

# TRITON SUSA

Huvudenhet för styrning och övervakning av brandspjäll



## MODBUS MANUAL

# SUSA

## INNEHÅLL

|                                       |    |
|---------------------------------------|----|
| Damper .....                          | 3  |
| Detector .....                        | 6  |
| Event log records .....               | 8  |
| Read single status flags.....         | 12 |
| Read all status flags .....           | 12 |
| Readback of writable registers .....  | 13 |
| Read external digital input sta ..... | 14 |
| Read RTC date and time .....          | 15 |
| Set RTC date and time .....           | 15 |
| Write triggers and day night co ..... | 16 |
| Diagnostics .....                     | 16 |
| Read product information .....        | 17 |

## TRANSFER PROTOCOL

|                                     |                                                                                                                                                                                                                                                                                                                                                                                            |
|-------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Protocol version                    | RTU                                                                                                                                                                                                                                                                                                                                                                                        |
| Selectable Modbus addresses         | 1-247                                                                                                                                                                                                                                                                                                                                                                                      |
| Selectable communication parameters | <ul style="list-style-type: none"><li>▪ 9600bps, 8 data bits, even parity, 1 stop bit</li><li>▪ 9600bps, 8 data bits, odd parity, 1 stop bit</li><li>▪ 9600bps, 8 data bits, none parity, 2 stop bits</li><li>▪ 19200bps, 8 data bits, even parity, 1 stop bit</li><li>▪ 19200bps, 8 data bits, odd parity, 1 stop bit</li><li>▪ 19200bps, 8 data bits, none parity, 2 stop bits</li></ul> |

## STANDARD SETUP

- Address 10
- 9600bps
- 8 data bits
- no parity
- 2 stop bit

## USED EXCEPTION CODES

- 0x01- Function code not supported
- 0x02- Illegal data address
- 0x03- Illegal data value (but not illegal register data!)
- 0x04- Unable to comply (e.g. invalid register data)

## TERMINATION

To terminate the line, there is a built-in resistor which is activated by jumpering the pin marked **UA1**.

The pin is situated to the left of terminal 1 in the SUSA.

**Function code: 0x03 or 0x04**

| BIT | READ DAMPER STATUS                                                          |
|-----|-----------------------------------------------------------------------------|
| 15  | (MSBit): MSBit of analog damper position                                    |
| 14  |                                                                             |
| 13  | (Analog damper position is available from KSUR slaves only!)                |
| 12  | (Analog damper position format: 8-bit unsigned)                             |
| 11  | (Analog damper position unit: 0..100% opened)                               |
| 10  |                                                                             |
| 9   |                                                                             |
| 8   | LSBit of analog damper position                                             |
| 7   | 1 = Damper is busy with travel or damper test                               |
| 6   | Always 0, reserved for forced day operation request from damper             |
| 5   | 1 = Damper failed to reach OFF position in last damper test                 |
| 4   | 1 = Damper failed to reach ON position in last damper test                  |
| 3   | 1 = Damper is currently not in expected OFF position (error)                |
| 2   | 1 = Damper is currently not in expected ON position (error)                 |
| 1   | 1 = Damper is currently in full OFF position (realtime monitoring)          |
| 0   | (LSBbit): 1 = Damper is currently in full ON position (realtime monitoring) |

## Function code: 0x03 or 0x04

| DAMPER GROUPS | MODBUS |        |
|---------------|--------|--------|
| SUSA          | DEC    | HEX    |
| 1             | 0      | 0x0000 |
| 2             | 1      | 0x0001 |
| Expansion     | 2      | 0x0002 |

| DAMPER GROUPS | MODBUS |        |
|---------------|--------|--------|
| Slave         | DEC    | HEX    |
| 1             | 3      | 0x0003 |
| 2             | 4      | 0x0004 |
| 3             | 5      | 0x0005 |
| 4             | 6      | 0x0006 |
| 5             | 7      | 0x0007 |
| 6             | 8      | 0x0008 |
| 7             | 9      | 0x0009 |
| 8             | 10     | 0x000A |
| 9             | 11     | 0x000B |
| 10            | 12     | 0x000C |
| 11            | 13     | 0x000D |
| 12            | 14     | 0x000E |
| 13            | 15     | 0x000F |
| 14            | 16     | 0x0010 |
| 15            | 17     | 0x0011 |
| 16            | 18     | 0x0012 |
| 17            | 19     | 0x0013 |
| 18            | 20     | 0x0014 |
| 19            | 21     | 0x0015 |
| 20            | 22     | 0x0016 |
| 21            | 23     | 0x0017 |
| 22            | 24     | 0x0018 |
| 23            | 25     | 0x0019 |
| 24            | 26     | 0x001A |
| 25            | 27     | 0x001B |
| 26            | 28     | 0x001C |
| 27            | 29     | 0x001D |
| 28            | 30     | 0x001E |
| 29            | 31     | 0x001F |
| 30            | 32     | 0x0020 |
| 31            | 33     | 0x0021 |
| 32            | 34     | 0x0022 |
| 33            | 35     | 0x0023 |
| 34            | 36     | 0x0024 |
| 35            | 37     | 0x0025 |
| 36            | 38     | 0x0026 |
| 37            | 39     | 0x0027 |
| 38            | 40     | 0x0028 |
| 39            | 41     | 0x0029 |
| 40            | 42     | 0x002A |

