



ECH 600

Modbus Serial Communication Protocol



SUMMARY

| | | |
|-------|--|----|
| 1 | Modbus Functions and Resources..... | 3 |
| 1.1 | Data format (RTU) | 3 |
| 1.2 | Network..... | 3 |
| 1.3 | Modbus functions available and data areas..... | 4 |
| 1.4 | Address configuration..... | 4 |
| 1.5 | Address Tables | 4 |
| 1.5.1 | Description of parameters | 4 |
| 1.5.2 | Parameters Table..... | 5 |
| 1.5.3 | Client Table..... | 17 |
| 2 | Analitic Index..... | 22 |

1 MODBUS FUNCTIONS AND RESOURCES

Modbus is a client/server communication protocol between devices connected on a *network*. Modbus instruments communicate using a master/slave technique in which only one device (master) can send messages. The other devices on the *network* (slave) respond by returning the data requested by the master or performing the action indicated in the message sent. A slave is a device connected to the *network* that processes information and sends the results to the master using the Modbus protocol.

The master can send messages to individual slaves, or send messages to the whole *network* (broadcast), whereas the slave instruments respond to the messages only individually and to the master device.

The Modbus standard used by Eliwell provides for the use of RTU coding for data transmission.

1.1 Data format (RTU)

The coding model used defines the structure of messages transmitted on the *network* and the way in which this information is decoded. The type of coding is normally selected according to specific parameters (baud rate, parity, etc.), also, certain devices only support certain coding models, however it must be the same for all the instruments connected to a Modbus *network*.

The protocol uses the binary RTU method with the byte made up as follows:
8 bits for data, even parity bit (not configurable), 1 stop bit.

NOTE: the transmission speed must be set to 9600 baud.

Setting the parameters allows the *instrument* to be fully configurable

They can be modified by means of:

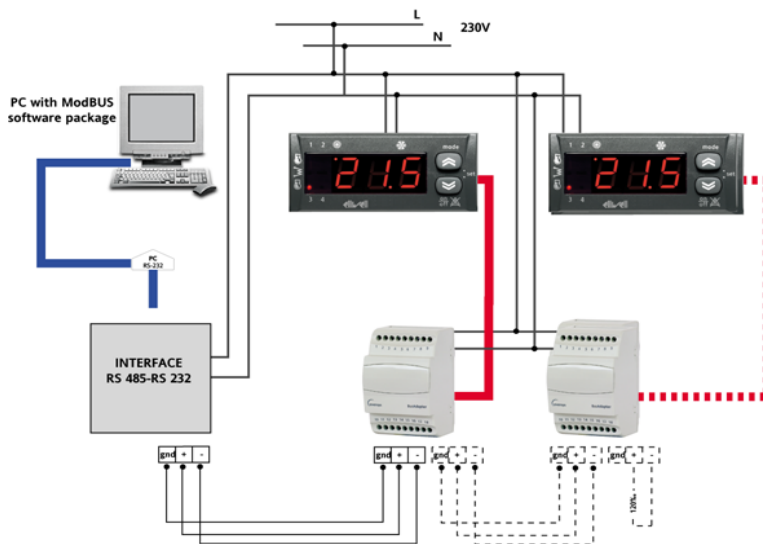
instrument keyboard

copy Card

sending the data using the ModBus protocol, directly to an individual instrument, or by broadcast, using *address 0* (broadcast)

1.2 Network

Schema di
connessione
ModBus a
multi-dispositivo



| | |
|------------------------------------|---|
| PC / Interface connection | RS232 cable |
| Device / Bus Adapter connection | 5-way TTL connector cable (30cm) (other sizes/lengths available) |
| Bus Adapter | BA150 |
| Bus Adapter / Interface connection | RS485 cable screened and twisted (e.g. Belden cable model 8762) |

1.3 Modbus functions available and data areas

| Function Code | Command description |
|---------------|---|
| 3 | Read 16 consecutive registers for Client side Read 1 single register for parameters. |
| 16 | Write 15 consecutive registers for Client side Write 1 register for parameters |

Product Identification

The product in question can be univocally recognised by means of the hexadecimal Family/Release version values. Regarding the product ECH600:

Fam/Ver: "007C0010" formed by Family Code 007C = 124 and version 0010= 16
Date: "050B03" = 05/11/03

IMPORTANT! The reading of 2 registers (WORD) must be requested to obtain 1 in response. If reading of only one register is requested a reading of the highest byte will be obtained.



IMPORTANT! To write values to WORD it is necessary to send a write request with 2 registers, and a dimension 2 response will be obtained.

1.4 Address configuration

The *address* of a device inside a ModBus message is made up of one byte and is formed of the family code and the instrument code, made up of parameters H65 and H66 respectively.

The *address* (Device *Address*) is thus formed of two nibbles:

- **H65:** low nibble
- **H66:** high nibble

To calculate the *address* starting from parameters H65 and H66;
 $address = H65 \times 16 + H66$

Per esempio: indirizzo (HEX) 16 (H65=01; H66=00)

Address 0 is used for broadcast messages, which are recognised by all slaves. Slaves do not respond to a broadcast type request.

| INSTRUMENT CONFIGURATION PARAMETERS | | | |
|-------------------------------------|--|-----------------------|-------|
| Par. | Description | Range | Value |
| H65 | Family serial <i>address</i> | 0...14 | 0 |
| H66 | Device serial <i>address</i> | 0...14 | 0 |
| H48 | Communication protocol configuration Note: If H26 is changed the controller must be turned off and then on again after they are changed to operate correctly | 1=Modbus 0=Televis | 1 |

1.5 Address Tables

1.5.1 Description of parameters

The *address tables* contain the information required to read, write and decode each individual resource accessible in the instrument.

There are two tables:

- the *parameters table* contains all the device configuration parameters stored in the instrument's non-volatile memory.
- the *client table* includes all the I/O and alarm status resources available in the instrument's volatile memory.

Description of columns:

| | |
|----------------|---|
| INDEX | For the <i>parameters table</i> this value represents the order in which the parameter is displayed in the instrument's menu. For the <i>client table</i> this value is not significant. |
| FOLDER | This indicates the <i>label</i> of the <i>folder</i> containing the parameter in question |
| LABEL | This indicates the <i>label</i> used to display the parameters in the instrument's menu. |
| ADDRESS | The whole part represents the <i>address</i> of the MODBUS register containing the value of the resource to be read or written in the instrument. The value after the point indicates the position of the most significant data bit inside the register; if not indicated it is taken as zero. This information is always provided when the register contains more than one information |

item, and it is necessary to distinguish which bits actually represent the data (the working size of the data indicated in the column *DATA SIZE* is also taken into consideration). Given that the modbus registers have the size of one WORD (16 bit), the *index* number after the point can vary from 0 (least significant bit –LSb–) to 15 (most significant bit –MSb–). Examples (in binary form the least significant bit is the first on the right):

| <i>ADDRESS</i> | <i>Contents of register</i> | <i>DATA SIZE</i> | <i>Value</i> |
|----------------|----------------------------------|------------------|--------------|
| 8806 | 1350 (0000010101000110) | WORD | 1350 |
| 8806 | 1350 (00000101 01000110) | Byte | 70 |
| 8806,8 | 1350 (00001010 1000110) | Byte | 5 |
| 8806,14 | 1350 (0000010101000110) | 1 bit | 0 |
| 8806,7 | 1350 (00000 1010 1000110) | 4 bit | 10 |

Important: when the register contains more than one data item, during the write operation proceed as follows:
 read current register value
 modify the bits that represent the resource concerned
 write the register

R/W Indicates the option of reading or writing the resource:

| | |
|----|---|
| R | the resource is read-only |
| W | the resource is write-only |
| RW | the resource can be both read and written |

DATA SIZE Indicates the size of the data in bits.

| | | |
|---------|---|---------------------------------------|
| WORD | = | 16 bits |
| Byte | = | 8 bits |
| “n” bit | = | 0...15 bits based on the value of “n” |

CPL When the field indicates “Y”, the value read by the register requires conversion, because the value represents a number with a sign. In the other cases the value is always positive or null.

