# RESOL VBus/Modbus Configuration

|  |  |
| --- | --- |
| Filename: | RESOL\_DeltaTherm\_HC\_MAX\_ModbusConfig\_1.0.1.cbor |
| ID: | RESOL\_DeltaTherm\_HC\_MAX |
| Version: | 1.0.1 |
| Build at: | 2021-04-16 04:26 |

### Coils (Type 0)

No values defined!

### Discrete Inputs (Type 1)

|  |  |  |  |
| --- | --- | --- | --- |
| Address | Description | Factor | Unit |
| 0 | Error: Sensor line broken | 1 |  |
| 1 | Error: Sensor line short-circuited | 1 |  |
| 2 | Error: Flow rate monitoring | 1 |  |
| 3 | Error: Overpressure | 1 |  |
| 4 | Error: Low pressure | 1 |  |
| 5 | Error: Data memory | 1 |  |
| 6 | Error: Real-time clock | 1 |  |
| 7 | Error: Twin pump | 1 |  |
| 8 | Error: HC cooling below flow minimum temperature | 1 |  |
| 9 | Error: Thermal disinfection cancelled | 1 |  |
| 10 | Warning: ΔT too high | 1 |  |
| 11 | Warning: Night circulation | 1 |  |
| 12 | Warning: Flow/Return interchanged | 1 |  |
| 13 | Warning: SD card | 1 |  |