| DAMPER GROUPS | MODBUS |        |
|---------------|--------|--------|
| Slave         | DEC    | HEX    |
| 41            | 43     | 0x002B |
| 42            | 44     | 0x002C |
| 43            | 45     | 0x002D |
| 44            | 46     | 0x002E |
| 45            | 47     | 0x002F |
| 46            | 48     | 0x0030 |
| 47            | 49     | 0x0031 |
| 48            | 50     | 0x0032 |
| 49            | 51     | 0x0033 |
| 50            | 52     | 0x0034 |
| 51            | 53     | 0x0035 |
| 52            | 54     | 0x0036 |
| 53            | 55     | 0x0037 |
| 54            | 56     | 0x0038 |
| 55            | 57     | 0x0039 |
| 56            | 58     | 0x003A |
| 57            | 59     | 0x003B |
| 58            | 60     | 0x003C |
| 59            | 61     | 0x003D |
| 60            | 62     | 0x003E |
| 61            | 63     | 0x003F |
| 62            | 64     | 0x0040 |
| 63            | 65     | 0x0041 |
| 64            | 66     | 0x0042 |
| 65            | 67     | 0x0043 |
| 66            | 68     | 0x0044 |
| 67            | 69     | 0x0045 |
| 68            | 70     | 0x0046 |
| 69            | 71     | 0x0047 |
| 70            | 72     | 0x0048 |
| 71            | 73     | 0x0049 |
| 72            | 74     | 0x004A |
| 73            | 75     | 0x004B |
| 74            | 76     | 0x004C |
| 75            | 77     | 0x004D |
| 76            | 78     | 0x004E |
| 77            | 79     | 0x004F |
| 78            | 80     | 0x0050 |
| 79            | 81     | 0x0051 |
| 80            | 82     | 0x0052 |

| DAMPER GROUPS | MODBUS |        |
|---------------|--------|--------|
| Slave         | DEC    | HEX    |
| 81            | 83     | 0x0053 |
| 82            | 84     | 0x0054 |
| 83            | 85     | 0x0055 |
| 84            | 86     | 0x0056 |
| 85            | 87     | 0x0057 |
| 86            | 88     | 0x0058 |
| 87            | 89     | 0x0059 |
| 88            | 90     | 0x005A |
| 89            | 91     | 0x005B |
| 90            | 92     | 0x005C |
| 91            | 93     | 0x005D |
| 92            | 94     | 0x005E |
| 93            | 95     | 0x005F |
| 94            | 96     | 0x0060 |
| 95            | 97     | 0x0061 |
| 96            | 98     | 0x0062 |
| 97            | 99     | 0x0063 |
| 98            | 100    | 0x0064 |
| 99            | 101    | 0x0065 |
| 100           | 102    | 0x0066 |
| 101           | 103    | 0x0067 |
| 102           | 104    | 0x0068 |
| 103           | 105    | 0x0069 |
| 104           | 106    | 0x006A |
| 105           | 107    | 0x006B |
| 106           | 108    | 0x006C |
| 107           | 109    | 0x006D |
| 108           | 110    | 0x006E |
| 109           | 111    | 0x006F |
| 110           | 112    | 0x0070 |
| 111           | 113    | 0x0071 |
| 112           | 114    | 0x0072 |
| 113           | 115    | 0x0073 |
| 114           | 116    | 0x0074 |
| 115           | 117    | 0x0075 |
| 116           | 118    | 0x0076 |
| 117           | 119    | 0x0077 |
| 118           | 120    | 0x0078 |
| 119           | 121    | 0x0079 |
| 120           | 122    | 0x007A |