To carry out conversion, proceed as follows:

- if the value in the register is between 0 and 32.767, the result is the value itself (zero and positive values)
- if the value in the register is between 32.768 and 65.535, the result is the value of the register – 65.536 (negative values)

RANGE Describes the interval of values that can be assigned to the parameter. It can be correlated with other parameters in the instrument (indicated with the parameter *label*).

DEFAULT Indicates the factory-set value for the standard model of the instrument.

EXP This is the multiplier *index* to be applied for converting the value read from the register to the values indicated in the *RANGE* and *DEFAULT* column to convert them into the final values according to the measurement unit indicated in the column *M.U.*

The multiplier is calculated with the base 10 exponential function and with the exponent indicated in the *EXP* column. When not indicated the value is 0. The following values are valid:

| Value | = | Corresponding multiplier |
|-------|---|---------------------------|
| -2 | = | 10 ⁻² (0.01) |
| -1 | = | 10 ⁻¹ (0.1) |
| 0 | = | 10 ⁰ (1) |
| 1 | = | 10 ¹ (10) |
| 2 | = | 10 ² (100) |

M.U. Measurement unit for values converted according to the rules indicated in the *CPL* and *EXP* columns.

1.5.2 Parameters Table

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|-----------------------------------|-----------|-----|--------------|---------|-----|--------|
| 1 | | G01 | 2049 | RW | Set point Cooling | WORD | Y | H04 ... H03 | 120 | -1 | °C/°F |
| 2 | | G02 | 2050 | RW | Set point Heating | WORD | Y | H02 ... H01 | 400 | -1 | °C/°F |
| 3 | | H01 | 2051 | RW | Max set point Heating | WORD | Y | H02 ... 900 | 600 | -1 | °C/°F |
| 4 | | H02 | 2052 | RW | Min set point Heating | WORD | Y | -400 ... H01 | 300 | -1 | °C/°F |
| 5 | | H03 | 2053 | RW | Max set point Cooling | WORD | Y | H04 ... 900 | 300 | -1 | °C/°F |
| 6 | | H04 | 2054 | RW | Min set point Cooling | WORD | Y | -400 ... H03 | -22 | -1 | °C/°F |
| 7 | | H05 | 2055 | RW | Number of circuits | WORD | | 0 ... 2 | 1 | | num |
| 8 | | H06 | 2056 | RW | Number of compressors per circuit | WORD | | 0 ... 6 | 2 | | num |
| 9 | | H07 | 2057 | RW | Number of stages per compressor | WORD | | 0 ... 5 | 0 | | num |
| 10 | | H08 | 2058 | RW | Compressor selection rule | WORD | | 0 ... 1 | 0 | | flag |
| 11 | | H09 | 2059 | RW | Circuit selection rule | WORD | | 0 ... 1 | 1 | | flag |
| 12 | | H10 | 2060 | RW | Heat pump presence | WORD | | 0 ... 1 | 1 | | flag |
| 13 | | H11 | 2061 | RW | A11 configuration | WORD | | 0 ... 4 | 1 | | num |
| 14 | | H12 | 2062 | RW | A12 configuration | WORD | | 0 ... 2 | 1 | | num |
| 15 | | H13 | 2063 | RW | A13 configuration | WORD | | 0 ... 5 | 2 | | num |
| 16 | | H14 | 2064 | RW | A14 configuration | WORD | | 0 ... 3 | 0 | | num |
| 17 | | H15 | 2065 | RW | A15 configuration | WORD | | 0 ... 1 | 0 | | num |
| 18 | | H16 | 2066 | RW | A16 configuration | WORD | | 0 ... 4 | 0 | | num |
| 19 | | H17 | 2067 | RW | Pressure end of scale value | WORD | | 0 ... 350 | 300 | | Kpa*10 |
| 20 | | H18 | 2068 | RW | ID1 ID2 ID3 ID4 polarity | WORD | | 0 ... 15 | 15 | | num |
| 21 | | H19 | 2069 | RW | ID5 ID6 ID7 ID8 polarity | WORD | | 0 ... 15 | 15 | | num |
| 22 | | H20 | 2070 | RW | ID9 ID10 ID11 A14 polarity | WORD | | 0 ... 15 | 12 | | num |
| 23 | | H21 | 2071 | RW | A11 polarity | WORD | | 0 ... 1 | 0 | | flag |
| 24 | | H22 | 2072 | RW | A12 polarity | WORD | | 0 ... 1 | 0 | | flag |
| 25 | | H23 | 2073 | RW | ID1 configuration | WORD | | 0 ... 30 | 1 | | num |
| 26 | | H24 | 2074 | RW | ID2 configuration | WORD | | 0 ... 30 | 2 | | num |
| 27 | | H25 | 2075 | RW | ID3 configuration | WORD | | 0 ... 30 | 3 | | num |
| 28 | | H26 | 2076 | RW | ID4 configuration | WORD | | 0 ... 30 | 4 | | num |
| 29 | | H27 | 2077 | RW | ID5 configuration | WORD | | 0 ... 30 | 5 | | num |
| 30 | | H28 | 2078 | RW | ID6 configuration | WORD | | 0 ... 30 | 12 | | num |
| 31 | | H29 | 2079 | RW | ID7 configuration | WORD | | 0 ... 30 | 0 | | num |
| 32 | | H30 | 2080 | RW | ID8 configuration | WORD | | 0 ... 30 | 0 | | num |
| 33 | | H31 | 2081 | RW | ID9 configuration | WORD | | 0 ... 30 | 0 | | num |
| 34 | | H32 | 2082 | RW | ID10 configuration | WORD | | 0 ... 30 | 10 | | num |
| 35 | | H33 | 2083 | RW | ID11 configuration | WORD | | 0 ... 30 | 0 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|---|-----------|-----|--------------|---------|-----|--------------|
| 36 | | H34 | 2084 | RW | AI4 configuration as digital input | WORD | | 0 ... 30 | 0 | | num |
| 37 | | H35 | 2085 | RW | RL2 output relay configuration | WORD | | 0 ... 17 | 9 | | num |
| 38 | | H36 | 2086 | RW | RL3 output relay configuration | WORD | | 0 ... 17 | 1 | | num |
| 39 | | H37 | 2087 | RW | RL4 output relay configuration | WORD | | 0 ... 17 | 0 | | num |
| 40 | | H38 | 2088 | RW | RL5 output relay configuration | WORD | | 0 ... 17 | 5 | | num |
| 41 | | H39 | 2089 | RW | RL6 output relay configuration | WORD | | 0 ... 17 | 3 | | num |
| 42 | | H40 | 2090 | RW | RL7 output relay configuration | WORD | | 0 ... 17 | 7 | | num |
| 43 | | H41 | 2091 | RW | RL2 polarity | WORD | | 0 ... 1 | 0 | | flag |
| 44 | | H42 | 2092 | RW | RL3 polarity | WORD | | 0 ... 1 | 1 | | flag |
| 45 | | H43 | 2093 | RW | RL4 polarity | WORD | | 0 ... 1 | 0 | | flag |
| 46 | | H44 | 2094 | RW | RL5 polarity | WORD | | 0 ... 1 | 0 | | flag |
| 47 | | H45 | 2095 | RW | Alarm relay polarity | WORD | | 0 ... 1 | 0 | | flag |
| 48 | | H46 | 2096 | RW | Fan output 1 configuration | WORD | | 0 ... 2 | 0 | | num |
| 49 | | H47 | 2097 | RW | Fan output 2 configuration | WORD | | 0 ... 2 | 0 | | num |
| 50 | | H48 | 2098 | RW | Communication protocol configuration | WORD | | 0 ... 1 | 0 | | flag |
| 51 | | H49 | 2099 | RW | Configuration mode selection | WORD | | 0 ... 1 | 0 | | flag |
| 52 | | H50 | 2100 | RW | Enabled "dynamic set point" | WORD | | 0 ... 1 | 0 | | flag |
| 53 | | H51 | 2101 | RW | Offset "dynamic set point" Cooling | WORD | Y | -500 ... 800 | 0 | -1 | °C/°F |
| 54 | | H52 | 2102 | RW | Offset "dynamic set point" Heating | WORD | Y | -500 ... 800 | 0 | -1 | °C/°F |
| 55 | | H53 | 2103 | RW | set point "dynamic set point" Cooling | WORD | Y | -127 ... 127 | 0 | | °C/°F |
| 56 | | H54 | 2104 | RW | Set point "dynamic Set point" Heating | WORD | Y | -127 ... 127 | 0 | | °C/°F |
| 57 | | H55 | 2105 | RW | Proportional Band "dynamic set point" Cooling | WORD | Y | -500 ... 800 | 0 | -1 | °C/°F |
| 58 | | H56 | 2106 | RW | Proportional Band "dynamic set point" Heating | WORD | Y | -500 ... 800 | 0 | -1 | °C/°F |
| 59 | | H57 | 2107 | RW | AI1 offset | WORD | Y | -127 ... 127 | 0 | -1 | °C/°F |
| 60 | | H58 | 2108 | RW | AI2 offset | WORD | Y | -127 ... 127 | 0 | -1 | °C/°F |
| 61 | | H59 | 2109 | RW | AI3 offset | WORD | Y | -127 ... 127 | 0 | | °C/10-Kpa*10 |
| 62 | | H60 | 2110 | RW | AI4 offset | WORD | Y | -127 ... 127 | 0 | -1 | °C/°F |
| 63 | | H61 | 2111 | RW | AI5 offset | WORD | Y | -127 ... 127 | 0 | -1 | °C/°F |
| 64 | | H62 | 2112 | RW | AI6 offset | WORD | Y | -127 ... 127 | 0 | | °C/10-Kpa*10 |
| 65 | | H63 | 2113 | RW | Power supply frequency | WORD | | 0 ... 1 | 0 | | flag |
| 66 | | H64 | 2114 | RW | Temperature unit (C/F) | WORD | | 0 ... 1 | 0 | | flag |
| 67 | | H65 | 2115 | RW | Family serial address | WORD | | 0 ... 14 | 0 | | num |
| 68 | | H66 | 2116 | RW | Device serial address | WORD | | 0 ... 14 | 0 | | num |
| 69 | | H67 | 2117 | RW | User password | WORD | | 0 ... 255 | 0 | | num |
| 70 | | H68 | 2118 | RW | Copy card password | WORD | | 0 ... 255 | 1 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|---|-----------|-----|--------------|---------|-----|--------------|
| 71 | | H69 | 2119 | RW | Keyboard presence | WORD | | 0 ... 1 | 0 | | flag |
| 72 | | A01 | 2120 | RW | Low pressure bypass time | WORD | | 0 ... 255 | 120 | | sec |
| 73 | | A02 | 2121 | RW | Low pressure alarm events per hour | WORD | | 0 ... 255 | 0 | | num |
| 74 | | A03 | 2122 | RW | Bypass time for flow switch alarm following pump on | WORD | | 0 ... 255 | 10 | | sec |
| 75 | | A04 | 2123 | RW | Active flow switch input duration | WORD | | 0 ... 255 | 15 | | sec |
| 76 | | A05 | 2124 | RW | Inactive flow switch input duration | WORD | | 0 ... 255 | 15 | | sec |
| 77 | | A06 | 2125 | RW | Flow switch events per hour | WORD | | 0 ... 255 | 0 | | num |
| 78 | | A07 | 2126 | RW | Bypass thermal protection compressor alarm | WORD | | 0 ... 255 | 5 | | sec |
