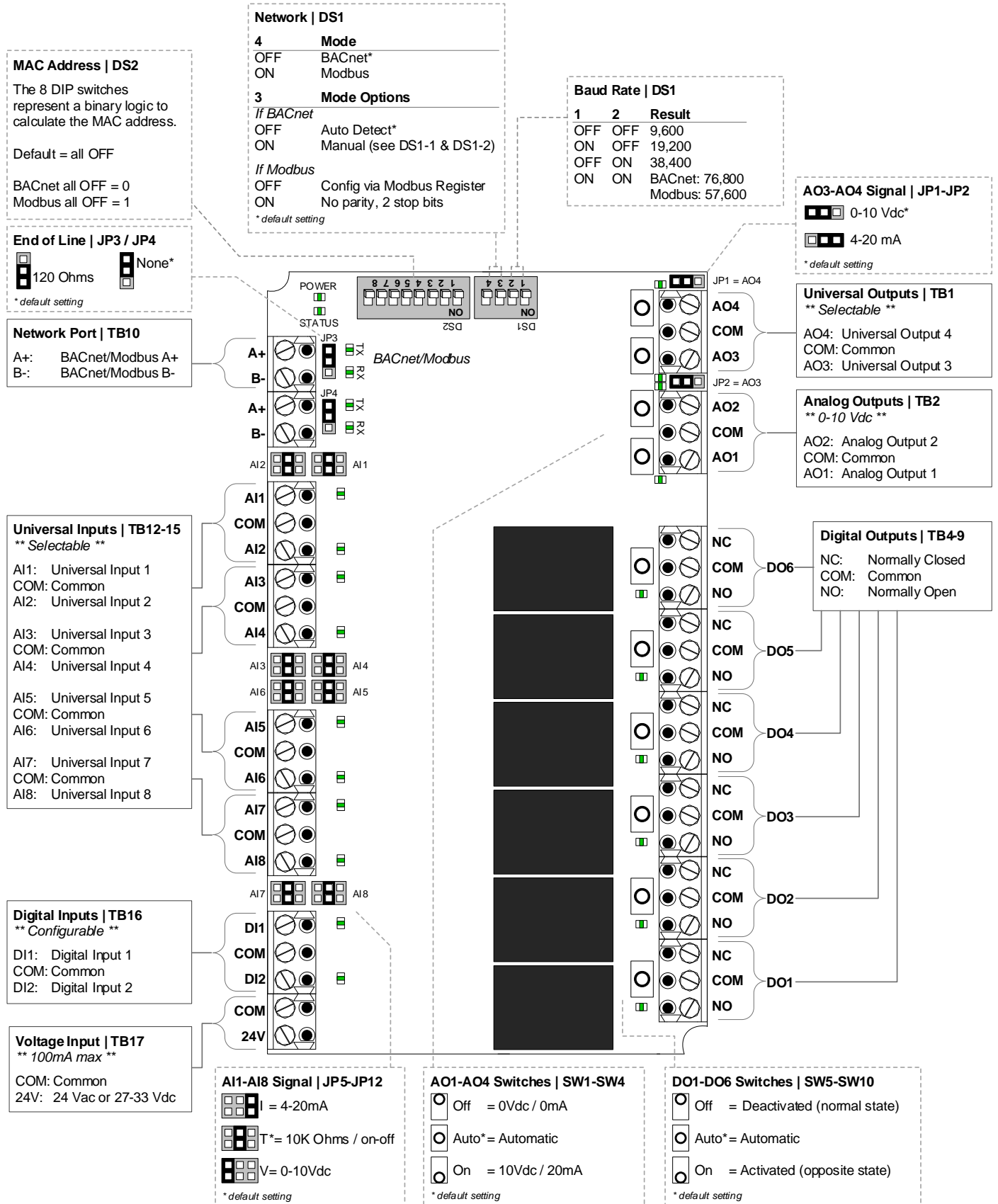
Technical Specifications

Specifications	CMMB106
Input Voltage	24 Vac or 27-33 Vdc
Consumption	5VA (331mA @ 24 Vac)
Universal Inputs	8 [0.00-10.00Vdc, 10KΩ/20KΩ/30KΩ, on/off (dry contact), 4.00-20.00mA] / 12b hardware resolution with oversampling
Digital Inputs	2 [normally open/closed or direct/reverse]
Universal Outputs	2 [0-10Vdc, pulsed signal (20mA drive), on/off, 4-20mA] / 1mV resolution
Analog Outputs	2 [0-10Vdc] / 1mV resolution
Digital Relay Outputs	6 [normally open/closed, independent common per relay, 5A resistive]
BACnet	BACnet® MS/TP @ 9600, 19200, 38400 or 76800 bps (BAS-C)
Modbus	Modbus RTU slave @ 9600, 19200, 38400 or 57600. Selectable parity and stop bit configuration: <ul style="list-style-type: none"> • No parity, 2 stop bit • Even parity, 1 stop bit • Odd parity, 1 stop bit
Communication Connections	24 AWG twisted-shield cable (Belden 9841 or equivalent)
Electrical Connections	0.8 mm ² [18 AWG] minimum
Operational Temperature	0°C to 50°C [32°F to 122°F]
Storage Temperature	-30°C to 50°C [-22°F to 122°F]
Relative Humidity	5 to 95% non condensed
Weight	0.4 kg [0.9 lb]
Dimensions	 <p>A = 6.30" / 160 mm B = 5.00" / 126 mm C = 2.25" / 57 mm</p>



Connections and Configurations

Please note that all jumper settings must also be set to the same value through BACnet. Some additional configurations are only available through BACnet (see Network Conditions on page 4).



