

# RESOL Modbus/TCP Configuration

**Filename:** Oventrop\_Regtronic\_RM\_ModbusConfig\_1.2.2.cbor  
**ID:** Oventrop\_Regtronic\_RM  
**Version:** 1.2.2  
**Build at:** 2022-10-20 10:16

**Endianness:** Big Endian

## **Coils (Type 0 / Modbus function code 01)**

No values defined!

**Discrete Inputs (Type 1 / Modbus function code 02)**

| Address | Description                                      | R/W | Factor | Unit |
|---------|--------------------------------------------------|-----|--------|------|
| 0       | Error: Sensor line broken                        | R   | 1      |      |
| 1       | Error: Sensor line short-circuited               | R   | 1      |      |
| 2       | Error: Flow rate monitoring                      | R   | 1      |      |
| 3       | Error: Overpressure                              | R   | 1      |      |
| 4       | Error: Low pressure                              | R   | 1      |      |
| 5       | Error: Data memory                               | R   | 1      |      |
| 6       | Error: Real-time clock                           | R   | 1      |      |
| 7       | Error: Twin pump                                 | R   | 1      |      |
| 8       | Error: HC cooling below flow minimum temperature | R   | 1      |      |
| 9       | Error: Thermal disinfection cancelled            | R   | 1      |      |
| 10      | Warning: $\Delta T$ too high                     | R   | 1      |      |
| 11      | Warning: Night circulation                       | R   | 1      |      |
| 12      | Warning: Flow/Return interchanged                | R   | 1      |      |
| 13      | Warning: SD card                                 | R   | 1      |      |
| 14      | Warnung: Thermische Desinfektion abgebrochen     | R   | 1      |      |