Fortsättning på nästa sida

## Function code: 0x03 or 0x04

| DAMPER GROUPS |     |        | MODBUS |     |        | DAMPER GROUPS |     |        | MODBUS |     |        | DAMPER GROUPS |     |     | MODBUS |     |     | DAMPER GROUPS |     |     | MODBUS |     |     |
|---------------|-----|--------|--------|-----|--------|---------------|-----|--------|--------|-----|--------|---------------|-----|-----|--------|-----|-----|---------------|-----|-----|--------|-----|-----|
| Slave         | DEC | HEX    | Slave  | DEC | HEX    | Slave         | DEC | HEX    | Slave  | DEC | HEX    | Slave         | DEC | HEX | Slave  | DEC | HEX | Slave         | DEC | HEX | Slave  | DEC | HEX |
| 121           | 123 | 0x007B | 161    | 163 | 0x00A3 | 201           | 203 | 0x00CB | 241    | 243 | 0x00F3 |               |     |     |        |     |     |               |     |     |        |     |     |
| 122           | 124 | 0x007C | 162    | 164 | 0x00A4 | 202           | 204 | 0x00CC | 242    | 244 | 0x00F4 |               |     |     |        |     |     |               |     |     |        |     |     |
| 123           | 125 | 0x007D | 163    | 165 | 0x00A5 | 203           | 205 | 0x00CD | 243    | 245 | 0x00F5 |               |     |     |        |     |     |               |     |     |        |     |     |
| 124           | 126 | 0x007E | 164    | 166 | 0x00A6 | 204           | 206 | 0x00CE | 244    | 246 | 0x00F6 |               |     |     |        |     |     |               |     |     |        |     |     |
| 125           | 127 | 0x007F | 165    | 167 | 0x00A7 | 205           | 207 | 0x00CF | 245    | 247 | 0x00F7 |               |     |     |        |     |     |               |     |     |        |     |     |
| 126           | 128 | 0x0080 | 166    | 168 | 0x00A8 | 206           | 208 | 0x00D0 | 246    | 248 | 0x00F8 |               |     |     |        |     |     |               |     |     |        |     |     |
| 127           | 129 | 0x0081 | 167    | 169 | 0x00A9 | 207           | 209 | 0x00D1 | 247    | 249 | 0x00F9 |               |     |     |        |     |     |               |     |     |        |     |     |
| 128           | 130 | 0x0082 | 168    | 170 | 0x00AA | 208           | 210 | 0x00D2 | 248    | 250 | 0x00FA |               |     |     |        |     |     |               |     |     |        |     |     |
| 129           | 131 | 0x0083 | 169    | 171 | 0x00AB | 209           | 211 | 0x00D3 | 249    | 251 | 0x00FB |               |     |     |        |     |     |               |     |     |        |     |     |
| 130           | 132 | 0x0084 | 170    | 172 | 0x00AC | 210           | 212 | 0x00D4 | 250    | 252 | 0x00FC |               |     |     |        |     |     |               |     |     |        |     |     |
| 131           | 133 | 0x0085 | 171    | 173 | 0x00AD | 211           | 213 | 0x00D5 | 251    | 253 | 0x00FD |               |     |     |        |     |     |               |     |     |        |     |     |
| 132           | 134 | 0x0086 | 172    | 174 | 0x00AE | 212           | 214 | 0x00D6 | 252    | 254 | 0x00FE |               |     |     |        |     |     |               |     |     |        |     |     |
| 133           | 135 | 0x0087 | 173    | 175 | 0x00AF | 213           | 215 | 0x00D7 | 253    | 255 | 0x00FF |               |     |     |        |     |     |               |     |     |        |     |     |
| 134           | 136 | 0x0088 | 174    | 176 | 0x00B0 | 214           | 216 | 0x00D8 | 254    | 256 | 0x0100 |               |     |     |        |     |     |               |     |     |        |     |     |
| 135           | 137 | 0x0089 | 175    | 177 | 0x00B1 | 215           | 217 | 0x00D9 | 255    | 257 | 0x0101 |               |     |     |        |     |     |               |     |     |        |     |     |
| 136           | 138 | 0x008A | 176    | 178 | 0x00B2 | 216           | 218 | 0x00DA | 256    | 258 | 0x0102 |               |     |     |        |     |     |               |     |     |        |     |     |
| 137           | 139 | 0x008B | 177    | 179 | 0x00B3 | 217           | 219 | 0x00DB |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 138           | 140 | 0x008C | 178    | 180 | 0x00B4 | 218           | 220 | 0x00DC |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 139           | 141 | 0x008D | 179    | 181 | 0x00B5 | 219           | 221 | 0x00DD |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 140           | 142 | 0x008E | 180    | 182 | 0x00B6 | 220           | 222 | 0x00DE |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 141           | 143 | 0x008F | 181    | 183 | 0x00B7 | 221           | 223 | 0x00DF |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 142           | 144 | 0x0090 | 182    | 184 | 0x00B8 | 222           | 224 | 0x00E0 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 143           | 145 | 0x0091 | 183    | 185 | 0x00B9 | 223           | 225 | 0x00E1 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 144           | 146 | 0x0092 | 184    | 186 | 0x00BA | 224           | 226 | 0x00E2 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 145           | 147 | 0x0093 | 185    | 187 | 0x00BB | 225           | 227 | 0x00E3 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 146           | 148 | 0x0094 | 186    | 188 | 0x00BC | 226           | 228 | 0x00E4 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 147           | 149 | 0x0095 | 187    | 189 | 0x00BD | 227           | 229 | 0x00E5 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 148           | 150 | 0x0096 | 188    | 190 | 0x00BE | 228           | 230 | 0x00E6 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 149           | 151 | 0x0097 | 189    | 191 | 0x00BF | 229           | 231 | 0x00E7 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 150           | 152 | 0x0098 | 190    | 192 | 0x00C0 | 230           | 232 | 0x00E8 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 151           | 153 | 0x0099 | 191    | 193 | 0x00C1 | 231           | 233 | 0x00E9 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 152           | 154 | 0x009A | 192    | 194 | 0x00C2 | 232           | 234 | 0x00EA |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 153           | 155 | 0x009B | 193    | 195 | 0x00C3 | 233           | 235 | 0x00EB |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 154           | 156 | 0x009C | 194    | 196 | 0x00C4 | 234           | 236 | 0x00EC |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 155           | 157 | 0x009D | 195    | 197 | 0x00C5 | 235           | 237 | 0x00ED |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 156           | 158 | 0x009E | 196    | 198 | 0x00C6 | 236           | 238 | 0x00EE |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 157           | 159 | 0x009F | 197    | 199 | 0x00C7 | 237           | 239 | 0x00EF |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 158           | 160 | 0x00A0 | 198    | 200 | 0x00C8 | 238           | 240 | 0x00F0 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 159           | 161 | 0x00A1 | 199    | 201 | 0x00C9 | 239           | 241 | 0x00F1 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |
| 160           | 162 | 0x00A2 | 200    | 202 | 0x00CA | 240           | 242 | 0x00F2 |        |     |        |               |     |     |        |     |     |               |     |     |        |     |     |