MAC Address DIP Switch (DS2)

MAC address for BACnet and Modbus communication, are selectable by DIP switch DS2 using binary logic.

BACnet

- Highest MAC address is 254.
- Default is all switches OFF = MAC address 0
- If you do not change device instance in program mode, it will be automatically modified according to the MAC address.

MAC Address	DS.1 = 1	DS.2 = 2	DS.3 = 4	DS.4 = 8	DS.5 = 16	DS.6 = 32	DS.7 = 64	DS.8 = 128	Default Device Instance
0	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF	153000
1	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF	153001
2	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF	153002
3	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF	153003
4	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF	153004
...
126	OFF	ON	ON	ON	ON	ON	ON	OFF	153126
...
254	OFF	ON	ON	ON	ON	ON	ON	ON	153254

Modbus

- Highest MAC address is 247.
- Default is all switches OFF = MAC address 1
- MAC address is **binary value +1**
- There is no device instance for Modbus.

MAC Address	DS.1 = 1	DS.2 = 2	DS.3 = 4	DS.4 = 8	DS.5 = 16	DS.6 = 32	DS.7 = 64	DS.8 = 128
0+1 = 1	OFF	OFF	OFF	OFF	OFF	OFF	OFF	OFF
1+1 = 2	ON	OFF	OFF	OFF	OFF	OFF	OFF	OFF
2+1 = 3	OFF	ON	OFF	OFF	OFF	OFF	OFF	OFF
3+1 = 4	ON	ON	OFF	OFF	OFF	OFF	OFF	OFF
4+1 = 5	OFF	OFF	ON	OFF	OFF	OFF	OFF	OFF
...
126+1 = 127	OFF	ON	ON	ON	ON	ON	ON	OFF
...
246+1 = 247	OFF	ON	ON	OFF	ON	ON	ON	ON

LEDs

Power

- On = Input voltage normal
- Off = No power

Status

- Flashing = Normal operation (watchdog)

RX/TX (BACnet)

- Flashing = Receiving (RX) and/or transmitting (TX) data.

RX/TX (Modbus)

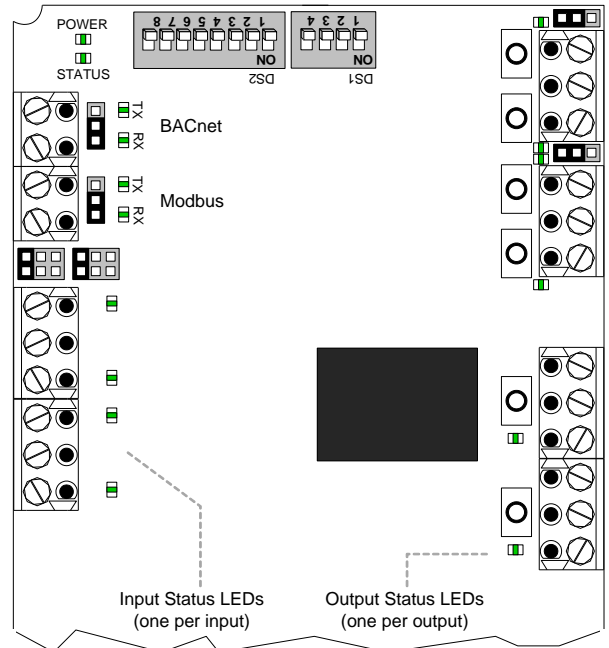
- Flashing = Receiving (RX) and/or transmitting (TX) data.

Input Status

- On = Input on
- Off = Input off
- Flashing = Input not connected (thermistor setting only)
- Analog = When Universal Inputs are set to analog values (Vdc, mA, or 10KΩ); the LED intensity corresponds to the input value. For example: At 10Vdc, the LED will be fully on. At 5Vdc, the LED will be at 50% intensity. At 0 Vdc, the LED will be off.

Output Status

- On = Activated
- Off = Deactivated
- Flashing = Output pulsed
- Analog = When Universal and Analog outputs are set to analog values (Vdc or mA); the LED intensity corresponds to the output value. For example: At 10Vdc, the LED will be fully on. At 5Vdc, the LED will be at 50% intensity. At 0 Vdc, the LED will be off.



Network Conditions

Please note that all jumper settings must also be set to the same value through BACnet or Modbus. The following is a list of conditions and additional BACnet or Modbus objects.

Universal Inputs (AI1-AI8)

- When the jumper is set to Thermistor, you can select either °C or °F or you can set the input as a digital on/off input.
- If the universal input is set as a digital on/off input, you can also set the polarity to direct or reverse. For example, in Reverse an “on” signal would be recognized as an “off” signal.
- When the jumper is set to 0-10 Vdc, you can also set the range to 0-5 Vdc.

Digital Inputs (DI1-DI2)

- You can set the polarity to direct or reverse. For example, in Reverse an “on” signal would be recognized as an “off” signal.

Universal/Analog Outputs (AO1-AO4)

- You can set the polarity to direct or reverse. For example, in reverse the output range would be 10-0 Vdc instead of 0-10 Vdc. The polarity applies to all settings 0-10Vdc, 4-20mA, on/off and pulsed.
- You can also set the outputs to pulsed or digital on/off.
- A fixed output value can only be modified via BACnet when the override switch is in the “Automatic” position.

Digital Outputs (DO1-DO6)

- A fixed output (open/closed) can only be modified via BACnet when the override switch is in the “Automatic” position.
- The displayed text can be set to either Open/Closed, On/Off, or Alarm/Normal (BACnet only).