### Input Registers (Type 3)

|  |  |  |  |
| --- | --- | --- | --- |
| Address | Description | Factor | Unit |
| 0 | Temperature sensor 1 | 0.1 | °C |
| 1 | Temperature sensor 2 | 0.1 | °C |
| 2 | Temperature sensor 3 | 0.1 | °C |
| 3 | Temperature sensor 4 | 0.1 | °C |
| 4 | Temperature sensor 5 | 0.1 | °C |
| 5 | Temperature sensor 6 | 0.1 | °C |
| 6 | Temperature sensor 7 | 0.1 | °C |
| 7 | Temperature sensor 8 | 0.1 | °C |
| 8 | Temperature sensor 9 | 0.1 | °C |
| 9 | Temperature sensor 10 | 0.1 | °C |
| 10 | Temperature sensor 11 | 0.1 | °C |
| 11 | Temperature sensor 12 | 0.1 | °C |
| 12 | Temperature sensor 13 | 0.1 | °C |
| 13 | Temperature sensor 14 | 0.1 | °C |
| 14 | Temperature sensor 15 | 0.1 | °C |
| 15 | Irradiation sensor 16 | 1 | W/m² |
| 16 | Temperature sensor 17 | 0.1 | °C |
| 17 | Temperature sensor 18 | 0.1 | °C |
| 18 | Temperature sensor 19 | 0.1 | °C |
| 19 | Temperature sensor 20 | 0.1 | °C |
| 20 | Flow rate sensor 13 (bits 16..31) | 1 | l/h |
| 21 | Flow rate sensor 13 (bits 0..15) | 1 | l/h |
| 22 | Flow rate sensor 14 (bits 16..31) | 1 | l/h |
| 23 | Flow rate sensor 14 (bits 0..15) | 1 | l/h |
| 24 | Flow rate sensor 15 (bits 16..31) | 1 | l/h |
| 25 | Flow rate sensor 15 (bits 0..15) | 1 | l/h |
| 26 | Flow rate sensor 17 (bits 16..31) | 1 | l/h |
| 27 | Flow rate sensor 17 (bits 0..15) | 1 | l/h |
| 28 | Flow rate sensor 18 (bits 16..31) | 1 | l/h |
| 29 | Flow rate sensor 18 (bits 0..15) | 1 | l/h |
| 30 | Flow rate sensor 19 (bits 16..31) | 1 | l/h |
| 31 | Flow rate sensor 19 (bits 0..15) | 1 | l/h |
| 32 | Flow rate sensor 20 (bits 16..31) | 1 | l/h |
| 33 | Flow rate sensor 20 (bits 0..15) | 1 | l/h |
| 34 | Flow rate sensor 21 (bits 16..31) | 1 | l/h |
| 35 | Flow rate sensor 21 (bits 0..15) | 1 | l/h |
| 36 | Pressure sensor 17 | 0.01 | bar |
| 37 | Pressure sensor 18 | 0.01 | bar |
| 38 | Pressure sensor 19 | 0.01 | bar |
| 39 | Pressure sensor 20 | 0.01 | bar |
| 40 | Pump speed relay 1 | 1 | % |
| 41 | Pump speed relay 2 | 1 | % |
| 42 | Pump speed relay 3 | 1 | % |
| 43 | Pump speed relay 4 | 1 | % |
| 44 | Pump speed relay 5 | 1 | % |
| 45 | Pump speed relay 6 | 1 | % |
| 46 | Pump speed relay 7 | 1 | % |
| 47 | Pump speed relay 8 | 1 | % |
| 48 | Pump speed relay 9 | 1 | % |
| 49 | Pump speed relay 10 | 1 | % |
| 50 | Pump speed relay 11 | 1 | % |
| 51 | Pump speed relay 12 | 1 | % |
| 52 | Pump speed relay 13 | 1 | % |
| 53 | Pump speed relay 14 | 1 | % |
| 54 | Output A | 1 | % |
| 55 | Output B | 1 | % |
| 56 | Output C | 1 | % |
| 57 | Output D | 1 | % |
| 58 | System date (bits 16..31) | 1 |  |
| 59 | System date (bits 0..15) | 1 |  |
| 60 | Error mask (bits 16..31) | 1 |  |
| 61 | Error mask (bits 0..15) | 1 |  |
| 62 | Warning mask (bits 16..31) | 1 |  |
| 63 | Warning mask (bits 0..15) | 1 |  |
| 64 | Humidity sensor 17 | 1 | %RH |
| 65 | Humidity sensor 18 | 1 | %RH |
| 66 | Flow set temperature | 0.1 | °C |
| 67 | Operating state | 1 |  |
| 68 | Flow set temperature | 0.1 | °C |
| 69 | Operating state | 1 |  |