| 79 | | A08 | 2127 | RW | Events per hour for thermal protection comp. alarm | WORD | | 0 ... 255 | 0 | | num |
| 80 | | A09 | 2128 | RW | Events per hour for fan thermal alarm | WORD | | 0 ... 255 | 0 | | num |
| 81 | | A10 | 2129 | RW | Bypass anti-freeze alarm | WORD | | 0 ... 255 | 4 | | min |
| 82 | | A11 | 2130 | RW | Set point anti-freeze alarm | WORD | Y | -127 ... 127 | 3 | | °C/°F |
| 83 | | A12 | 2131 | RW | Hysterisis anti-freeze alarm | WORD | | 0 ... 255 | 20 | -1 | °C/°F |
| 84 | | A13 | 2132 | RW | Anti-freeze alarm events per hour | WORD | | 0 ... 255 | 0 | | num |
| 85 | | A14 | 2133 | RW | Set point T triggering high temperature alarm from analogue input | WORD | | 0 ... 900 | 900 | | °C/10-Kpa*10 |
| 86 | | A15 | 2134 | RW | Hysterisis of high temperature alarm from analogue input | WORD | | 0 ... 255 | 0 | | °C/10-Kpa*10 |
| 87 | | A16 | 2135 | RW | Low pressure bypass time | WORD | | 0 ... 255 | 255 | | sec |
| 88 | | A17 | 2136 | RW | Set point T triggering low temperature alarm from analogue input | WORD | Y | -500 ... 800 | -500 | | °C/10-Kpa*10 |
| 89 | | A18 | 2137 | RW | Hysterisis of low temperature alarm from analogue input | WORD | | 0 ... 255 | 0 | | °C/10-Kpa*10 |
| 90 | | A19 | 2138 | RW | Events/hour for low pressure alarm from analogue input | WORD | | 0 ... 255 | 255 | | num |
| 91 | | A20 | 2139 | RW | Machine empty differential | WORD | | 0 ... 255 | 0 | | °C/°F |
| 92 | | A21 | 2140 | RW | Machine empty bypass time | WORD | | 0 ... 255 | 255 | | min |
| 93 | | A22 | 2141 | RW | Machine empty duration | WORD | | 0 ... 255 | 255 | | min |
| 94 | | A23 | 2142 | RW | Enabled machine empty | WORD | | 0 ... 1 | 0 | | flag |
| 95 | | A24 | 2143 | RW | Enabled low pressure alarm during defrost | WORD | | 0 ... 1 | 0 | | flag |
| 96 | | A25 | 2144 | RW | Set point inlet over temperature alarm 1 | WORD | | 0 ... 255 | 100 | | °C/°F |
| 97 | | A26 | 2145 | RW | Inlet Over temperature duration | WORD | | 0 ... 255 | 255 | | sec*10 |
| 98 | | C01 | 2146 | RW | ON-OFF compressor delay | WORD | | 0 ... 255 | 18 | | sec*10 |
| 99 | | C02 | 2147 | RW | ON-ON compressor delay | WORD | | 0 ... 255 | 36 | | sec*10 |
| 100 | | C03 | 2148 | RW | Cooling mode hysteresis | WORD | | 0 ... 255 | 10 | -1 | °C/°F |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|---|-----------|-----|--------------|---------|-----|--------------|
| 101 | | C04 | 2149 | RW | Heating mode hysteresis | WORD | | 0 ... 255 | 10 | -1 | °C/°F |
| 102 | | C05 | 2150 | RW | Steps differential | WORD | | 0 ... 255 | 10 | -1 | °C/°F |
| 103 | | C06 | 2151 | RW | Delay ON/ON compressors | WORD | | 0 ... 255 | 10 | | sec |
| 104 | | C07 | 2152 | RW | Delay OFF/OFF compressors | WORD | | 0 ... 255 | 1 | | sec |
| 105 | | C08 | 2153 | RW | Delay ON first / ON second compressor | WORD | | 0 ... 255 | 0 | | sec |
| 106 | | F01 | 2154 | RW | Fan output configuration | WORD | | 0 ... 2 | 0 | | num |
| 107 | | F02 | 2155 | RW | Fan pickup time | WORD | | 0 ... 255 | 30 | | sec/10 |
| 108 | | F03 | 2156 | RW | Fan phase shift | WORD | | 0 ... 100 | 8 | | num |
| 109 | | F04 | 2157 | RW | Triac pulse length | WORD | | 0 ... 255 | 30 | | usec*100 |
| 110 | | F05 | 2158 | RW | Operation on compressor ON | WORD | | 0 ... 1 | 0 | | flag |
| 111 | | F06 | 2159 | RW | Min fan speed Cooling | WORD | | 0 ... 100 | 30 | | num |
| 112 | | F07 | 2160 | RW | Silent fan speed Cooling | WORD | | 0 ... 100 | 100 | | num |
| 113 | | F08 | 2161 | RW | T/P set point for min fan speed Cooling | WORD | Y | -500 ... 800 | 130 | | °C/10-Kpa*10 |
| 114 | | F09 | 2162 | RW | Proportional band Cooling | WORD | | 0 ... 255 | 40 | | °C/10-Kpa*10 |
| 115 | | F10 | 2163 | RW | Cut-off differential | WORD | | 0 ... 255 | 20 | | °C/10-Kpa*10 |
| 116 | | F11 | 2164 | RW | Cut-off hysteresis | WORD | | 0 ... 255 | 5 | | °C/10-Kpa*10 |
| 117 | | F12 | 2165 | RW | Cut-off bypass time | WORD | | 0 ... 255 | 10 | | sec |
| 118 | | F13 | 2166 | RW | Max fan speed Cooling | WORD | | 0 ... 100 | 100 | | num |
| 119 | | F14 | 2167 | RW | T/P set point for max fan speed Cooling | WORD | Y | -500 ... 800 | 170 | | °C/10-Kpa*10 |
| 120 | | F15 | 2168 | RW | Min fan speed Heating | WORD | | 0 ... 100 | 30 | | num |
| 121 | | F16 | 2169 | RW | Silent fan speed Heating | WORD | | 0 ... 100 | 100 | | num |
| 122 | | F17 | 2170 | RW | T/P set point for min fan speed Heating | WORD | Y | -500 ... 800 | 70 | | °C/10-Kpa*10 |
| 123 | | F18 | 2171 | RW | Proportional band Heating | WORD | | 0 ... 255 | 20 | | °C/10-Kpa*10 |
| 124 | | F19 | 2172 | RW | Max fan speed in Heating | WORD | | 0 ... 100 | 100 | | sec |
| 125 | | F20 | 2173 | RW | T/P set point for max fan speed Heating | WORD | Y | -500 ... 800 | 50 | | °C/10-Kpa*10 |
| 126 | | F21 | 2174 | RW | Preventilation in Cooling | WORD | | 0 ... 255 | 0 | | sec |
| 127 | | F22 | 2175 | RW | Single or separate configuration | WORD | | 0 ... 1 | 1 | | flag |
| 128 | | F23 | 2176 | RW | Set point T/P fan in defrost | WORD | Y | -500 ... 800 | 800 | | °C/10-Kpa*10 |
| 129 | | F24 | 2177 | RW | Isteresis fan in defrost | WORD | | 0 ... 255 | 0 | | °C/10-Kpa*10 |
| 130 | | F25 | 2178 | RW | Set point of step 2 of fan Cooling | WORD | Y | -500 ... 800 | 0 | | °C/10-Kpa*10 |
| 131 | | F26 | 2179 | RW | Set point of step 3 of fan Cooling | WORD | Y | -500 ... 800 | 0 | | °C/10-Kpa*10 |
| 132 | | F27 | 2180 | RW | Set point of step 2 of fan Heating | WORD | Y | -500 ... 800 | 0 | | °C/10-Kpa*10 |
| 133 | | F28 | 2181 | RW | Set point of step 3 of fan Heating | WORD | Y | -500 ... 800 | 0 | | °C/10-Kpa*10 |
| 134 | | F29 | 2182 | RW | DC output duty cycle period | WORD | | 1 ... 10 | 5 | | sec |
| 135 | | P01 | 2183 | RW | Water pump configuration | WORD | | 0 ... 1 | 0 | | flag |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|--|-----------|-----|--------------|---------|-----|--------------|
| 136 | | P02 | 2184 | RW | Pump ON - compressor ON delay | WORD | | 0 ... 255 | 15 | | sec |
| 137 | | P03 | 2185 | RW | Compressor OFF - pump OFF delay | WORD | | 0 ... 255 | 15 | | sec |
| 138 | | P04 | 2186 | RW | Set point external T triggering pump | WORD | Y | -500 ... 800 | 0 | | °C-°F/10 |
| 139 | | P05 | 2187 | RW | Set point external T machine stand-by | WORD | Y | -500 ... 800 | 0 | | °C-°F/10 |
| 140 | | P06 | 2188 | RW | Hysteresis triggering pump due to external temperature | WORD | | 0 ... 255 | 20 | | °C-°F/10 |
| 141 | | r01 | 2189 | RW | Electric heater configuration in defrost | WORD | | 0 ... 1 | 0 | | flag |
| 142 | | r02 | 2190 | RW | Enabled electric heater Cooling mode | WORD | | 0 ... 1 | 0 | | flag |
| 143 | | r03 | 2191 | RW | Enabled electric heater Heating mode | WORD | | 0 ... 1 | 0 | | flag |
| 144 | | r04 | 2192 | RW | Configuration electric heater probe Cooling | WORD | | 0 ... 3 | 2 | | num |
| 145 | | r05 | 2193 | RW | Configuration electric heater 2 probe | WORD | | 0 ... 3 | 2 | | num |
| 146 | | r06 | 2194 | RW | Electric heater configuration in OFF or STANDBY | WORD | | 0 ... 1 | 1 | | flag |
| 147 | | r07 | 2195 | RW | Set point electric heater 1 Heating | WORD | Y | r10 ... r09 | 4 | | °C/°F |
| 148 | | r08 | 2196 | RW | Set point electric heater 1 Cooling | WORD | Y | r10 ... r09 | 4 | | °C/°F |
| 149 | | r09 | 2197 | RW | Max set point electric heater | WORD | Y | r10 ... 127 | 10 | | °C/°F |
| 150 | | r10 | 2198 | RW | Min set point electric heater | WORD | Y | -127 ... r09 | -10 | | °C/°F |
| 151 | | r11 | 2199 | RW | Hysteresis electric heater | WORD | | 0 ... 255 | 10 | -1 | °C/°F |
| 152 | | r12 | 2200 | RW | Enabled electric heater linked | WORD | | 0 ... 1 | 0 | | flag |
| 153 | | r13 | 2201 | RW | Set point electric heater 2 Heating | WORD | Y | r10 ... r09 | 4 | | °C/°F |
| 154 | | r14 | 2202 | RW | Set point electric heater 2 Cooling | WORD | Y | r10 ... r09 | 4 | | °C/°F |
| 155 | | r15 | 2203 | RW | Enabled supplementary Electrical Heaters | WORD | | 0 ... 1 | 0 | | flag |
| 156 | | r16 | 2204 | RW | Differential supplementary electric heater 1 | WORD | | 0 ... 255 | 0 | -1 | °C/°F |
| 157 | | r17 | 2205 | RW | Differential supplementary electric heater 2 | WORD | | 0 ... 255 | 0 | -1 | °C/°F |
| 158 | | r18 | 2206 | RW | Configuration of electric heaters with pump off | WORD | | 0 ... 1 | 0 | | flag |
| 159 | | d01 | 2207 | RW | Defrost enable | WORD | | 0 ... 1 | 0 | | flag |
| 160 | | d02 | 2208 | RW | Set point T/P start defrost | WORD | Y | -500 ... 800 | -20 | | °C/10-Kpa*10 |