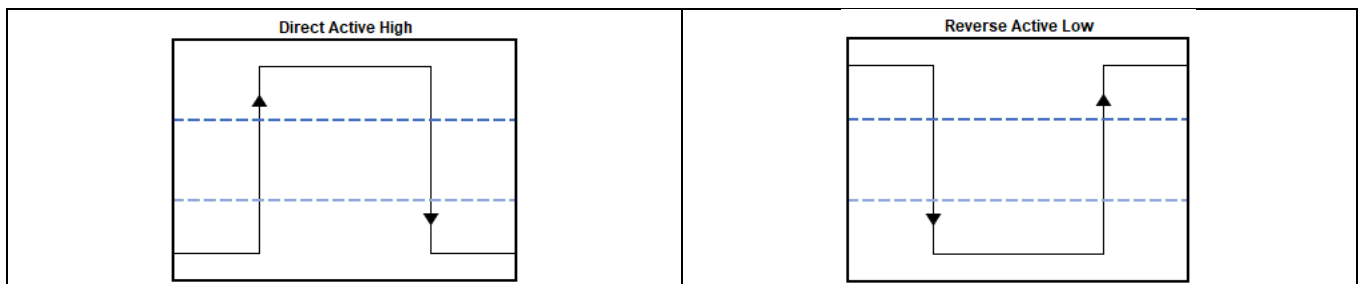
Supervised Outputs

- All outputs are fully supervised via BACnet. This provides the actual state of the output including any manual overrides done using the on-board switches.

Pulse Counting Feature

The pulse counting feature enables counting the number of pulses detected by the universal or digital inputs.

- When an active edge is detected, the Pulse Count is incremented by 1 up to the Prescaler value. When the Prescaler value is reached, the Accumulator is incremented by 1 and the Pulse Count is reset to 0.
- For digital inputs, there is a 1ms debouncing for the detection of the edge.
- For universal inputs, a value that is higher than 80% of the input’s saturation confirms a high level. A value that is lower than 20% of the input’s saturation confirms a low level.
- On both types of inputs, the maximum frequency is 100Hz and the minimum pulse length is 5ms/50%D.C.





BACnet Objects Table

ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
AI.1	UniversalInput1	Universal input 1 mode selected by MSV.1	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.2	UniversalInput2	Universal input 2 mode selected by MSV.12	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.3	UniversalInput3	Universal input 3 mode selected by MSV.15	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.4	UniversalInput4	Universal input 4 mode selected by MSV.48	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.5	UniversalInput5	Universal input 5 mode selected by MSV.57	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.6	UniversalInput6	Universal input 6 mode selected by MSV.58	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.7	UniversalInput7	Universal input 7 mode selected by MSV.59	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AI.8	UniversalInput8	Universal input 8 mode selected by MSV.60	Out of service	0 to 10Volt or -40 to 100°C (150°C) [†] or -40 to 212°F (302°F) [†] or 4 to 20mA or 0 to 1 Resolution: 0.01Volt or 0.01°C/0.02°F or 0.01mA or 1
AV.1	UI1PulseCount	Universal input 1 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.2	UI2PulseCount	Universal input 2 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.3	UI3PulseCount	Universal input 3 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.4	UI4PulseCount	Universal input 4 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.5	UI5PulseCount	Universal input 5 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.6	UI6PulseCount	Universal input 6 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.7	UI7PulseCount	Universal input 7 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.8	UI8PulseCount	Universal input 8 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.9	DI1PulseCount	Digital input 1 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.10	DI2PulseCount	Digital input 2 pulse count.	Present Value	0 to 16777216, Resolution: 1
AV.11	UI1Accumulator	Universal input 1 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.12	UI2Accumulator	Universal input 2 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.13	UI3Accumulator	Universal input 3 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.14	UI4Accumulator	Universal input 4 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.15	UI5Accumulator	Universal input 5 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.16	UI6Accumulator	Universal input 6 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.17	UI7Accumulator	Universal input 7 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.18	UI8Accumulator	Universal input 8 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.19	DI1Accumulator	Digital input 1 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1
AV.20	DI2Accumulator	Digital input 2 pulse counter rollovers.	Present Value	0 to 16777216, Resolution: 1

