











**IMPORTANT:** MODBUS access has changed in **v6.10r32** and later. ModWeigh v6.10r32 changes the default settings for MODBUS access to 2143 byte order and base 1 addressing, which are the modicon defaults. This is compatible with v6.09 and earlier versions. For releases of V6.10 with a release of r31 or less the default was 4321 byte order and base 0 addressing. The settings for this are under **Q2504 Modbus**. These settings can be tested using **Q25040 modbus status**. More information can be found at <https://ak.emc.co.nz/modweigh/downloads/ModWeigh%20MODBUS.pdf>

<b>Modbus</b> Q25042 modbus word order	
<u>1</u> on	
High endian, Word swap (2143)	
	
18044	
<b>Modbus</b> Q25043 modbus address base	
<u>1</u> on	
Address Base 1	
	
18046	

## Register addressing

A register in MODBUS is two bytes (a word). Therefore a register address is addressing 2 bytes or 1 word. A real (float) number is 4 bytes or 2 words so it occupies two register addresses, for example 8000 and 8001.

## Coil and Register address base

Base 0	Default for v6.10 units up to v6.10r31. NB: Units upgraded from older versions will not change.	Coil and Register addresses are put directly onto the wire with no change. The new setting Q25043 modbus address base is used to control this.
Base 1	Default up to v6.09 units and v6.10r32 onwards.	Coil and Register addresses are put onto the wire with an offset of 1. So address 1 becomes 0 on the wire. <b><i>This is the modicon default.</i></b>

## Real (float) number byte order

High Endian (4321)	Default for v6.10 units up to v6.10r31. NB: Units upgraded from older versions will not change.	The order of bytes in a 32 bit real (float) number is 4321. The new setting Q25042 modbus word order is used to control this.
High endian, Word swap (2143)	Default up to v6.09 units and v6.10r32 onwards.	The order of bytes in a 32 bit real (float) number is 2143. The words (2 bytes each) are swapped. <b><i>This is the modicon default.</i></b>

## Testing MODBUS

From ModWeigh v6.10r32 onwards the new setting **Q25040 modbus status** is available.

The screenshot shows a software interface for testing MODBUS. At the top, a dark blue header contains the text "Modbus" and "Q25040 modbus status" with a lock icon. Below this, the value "0.000" is displayed in large, bold, black font with a red underline. Underneath, a light blue box contains the text: "Use modbus function 16 (0x10) to write a non zero 32 bit real (-1000 to 1000) into register 8840" and "Enter 0 to clear errors". At the bottom right, the number "8840" is shown next to a vertical stack of four blue buttons: a red 'X' button, a button with the symbol  $F_n$ , two empty buttons, and a button with a downward-pointing arrow.