## Function code: 0x03 or 0x04

| BIT | READ DETECTOR STATUS                                              |
|-----|-------------------------------------------------------------------|
| 15  | MSBit of detector current                                         |
| 14  |                                                                   |
| 13  | (Current format: 8-bit unsigned)                                  |
| 12  | (Current unit: Milliampere)                                       |
| 11  | Bit 11:                                                           |
| 10  | Bit 10:                                                           |
| 9   | Bit 9:                                                            |
| 8   | LSBit of detector current                                         |
| 7   | Always 0                                                          |
| 6   | Always 0                                                          |
| 5   | Always 0                                                          |
| 4   | Always 0                                                          |
| 3   | Always 0                                                          |
| 2   | Detector service request (excessive idle current for a long time) |
| 1   | Detector failure (no current at all or current too low)           |
| 0   | (LSBit): Fire alarm                                               |

| DETECTOR<br>SUSA | MODBUS |        |
|------------------|--------|--------|
|                  | DEC    | HEX    |
| 0                | 512    | 0x0200 |
| 1                | 513    | 0x0201 |

## Function code: 0x03 or 0x04

| DETECTOR |  |  | MODBUS |        |  | DETECTOR |  |  | MODBUS |        |  | DETECTOR |  |  | MODBUS |        |  |
|----------|--|--|--------|--------|--|----------|--|--|--------|--------|--|----------|--|--|--------|--------|--|
| Slave    |  |  | DEC    | HEX    |  | Slave    |  |  | DEC    | HEX    |  | Slave    |  |  | DEC    | HEX    |  |
| 1        |  |  | 514    | 0x0202 |  | 41       |  |  | 554    | 0x022A |  | 81       |  |  | 594    | 0x0252 |  |
| 2        |  |  | 515    | 0x0203 |  | 42       |  |  | 555    | 0x022B |  | 82       |  |  | 595    | 0x0253 |  |
| 3        |  |  | 516    | 0x0204 |  | 43       |  |  | 556    | 0x022C |  | 83       |  |  | 596    | 0x0254 |  |
| 4        |  |  | 517    | 0x0205 |  | 44       |  |  | 557    | 0x022D |  | 84       |  |  | 597    | 0x0255 |  |
| 5        |  |  | 518    | 0x0206 |  | 45       |  |  | 558    | 0x022E |  | 85       |  |  | 598    | 0x0256 |  |
| 6        |  |  | 519    | 0x0207 |  | 46       |  |  | 559    | 0x022F |  | 86       |  |  | 599    | 0x0257 |  |
| 7        |  |  | 520    | 0x0208 |  | 47       |  |  | 560    | 0x0230 |  | 87       |  |  | 600    | 0x0258 |  |
| 8        |  |  | 521    | 0x0209 |  | 48       |  |  | 561    | 0x0231 |  | 88       |  |  | 601    | 0x0259 |  |
| 9        |  |  | 522    | 0x020A |  | 49       |  |  | 562    | 0x0232 |  | 89       |  |  | 602    | 0x025A |  |
| 10       |  |  | 523    | 0x020B |  | 50       |  |  | 563    | 0x0233 |  | 90       |  |  | 603    | 0x025B |  |
| 11       |  |  | 524    | 0x020C |  | 51       |  |  | 564    | 0x0234 |  | 91       |  |  | 604    | 0x025C |  |
| 12       |  |  | 525    | 0x020D |  | 52       |  |  | 565    | 0x0235 |  | 92       |  |  | 605    | 0x025D |  |
| 13       |  |  | 526    | 0x020E |  | 53       |  |  | 566    | 0x0236 |  | 93       |  |  | 606    | 0x025E |  |