¹ ID is equal to ObjectType.Instance



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
AV.52	AnalogOutput1Min	Min. voltage of analog output 1	Present Value	0* Volt to AV.54 Resolution 0.1 Volt
AV.53	AnalogOutput2Min	Min. voltage of analog output 2	Present Value	0* Volt to AV.55 Resolution 0.1 Volt
AV.54	AnalogOutput1Max	Max. voltage of analog output 1	Present Value	AV.52 to 10.0* Volt Resolution 0.1 Volt
AV.55	AnalogOutput2Max	Max. voltage of analog output 2	Present Value	AV.53 to 10.0* Volt Resolution 0.1 Volt
AV.72	AnalogOutput1	Analog output 1 value	Present Value	0-100% Resolution 0.1%
AV.73	AnalogOutput2	Analog output 2 value	Present Value	0-100% Resolution 0.1%
AV.118	AnalogOutput3Min	Min. voltage of analog output 3	Present Value	0* Volt to AV.120 Resolution 0.1 Volt
AV.119	AnalogOutput4Min	Min. voltage of analog output 4	Present Value	0* Volt to AV.121 Resolution 0.1 Volt
AV.120	AnalogOutput3Max	Max. voltage of analog output 3	Present Value	AV.118 to 10.0* Volt Resolution 0.1 Volt
AV.121	AnalogOutput4Max	Max. voltage of analog output 4	Present Value	AV.119 to 10.0* Volt Resolution 0.1 Volt
AV.124	AnalogOutput3	Analog output 3 value	Present Value	0-100% Resolution 1%
AV.125	AnalogOutput4	Analog output 4 value	Present Value	0-100% Resolution 1%
AV.226	UniversalInput1Offset	Universal input 1 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.227	UniversalInput2Offset	Universal input 2 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.228	UniversalInput3Offset	Universal input 3 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.229	UniversalInput4Offset	Universal input 4 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.230	UniversalInput5Offset	Universal input 5 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.231	UniversalInput6Offset	Universal input 6 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.232	UniversalInput7Offset	Universal input 7 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.233	UniversalInput8Offset	Universal input 8 offset	Present Value	-5.00 to 5.00 °C/°F/Volt/mA (default 0*) Resolution: 0.01 °C/°F/Volt/mA
AV.468	CopyCfgStartAdd	Copy configuration start address	Present Value	0-254 Address of first CMMB to copy Available only if BV.101 is set to No
AV.469	CopyCfgEndAdd	Copy configuration end address	Present Value	AV.468 – (AV.468 + 64) Address of last CMMB to copy Available only if BV.101 is set to No
AV.470	CopyCfgResult ²	Copy configuration result	Present Value	AV.468 – AV.469 Result of copy is available on Description property and is available only if BV.101 is set to Yes. Results: Succeed, Prog_Error, Type_Error, Model_Error, FW_Error, Mem_Error, Size_Error, Comm_Error, SlaveDevice, InProgress, AllSucceed
AV.500	U1_MinInputValue	Universal input 1 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.501	U1_MaxInputValue	Universal input 1 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.502	U1_MinValue	Universal input 1 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.503	U1_MaxValue	Universal input 1 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.504	U2_MinInputValue	Universal input 2 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.505	U2_MaxInputValue	Universal input 2 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.506	U2_MinValue	Universal input 2 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.507	U2_MaxValue	Universal input 2 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.508	U3_MinInputValue	Universal input 3 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.509	U3_MaxInputValue	Universal input 3 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.510	U3_MinValue	Universal input 3 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01

² Write 526address in present value, result will be available in description.



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFnction</i> is set to <i>10K_Type3/G</i>)
AV.511	U3_MaxValue	Universal input 3 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.512	U4_MinInputValue	Universal input 4 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.513	U4_MaxInputValue	Universal input 4 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.514	U4_MinValue	Universal input 4 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.515	U4_MaxValue	Universal input 4 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.516	U5_MinInputValue	Universal input 5 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.517	U5_MaxInputValue	Universal input 5 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.518	U5_MinValue	Universal input 5 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.519	U5_MaxValue	Universal input 5 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.520	U6_MinInputValue	Universal input 6 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.521	U6_MaxInputValue	Universal input 6 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.522	U6_MinValue	Universal input 6 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.523	U6_MaxValue	Universal input 6 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.524	U7_MinInputValue	Universal input 7 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.525	U7_MaxInputValue	Universal input 7 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.526	U7_MinValue	Universal input 7 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.527	U7_MaxValue	Universal input 7 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.528	U8_MinInputValue	Universal input 8 minimum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.529	U8_MaxInputValue	Universal input 8 maximum input value	Present Value	0-10Volt or 4-20mA, Resolution: 0.01Volt or 0.01mA
AV.530	U8_MinValue	Universal input 8 minimum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.531	U8_MaxValue	Universal input 8 maximum scaled value	Present Value	-32768 to 32767, Resolution: 0.01
AV.532	AO1FailsafePreset	Analog output 1 failsafe preset value	Present Value	0 to 100%, Resolution: 0.1%
AV.533	AO2FailsafePreset	Analog output 2 failsafe preset value	Present Value	0 to 100%, Resolution: 0.1%
AV.534	AO3FailsafePreset	Analog output 3 failsafe preset value	Present Value	0 to 100%, Resolution: 0.1%
AV.535	AO4FailsafePreset	Analog output 4 failsafe preset value	Present Value	0 to 100%, Resolution: 0.1%
AV.536	TimeoutValue	Network Timeout value	Present Value	5 to 600 sec, Resolution: 5 sec
AV.537	UI1_PulsePrescaler	Universal input 1 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.538	UI2_PulsePrescaler	Universal input 2 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.539	UI3_PulsePrescaler	Universal input 3 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.540	UI4_PulsePrescaler	Universal input 4 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.541	UI5_PulsePrescaler	Universal input 5 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.542	UI6_PulsePrescaler	Universal input 6 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
AV.543	UI7_PulsePrescaler	Universal input 7 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.544	UI8_PulsePrescaler	Universal input 8 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.545	DI1_PulsePrescaler	Digital input 1 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
AV.546	DI2_PulsePrescaler	Digital input 2 pulse counter rollover threshold.	Present Value	0 to 16777216, Resolution: 1
BI.1	DigitalInput1	Digital input 1 status	Out of service	0= Open / Ouvert * 1= Close / Fermé Text depends of selection in MSV.76
BI.2	DigitalInput2	Digital input 2 status	Out of service	0= Open / Ouvert * 1= Close / Fermé Text depends of selection in MSV.77
BV.22	ContactOutput1	Digital output 1 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.66
BV.23	ContactOutput2	Digital output 2 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.67
BV.24	ContactOutput3	Digital output 3 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.68
BV.25	ContactOutput4	Digital output 4 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.69
BV.26	ContactOutput5	Digital output 5 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.70
BV.27	ContactOutput6	Digital output 6 status	Present Value	0= Open / Ouvert / Off / Arret / Normal * 1= Close / Fermé / On / Marche / Alarm Text depends of selection in MSV.71
BV.33	DigitalInput1Polarity	Polarity of digital input 1	Present Value	0= Direct * 1= Reverse
BV.34	DigitalInput2Polarity	Polarity of digital input 2	Present Value	0= Direct * 1= Reverse
BV.66	AnalogOutput1Direction	Polarity of analog output 1	Present Value	0= Direct * 1= Reverse
BV.67	AnalogOutput2Direction	Polarity of analog output 2	Present Value	0= Direct * 1= Reverse
BV.68	AnalogOutput3Direction	Polarity of analog output 3	Present Value	0= Direct * 1= Reverse
BV.69	AnalogOutput4Direction	Polarity of analog output 4	Present Value	0= Direct * 1= Reverse
BV.93	UI1_DI_Polarity	Polarity of universal input 1 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.94	UI2_DI_Polarity	Polarity of universal input 2 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.95	UI3_DI_Polarity	Polarity of universal input 3 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.96	UI4_DI_Polarity	Polarity of universal input 4 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.97	UI5_DI_Polarity	Polarity of universal input 5 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.98	UI6_DI_Polarity	Polarity of universal input 6 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.99	UI7_DI_Polarity	Polarity of universal input 7 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.100	UI8_DI_Polarity	Polarity of universal input 8 when used in digital input mode	Present Value	0= Direct * 1= Reverse
BV.101	CopyCfgExecute	Start or stop copy configuration	Present Value	0= No * 1= Yes Start copy and give results, must be reset by user.
BV.102	SystemUnit	Select the unit system to use on the device	Present Value	0= Celsius * 1= Fahrenheit