## Input Registers (Type 3 / Modbus function code 04)

| Address | Description                       | R/W | Data type | Factor | Unit             |
|---------|-----------------------------------|-----|-----------|--------|------------------|
| 0       | Temperature sensor 1              | R   | int16     | 0.1    | °C               |
| 1       | Temperature sensor 2              | R   | int16     | 0.1    | °C               |
| 2       | Temperature sensor 3              | R   | int16     | 0.1    | °C               |
| 3       | Temperature sensor 4              | R   | int16     | 0.1    | °C               |
| 4       | Temperature sensor 5              | R   | int16     | 0.1    | °C               |
| 5       | Temperature sensor 6              | R   | int16     | 0.1    | °C               |
| 6       | Temperature sensor 7              | R   | int16     | 0.1    | °C               |
| 7       | Temperature sensor 8              | R   | int16     | 0.1    | °C               |
| 8       | Temperature sensor 9              | R   | int16     | 0.1    | °C               |
| 9       | Temperature sensor 10             | R   | int16     | 0.1    | °C               |
| 10      | Temperature sensor 11             | R   | int16     | 0.1    | °C               |
| 11      | Temperature sensor 12             | R   | int16     | 0.1    | °C               |
| 12      | Temperature sensor 13             | R   | int16     | 0.1    | °C               |
| 13      | Temperature sensor 14             | R   | int16     | 0.1    | °C               |
| 14      | Temperature sensor 15             | R   | int16     | 0.1    | °C               |
| 15      | Irradiation sensor 16             | R   | int16     | 1      | W/m <sup>2</sup> |
| 16      | Temperature sensor 17             | R   | int16     | 0.1    | °C               |
| 17      | Temperature sensor 18             | R   | int16     | 0.1    | °C               |
| 18      | Temperature sensor 19             | R   | int16     | 0.1    | °C               |
| 19      | Temperature sensor 20             | R   | int16     | 0.1    | °C               |
| 20      | Flow rate sensor 13 (bits 16..31) | R   | int32     | 1      | l/h              |
| 21      | Flow rate sensor 13 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 22      | Flow rate sensor 14 (bits 16..31) | R   | int32     | 1      | l/h              |
| 23      | Flow rate sensor 14 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 24      | Flow rate sensor 15 (bits 16..31) | R   | int32     | 1      | l/h              |
| 25      | Flow rate sensor 15 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 26      | Flow rate sensor 17 (bits 16..31) | R   | int32     | 1      | l/h              |
| 27      | Flow rate sensor 17 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 28      | Flow rate sensor 18 (bits 16..31) | R   | int32     | 1      | l/h              |
| 29      | Flow rate sensor 18 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 30      | Flow rate sensor 19 (bits 16..31) | R   | int32     | 1      | l/h              |
| 31      | Flow rate sensor 19 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 32      | Flow rate sensor 20 (bits 16..31) | R   | int32     | 1      | l/h              |
| 33      | Flow rate sensor 20 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 34      | Flow rate sensor 21 (bits 16..31) | R   | int32     | 1      | l/h              |
| 35      | Flow rate sensor 21 (bits 0..15)  | R   | int32     | 1      | l/h              |
| 36      | Pressure sensor 17                | R   | int16     | 0.01   | bar              |
| 37      | Pressure sensor 18                | R   | int16     | 0.01   | bar              |
| 38      | Pressure sensor 19                | R   | int16     | 0.01   | bar              |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                 | R/W | Data type | Factor | Unit |
|---------|-----------------------------|-----|-----------|--------|------|
| 39      | Pressure sensor 20          | R   | int16     | 0.01   | bar  |
| 40      | Pump speed relay 1          | R   | uint16    | 1      | %    |
| 41      | Pump speed relay 2          | R   | uint16    | 1      | %    |
| 42      | Pump speed relay 3          | R   | uint16    | 1      | %    |
| 43      | Pump speed relay 4          | R   | uint16    | 1      | %    |
| 44      | Pump speed relay 5          | R   | uint16    | 1      | %    |
| 45      | Pump speed relay 6          | R   | uint16    | 1      | %    |
| 46      | Pump speed relay 7          | R   | uint16    | 1      | %    |
| 47      | Pump speed relay 8          | R   | uint16    | 1      | %    |
| 48      | Pump speed relay 9          | R   | uint16    | 1      | %    |
| 49      | Pump speed relay 10         | R   | uint16    | 1      | %    |
| 50      | Pump speed relay 11         | R   | uint16    | 1      | %    |
| 51      | Pump speed relay 12         | R   | uint16    | 1      | %    |
| 52      | Pump speed relay 13         | R   | uint16    | 1      | %    |
| 53      | Pump speed relay 14         | R   | uint16    | 1      | %    |
| 54      | Output A                    | R   | uint16    | 1      | %    |
| 55      | Output B                    | R   | uint16    | 1      | %    |
| 56      | Output C                    | R   | uint16    | 1      | %    |
| 57      | Output D                    | R   | uint16    | 1      | %    |
| 58      | System date (bits 16..31)   | R   | int32     | 1      |      |