| 161 | | d03 | 2209 | RW | Cumulative time before defrost start | WORD | | 0 ... 255 | 2 | | min |
| 162 | | d04 | 2210 | RW | Set point T/P end defrost | WORD | Y | -500 ... 800 | 100 | | °C/10-Kpa*10 |
| 163 | | d05 | 2211 | RW | Max defrost time | WORD | | 0 ... 255 | 10 | | min |
| 164 | | d06 | 2212 | RW | Valve delay at defrost start | WORD | | 0 ... 255 | 5 | | sec |
| 165 | | d07 | 2213 | RW | Dripping time | WORD | | 0 ... 255 | 5 | | sec |
| 166 | | d08 | 2214 | RW | Delay circuits defrost | WORD | | 0 ... 255 | 30 | | sec |
| 167 | | d09 | 2215 | RW | Configuration end defrost probe circuit 1 | WORD | | 0 ... 3 | 0 | | num |
| 168 | | d10 | 2216 | RW | Configuration end defrost probe circuit 2 | WORD | | 0 ... 3 | 0 | | num |
| 169 | | d11 | 2217 | RW | Delay ON compressors defrost | WORD | | 0 ... 255 | 0 | | sec |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|---------------------------------|-----------|-----|-----------|---------|-----|------|
| 170 | | N01 | 2218 | RW | ID12 ID13 ID14 ID15 polarity | WORD | | 0 ... 15 | 0 | | num |
| 171 | | N02 | 2219 | RW | ID12 configuration | WORD | | 0 ... 30 | 0 | | num |
| 172 | | N03 | 2220 | RW | ID13 configuration | WORD | | 0 ... 30 | 19 | | num |
| 173 | | N04 | 2221 | RW | ID14 configuration | WORD | | 0 ... 30 | 6 | | num |
| 174 | | N05 | 2222 | RW | ID15 configuration | WORD | | 0 ... 30 | 7 | | num |
| 175 | | N06 | 2223 | RW | RL9 output relay configuration | WORD | | 0 ... 17 | 10 | | num |
| 176 | | N07 | 2224 | RW | RL10 output relay configuration | WORD | | 0 ... 17 | 11 | | num |
| 177 | | N08 | 2225 | RW | RL11 output relay configuration | WORD | | 0 ... 17 | 0 | | num |
| 178 | | N09 | 2226 | RW | RL12 output relay configuration | WORD | | 0 ... 17 | 0 | | num |
| 179 | | N10 | 2227 | RW | RL13 output relay configuration | WORD | | 0 ... 17 | 0 | | num |
| 204 | | G01 | 34817 | RW | Parameter visibility | WORD | | 0 ... 0 | 3 | | num |
| 205 | | G02 | 34818 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 206 | | H01 | 34819 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 207 | | H02 | 34820 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 208 | | H03 | 34821 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 209 | | H04 | 34822 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 210 | | H05 | 34823 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 211 | | H06 | 34824 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 212 | | H07 | 34825 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 213 | | H08 | 34826 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 214 | | H09 | 34827 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 215 | | H10 | 34828 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 216 | | H11 | 34829 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 217 | | H12 | 34830 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 218 | | H13 | 34831 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 219 | | H14 | 34832 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 220 | | H15 | 34833 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 221 | | H16 | 34834 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 222 | | H17 | 34835 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 223 | | H18 | 34836 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 224 | | H19 | 34837 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 225 | | H20 | 34838 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 226 | | H21 | 34839 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 227 | | H22 | 34840 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 228 | | H23 | 34841 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|----------------------|-----------|-----|-----------|---------|-----|------|
| 229 | | H24 | 34842 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 230 | | H25 | 34843 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 231 | | H26 | 34844 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 232 | | H27 | 34845 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 233 | | H28 | 34846 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 234 | | H29 | 34847 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 235 | | H30 | 34848 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 236 | | H31 | 34849 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 237 | | H32 | 34850 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 238 | | H33 | 34851 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 239 | | H34 | 34852 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 240 | | H35 | 34853 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 241 | | H36 | 34854 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 242 | | H37 | 34855 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 243 | | H38 | 34856 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 244 | | H39 | 34857 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 245 | | H40 | 34858 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 246 | | H41 | 34859 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 247 | | H42 | 34860 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 248 | | H43 | 34861 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 249 | | H44 | 34862 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 250 | | H45 | 34863 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 251 | | H46 | 34864 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 252 | | H47 | 34865 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 253 | | H48 | 34866 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 254 | | H49 | 34867 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 255 | | H50 | 34868 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 256 | | H51 | 34869 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 257 | | H52 | 34870 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 258 | | H53 | 34871 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 259 | | H54 | 34872 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 260 | | H55 | 34873 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 261 | | H56 | 34874 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 262 | | H57 | 34875 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 263 | | H58 | 34876 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|----------------------|-----------|-----|-----------|---------|-----|------|
| 264 | | H59 | 34877 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 265 | | H60 | 34878 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 266 | | H61 | 34879 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 267 | | H62 | 34880 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 268 | | H63 | 34881 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 269 | | H64 | 34882 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 270 | | H65 | 34883 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 271 | | H66 | 34884 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 272 | | H67 | 34885 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 273 | | H68 | 34886 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 274 | | H69 | 34887 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 275 | | A01 | 34888 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 276 | | A02 | 34889 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 277 | | A03 | 34890 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 278 | | A04 | 34891 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 279 | | A05 | 34892 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 280 | | A06 | 34893 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 281 | | A07 | 34894 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 282 | | A08 | 34895 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 283 | | A09 | 34896 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 284 | | A10 | 34897 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 285 | | A11 | 34898 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 286 | | A12 | 34899 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 287 | | A13 | 34900 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 288 | | A14 | 34901 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 289 | | A15 | 34902 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 290 | | A16 | 34903 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 291 | | A17 | 34904 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 292 | | A18 | 34905 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 293 | | A19 | 34906 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 294 | | A20 | 34907 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 295 | | A21 | 34908 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 296 | | A22 | 34909 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 297 | | A23 | 34910 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 298 | | A24 | 34911 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|----------------------|-----------|-----|-----------|---------|-----|------|