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
BV.103	Inhibit Output Override	Inhibit the override of the outputs	Present Value	0= Off * 1= On
BV.104	TimeoutStatus	Network timeout status		0= Inactive * 1= Active
MSV.1	UniversalInput1Function	Selected analog input 1 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI
MSV.12	UniversalInput2Function	Selected analog input 2 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI
MSV.15	UniversalInput3Function	Selected analog input 3 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI
MSV.48	UniversalInput4Function	Selected analog input 4 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI
MSV.54	AnalogOutput1Mode	Select analog output 1 mode	Present Value	1= Analog * 2= On_Off 3= Pulsing
MSV.55	AnalogOutput2Mode	Select analog output 2 mode	Present Value	1= Analog * 2= On_Off 3= Pulsing
MSV.57	UniversalInput5Function	Selected analog input 5 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
MSV.58	UniversalInput6Function	Selected analog input 6 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_Carel
MSV.59	UniversalInput7Function	Selected analog input 7 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_Carel
MSV.60	UniversalInput8Function	Selected analog input 8 mode	Present Value	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1 9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_Carel
MSV.66	ContactOutput1Text	Contact output 1 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.67	ContactOutput2Text	Contact output 2 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.68	ContactOutput3Text	Contact output 3 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.69	ContactOutput4Text	Contact output 4 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.70	ContactOutput5Text	Contact output 5 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.71	ContactOutput6Text	Contact output 6 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé 3= On_Off 4= Marche_Arret 5= Alarm_Normal
MSV.76	DigitalInput1Text	Digital input 1 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé



ID ¹	Name	Description	Writable?	Notes (* = default) († = only when <i>UniversalInputxFunction</i> is set to <i>10K_Type3/G</i>)
MSV.77	DigitalInput2Text	Digital input 2 inactive & active text	Present Value	1= Open_Close * 2= Ouvert_Fermé
MSV.81	AnalogOutput3Mode	Select analog output 3 mode	Present Value	1= Analog * 2= On_Off 3= Pulsing 4= 4_20mA
MSV.82	AnalogOutput4Mode	Select analog output 4 mode	Present Value	1= Analog * 2= On_Off 3= Pulsing 4= 4_20mA
MSV.83	CfgBO1FailsafeMode	Configuration of the binary output 1 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.84	CfgBO2FailsafeMode	Configuration of the binary output 2 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.85	CfgBO3FailsafeMode	Configuration of the binary output 3 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.86	CfgBO4FailsafeMode	Configuration of the binary output 4 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.87	CfgBO5FailsafeMode	Configuration of the binary output 5 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.88	CfgBO6FailsafeMode	Configuration of the binary output 6 failsafe mode	Present Value	1= LastState * 2= Open 3= Close
MSV.89	CfgAO1FailsafeMode	Configuration of the analog output 1 failsafe mode	Present Value	1= LastState * 2= Preset
MSV.90	CfgAO2FailsafeMode	Configuration of the analog output 2 failsafe mode	Present Value	1= LastState * 2= Preset
MSV.91	CfgAO3FailsafeMode	Configuration of the analog output 3 failsafe mode	Present Value	1= LastState * 2= Preset
MSV.92	CfgAO4FailsafeMode	Configuration of the analog output 4 failsafe mode	Present Value	1= LastState * 2= Preset

Modbus Registers

- Register address
 - As per protocol base (base 0); for PLC add 1 to protocol base.
 - As per holding register (base 40001)
- Functions :
 - 03 Read Holding Register
 - 06 Write Single Register
 - 16 Write Multiple Registers
- Error Codes :
 - 02 Illegal Data Address
 - 03 Illegal Value
 - 06 Slave Device Busy
- W = Writable register, [blank] = read only.
- No Real number in modbus register, use scale to calculate real number. Register = Real number * Scale => Real number = Register / Scale. Scale could be 1, 10 or 100
- Attention when writing a register that contains a bit string. If bit is writable (conditional or not), the write will always be accepted. If bit is reserved or not writable, the write will be ignored and will keep its actual state.
- Use READ-MODIFY-WRITE sequence.