| 59      | System date (bits 0..15)    | R   | int32     | 1      |      |
| 60      | Error mask (bits 16..31)    | R   | int32     | 1      |      |
| 61      | Error mask (bits 0..15)     | R   | int32     | 1      |      |
| 62      | Warning mask (bits 16..31)  | R   | int32     | 1      |      |
| 63      | Warning mask (bits 0..15)   | R   | int32     | 1      |      |
| 64      | Humidity sensor 17          | R   | uint16    | 1      | %RH  |
| 65      | Humidity sensor 18          | R   | uint16    | 1      | %RH  |
| 66      | Humidity sensor 19          | R   | uint16    | 1      | %RH  |
| 67      | Humidity sensor 20          | R   | uint16    | 1      | %RH  |
| 68      | HC #1: Flow set temperature | R   | int16     | 0.1    | °C   |
| 69      | HC #1: Operating state      | R   | uint16    | 1      |      |
| 70      | HC #2: Flow set temperature | R   | int16     | 0.1    | °C   |
| 71      | HC #2: Operating state      | R   | uint16    | 1      |      |
| 72      | HC #3: Flow set temperature | R   | int16     | 0.1    | °C   |
| 73      | HC #3: Operating state      | R   | uint16    | 1      |      |
| 74      | HC #4: Flow set temperature | R   | int16     | 0.1    | °C   |
| 75      | HC #4: Operating state      | R   | uint16    | 1      |      |
| 76      | HC #5: Flow set temperature | R   | int16     | 0.1    | °C   |
| 77      | HC #5: Operating state      | R   | uint16    | 1      |      |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                               | R/W | Data type | Factor | Unit |
|---------|-------------------------------------------|-----|-----------|--------|------|
| 78      | HC #6: Flow set temperature               | R   | int16     | 0.1    | °C   |
| 79      | HC #6: Operating state                    | R   | uint16    | 1      |      |
| 80      | HC #7: Flow set temperature               | R   | int16     | 0.1    | °C   |
| 81      | HC #7: Operating state                    | R   | uint16    | 1      |      |
| 82      | WMZ #1 Heat quantity (bits 48..63)        | R   | int64     | 1      | Wh   |
| 83      | WMZ #1 Heat quantity (bits 32..47)        | R   | int64     | 1      | Wh   |
| 84      | WMZ #1 Heat quantity (bits 16..31)        | R   | int64     | 1      | Wh   |
| 85      | WMZ #1 Heat quantity (bits 0..15)         | R   | int64     | 1      | Wh   |
| 86      | WMZ #1 Heat quantity today (bits 16..31)  | R   | int32     | 1      | Wh   |
| 87      | WMZ #1 Heat quantity today (bits 0..15)   | R   | int32     | 1      | Wh   |
| 88      | WMZ #1 Heat quantity week (bits 16..31)   | R   | int32     | 1      | Wh   |
| 89      | WMZ #1 Heat quantity week (bits 0..15)    | R   | int32     | 1      | Wh   |
| 90      | WMZ #1 Heat quantity month (bits 16..31)  | R   | int32     | 1      | Wh   |
| 91      | WMZ #1 Heat quantity month (bits 0..15)   | R   | int32     | 1      | Wh   |
| 92      | WMZ #1 Volume in total (bits 16..31)      | R   | int32     | 1      | l    |
| 93      | WMZ #1 Volume in total (bits 0..15)       | R   | int32     | 1      | l    |
| 94      | WMZ #1 Volume today (bits 16..31)         | R   | int32     | 1      | l    |
| 95      | WMZ #1 Volume today (bits 0..15)          | R   | int32     | 1      | l    |
| 96      | WMZ #1 Volume week (bits 16..31)          | R   | int32     | 1      | l    |
| 97      | WMZ #1 Volume week (bits 0..15)           | R   | int32     | 1      | l    |
| 98      | WMZ #1 Volume month (bits 16..31)         | R   | int32     | 1      | l    |
| 99      | WMZ #1 Volume month (bits 0..15)          | R   | int32     | 1      | l    |
| 100     | WMZ #1 Power (bits 16..31)                | R   | int32     | 1      | W    |
| 101     | WMZ #1 Power (bits 0..15)                 | R   | int32     | 1      | W    |
| 102     | WMZ #2: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 103     | WMZ #2: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 104     | WMZ #2: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 105     | WMZ #2: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 106     | WMZ #2: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 107     | WMZ #2: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 108     | WMZ #2: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 109     | WMZ #2: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 110     | WMZ #2: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 111     | WMZ #2: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 112     | WMZ #2: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 113     | WMZ #2: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 114     | WMZ #2: Volume today (bits 16..31)        | R   | int32     | 1      | l    |
| 115     | WMZ #2: Volume today (bits 0..15)         | R   | int32     | 1      | l    |
| 116     | WMZ #2: Volume week (bits 16..31)         | R   | int32     | 1      | l    |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                               | R/W | Data type | Factor | Unit |
|---------|-------------------------------------------|-----|-----------|--------|------|