| 70 | Flow set temperature | 0.1 | °C |
| 71 | Operating state | 1 |  |
| 72 | Flow set temperature | 0.1 | °C |
| 73 | Operating state | 1 |  |
| 74 | Flow set temperature | 0.1 | °C |
| 75 | Operating state | 1 |  |
| 76 | Flow set temperature | 0.1 | °C |
| 77 | Operating state | 1 |  |
| 78 | Flow set temperature | 0.1 | °C |
| 79 | Operating state | 1 |  |
| 80 | Heat quantity (bits 48..63) | 1 | Wh |
| 81 | Heat quantity (bits 32..47) | 1 | Wh |
| 82 | Heat quantity (bits 16..31) | 1 | Wh |
| 83 | Heat quantity (bits 0..15) | 1 | Wh |
| 84 | Heat quantity today (bits 16..31) | 1 | Wh |
| 85 | Heat quantity today (bits 0..15) | 1 | Wh |
| 86 | Heat quantity week (bits 16..31) | 1 | Wh |
| 87 | Heat quantity week (bits 0..15) | 1 | Wh |
| 88 | Heat quantity month (bits 16..31) | 1 | Wh |
| 89 | Heat quantity month (bits 0..15) | 1 | Wh |
| 90 | Volume in total (bits 16..31) | 1 | l |
| 91 | Volume in total (bits 0..15) | 1 | l |
| 92 | Volume today (bits 16..31) | 1 | l |
| 93 | Volume today (bits 0..15) | 1 | l |
| 94 | Volume week (bits 16..31) | 1 | l |
| 95 | Volume week (bits 0..15) | 1 | l |
| 96 | Volume month (bits 16..31) | 1 | l |
| 97 | Volume month (bits 0..15) | 1 | l |
| 98 | Power (bits 16..31) | 1 | W |
| 99 | Power (bits 0..15) | 1 | W |
| 100 | Heat quantity (bits 48..63) | 1 | Wh |
| 101 | Heat quantity (bits 32..47) | 1 | Wh |
| 102 | Heat quantity (bits 16..31) | 1 | Wh |
| 103 | Heat quantity (bits 0..15) | 1 | Wh |
| 104 | Heat quantity today (bits 16..31) | 1 | Wh |
| 105 | Heat quantity today (bits 0..15) | 1 | Wh |
| 106 | Heat quantity week (bits 16..31) | 1 | Wh |
| 107 | Heat quantity week (bits 0..15) | 1 | Wh |
| 108 | Heat quantity month (bits 16..31) | 1 | Wh |
| 109 | Heat quantity month (bits 0..15) | 1 | Wh |
| 110 | Volume in total (bits 16..31) | 1 | l |
| 111 | Volume in total (bits 0..15) | 1 | l |
| 112 | Volume today (bits 16..31) | 1 | l |
| 113 | Volume today (bits 0..15) | 1 | l |
| 114 | Volume week (bits 16..31) | 1 | l |
| 115 | Volume week (bits 0..15) | 1 | l |
| 116 | Volume month (bits 16..31) | 1 | l |
| 117 | Volume month (bits 0..15) | 1 | l |
| 118 | Power (bits 16..31) | 1 | W |
| 119 | Power (bits 0..15) | 1 | W |
| 120 | Heat quantity (bits 48..63) | 1 | Wh |
| 121 | Heat quantity (bits 32..47) | 1 | Wh |
| 122 | Heat quantity (bits 16..31) | 1 | Wh |
| 123 | Heat quantity (bits 0..15) | 1 | Wh |
| 124 | Heat quantity today (bits 16..31) | 1 | Wh |
| 125 | Heat quantity today (bits 0..15) | 1 | Wh |
| 126 | Heat quantity week (bits 16..31) | 1 | Wh |
| 127 | Heat quantity week (bits 0..15) | 1 | Wh |
| 128 | Heat quantity month (bits 16..31) | 1 | Wh |
| 129 | Heat quantity month (bits 0..15) | 1 | Wh |
| 130 | Volume in total (bits 16..31) | 1 | l |
| 131 | Volume in total (bits 0..15) | 1 | l |
| 132 | Volume today (bits 16..31) | 1 | l |
| 133 | Volume today (bits 0..15) | 1 | l |
| 134 | Volume week (bits 16..31) | 1 | l |
| 135 | Volume week (bits 0..15) | 1 | l |
| 136 | Volume month (bits 16..31) | 1 | l |
