

**Versatronik® 502 & 502D NR2/  
Modbus  
Communication Gateway**

**120VAC Wall-mount** 704087  
**24VAC DIN-rail mount** 704088



**Effective Date: July 3, 2012**

<p><b>Product Overview</b></p> <p>The Versatronik® 502 and 502D NR2/Modbus gateway allows Viessmann® NR2 controls to remain operational in Autobinding</p>	<p>mode, while providing information to BAS, BMS/ DDC systems.</p> <p>These gateways provide a communication translation between applicable controls</p>	<p>and BMS systems which are capable of Modbus communications.</p> <p>The gateway may be either part of a control panel or stand-alone control device.</p>
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<p><b>Special Features</b></p> <p>Available data points (<i>readable</i>):</p> <ul style="list-style-type: none"> <li>Boilers 1-4 actual temperature</li> <li>Boilers 1-4 actual return temperature sensors 1 and 2</li> <li>Boilers 1-4 actual flue-gas temperature</li> <li>Boilers 1-4 fault code</li> <li>Boilers 1-4 relay state</li> <li>Zone/ cascade/ boiler outdoor temperature</li> <li>Zone/ cascade/ boiler relay state</li> <li>Zone/ cascade/ boiler fault code</li> <li>Zone/ cascade/ boiler DHW actual temperature</li> <li>Zone/ cascade/ boiler zones A1 + M2 + M3 supply actual temperature</li> <li>Zone/ cascade/ boiler Zone A1 actual return temperature</li> </ul> <p>(<i>readable/ writeable</i>):</p> <ul style="list-style-type: none"> <li>Boilers 1-4 + zone/ cascade/ boiler LON addresses</li> <li>Zone/ cascade/ boiler DHW setpoint</li> <li>Zone/ cascade/ boiler zones A1 + M2 + M3 supply setpoint</li> <li>Zone/ cascade/ boiler zones A1 + M2 + M3 curve shift</li> </ul>	<ul style="list-style-type: none"> <li>zone/ cascade/ boiler zones A1 + M2 + M3 curve slope</li> <li>Zone/ cascade/ boiler zones A1 + M2 + M3 curve room temperature normal</li> <li>Zone/ cascade/ boiler zones A1 + M2 + M3 curve room temperature reduced</li> <li>°C or °F selectable</li> </ul> <p>Please note that these features are a function of boiler control manufacturer programming.</p> <p>Please refer to the technical instruction manual of your boiler control for a complete list of points available for each control.</p> <p><b>Specifications</b></p> <p><b>Electrical:</b> 120VAC Wall-mount or 24VAC DIN-rail mount</p> <p><b>Power Requirements:</b> 120VAC Wall-mount: MAX 7.5W 24VAC DIN-rail mount: MAX 12W</p> <p><b>Recommendations:</b> Avoid running wires beside or near high voltage 120/240VAC conductors. If proximity to high voltage conductors cannot be</p>	<p>avoided, use stranded, twisted pair of shield design wire. Ensure that only one end of the shielding is grounded.</p> <p><b>Appearance and Weight:</b> 120V Wall-mount: <i>Mounting style:</i> Wall (field-supplied screws) <i>Supply Voltage:</i> 120VAC (power cord supplied) <i>Dimensions</i> 8" X 6.5" X 1.75" (200 X 165 X 45 mm) <i>Weight:</i> 3.55 lbs (1.6 Kg) <i>Appearance:</i> galvanized steel base with white metal cover</p> <p>24VAC DIN-rail mount: <i>Mounting style:</i> DIN-rail <i>Supply Voltage:</i> 24VAC (power supply not included) <i>Dimensions:</i> 6.25" X 3.5" X 2.25" (160 X 90 X 60 mm) <i>Weight:</i> 0.5 lbs (225 Grams) <i>Appearance:</i> tan-coloured enclosure</p> <p><b>Currently Supported Devices:</b></p> <ul style="list-style-type: none"> <li>Vitotronic-S, MW1 and MW2</li> <li>Vitotronic 100, GC1</li> <li>Vitotronic 300, GW2</li> <li>Vitotronic 200, HO1</li> <li>Vitotronic 100, KK10LON</li> </ul>
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KWE PN 394036 Versatronik® 502 NR2/Modbus Communication Gateway V1.1 06/2013 Technical information subject to change without notice.

## Additional Information

### Surroundings:

Mount 120VAC gateway in a convenient location near the connected boiler control.

Mount 24VAC gateway onto DIN-rail within an enclosure in a convenient location near the boiler control.

### Terminals:

- Two wire Modbus connections

### External Diagnostics:

- Flashing LED fault diagnostic

### Programming:

Setting registers

### Networks:

- Modbus

### Wiring:

- Modbus RS-485 Network COM1 terminals A and B are used.

### Protocols:

- Modbus and LON® to boiler controls

### Agency Compliances:

The 120VAC wall-mount unit is CSA compliant.

## Trademark Information

Versatronik® is a registered trademark of K-W Electronic Service Inc.

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**NOTE:** We reserve the right to make technical changes designed to improve our products without prior notice.



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## Modbus Communication

### Configuration Settings

The gateway is a Modbus slave and all communication has to be initiated by a master. To set up successful communication with the gateway all connection parameters have to be set correctly to the following: 9600 8-N-1 RTU.

Mode	RTU
Baud Rate	9600bps
Data Bits/Length	8
Parity	None
Stop bits	1
Address/Device ID	88, 1-9