| 117     | WMZ #2: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 118     | WMZ #2: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 119     | WMZ #2: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 120     | WMZ #2: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 121     | WMZ #2: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 122     | WMZ #3: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 123     | WMZ #3: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 124     | WMZ #3: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 125     | WMZ #3: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 126     | WMZ #3: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 127     | WMZ #3: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 128     | WMZ #3: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 129     | WMZ #3: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 130     | WMZ #3: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 131     | WMZ #3: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 132     | WMZ #3: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 133     | WMZ #3: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 134     | WMZ #3: Volume today (bits 16..31)        | R   | int32     | 1      | l    |
| 135     | WMZ #3: Volume today (bits 0..15)         | R   | int32     | 1      | l    |
| 136     | WMZ #3: Volume week (bits 16..31)         | R   | int32     | 1      | l    |
| 137     | WMZ #3: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 138     | WMZ #3: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 139     | WMZ #3: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 140     | WMZ #3: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 141     | WMZ #3: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 142     | WMZ #4: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 143     | WMZ #4: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 144     | WMZ #4: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 145     | WMZ #4: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 146     | WMZ #4: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 147     | WMZ #4: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 148     | WMZ #4: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 149     | WMZ #4: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 150     | WMZ #4: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 151     | WMZ #4: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 152     | WMZ #4: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 153     | WMZ #4: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 154     | WMZ #4: Volume today (bits 16..31)        | R   | int32     | 1      | l    |
| 155     | WMZ #4: Volume today (bits 0..15)         | R   | int32     | 1      | l    |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                               | R/W | Data type | Factor | Unit |
|---------|-------------------------------------------|-----|-----------|--------|------|
| 156     | WMZ #4: Volume week (bits 16..31)         | R   | int32     | 1      | l    |
| 157     | WMZ #4: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 158     | WMZ #4: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 159     | WMZ #4: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 160     | WMZ #4: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 161     | WMZ #4: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 162     | WMZ #5: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 163     | WMZ #5: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 164     | WMZ #5: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 165     | WMZ #5: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 166     | WMZ #5: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 167     | WMZ #5: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 168     | WMZ #5: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 169     | WMZ #5: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 170     | WMZ #5: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 171     | WMZ #5: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 172     | WMZ #5: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 173     | WMZ #5: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 174     | WMZ #5: Volume today (bits 16..31)        | R   | int32     | 1      | l    |
| 175     | WMZ #5: Volume today (bits 0..15)         | R   | int32     | 1      | l    |
| 176     | WMZ #5: Volume week (bits 16..31)         | R   | int32     | 1      | l    |
| 177     | WMZ #5: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 178     | WMZ #5: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 179     | WMZ #5: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 180     | WMZ #5: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 181     | WMZ #5: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 182     | WMZ #6: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 183     | WMZ #6: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 184     | WMZ #6: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 185     | WMZ #6: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 186     | WMZ #6: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 187     | WMZ #6: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 188     | WMZ #6: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 189     | WMZ #6: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 190     | WMZ #6: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 191     | WMZ #6: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 192     | WMZ #6: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 193     | WMZ #6: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 194     | WMZ #6: Volume today (bits 16..31)        | R   | int32     | 1      | l    |