| 137 | Volume month (bits 0..15) | 1 | l |
| 138 | Power (bits 16..31) | 1 | W |
| 139 | Power (bits 0..15) | 1 | W |
| 140 | Heat quantity (bits 48..63) | 1 | Wh |
| 141 | Heat quantity (bits 32..47) | 1 | Wh |
| 142 | Heat quantity (bits 16..31) | 1 | Wh |
| 143 | Heat quantity (bits 0..15) | 1 | Wh |
| 144 | Heat quantity today (bits 16..31) | 1 | Wh |
| 145 | Heat quantity today (bits 0..15) | 1 | Wh |
| 146 | Heat quantity week (bits 16..31) | 1 | Wh |
| 147 | Heat quantity week (bits 0..15) | 1 | Wh |
| 148 | Heat quantity month (bits 16..31) | 1 | Wh |
| 149 | Heat quantity month (bits 0..15) | 1 | Wh |
| 150 | Volume in total (bits 16..31) | 1 | l |
| 151 | Volume in total (bits 0..15) | 1 | l |
| 152 | Volume today (bits 16..31) | 1 | l |
| 153 | Volume today (bits 0..15) | 1 | l |
| 154 | Volume week (bits 16..31) | 1 | l |
| 155 | Volume week (bits 0..15) | 1 | l |
| 156 | Volume month (bits 16..31) | 1 | l |
| 157 | Volume month (bits 0..15) | 1 | l |
| 158 | Power (bits 16..31) | 1 | W |
| 159 | Power (bits 0..15) | 1 | W |
| 160 | Heat quantity (bits 48..63) | 1 | Wh |
| 161 | Heat quantity (bits 32..47) | 1 | Wh |
| 162 | Heat quantity (bits 16..31) | 1 | Wh |
| 163 | Heat quantity (bits 0..15) | 1 | Wh |
| 164 | Heat quantity today (bits 16..31) | 1 | Wh |
| 165 | Heat quantity today (bits 0..15) | 1 | Wh |
| 166 | Heat quantity week (bits 16..31) | 1 | Wh |
| 167 | Heat quantity week (bits 0..15) | 1 | Wh |
| 168 | Heat quantity month (bits 16..31) | 1 | Wh |
| 169 | Heat quantity month (bits 0..15) | 1 | Wh |
| 170 | Volume in total (bits 16..31) | 1 | l |
| 171 | Volume in total (bits 0..15) | 1 | l |
| 172 | Volume today (bits 16..31) | 1 | l |
| 173 | Volume today (bits 0..15) | 1 | l |
| 174 | Volume week (bits 16..31) | 1 | l |
| 175 | Volume week (bits 0..15) | 1 | l |
| 176 | Volume month (bits 16..31) | 1 | l |
| 177 | Volume month (bits 0..15) | 1 | l |
| 178 | Power (bits 16..31) | 1 | W |
| 179 | Power (bits 0..15) | 1 | W |
| 180 | Heat quantity (bits 48..63) | 1 | Wh |
| 181 | Heat quantity (bits 32..47) | 1 | Wh |
| 182 | Heat quantity (bits 16..31) | 1 | Wh |
| 183 | Heat quantity (bits 0..15) | 1 | Wh |
| 184 | Heat quantity today (bits 16..31) | 1 | Wh |
| 185 | Heat quantity today (bits 0..15) | 1 | Wh |
| 186 | Heat quantity week (bits 16..31) | 1 | Wh |
| 187 | Heat quantity week (bits 0..15) | 1 | Wh |
| 188 | Heat quantity month (bits 16..31) | 1 | Wh |
| 189 | Heat quantity month (bits 0..15) | 1 | Wh |
| 190 | Volume in total (bits 16..31) | 1 | l |
| 191 | Volume in total (bits 0..15) | 1 | l |
| 192 | Volume today (bits 16..31) | 1 | l |
| 193 | Volume today (bits 0..15) | 1 | l |
| 194 | Volume week (bits 16..31) | 1 | l |
| 195 | Volume week (bits 0..15) | 1 | l |
| 196 | Volume month (bits 16..31) | 1 | l |
| 197 | Volume month (bits 0..15) | 1 | l |
| 198 | Power (bits 16..31) | 1 | W |
| 199 | Power (bits 0..15) | 1 | W |
| 200 | Heat quantity (bits 48..63) | 1 | Wh |
| 201 | Heat quantity (bits 32..47) | 1 | Wh |
| 202 | Heat quantity (bits 16..31) | 1 | Wh |