| 14       |  |  | 527    | 0x020F |  | 54       |  |  | 567    | 0x0237 |  | 94       |  |  | 607    | 0x025F |  |
| 15       |  |  | 528    | 0x0210 |  | 55       |  |  | 568    | 0x0238 |  | 95       |  |  | 608    | 0x0260 |  |
| 16       |  |  | 529    | 0x0211 |  | 56       |  |  | 569    | 0x0239 |  | 96       |  |  | 609    | 0x0261 |  |
| 17       |  |  | 530    | 0x0212 |  | 57       |  |  | 570    | 0x023A |  | 97       |  |  | 610    | 0x0262 |  |
| 18       |  |  | 531    | 0x0213 |  | 58       |  |  | 571    | 0x023B |  | 98       |  |  | 611    | 0x0263 |  |
| 19       |  |  | 532    | 0x0214 |  | 59       |  |  | 572    | 0x023C |  | 99       |  |  | 612    | 0x0264 |  |
| 20       |  |  | 533    | 0x0215 |  | 60       |  |  | 573    | 0x023D |  | 100      |  |  | 613    | 0x0265 |  |
| 21       |  |  | 534    | 0x0216 |  | 61       |  |  | 574    | 0x023E |  | 101      |  |  | 614    | 0x0266 |  |
| 22       |  |  | 535    | 0x0217 |  | 62       |  |  | 575    | 0x023F |  | 102      |  |  | 615    | 0x0267 |  |
| 23       |  |  | 536    | 0x0218 |  | 63       |  |  | 576    | 0x0240 |  | 103      |  |  | 616    | 0x0268 |  |
| 24       |  |  | 537    | 0x0219 |  | 64       |  |  | 577    | 0x0241 |  | 104      |  |  | 617    | 0x0269 |  |
| 25       |  |  | 538    | 0x021A |  | 65       |  |  | 578    | 0x0242 |  | 105      |  |  | 618    | 0x026A |  |
| 26       |  |  | 539    | 0x021B |  | 66       |  |  | 579    | 0x0243 |  | 106      |  |  | 619    | 0x026B |  |
| 27       |  |  | 540    | 0x021C |  | 67       |  |  | 580    | 0x0244 |  | 107      |  |  | 620    | 0x026C |  |
| 28       |  |  | 541    | 0x021D |  | 68       |  |  | 581    | 0x0245 |  | 108      |  |  | 621    | 0x026D |  |
| 29       |  |  | 542    | 0x021E |  | 69       |  |  | 582    | 0x0246 |  | 109      |  |  | 622    | 0x026E |  |
| 30       |  |  | 543    | 0x021F |  | 70       |  |  | 583    | 0x0247 |  | 110      |  |  | 623    | 0x026F |  |
| 31       |  |  | 544    | 0x0220 |  | 71       |  |  | 584    | 0x0248 |  | 111      |  |  | 624    | 0x0270 |  |
| 32       |  |  | 545    | 0x0221 |  | 72       |  |  | 585    | 0x0249 |  | 112      |  |  | 625    | 0x0271 |  |
| 33       |  |  | 546    | 0x0222 |  | 73       |  |  | 586    | 0x024A |  | 113      |  |  | 626    | 0x0272 |  |
| 34       |  |  | 547    | 0x0223 |  | 74       |  |  | 587    | 0x024B |  | 114      |  |  | 627    | 0x0273 |  |
| 35       |  |  | 548    | 0x0224 |  | 75       |  |  | 588    | 0x024C |  | 115      |  |  | 628    | 0x0274 |  |
| 36       |  |  | 549    | 0x0225 |  | 76       |  |  | 589    | 0x024D |  | 116      |  |  | 629    | 0x0275 |  |
| 37       |  |  | 550    | 0x0226 |  | 77       |  |  | 590    | 0x024E |  | 117      |  |  | 630    | 0x0276 |  |
| 38       |  |  | 551    | 0x0227 |  | 78       |  |  | 591    | 0x024F |  | 118      |  |  | 631    | 0x0277 |  |
| 39       |  |  | 552    | 0x0228 |  | 79       |  |  | 592    | 0x0250 |  | 119      |  |  | 632    | 0x0278 |  |
| 40       |  |  | 553    | 0x0229 |  | 80       |  |  | 593    | 0x0251 |  | 120      |  |  | 633    | 0x0279 |  |

**Function code: 0x03 or 0x04****Read event log**

The log can contain up to 99 records (logged events).  
The log is circular i.e. a new event will overwrite the oldest record if the log is full, where 0x0300 corresponds to the oldest log record.