**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                               | R/W | Data type | Factor | Unit |
|---------|-------------------------------------------|-----|-----------|--------|------|
| 195     | WMZ #6: Volume today (bits 0..15)         | R   | int32     | 1      | l    |
| 196     | WMZ #6: Volume week (bits 16..31)         | R   | int32     | 1      | l    |
| 197     | WMZ #6: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 198     | WMZ #6: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 199     | WMZ #6: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 200     | WMZ #6: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 201     | WMZ #6: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 202     | WMZ #7: Heat quantity (bits 48..63)       | R   | int64     | 1      | Wh   |
| 203     | WMZ #7: Heat quantity (bits 32..47)       | R   | int64     | 1      | Wh   |
| 204     | WMZ #7: Heat quantity (bits 16..31)       | R   | int64     | 1      | Wh   |
| 205     | WMZ #7: Heat quantity (bits 0..15)        | R   | int64     | 1      | Wh   |
| 206     | WMZ #7: Heat quantity today (bits 16..31) | R   | int32     | 1      | Wh   |
| 207     | WMZ #7: Heat quantity today (bits 0..15)  | R   | int32     | 1      | Wh   |
| 208     | WMZ #7: Heat quantity week (bits 16..31)  | R   | int32     | 1      | Wh   |
| 209     | WMZ #7: Heat quantity week (bits 0..15)   | R   | int32     | 1      | Wh   |
| 210     | WMZ #7: Heat quantity month (bits 16..31) | R   | int32     | 1      | Wh   |
| 211     | WMZ #7: Heat quantity month (bits 0..15)  | R   | int32     | 1      | Wh   |
| 212     | WMZ #7: Volume in total (bits 16..31)     | R   | int32     | 1      | l    |
| 213     | WMZ #7: Volume in total (bits 0..15)      | R   | int32     | 1      | l    |
| 214     | WMZ #7: Volume today (bits 16..31)        | R   | int32     | 1      | l    |
| 215     | WMZ #7: Volume today (bits 0..15)         | R   | int32     | 1      | l    |
| 216     | WMZ #7: Volume week (bits 16..31)         | R   | int32     | 1      | l    |
| 217     | WMZ #7: Volume week (bits 0..15)          | R   | int32     | 1      | l    |
| 218     | WMZ #7: Volume month (bits 16..31)        | R   | int32     | 1      | l    |
| 219     | WMZ #7: Volume month (bits 0..15)         | R   | int32     | 1      | l    |
| 220     | WMZ #7: Power (bits 16..31)               | R   | int32     | 1      | W    |
| 221     | WMZ #7: Power (bits 0..15)                | R   | int32     | 1      | W    |
| 222     | Module #1: Temperature sensor 1           | R   | int16     | 0.1    | °C   |
| 223     | Module #1: Temperature sensor 2           | R   | int16     | 0.1    | °C   |
| 224     | Module #1: Temperature sensor 3           | R   | int16     | 0.1    | °C   |
| 225     | Module #1: Temperature sensor 4           | R   | int16     | 0.1    | °C   |
| 226     | Module #1: Temperature sensor 5           | R   | int16     | 0.1    | °C   |
| 227     | Module #1: Temperature sensor 6           | R   | int16     | 0.1    | °C   |
| 228     | Module #1: Pump speed relay 1             | R   | uint16    | 1      | %    |
| 229     | Module #1: Pump speed relay 2             | R   | uint16    | 1      | %    |
| 230     | Module #1: Pump speed relay 3             | R   | uint16    | 1      | %    |
| 231     | Module #1: Pump speed relay 4             | R   | uint16    | 1      | %    |
| 232     | Module #1: Pump speed relay 5             | R   | uint16    | 1      | %    |
| 233     | Module #2: Temperature sensor 1           | R   | int16     | 0.1    | °C   |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                     | R/W | Data type | Factor | Unit |
|---------|---------------------------------|-----|-----------|--------|------|
| 234     | Module #2: Temperature sensor 2 | R   | int16     | 0.1    | °C   |
| 235     | Module #2: Temperature sensor 3 | R   | int16     | 0.1    | °C   |
| 236     | Module #2: Temperature sensor 4 | R   | int16     | 0.1    | °C   |
| 237     | Module #2: Temperature sensor 5 | R   | int16     | 0.1    | °C   |
| 238     | Module #2: Temperature sensor 6 | R   | int16     | 0.1    | °C   |
| 239     | Module #2: Pump speed relay 1   | R   | uint16    | 1      | %    |
| 240     | Module #2: Pump speed relay 2   | R   | uint16    | 1      | %    |
| 241     | Module #2: Pump speed relay 3   | R   | uint16    | 1      | %    |
| 242     | Module #2: Pump speed relay 4   | R   | uint16    | 1      | %    |
| 243     | Module #2: Pump speed relay 5   | R   | uint16    | 1      | %    |
| 244     | Module #3: Temperature sensor 1 | R   | int16     | 0.1    | °C   |
| 245     | Module #3: Temperature sensor 2 | R   | int16     | 0.1    | °C   |
| 246     | Module #3: Temperature sensor 3 | R   | int16     | 0.1    | °C   |
| 247     | Module #3: Temperature sensor 4 | R   | int16     | 0.1    | °C   |
| 248     | Module #3: Temperature sensor 5 | R   | int16     | 0.1    | °C   |
| 249     | Module #3: Temperature sensor 6 | R   | int16     | 0.1    | °C   |
| 250     | Module #3: Pump speed relay 1   | R   | uint16    | 1      | %    |
| 251     | Module #3: Pump speed relay 2   | R   | uint16    | 1      | %    |
| 252     | Module #3: Pump speed relay 3   | R   | uint16    | 1      | %    |
| 253     | Module #3: Pump speed relay 4   | R   | uint16    | 1      | %    |
| 254     | Module #3: Pump speed relay 5   | R   | uint16    | 1      | %    |
| 255     | Module #4: Temperature sensor 1 | R   | int16     | 0.1    | °C   |
| 256     | Module #4: Temperature sensor 2 | R   | int16     | 0.1    | °C   |
| 257     | Module #4: Temperature sensor 3 | R   | int16     | 0.1    | °C   |
| 258     | Module #4: Temperature sensor 4 | R   | int16     | 0.1    | °C   |
| 259     | Module #4: Temperature sensor 5 | R   | int16     | 0.1    | °C   |
| 260     | Module #4: Temperature sensor 6 | R   | int16     | 0.1    | °C   |
| 261     | Module #4: Pump speed relay 1   | R   | uint16    | 1      | %    |
| 262     | Module #4: Pump speed relay 2   | R   | uint16    | 1      | %    |
| 263     | Module #4: Pump speed relay 3   | R   | uint16    | 1      | %    |
| 264     | Module #4: Pump speed relay 4   | R   | uint16    | 1      | %    |
| 265     | Module #4: Pump speed relay 5   | R   | uint16    | 1      | %    |
| 266     | Module #5: Temperature sensor 1 | R   | int16     | 0.1    | °C   |
| 267     | Module #5: Temperature sensor 2 | R   | int16     | 0.1    | °C   |
| 268     | Module #5: Temperature sensor 3 | R   | int16     | 0.1    | °C   |
| 269     | Module #5: Temperature sensor 4 | R   | int16     | 0.1    | °C   |
| 270     | Module #5: Temperature sensor 5 | R   | int16     | 0.1    | °C   |
| 271     | Module #5: Temperature sensor 6 | R   | int16     | 0.1    | °C   |