| 299 | | A25 | 34912 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 300 | | A26 | 34913 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 301 | | C01 | 34914 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 302 | | C02 | 34915 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 303 | | C03 | 34916 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 304 | | C04 | 34917 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 305 | | C05 | 34918 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 306 | | C06 | 34919 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 307 | | C07 | 34920 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 308 | | C08 | 34921 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 309 | | F01 | 34922 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 310 | | F02 | 34923 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 311 | | F03 | 34924 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 312 | | F04 | 34925 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 313 | | F05 | 34926 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 314 | | F06 | 34927 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 315 | | F07 | 34928 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 316 | | F08 | 34929 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 317 | | F09 | 34930 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 318 | | F10 | 34931 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 319 | | F11 | 34932 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 320 | | F12 | 34933 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 321 | | F13 | 34934 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 322 | | F14 | 34935 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 323 | | F15 | 34936 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 324 | | F16 | 34937 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 325 | | F17 | 34938 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 326 | | F18 | 34939 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 327 | | F19 | 34940 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 328 | | F20 | 34941 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 329 | | F21 | 34942 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 330 | | F22 | 34943 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 331 | | F23 | 34944 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 332 | | F24 | 34945 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 333 | | F25 | 34946 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|----------------------|-----------|-----|-----------|---------|-----|------|
| 334 | | F26 | 34947 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 335 | | F27 | 34948 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 336 | | F28 | 34949 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 337 | | F29 | 34950 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 338 | | P01 | 34951 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 339 | | P02 | 34952 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 340 | | P03 | 34953 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 341 | | P04 | 34954 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 342 | | P05 | 34955 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 343 | | P06 | 34956 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 344 | | r01 | 34957 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 345 | | r02 | 34958 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 346 | | r03 | 34959 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 347 | | r04 | 34960 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 348 | | r05 | 34961 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 349 | | r06 | 34962 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 350 | | r07 | 34963 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 351 | | r08 | 34964 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 352 | | r09 | 34965 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 353 | | r10 | 34966 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 354 | | r11 | 34967 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 355 | | r12 | 34968 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 356 | | r13 | 34969 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 357 | | r14 | 34970 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 358 | | r15 | 34971 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 359 | | r16 | 34972 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 360 | | r17 | 34973 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 361 | | r18 | 34974 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 362 | | d01 | 34975 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 363 | | d02 | 34976 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 364 | | d03 | 34977 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 365 | | d04 | 34978 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 366 | | d05 | 34979 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 367 | | d06 | 34980 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 368 | | d07 | 34981 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|----------------------|-----------|-----|-----------|---------|-----|------|
| 369 | | d08 | 34982 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 370 | | d09 | 34983 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 371 | | d10 | 34984 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 372 | | d11 | 34985 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 373 | | N01 | 34986 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 374 | | N02 | 34987 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 375 | | N03 | 34988 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 376 | | N04 | 34989 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 377 | | N05 | 34990 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 378 | | N06 | 34991 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 379 | | N07 | 34992 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 380 | | N08 | 34993 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 381 | | N09 | 34994 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 382 | | N10 | 34995 | RW | Parameter visibility | WORD | | 0 ... 770 | 3 | | num |
| 383 | | SeT | 34996 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 384 | | TP | 34997 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 385 | | ERR | 34998 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 386 | | ID | 34999 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 387 | | PAr | 35000 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 388 | | PSS | 35001 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 389 | | OHr | 35002 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 390 | | COO | 35003 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 391 | | HEA | 35004 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 392 | | CnF | 35005 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 393 | | CP | 35006 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 394 | | FAN | 35007 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 395 | | ALL | 35008 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 396 | | PUP | 35009 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 397 | | Fro | 35010 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 398 | | dFr | 35011 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 399 | | ESP | 35012 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 400 | | OH1 | 35013 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 401 | | OH2 | 35014 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 402 | | OH3 | 35015 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 403 | | OH4 | 35016 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |

| INDEX | FOLDER | LABEL | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|-------|---------|-----|------------------|-----------|-----|-----------|---------|-----|------|
| 404 | | OH5 | 35017 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 405 | | OH6 | 35018 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |
| 406 | | OHP | 35019 | RW | Label visibility | WORD | | 0 ... 770 | 3 | | num |

* **NOTE:** Each parameter can be assigned a “visibility value” as described below:

Value Meaning

- 3 The parameter or *label* is always visible
- 258 The parameter or *label* is visible if the user password is entered correctly (password = Pa H67)
- 770 The parameter or *label* is visible if the user password is entered correctly (password = Pa H67). The parameter cannot be modified.
- 768 The parameter is only visible using a PC

1.5.3 Client Table

| INDEX | FOLDER | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|---------|-----|-------------------------|-----------|-----|---------------|---------|-----|-------|
| 1 | | 4097 | R | Analogue input 1 – AI1 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 2 | | 4098 | R | Analogue input 2 – AI2 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 3 | | 4099 | R | Analogue input 3 – AI3 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 4 | | 4100 | R | Analogue input 4 – AI4 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 5 | | 4101 | R | Analogue input 5 – AI5 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 6 | | 4102 | R | Analogue input 6 – AI6 | WORD | Y | -670 ... 3020 | 0 | -1 | °C/°F |
| 7 | | 8193 | R | Digital input 1 – DI1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 8 | | 8194 | R | Digital input 2 – DI2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 9 | | 8195 | R | Digital input 3 – DI3 | 1 bit | | 0 ... 1 | 0 | | flag |
| 10 | | 8196 | R | Digital input 4 – DI4 | 1 bit | | 0 ... 1 | 0 | | flag |
| 11 | | 8197 | R | Digital input 5 – DI5 | 1 bit | | 0 ... 1 | 0 | | flag |
| 12 | | 8198 | R | Digital input 6 – DI6 | 1 bit | | 0 ... 1 | 0 | | flag |
| 13 | | 8199 | R | Digital input 7 – DI7 | 1 bit | | 0 ... 1 | 0 | | flag |
| 14 | | 8200 | R | Digital input 8 – DI8 | 1 bit | | 0 ... 1 | 0 | | flag |
| 15 | | 8201 | R | Digital input 9 – DI9 | 1 bit | | 0 ... 1 | 0 | | flag |
| 16 | | 8202 | R | Digital input 10 – DI10 | 1 bit | | 0 ... 1 | 0 | | flag |
| 17 | | 8203 | R | Digital input 11 – DI11 | 1 bit | | 0 ... 1 | 0 | | flag |
| 18 | | 8204 | R | Digital input 12 – DI12 | 1 bit | | 0 ... 1 | 0 | | flag |
| 19 | | 8205 | R | Digital input 13 – DI13 | 1 bit | | 0 ... 1 | 0 | | flag |

