Modbus Map

These Modbus maps are for your reference. The modbus service runs on port 502.

Important note: The Ampt ModBus register map uses big endian values.

SunSpec SMDX File

<table>
<tr><th colspan="6">SunSpec Registers</th></tr>
<tr><th>Start Offset</th><th>Size</th><th>Name</th><th>Type</th><th>R/W</th><th>Description</th></tr>
<tr><td>1</td><td>2</td><td>SID</td><td>uint32</td><td>R</td><td>A well-known value 0x53756e53, uniquely identifies this as a SunSpec Modbus Map</td></tr>
<tr><td>3</td><td>1</td><td>ID</td><td>uint16</td><td>R</td><td>A well-known value 1, uniquely identifies this as a SunSpec Common Model</td></tr>
<tr><td>4</td><td>1</td><td>L</td><td>uint16</td><td>R</td><td>Well-known # of 16-bit registers to follow: 66</td></tr>
<tr><td>5</td><td>16</td><td>Manufacturer</td><td>string</td><td>R</td><td>A well-known value registered with SunSpec for compliance: Ampt</td></tr>
<tr><td>21</td><td>16</td><td>Model</td><td>string</td><td>R</td><td>Manufacturer specific value Communication Unit</td></tr>
<tr><td>37</td><td>8</td><td>Reserved</td><td>-</td><td>-</td><td></td></tr>
<tr><td>45</td><td>8</td><td>Version</td><td>string</td><td>R</td><td>Software Version</td></tr>
<tr><td>53</td><td>16</td><td>Serial Number</td><td>string</td><td>R</td><td>Manufacturer specific value</td></tr>
<tr><td>69</td><td>1</td><td>Device Address</td><td>int16</td><td>R/W</td><td>Modbus Device ID</td></tr>
<tr><td>71</td><td>1</td><td>ID</td><td>uint16</td><td>R</td><td>Ampt SunSpec Vendor Code 64050</td></tr>
<tr><td>72</td><td>1</td><td>L</td><td>uint16</td><td>R</td><td>Variable number of 16-bit registers to follow: 12 + N*16</td></tr>
<tr><td>73</td><td>1</td><td>DCA_SF</td><td>int16</td><td>R</td><td>Current scale factor</td></tr>
<tr><td>74</td><td>1</td><td>DCV_SF</td><td>int16</td><td>R</td><td>Voltage scale factor</td></tr>
<tr><td>75</td><td>1</td><td>Reserved</td><td>-</td><td>-</td><td></td></tr>
<tr><td>76</td><td>1</td><td>DCkWh_SF</td><td>int16</td><td>R</td><td>Energy Scale Factor</td></tr>
<tr><td>77</td><td>1</td><td>Reserved</td><td>-</td><td>-</td><td></td></tr>
<tr><td>78</td><td>1</td><td>N</td><td>uint16</td><td>R</td><td>Number of strings</td></tr>
<tr><td>79</td><td>6</td><td>Reserved</td><td>-</td><td>-</td><td></td></tr>
<tr><td></td><td></td><td></td><td></td><td></td><td></td></tr>
<tr><td>85</td><td>1</td><td>String ID</td><td>int16</td><td>R</td><td>The string number</td></tr>
<tr><td>86</td><td>2</td><td>Reserved</td><td>-</td><td>-</td><td></td></tr>
<tr><td>88</td><td>2</td><td>String data timestamp</td><td>uint32</td><td>R</td><td>The UTC timestamp of the measurements</td></tr>
<tr><td>90</td><td>1</td><td>OutDCA</td><td>int16</td><td>R</td><td>String output current in mA</td></tr>
<tr><td>91</td><td>2</td><td>OutDCV</td><td>uint32</td><td>R</td><td>String output voltage in mV</td></tr>
<tr><td>93</td><td>2</td><td>In1DCV</td><td>uint32</td><td>R</td><td>String input 1 voltage in mV</td></tr>
</table>

Start Offset	Size	Name	Type	R/W	Description
95	2	In2DCV	uint32	R	String input 2 voltage in mV
97	2	DCWh	uint32	R	Daily integrated string output energy in Wh
99	1	In1DCA	int16	R	String input 1 current in mA
100	1	In2DCA	int16	R	String input 2 current in mA
101	1	String ID	int16	R	The string number
102	2	Reserved	-	-	
104	2	String data timestamp	uint32	R	The UTC timestamp of the measurements
106	1	OutDCA	int16	R	String output current in mA
107	2	OutDCV	uint32	R	String output voltage in mV
109	2	In1DCV	uint32	R	String input 1 voltage in mV
111	2	In2DCV	uint32	R	String input 2 voltage in mV
113	2	DCWh	uint32	R	Daily integrated string output energy in Wh
115	1	In1DCA	int16	R	String input 1 current in mA
116	1	In2DCA	int16	R	String input 2 current in mA
117	1	String ID	int16	R	The string number
118	2	Reserved	-	-	
120	2	String data timestamp	uint32	R	The UTC timestamp of the measurements
122	1	OutDCA	int16	R	String output current in mA
123	2	OutDCV	uint32	R	String output voltage in mV
125	2	In1DCV	uint32	R	String input 1 voltage in mV
127	2	In2DCV	uint32	R	String input 2 voltage in mV
129	2	DCWh	uint32	R	Daily integrated string output energy in Wh
131	1	In1DCA	int16	R	String input 1 current in mA
132	1	In2DCA	int16	R	String input 2 current in mA
133	1	String ID	int16	R	The string number
134	2	Reserved	-	-	
136	2	String data timestamp	uint32	R	The UTC timestamp of the measurements
138	1	OutDCA	int16	R	String output current in mA
139	2	OutDCV	uint32	R	String output voltage in mV

Start Offset	Size	Name	Type	R/W	Description
141	2	In1DCV	uint32	R	String input 1 voltage in mV
143	2	In2DCV	uint32	R	String input 2 voltage in mV
145	2	DCWh	uint32	R	Daily integrated string output energy in Wh
147	1	In1DCA	int16	R	String input 1 current in mA
148	1	In2DCA	int16	R	String input 2 current in mA
149	1	String ID	int16	R	The string number
150	2	Reserved	-	-	
152	2	String data timestamp	uint32	R	The UTC timestamp of the measurements
154	1	OutDCA	int16	R	String output current in mA
155	2	OutDCV	uint32	R	String output voltage in mV
157	2	In1DCV	uint32	R	String input 1 voltage in mV
159	2	In2DCV	uint32	R	String input 2 voltage in mV
161	2	DCWh	uint32	R	Daily integrated string output energy in Wh
163	1	In1DCA	int16	R	String input 1 current in mA
164	1	In2DCA	int16	R	String input 2 current in mA
165	1	String ID	int16	R	The string number
166	2	Reserved	-	-	
168	2	String data timestamp	uint32	R	The UTC timestamp of the measurements
170	1	OutDCA	int16	R	String output current in mA
171	2	OutDCV	uint32	R	String output voltage in mV
173	2	In1DCV	uint32	R	String input 1 voltage in mV
175	2	In2DCV	uint32	R	String input 2 voltage in mV
177	2	DCWh	uint32	R	Daily integrated string output energy in Wh
179	1	In1DCA	int16	R	String input 1 current in mA
180	1	In2DCA	int16	R	String input 2 current in mA

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