Empty log records are returned with all 8 bytes cleared (0x00). This can be used by the Modbus master to detect end-of-log when the log is not full. The record is empty if the month (or day) byte = 0x00.

Special requirements:

1. The starting address must be a multiple of 4 e.g. 0x0300, 0x0304, 0x0308 etc.
2. The register count must also be a multiple of 4 e.g. 0x0004, 0x0008, 0x000C etc.

All values are unsigned 8-bit binary (not BCD).

Source identifiers:

- 0 = Local dampers
- 1 = Local detectors
- 2 = External dampers
- 3 = External detectors
- 4 = Bus communication
- 5 = System
- 6 = External digital inputs

**Event identifiers:**

If source identifier = 0 (local) or 2 (external) dampers:

- 0 = Damper (P+1) failed to reach OFF position in damper test
- 1 = Damper (P+1) failed to reach ON position in damper test
- 2 = Damper (P+1) failed to reach both OFF and ON position in damper test
- 3 = Damper (P+1) not in expected OFF position during normal operation
- 4 = Damper (P+1) not in expected ON position during normal operation
- 5 = Damper (P+1) appeared to be in both OFF and ON positions simultaneously

Where P is the Parameter byte, for example  
Parameter=6 means damper number 7.

If source identifier = 1 (local) or 3 (external) detectors:

- 0 = Detector (P+1) fire alarm
- 1 = Detector (P+1) failure
- 2 = Detector (P+1) service request

Where P is the Parameter byte, for example

Parameter=6 means detector number 7.

If source identifier = 4, bus communication:

0 = Slave (P) communication error e.g. response timeout or bad data

Where P is the Parameter byte containing slave address, 0..31.

If source identifier = 5, system:

- 0 = External fire alarm input activated
  - 1 = RTC backup battery is low and should be replaced
  - 2 = RTC has stopped
  - 3 = RTC has been set by the user via the LCD menu system
  - 4 = RTC data error detected, the RTC must be set again for correct operation
  - 5 = System started (cold start from CPU reset)
  - 6 = User logged in to the LCD menu system
  - 7 = Damper test completed successfully
  - 8 = Damper test failed
  - 9 = Exhaust fan test completed successfully
  - 10 = Exhaust fan test failed due to lack of pressure rise
  - 11 = Exhaust fan test inhibited due to stuck damper
  - 12 = Reserved code for forced damper opening (not used)
  - 13 = External AUX input fire alarm activated for FG2
- The Parameter byte is currently not used for system loggings (always 0x00)

If source identifier = 6, External digital inputs:

An external digital input is logged ONLY when a 0-to-1 transition (low-to-high on KSUC) occur AND that particular input is configured for a special function i.e. to trigger fire alarm in function group(s) or to activate the B alarm relay.

The external digital input number is coded as a 16-bit number which is placed in the event identifier and the parameter bytes:

Event identifier byte = MSByte

Parameter byte = LSByte

The range of this 16-bit number is 0..511 which corresponds to external digital input numbers 1..512