| INDEX | FOLDER | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|---------|-----|---|-----------|-----|-----------|---------|-----|------|
| 20 | | 8206 | R | Digital input 14 – DI14 | 1 bit | | 0 ... 1 | 0 | | flag |
| 21 | | 8207 | R | Digital input 15 – DI15 | 1 bit | | 0 ... 1 | 0 | | flag |
| 22 | | 8208 | R | Digital input 16 – DI16 | 1 bit | | 0 ... 1 | 0 | | flag |
| 23 | | 16493 | R | Digital input 17 – DI17 | 1 bit | | 0 ... 1 | 0 | | flag |
| 24 | | 16493,1 | R | Digital input 18 – DI18 | 1 bit | | 0 ... 1 | 0 | | flag |
| 25 | | 14337 | R | Analogue output 1 – AN1 | BYTE | | 0 ... 255 | 0 | | num |
| 26 | | 14338 | R | Analogue output 2 – AN2 | BYTE | | 0 ... 255 | 0 | | num |
| 27 | | 10241 | R | Out 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 28 | | 10242 | R | Out 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 29 | | 10243 | R | Out 3 | 1 bit | | 0 ... 1 | 0 | | flag |
| 30 | | 10244 | R | Out 4 | 1 bit | | 0 ... 1 | 0 | | flag |
| 31 | | 10245 | R | Out 5 | 1 bit | | 0 ... 1 | 0 | | flag |
| 32 | | 10246 | R | Out 6 | 1 bit | | 0 ... 1 | 0 | | flag |
| 33 | | 10247 | R | Out 7 | 1 bit | | 0 ... 1 | 0 | | flag |
| 34 | | 10248 | R | Alarm | 1 bit | | 0 ... 1 | 0 | | flag |
| 35 | | 10249 | R | Out 9 | 1 bit | | 0 ... 1 | 0 | | flag |
| 36 | | 10250 | R | Out 10 | 1 bit | | 0 ... 1 | 0 | | flag |
| 37 | | 16761,4 | R | Out 11 | 1 bit | | 0 ... 1 | 0 | | flag |
| 38 | | 16761,5 | R | Out 12 | 1 bit | | 0 ... 1 | 0 | | flag |
| 39 | | 16761,3 | R | Out 13 | 1 bit | | 0 ... 1 | 0 | | flag |
| 40 | | 16497 | RW | Cool mode | 1 bit | | 0 ... 1 | 0 | | flag |
| 41 | | 16497,1 | RW | Heat mode | 1 bit | | 0 ... 1 | 0 | | flag |
| 42 | | 16497,7 | RW | On | 1 bit | | 0 ... 1 | 0 | | flag |
| 43 | | 17296,2 | R | Demand compressor 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 44 | | 17296,3 | R | Demand compressor 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 45 | | 17296,4 | R | Demand compressor 3 | 1 bit | | 0 ... 1 | 0 | | flag |
| 46 | | 17296,5 | R | Demand compressor 4 | 1 bit | | 0 ... 1 | 0 | | flag |
| 47 | | 17296,6 | R | Demand compressor 5 | 1 bit | | 0 ... 1 | 0 | | flag |
| 48 | | 17296,7 | R | Demand compressor 6 | 1 bit | | 0 ... 1 | 0 | | flag |
| 49 | | 17301,5 | R | Fan cut-off | 1 bit | | 0 ... 1 | 0 | | flag |
| 50 | | 17301,6 | R | Max speed fan | 1 bit | | 0 ... 1 | 0 | | flag |
| 51 | | 17301,7 | R | Electrical Heater | 1 bit | | 0 ... 1 | 0 | | flag |
| 52 | | 17302,1 | R | Digital control of temperature controller | 1 bit | | 0 ... 1 | 0 | | flag |
| 53 | | 17302,3 | R | Enable autotest | 1 bit | | 0 ... 1 | 0 | | flag |
| 54 | | 17302,5 | R | Keyboard change-over enabled | 1 bit | | 0 ... 1 | 0 | | flag |

| INDEX | FOLDER | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|---------|-----|---|-----------|-----|-------------|---------|-----|------|
| 55 | | 16499 | R | Compressor operating hours 1 | WORD | | 0 ... 65535 | 0 | | num |
| 56 | | 16501 | R | Compressor operating hours 2 | WORD | | 0 ... 65535 | 0 | | num |
| 57 | | 16503 | R | Compressor operating hours 3 | WORD | | 0 ... 65535 | 0 | | num |
| 58 | | 16505 | R | Compressor operating hours 4 | WORD | | 0 ... 65535 | 0 | | num |
| 59 | | 16507 | R | Compressor operating hours 5 | WORD | | 0 ... 65535 | 0 | | num |
| 60 | | 16509 | R | Compressor operating hours 6 | WORD | | 0 ... 65535 | 0 | | num |
| 61 | | 16511 | R | Pump operating hours | WORD | | 0 ... 65535 | 0 | | num |
| 62 | | 16953 | R | Remote ON/OFF | 1 bit | | 0 ... 1 | 0 | | flag |
| 63 | | 16953,1 | R | High pressure switch circuit 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 64 | | 16953,2 | R | Low pressure switch circuit 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 65 | | 16953,3 | R | Thermal protection compressor 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 66 | | 16953,4 | R | Thermal protection fan 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 67 | | 16953,5 | R | Antifreeze alarm threshold exceeded circuit 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 68 | | 16953,6 | R | Analog input 2 failure | 1 bit | | 0 ... 1 | 0 | | flag |
| 69 | | 16953,7 | R | Analog input 3 failure | 1 bit | | 0 ... 1 | 0 | | flag |
| 70 | | 16954 | R | High pressure compressor 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 71 | | 16954,1 | R | High analogue input threshold exceeded 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 72 | | 16954,2 | R | Low analogue input threshold exceeded 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 73 | | 16954,3 | R | Thermal protection compressor 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 74 | | 16954,4 | R | High pressure compressor 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 75 | | 16954,5 | R | High pressure switch circuit 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 76 | | 16954,6 | R | Low pressure switch circuit 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 77 | | 16954,7 | R | Thermal protection compressor 3 | 1 bit | | 0 ... 1 | 0 | | flag |
| 78 | | 16955 | R | Thermal protection fan 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 79 | | 16955,1 | R | Antifreeze alarm threshold exceeded circuit 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 80 | | 16955,2 | R | Analog input 5 failure | 1 bit | | 0 ... 1 | 0 | | flag |
| 81 | | 16955,3 | R | Analog input 6 failure | 1 bit | | 0 ... 1 | 0 | | flag |
| 82 | | 16955,4 | R | High pressure compressor 3 | 1 bit | | 0 ... 1 | 0 | | flag |
| 83 | | 16955,5 | R | High analogue input threshold exceeded 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 84 | | 16955,6 | R | Low analogue input threshold exceeded 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 85 | | 16955,7 | R | Thermal protection compressor 4 | 1 bit | | 0 ... 1 | 0 | | flag |
| 86 | | 16956 | R | High pressure compressor 4 | 1 bit | | 0 ... 1 | 0 | | flag |
| 87 | | 16956,1 | R | Analog input 1 failure | 1 bit | | 0 ... 1 | 0 | | flag |
| 88 | | 16956,2 | R | Flow switch | 1 bit | | 0 ... 1 | 0 | | flag |
| 89 | | 16956,3 | R | Analog input 4 failure | 1 bit | | 0 ... 1 | 0 | | flag |