Protocol Base	Holding Register	Description	Data Type	MSB/LSB		Units/Values	Writable	Default Value	
								MB	LB
0	40001	MSB = Neptronic Device ID LSB = MAC Address	Unsigned	105 (69h)	[1..247] (1h- F7h)	* MAC address is writable if all DIP switches of DS2 are OFF.	W*	69h	1h
1	40002	Device Baud Rate	Unsigned Scale 0.01	[96] [192] [384] [576]		9,600 19,200 38,400 57,600		96	
2	40003	COM Port Configuration IMPORTANT: The default value is "no parity, 2 stop bits". To change the value, you must set DIP switch DS1-3 to OFF. If set to ON, it will always remain at the default value. Refer to Connections and Configurations on page 2.	Unsigned	[0..2]		0 = no parity, 2 stop bits 1 = even parity, 1 stop bit 2 = odd parity, 1 stop bit	W	0	
3	40004	Product Name (characters 8 & 7)	2 x ASCII	char 8	char 7	Valid ASCII character: 32 (20h) – 122 (7ah), Empty = 0	W	43h [C]	40h [M]
4	40005	Product Name (characters 6 & 5)	2 x ASCII	char 6	char 5	Valid ASCII character: 32 (20h) – 122 (7ah), Empty = 0	W	40h [M]	42h [B]
5	40006	Product Name (characters 4 & 3)	2 x ASCII	char 4	char 3	Valid ASCII character: 32 (20h) – 122 (7ah), Empty = 0	W	31h [1]	30h [0]
6	40007	Product Name (characters 2 & 1)	2 x ASCII	char 2	char 1	Valid ASCII character: 32 (20h) – 122 (7ah), Empty = 0	W	36h [6]	20h []
7	40008	Firmware Version	Unsigned Scale 100	115		1.15		115	
8	40009	Application Version	Unsigned Scale 100	103		1.03		103	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
9	40010	System Status 1	Bit String	[B0..B15]	0 = Normal 1 = Fault ----- B0 = System operation		0000, 0001, 1111, 1110b	
10	40011	System Status 2	Bit String	[B0..B15]	Always 0		0000, 0000, 0000, 0000b	
11	40012	Analog Input 1	0-10V: Type: Unsigned, Scale:100, Unit: Volt, Range: 0.00-10.00V, Resolution: 0.01 4-20mA: Type: Unsigned, Scale:100, Unit: mA, Range: 4.00-20.00 mA, Resolution: 0.01 10K Type 3A1, 10K Type 4AI, 10K Type 2, 20K Type 6AI, 30K Type 6AI: Type: Signed, Scale:100, Unit: °C, Range: -40.00 - 100.00 °C, Resolution: 0.01 Type: Signed, Scale:100, Unit: °F, Range: -40.00 - 212.00 °F, Resolution: 0.02 10K Type 3/G: Type: Signed, Scale:100, Unit: °C, Range: -40.00 - 150.00 °C, Resolution: 0.01 Type: Signed, Scale:100, Unit: °F, Range: -40.00 - 302.00 °F, Resolution: 0.02 DI: Type: Unsigned, Scale:1, No Unit, Range: 0-1, Resolution: 1 Scaled Input (Volt), Scaled Input (mA): Type: Unsigned, Scale:1, No Unit, Range: Ux_MinValue - Ux_MaxValue, Resolution: 1				32767	
12	40013	Analog Input 2					32767	
13	40014	Analog Input 3					32767	
14	40015	Analog Input 4					32767	
15	40016	Analog Input 5					32767	
16	40017	Analog Input 6					32767	
17	40018	Analog Input 7					32767	
18	40019	Analog Input 8					32767	
19	40020	Digital Input					Bit String	[B0..B1]
20	40021	Analog Output 1	Unsigned Scale 10	[0..1000]	Unit: %, Range: 0-100.0%, Resolution: 0.1	W	0	
21	40022	Analog Output 2					0	
22	40023	Analog Output 3					0	
23	40024	Analog Output 4					0	
24	40025	Relay Output	Bit String	[B0..B5]	B0 = Relay 1 B1 = Relay 2 B2 = Relay 3 B3 = Relay 4 B4 = Relay 5 B5 = Relay 6	W	0000, 0000, 0000, 0000b	
25	40026	Output Overwrite Status <i>Indicates that the output is overridden by the hardware switch (SW5-SW10).</i>	Bit String	[B0..B9]	B0 = Relay 1 B1 = Relay 2 B2 = Relay 3 B3 = Relay 4 B4 = Relay 5 B5 = Relay 6 B6 = AO1 B7 = AO2 B8 = AO3 B9 = AO4		0000, 0000, 0000, 0000b	
26	40027	Universal Input 1 Function	Unsigned	[1..12]	1= 0_10Volt 2= 4_20mA 3= 10K_Type3/G * 4= 10K_Type3A1 5= 10K_Type4A1 6= 10K_Type2 7= 20K_Type6A1 8= 30K_Type6A1	W	3	
27	40028	Universal Input 2 Function					3	
28	40029	Universal Input 3 Function					3	
29	40030	Universal Input 4 Function					3	
30	40031	Universal Input 5 Function					3	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
31	40032	Universal Input 6 Function			9= DigitalInput 10= ScaledValue_Volt 11= ScaledValue_mA 12= 10K_NTC_CareI		3	
32	40033	Universal Input 7 Function					3	
33	40034	Universal Input 8 Function					3	
34	40035	Universal Input 1 Offset	Signed Scale 100	[-500..500]	Range: +/- 5.00, Resolution: 0.10	W	0	
35	40036	Universal Input 2 Offset					0	
36	40037	Universal Input 3 Offset					0	
37	40038	Universal Input 4 Offset					0	
38	40039	Universal Input 5 Offset					0	
39	40040	Universal Input 6 Offset					0	
40	40041	Universal Input 7 Offset					0	
41	40042	Universal Input 8 Offset					0	
42	40043	Analog Output 1 Mode	Unsigned	[1..3]	1 = Analog 2 = On/Off 3 = Pulse	W	1	
43	40044	Analog Output 1 Minimum Voltage	Signed Scale 10	[0..100]	Unit: Volt, Range: 0 V - Register 44, Resolution: 0.1	W	0	
44	40045	Analog Output 1 Maximum Voltage			Unit: Volt, Range: Register 43 - 10.0V, Resolution: 0.1		100	
45	40046	Analog Output 2 Mode	Unsigned	[1..3]	1 = Analog 2 = On/Off 3 = Pulse	W	1	
46	40047	Analog Output 2 Minimum Voltage	Signed Scale 10	[0..100]	Unit: Volt, Range: 0 V - Register 47, Resolution: 0.1	W	0	
47	40048	Analog Output 2 Maximum Voltage			Unit: Volt, Range: Register 46 - 10.0V, Resolution: 0.1		100	
48	40049	Analog Output 3 Mode	Unsigned	[1..4]	1 = Analog 2 = On/Off 3 = Pulse 4 = 4-20mA	W	1	
49	40050	Analog Output 3 Minimum Voltage	Signed Scale 10	[0..100]	Unit: Volt, Range: 0 V - Register 50, Resolution: 0.1	W	0	
50	40051	Analog Output 3 Maximum Voltage			Unit: Volt, Range: Register 49 - 10.0V, Resolution: 0.1		100	
51	40052	Analog Output 4 Mode	Unsigned	[1..4]	1 = Analog 2 = On/Off 3 = Pulse 4 = 4-20mA	W	1	
52	40053	Analog Output 4 Minimum Voltage	Signed Scale 10	[0..100]	Unit: Volt, Range: 0 V - Register 53, Resolution: 0.1	W	0	
53	40054	Analog Output 4 Maximum Voltage			Unit: Volt, Range: Register 52 - 10.0V, Resolution: 0.1		100	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
54	40055	System Options <i>* = digital input mode only</i>	Bit String	[B0..B15]	0 = Direct 1 = Reverse ----- B0 = AO1 polarity B1 = AO2 polarity B2 = AO3 polarity B3 = AO4 polarity B4 = AI1 polarity * B5 = AI2 polarity * B6 = AI3 polarity * B7 = AI4 polarity * B8 = AI5 polarity * B9 = AI6 polarity * B10 = AI7 polarity * B11 = AI8 polarity * B12 = DI1 polarity B13 = DI2 polarity 0 = Off 1 = On ----- B14 = Inhibit Output Override ----- 0 = Celsius 1 = Fahrenheit ----- B15 = System Unit	W	0000, 0000, 0000, 0000b	
55	40056	Universal Input 1 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 56, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 56, Resolution: 0.01	W	0	
56	40057	Universal Input 1 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 55 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 55 – 20.00 mA, Resolution: 0.01	W	1000	