| 203 | Heat quantity (bits 0..15) | 1 | Wh |
| 204 | Heat quantity today (bits 16..31) | 1 | Wh |
| 205 | Heat quantity today (bits 0..15) | 1 | Wh |
| 206 | Heat quantity week (bits 16..31) | 1 | Wh |
| 207 | Heat quantity week (bits 0..15) | 1 | Wh |
| 208 | Heat quantity month (bits 16..31) | 1 | Wh |
| 209 | Heat quantity month (bits 0..15) | 1 | Wh |
| 210 | Volume in total (bits 16..31) | 1 | l |
| 211 | Volume in total (bits 0..15) | 1 | l |
| 212 | Volume today (bits 16..31) | 1 | l |
| 213 | Volume today (bits 0..15) | 1 | l |
| 214 | Volume week (bits 16..31) | 1 | l |
| 215 | Volume week (bits 0..15) | 1 | l |
| 216 | Volume month (bits 16..31) | 1 | l |
| 217 | Volume month (bits 0..15) | 1 | l |
| 218 | Power (bits 16..31) | 1 | W |
| 219 | Power (bits 0..15) | 1 | W |
| 220 | Temperature sensor 1 | 0.1 | °C |
| 221 | Temperature sensor 2 | 0.1 | °C |
| 222 | Temperature sensor 3 | 0.1 | °C |
| 223 | Temperature sensor 4 | 0.1 | °C |
| 224 | Temperature sensor 5 | 0.1 | °C |
| 225 | Temperature sensor 6 | 0.1 | °C |
| 226 | Pump speed relay 1 | 1 | % |
| 227 | Pump speed relay 2 | 1 | % |
| 228 | Pump speed relay 3 | 1 | % |
| 229 | Pump speed relay 4 | 1 | % |
| 230 | Pump speed relay 5 | 1 | % |
| 231 | Temperature sensor 1 | 0.1 | °C |
| 232 | Temperature sensor 2 | 0.1 | °C |
| 233 | Temperature sensor 3 | 0.1 | °C |
| 234 | Temperature sensor 4 | 0.1 | °C |
| 235 | Temperature sensor 5 | 0.1 | °C |
| 236 | Temperature sensor 6 | 0.1 | °C |
| 237 | Pump speed relay 1 | 1 | % |
| 238 | Pump speed relay 2 | 1 | % |
| 239 | Pump speed relay 3 | 1 | % |
| 240 | Pump speed relay 4 | 1 | % |
| 241 | Pump speed relay 5 | 1 | % |
| 242 | Temperature sensor 1 | 0.1 | °C |
| 243 | Temperature sensor 2 | 0.1 | °C |
| 244 | Temperature sensor 3 | 0.1 | °C |
| 245 | Temperature sensor 4 | 0.1 | °C |
| 246 | Temperature sensor 5 | 0.1 | °C |
| 247 | Temperature sensor 6 | 0.1 | °C |
| 248 | Pump speed relay 1 | 1 | % |
| 249 | Pump speed relay 2 | 1 | % |
| 250 | Pump speed relay 3 | 1 | % |
| 251 | Pump speed relay 4 | 1 | % |
| 252 | Pump speed relay 5 | 1 | % |
| 253 | Temperature sensor 1 | 0.1 | °C |
| 254 | Temperature sensor 2 | 0.1 | °C |
| 255 | Temperature sensor 3 | 0.1 | °C |
| 256 | Temperature sensor 4 | 0.1 | °C |
| 257 | Temperature sensor 5 | 0.1 | °C |
| 258 | Temperature sensor 6 | 0.1 | °C |
| 259 | Pump speed relay 1 | 1 | % |
| 260 | Pump speed relay 2 | 1 | % |
| 261 | Pump speed relay 3 | 1 | % |
| 262 | Pump speed relay 4 | 1 | % |
| 263 | Pump speed relay 5 | 1 | % |
| 264 | Temperature sensor 1 | 0.1 | °C |
| 265 | Temperature sensor 2 | 0.1 | °C |
| 266 | Temperature sensor 3 | 0.1 | °C |
| 267 | Temperature sensor 4 | 0.1 | °C |
| 268 | Temperature sensor 5 | 0.1 | °C |
| 269 | Temperature sensor 6 | 0.1 | °C |
| 270 | Pump speed relay 1 | 1 | % |
| 271 | Pump speed relay 2 | 1 | % |
| 272 | Pump speed relay 3 | 1 | % |
| 273 | Pump speed relay 4 | 1 | % |
| 274 | Pump speed relay 5 | 1 | % |

### Holding Registers (Type 4)

No values defined!