| INDEX | FOLDER | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|---------|-----|--|-----------|-----|---------|---------|-----|------|
| 90 | | 16956,4 | R | Antifreeze alarm (secondary) | 1 bit | | 0 ... 1 | 0 | | flag |
| 91 | | 16956,5 | R | Low level of refrigerant | 1 bit | | 0 ... 1 | 0 | | flag |
| 92 | | 16956,6 | R | Configuration error | 1 bit | | 0 ... 1 | 0 | | flag |
| 93 | | 16956,7 | R | High inlet water temperature | 1 bit | | 0 ... 1 | 0 | | flag |
| 94 | | 16957 | R | High pressure compressor 5 | 1 bit | | 0 ... 1 | 0 | | flag |
| 95 | | 16957,1 | R | Thermal protection compressor 5 | 1 bit | | 0 ... 1 | 0 | | flag |
| 96 | | 16957,2 | R | High pressure compressor 6 | 1 bit | | 0 ... 1 | 0 | | flag |
| 97 | | 16957,3 | R | Thermal protection compressor 6 | 1 bit | | 0 ... 1 | 0 | | flag |
| 98 | | 16957,4 | R | Combined alarm circuit 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 99 | | 16957,5 | R | Combined alarm circuit 2 | 1 bit | | 0 ... 1 | 0 | | flag |
| 100 | | 16959 | R | On/Off remoto | 1 bit | | 0 ... 1 | 0 | | flag |
| 101 | | 16959,1 | R | Maximum circuit pressure switch 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 102 | | 16959,2 | R | Minimum circuit pressure switch 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 103 | | 16959,3 | R | Compressor thermal protection alarm 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 104 | | 16959,4 | R | Thermal protection fan circuit 1 | 1 bit | | 0 ... 1 | 0 | | flag |
| 105 | | 16959,5 | R | Antifreeze alarm threshold exceeded circuit 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 106 | | 16959,6 | R | Analogue input failure 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 107 | | 16959,7 | R | Analogue input failure 3 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 108 | | 16960 | R | Compressor 1 high pressure (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 109 | | 16960,1 | R | High pressure alarm analogue input 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 110 | | 16960,2 | R | Low pressure alarm analogue input 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 111 | | 16960,3 | R | Compressor thermal protection alarm 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 112 | | 16960,4 | R | Low pressure alarm analogue input 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 113 | | 16960,5 | R | Maximum circuit pressure switch 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 114 | | 16960,6 | R | Minimum circuit pressure switch 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 115 | | 16960,7 | R | Compressor thermal protection alarm 3 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 116 | | 16961 | R | Thermal protection fan circuit 2 | 1 bit | | 0 ... 1 | 0 | | flag |

| INDEX | FOLDER | ADDRESS | R/W | DESCRIPTION | DATA SIZE | CPL | RANGE | DEFAULT | EXP | M.U. |
|-------|--------|---------|-----|--|-----------|-----|---------|---------|-----|------|
| 117 | | 16961,1 | R | Antifreeze alarm threshold exceeded circuit 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 118 | | 16961,2 | R | Analogue input failure 5 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 119 | | 16961,3 | R | Analogue input failure 6 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 120 | | 16961,4 | R | Compressor 3 high pressure (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 121 | | 16961,5 | R | High pressure alarm analogue input 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 122 | | 16961,6 | R | Low pressure alarm analogue input 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 123 | | 16961,7 | R | Compressor thermal protection alarm 4 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 124 | | 16962 | R | Compressor 4 high pressure (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 125 | | 16962,1 | R | Analogue input failure 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 126 | | 16962,2 | R | Flow switch (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 127 | | 16962,3 | R | Analogue input failure 4 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 128 | | 16962,4 | R | External circuits alarm threshold exceeded (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 129 | | 16962,5 | R | Low level of refrigerant (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 130 | | 16962,6 | R | Configuration error | 1 bit | | 0 ... 1 | 0 | | flag |
| 131 | | 16962,7 | R | High inlet water temperature (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 132 | | 16963 | R | Compressor 5 high pressure (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 133 | | 16963,1 | R | Compressor thermal protection alarm 5 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 134 | | 16963,2 | R | Compressor 6 high pressure (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 135 | | 16963,3 | R | Compressor thermal protection alarm 6 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 136 | | 16963,4 | R | Combined alarm circuit 1 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |
| 137 | | 16963,5 | R | Combined alarm circuit 2 (manual reset) | 1 bit | | 0 ... 1 | 0 | | flag |

2 ANALITIC INDEX

| | | |
|--|-----------|--|
| A | | |
| <i>ADDRESS</i> | 4 | |
| <i>Address configuration</i> | 4 | |
| <i>Address Tables</i> | 4 | |
| C | | |
| <i>Client Table</i> | 17 | |
| <i>CPL</i> | 5 | |
| D | | |
| <i>Data format (RTU)</i> | 3 | |
| <i>DATA SIZE</i> | 5 | |
| <i>DEFAULT</i> | 5 | |
| <i>Description of parameters</i> | 4 | |
| E | | |
| <i>EXP</i> | 5 | |
| F | | |
| <i>FOLDER</i> | 4 | |
| I | | |
| <i>INDEX</i> | 4 | |
| | | |
| L | | |
| <i>LABEL</i> | 4 | |
| M | | |
| <i>M.U.</i> | 5 | |
| <i>MODBUS FUNCTIONS AND RESOURCES</i> | 3 | |
| <i>Modbus functions available and data areas</i> | 4 | |
| <i>multi-dispositivo</i> | 3 | |
| N | | |
| <i>Network</i> | 3 | |
| P | | |
| <i>Parameters Table</i> | 5 | |
| <i>Product Identification</i> | 4 | |
| R | | |
| <i>R/W</i> | 5 | |
| <i>RANGE</i> | 5 | |
| S | | |
| <i>Schema di connessione ModBus a</i> | 3 | |



Eliwell & Controlli s.r.l.
Via dell'Industria, 15 Zona Industriale Paludi
32010 Pieve d'Alpago (BL) ITALY
Telephone +39 0437 986111
Facsimile +39 0437 989066
Internet <http://www.eliwell.it>

Technical Customer Support:
Email: techsupporteliwell@invensys.com
Telephone +39 0437 986300

Invensys Controls Europe
Part of the Invensys Group



ECH 600 Modbus
2006/11/0
Cod: 8MA10042