57	40058	Universal Input 1 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 58, Resolution: 0.01	W	0	
58	40059	Universal Input 1 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 57 - 32767, Resolution: 0.01	W	1000	
59	40060	Universal Input 2 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 60, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 60, Resolution: 0.01	W	0	
60	40061	Universal Input 2 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 59 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 59 – 20.00 mA, Resolution: 0.01	W	1000	
61	40062	Universal Input 2 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 62, Resolution: 0.01	W	0	
62	40063	Universal Input 2 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 61 - 32767, Resolution: 0.01	W	1000	
63	40064	Universal Input 3 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 64, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 64, Resolution: 0.01	W	0	
64	40065	Universal Input 3 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 63 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 63 – 20.00 mA, Resolution: 0.01	W	1000	
65	40066	Universal Input 3 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 66, Resolution: 0.01	W	0	
66	40067	Universal Input 3 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 65 - 32767, Resolution: 0.01	W	1000	
67	40068	Universal Input 4 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 68, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 68, Resolution: 0.01	W	0	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
68	40069	Universal Input 4 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 67 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 67 – 20.00 mA, Resolution: 0.01	W	1000	
69	40070	Universal Input 4 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 70, Resolution: 0.01	W	0	
70	40071	Universal Input 4 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 69 - 32767, Resolution: 0.01	W	1000	
71	40072	Universal Input 5 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 72, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 72, Resolution: 0.01	W	0	
72	40073	Universal Input 5 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 71 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 71 – 20.00 mA, Resolution: 0.01	W	1000	
73	40074	Universal Input 5 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 66, Resolution: 0.01	W	0	
74	40075	Universal Input 5 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 65 - 32767, Resolution: 0.01	W	1000	
75	40076	Universal Input 6 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 64, Resolution: 0.01 Unit: mA, Range : 4.00 mA - Register 64, Resolution: 0.01	W	0	
76	40077	Universal Input 6 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 63 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 63 – 20.00 mA, Resolution: 0.01	W	1000	
77	40078	Universal Input 6 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 78, Resolution: 0.01	W	0	
78	40079	Universal Input 6 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 77 - 32767, Resolution: 0.01	W	1000	
79	40080	Universal Input 7 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 80, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 80, Resolution: 0.01	W	0	
80	40081	Universal Input 7 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 79 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 79 – 20.00 mA, Resolution: 0.01	W	1000	
81	40082	Universal Input 7 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 82, Resolution: 0.01	W	0	
82	40083	Universal Input 7 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 81 - 32767, Resolution: 0.01	W	1000	
83	40084	Universal Input 8 Minimum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: 0.00 V - Register 84, Resolution: 0.01 Unit: mA, Range: 4.00 mA - Register 84, Resolution: 0.01	W	0	
84	40085	Universal Input 8 Maximum Input Value	Unsigned Scale 100	[0..100]	Unit: Volt, Range: Register 83 – 10.00 V, Resolution: 0.01 Unit: mA, Range: Register 83 – 20.00 mA, Resolution: 0.01	W	1000	
85	40086	Universal Input 8 Minimum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: -32768 - Register 86, Resolution: 0.01	W	0	
86	40087	Universal Input 8 Maximum Value	Signed Scale 1	[-32768...32767]	No Unit, Range: Register 85 - 32767, Resolution: 0.01	W	1000	
87	40088	Binary Output 1 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
88	40089	Binary Output 2 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	
89	40090	Binary Output 3 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	
90	40091	Binary Output 4 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	
91	40092	Binary Output 5 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	
92	40093	Binary Output 6 Fail Safe Mode	Unsigned	[1..3]	1= LastState 2= Open 3= Close	W	1	
93	40094	Analog Output 1 Fail Safe Mode	Unsigned	[1,2]	1= LastState 2= Preset	W	1	
94	40095	Analog Output 1 Fail Safe Preset Value	Unsigned Scale 10	[0..1000]	Unit: %, Range: 0 – 100.00 %, Resolution: 0.1	W	100	
95	40096	Analog Output 2 Fail Safe Mode	Unsigned	[1,2]	1= LastState 2= Preset	W	1	
96	40097	Analog Output 2 Fail Safe Preset Value	Unsigned Scale 10	[0..1000]	Unit: %, Range: 0 – 100.00 %, Resolution: 0.1	W	100	
97	40098	Analog Output 3 Fail Safe Mode	Unsigned	[1,2]	1= LastState 2= Preset	W	1	
98	40099	Analog Output 3 Fail Safe Preset Value	Unsigned Scale 10	[0..1000]	Unit: %, Range: 0 – 100.00 %, Resolution: 0.1	W	100	
99	40100	Analog Output 4 Fail Safe Mode	Unsigned	[1,2]	1= LastState 2= Preset	W	1	
100	40101	Analog Output 4 Fail Safe Preset Value	Unsigned Scale 10	[0..1000]	Unit: %, Range: 0 – 100.00 %, Resolution: 0.1	W	100	
101	40102	Timeout Status	Unsigned	[0,1]	0= Inactive 1= Active		0	
102	40103	Network Timeout Value	Unsigned Scale 1	[5..600]	Unit: Seconds (sec), Range: 5 – 600 sec, Resolution: 5 sec	W	30	
103	40104	UI1 Pulse Prescaler (0)	Unsigned Scale 1	[0..16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
104	40105	UI1 Pulse Prescaler (1)		[0..16777216]	Range: 0 to 16777216, Resolution: 1			
105	40106	UI2 Pulse Prescaler (0)	Unsigned Scale 1	[0..16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
106	40107	UI2 Pulse Prescaler (1)		[0..16777216]	Range: 0 to 16777216, Resolution: 1			
107	40108	UI3 Pulse Prescaler (0)	Unsigned Scale 1	[0..16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
108	40109	UI3 Pulse Prescaler (1)		[0..16777216]	Range: 0 to 16777216, Resolution: 1			
109	40110	UI4 Pulse Prescaler (0)	Unsigned Scale 1	[0..16777216]	Range: 0 to 16777216, Resolution: 1	W	0	