## Function code: 0x03 or 0x04

| MODBUS |        | MODBUS |        | MODBUS |        | MODBUS |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| DEC    | HEX    | DEC    | HEX    | DEC    | HEX    | DEC    | HEX    |
| 768    | 0x0300 | 808    | 0x0328 | 848    | 0x0350 | 888    | 0x0378 |
| 769    | 0x0301 | 809    | 0x0329 | 849    | 0x0351 | 889    | 0x0379 |
| 770    | 0x0302 | 810    | 0x032A | 850    | 0x0352 | 890    | 0x037A |
| 771    | 0x0303 | 811    | 0x032B | 851    | 0x0353 | 891    | 0x037B |
| 772    | 0x0304 | 812    | 0x032C | 852    | 0x0354 | 892    | 0x037C |
| 773    | 0x0305 | 813    | 0x032D | 853    | 0x0355 | 893    | 0x037D |
| 774    | 0x0306 | 814    | 0x032E | 854    | 0x0356 | 894    | 0x037E |
| 775    | 0x0307 | 815    | 0x032F | 855    | 0x0357 | 895    | 0x037F |
| 776    | 0x0308 | 816    | 0x0330 | 856    | 0x0358 | 896    | 0x0380 |
| 777    | 0x0309 | 817    | 0x0331 | 857    | 0x0359 | 897    | 0x0381 |
| 778    | 0x030A | 818    | 0x0332 | 858    | 0x035A | 898    | 0x0382 |
| 779    | 0x030B | 819    | 0x0333 | 859    | 0x035B | 899    | 0x0383 |
| 780    | 0x030C | 820    | 0x0334 | 860    | 0x035C | 900    | 0x0384 |
| 781    | 0x030D | 821    | 0x0335 | 861    | 0x035D | 901    | 0x0385 |
| 782    | 0x030E | 822    | 0x0336 | 862    | 0x035E | 902    | 0x0386 |
| 783    | 0x030F | 823    | 0x0337 | 863    | 0x035F | 903    | 0x0387 |
| 784    | 0x0310 | 824    | 0x0338 | 864    | 0x0360 | 904    | 0x0388 |
| 785    | 0x0311 | 825    | 0x0339 | 865    | 0x0361 | 905    | 0x0389 |
| 786    | 0x0312 | 826    | 0x033A | 866    | 0x0362 | 906    | 0x038A |
| 787    | 0x0313 | 827    | 0x033B | 867    | 0x0363 | 907    | 0x038B |
| 788    | 0x0314 | 828    | 0x033C | 868    | 0x0364 | 908    | 0x038C |
| 789    | 0x0315 | 829    | 0x033D | 869    | 0x0365 | 909    | 0x038D |
| 790    | 0x0316 | 830    | 0x033E | 870    | 0x0366 | 910    | 0x038E |
| 791    | 0x0317 | 831    | 0x033F | 871    | 0x0367 | 911    | 0x038F |
| 792    | 0x0318 | 832    | 0x0340 | 872    | 0x0368 | 912    | 0x0390 |
| 793    | 0x0319 | 833    | 0x0341 | 873    | 0x0369 | 913    | 0x0391 |
| 794    | 0x031A | 834    | 0x0342 | 874    | 0x036A | 914    | 0x0392 |
| 795    | 0x031B | 835    | 0x0343 | 875    | 0x036B | 915    | 0x0393 |
| 796    | 0x031C | 836    | 0x0344 | 876    | 0x036C | 916    | 0x0394 |
| 797    | 0x031D | 837    | 0x0345 | 877    | 0x036D | 917    | 0x0395 |
| 798    | 0x031E | 838    | 0x0346 | 878    | 0x036E | 918    | 0x0396 |
| 799    | 0x031F | 839    | 0x0347 | 879    | 0x036F | 919    | 0x0397 |
| 800    | 0x0320 | 840    | 0x0348 | 880    | 0x0370 | 920    | 0x0398 |
| 801    | 0x0321 | 841    | 0x0349 | 881    | 0x0371 | 921    | 0x0399 |
| 802    | 0x0322 | 842    | 0x034A | 882    | 0x0372 | 922    | 0x039A |
| 803    | 0x0323 | 843    | 0x034B | 883    | 0x0373 | 923    | 0x039B |
| 804    | 0x0324 | 844    | 0x034C | 884    | 0x0374 | 924    | 0x039C |
| 805    | 0x0325 | 845    | 0x034D | 885    | 0x0375 | 925    | 0x039D |
| 806    | 0x0326 | 846    | 0x034E | 886    | 0x0376 | 926    | 0x039E |
| 807    | 0x0327 | 847    | 0x034F | 887    | 0x0377 | 927    | 0x039F |