| 272     | Module #5: Pump speed relay 1   | R   | uint16    | 1      | %    |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                                          | R/W | Data type | Factor | Unit  |
|---------|------------------------------------------------------|-----|-----------|--------|-------|
| 273     | Module #5: Pump speed relay 2                        | R   | uint16    | 1      | %     |
| 274     | Module #5: Pump speed relay 3                        | R   | uint16    | 1      | %     |
| 275     | Module #5: Pump speed relay 4                        | R   | uint16    | 1      | %     |
| 276     | Module #5: Pump speed relay 5                        | R   | uint16    | 1      | %     |
| 277     | Impulszähler #1: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 278     | Impulszähler #1: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 279     | Impulszähler #1: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 280     | Impulszähler #1: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 281     | Impulszähler #1: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 282     | Impulszähler #1: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 283     | Impulszähler #1: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 284     | Impulszähler #1: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 285     | Impulszähler #1: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 286     | Impulszähler #1: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 287     | Impulszähler #1: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 288     | Impulszähler #1: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 289     | Impulszähler #2: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 290     | Impulszähler #2: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 291     | Impulszähler #2: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 292     | Impulszähler #2: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 293     | Impulszähler #2: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 294     | Impulszähler #2: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 295     | Impulszähler #2: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 296     | Impulszähler #2: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 297     | Impulszähler #2: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 298     | Impulszähler #2: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 299     | Impulszähler #2: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 300     | Impulszähler #2: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 301     | Impulszähler #3: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 302     | Impulszähler #3: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 303     | Impulszähler #3: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 304     | Impulszähler #3: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 305     | Impulszähler #3: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 306     | Impulszähler #3: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 307     | Impulszähler #3: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 308     | Impulszähler #3: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 309     | Impulszähler #3: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 310     | Impulszähler #3: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 311     | Impulszähler #3: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                                          | R/W | Data type | Factor | Unit  |
|---------|------------------------------------------------------|-----|-----------|--------|-------|
| 312     | Impulszähler #3: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 313     | Impulszähler #4: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 314     | Impulszähler #4: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 315     | Impulszähler #4: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 316     | Impulszähler #4: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 317     | Impulszähler #4: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 318     | Impulszähler #4: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 319     | Impulszähler #4: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 320     | Impulszähler #4: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 321     | Impulszähler #4: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 322     | Impulszähler #4: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 323     | Impulszähler #4: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 324     | Impulszähler #4: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 325     | Impulszähler #5: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 326     | Impulszähler #5: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 327     | Impulszähler #5: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 328     | Impulszähler #5: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 329     | Impulszähler #5: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 330     | Impulszähler #5: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 331     | Impulszähler #5: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 332     | Impulszähler #5: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 333     | Impulszähler #5: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 334     | Impulszähler #5: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 335     | Impulszähler #5: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 336     | Impulszähler #5: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 337     | Impulszähler #6: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 338     | Impulszähler #6: Counter reading (bits 0..15)        | R   | int32     | 1      |       |
| 339     | Impulszähler #6: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 340     | Impulszähler #6: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 341     | Impulszähler #6: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 342     | Impulszähler #6: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 343     | Impulszähler #6: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 344     | Impulszähler #6: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 345     | Impulszähler #6: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 346     | Impulszähler #6: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 347     | Impulszähler #6: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 348     | Impulszähler #6: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |
| 349     | Impulszähler #7: Counter reading (bits 16..31)       | R   | int32     | 1      |       |
| 350     | Impulszähler #7: Counter reading (bits 0..15)        | R   | int32     | 1      |       |