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
110	40111	UI4 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
111	40112	UI5 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
112	40113	UI5 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
113	40114	UI6 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
114	40115	UI6 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
115	40116	UI7 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
116	40117	UI7 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
117	40118	UI8 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
118	40119	UI8 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
119	40120	DI1 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
120	40121	DI1 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
121	40122	DI2 Pulse Prescaler (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
122	40123	DI2 Pulse Prescaler (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
123	40124	UI1 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
124	40125	UI1 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
125	40126	UI2 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
126	40127	UI2 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
127	40128	UI3 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
128	40129	UI3 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
129	40130	UI4 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
130	40131	UI4 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
131	40132	UI5 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
132	40133	UI5 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
133	40134	UI6 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
134	40135	UI6 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
135	40136	UI7 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
136	40137	UI7 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
137	40138	UI8 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
138	40139	UI8 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			

Protocol Base	Holding Register	Description	Data Type	MSB/LSB	Units/Values	Writable	Default Value	
							MB	LB
139	40140	DI1 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
140	40141	DI1 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
141	40142	DI2 Pulse Count (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
142	40143	DI1 Pulse Count (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
143	40144	UI1 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
144	40145	UI1 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
145	40146	UI2 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
146	40147	UI2 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
147	40148	UI3 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
148	40149	UI3 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
149	40150	UI4 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
150	40151	UI4 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
151	40152	UI5 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
152	40153	UI5 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
153	40154	UI6 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
154	40155	UI6 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
155	40156	UI7 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
156	40157	UI7 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
157	40158	UI8 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
158	40159	UI8 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
159	40160	DI1 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
160	40161	DI1 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			
161	40162	DI2 Accumulator (0)	Unsigned Scale 1	[0...16777216]	Range: 0 to 16777216, Resolution: 1	W	0	
162	40163	DI2 Accumulator (1)		[0...16777216]	Range: 0 to 16777216, Resolution: 1			





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neptronic[®]

400 Lebeau blvd, Montreal, Qc, H4N 1R6, Canada

www.neptronic.com

Toll free in North America: 1-800-361-2308

Tel.: (514) 333-1433

Fax: (514) 333-3163

Customer service fax: (514) 333-1091

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