**Input Registers (Type 3 / Modbus function code 04) cont.**

| Address | Description                                          | R/W | Data type | Factor | Unit  |
|---------|------------------------------------------------------|-----|-----------|--------|-------|
| 351     | Impulszähler #7: Impulse rate (bits 16..31)          | R   | int32     | 1      | Imp/h |
| 352     | Impulszähler #7: Impulse rate (bits 0..15)           | R   | int32     | 1      | Imp/h |
| 353     | Impulszähler #7: Counter reading today (bits 16..31) | R   | int32     | 1      |       |
| 354     | Impulszähler #7: Counter reading today (bits 0..15)  | R   | int32     | 1      |       |
| 355     | Impulszähler #7: Counter reading week (bits 16..31)  | R   | int32     | 1      |       |
| 356     | Impulszähler #7: Counter reading week (bits 0..15)   | R   | int32     | 1      |       |
| 357     | Impulszähler #7: Counter reading month (bits 16..31) | R   | int32     | 1      |       |
| 358     | Impulszähler #7: Counter reading month (bits 0..15)  | R   | int32     | 1      |       |
| 359     | Impulszähler #7: Counter reading year (bits 16..31)  | R   | int32     | 1      |       |
| 360     | Impulszähler #7: Counter reading year (bits 0..15)   | R   | int32     | 1      |       |

## **Holding Registers (Type 4 / Modbus function code 06)**

No values defined!