## Function code: 0x03 or 0x04

| MODBUS |        | MODBUS |        | MODBUS |        | MODBUS |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| DEC    | HEX    | DEC    | HEX    | DEC    | HEX    | DEC    | HEX    |
| 928    | 0x03A0 | 968    | 0x03C8 | 1008   | 0x03F0 | 1048   | 0x0418 |
| 929    | 0x03A1 | 969    | 0x03C9 | 1009   | 0x03F1 | 1049   | 0x0419 |
| 930    | 0x03A2 | 970    | 0x03CA | 1010   | 0x03F2 | 1050   | 0x041A |
| 931    | 0x03A3 | 971    | 0x03CB | 1011   | 0x03F3 | 1051   | 0x041B |
| 932    | 0x03A4 | 972    | 0x03CC | 1012   | 0x03F4 | 1052   | 0x041C |
| 933    | 0x03A5 | 973    | 0x03CD | 1013   | 0x03F5 | 1053   | 0x041D |
| 934    | 0x03A6 | 974    | 0x03CE | 1014   | 0x03F6 | 1054   | 0x041E |
| 935    | 0x03A7 | 975    | 0x03CF | 1015   | 0x03F7 | 1055   | 0x041F |
| 936    | 0x03A8 | 976    | 0x03D0 | 1016   | 0x03F8 | 1056   | 0x0420 |
| 937    | 0x03A9 | 977    | 0x03D1 | 1017   | 0x03F9 | 1057   | 0x0421 |
| 938    | 0x03AA | 978    | 0x03D2 | 1018   | 0x03FA | 1058   | 0x0422 |
| 939    | 0x03AB | 979    | 0x03D3 | 1019   | 0x03FB | 1059   | 0x0423 |
| 940    | 0x03AC | 980    | 0x03D4 | 1020   | 0x03FC | 1060   | 0x0424 |
| 941    | 0x03AD | 981    | 0x03D5 | 1021   | 0x03FD | 1061   | 0x0425 |
| 942    | 0x03AE | 982    | 0x03D6 | 1022   | 0x03FE | 1062   | 0x0426 |
| 943    | 0x03AF | 983    | 0x03D7 | 1023   | 0x03FF | 1063   | 0x0427 |
| 944    | 0x03B0 | 984    | 0x03D8 | 1024   | 0x0400 | 1064   | 0x0428 |
| 945    | 0x03B1 | 985    | 0x03D9 | 1025   | 0x0401 | 1065   | 0x0429 |
| 946    | 0x03B2 | 986    | 0x03DA | 1026   | 0x0402 | 1066   | 0x042A |
| 947    | 0x03B3 | 987    | 0x03DB | 1027   | 0x0403 | 1067   | 0x042B |
| 948    | 0x03B4 | 988    | 0x03DC | 1028   | 0x0404 | 1068   | 0x042C |
| 949    | 0x03B5 | 989    | 0x03DD | 1029   | 0x0405 | 1069   | 0x042D |
| 950    | 0x03B6 | 990    | 0x03DE | 1030   | 0x0406 | 1070   | 0x042E |
| 951    | 0x03B7 | 991    | 0x03DF | 1031   | 0x0407 | 1071   | 0x042F |
| 952    | 0x03B8 | 992    | 0x03E0 | 1032   | 0x0408 | 1072   | 0x0430 |
| 953    | 0x03B9 | 993    | 0x03E1 | 1033   | 0x0409 | 1073   | 0x0431 |
| 954    | 0x03BA | 994    | 0x03E2 | 1034   | 0x040A | 1074   | 0x0432 |
| 955    | 0x03BB | 995    | 0x03E3 | 1035   | 0x040B | 1075   | 0x0433 |
| 956    | 0x03BC | 996    | 0x03E4 | 1036   | 0x040C | 1076   | 0x0434 |
| 957    | 0x03BD | 997    | 0x03E5 | 1037   | 0x040D | 1077   | 0x0435 |
| 958    | 0x03BE | 998    | 0x03E6 | 1038   | 0x040E | 1078   | 0x0436 |
| 959    | 0x03BF | 999    | 0x03E7 | 1039   | 0x040F | 1079   | 0x0437 |
| 960    | 0x03C0 | 1000   | 0x03E8 | 1040   | 0x0410 | 1080   | 0x0438 |
| 961    | 0x03C1 | 1001   | 0x03E9 | 1041   | 0x0411 | 1081   | 0x0439 |
| 962    | 0x03C2 | 1002   | 0x03EA | 1042   | 0x0412 | 1082   | 0x043A |
| 963    | 0x03C3 | 1003   | 0x03EB | 1043   | 0x0413 | 1083   | 0x043B |
| 964    | 0x03C4 | 1004   | 0x03EC | 1044   | 0x0414 | 1084   | 0x043C |
| 965    | 0x03C5 | 1005   | 0x03ED | 1045   | 0x0415 | 1085   | 0x043D |
| 966    | 0x03C6 | 1006   | 0x03EE | 1046   | 0x0416 | 1086   | 0x043E |
| 967    | 0x03C7 | 1007   | 0x03EF | 1047   | 0x0417 | 1087   | 0x043F |

## EVENT LOG RECORDS

### Function code: 0x03 or 0x04

| MODBUS |        | MODBUS |        | MODBUS |        | MODBUS |        |
|--------|--------|--------|--------|--------|--------|--------|--------|
| DEC    | HEX    | DEC    | HEX    | DEC    | HEX    | DEC    | HEX    |
| 1088   | 0x0440 | 1108   | 0x0454 | 1128   | 0x0468 | 1148   | 0x047C |
| 1089   | 0x0441 | 1109   | 0x0455 | 1129   | 0x0469 | 1149   | 0x047D |
| 1090   | 0x0442 | 1110   | 0x0456 | 1130   | 0x046A | 1150   | 0x047E |
| 1091   | 0x0443 | 1111   | 0x0457 | 1131   | 0x046B | 1151   | 0x047F |
| 1092   | 0x0444 | 1112   | 0x0458 | 1132   | 0x046C | 1152   | 0x0480 |
| 1093   | 0x0445 | 1113   | 0x0459 | 1133   | 0x046D | 1153   | 0x0481 |
| 1094   | 0x0446 | 1114   | 0x045A | 1134   | 0x046E | 1154   | 0x0482 |
| 1095   | 0x0447 | 1115   | 0x045B | 1135   | 0x046F | 1155   | 0x0483 |
| 1096   | 0x0448 | 1116   | 0x045C | 1136   | 0x0470 | 1156   | 0x0484 |
| 1097   | 0x0449 | 1117   | 0x045D | 1137   | 0x0471 | 1157   | 0x0485 |
| 1098   | 0x044A | 1118   | 0x045E | 1138   | 0x0472 | 1158   | 0x0486 |
| 1099   | 0x044B | 1119   | 0x045F | 1139   | 0x0473 | 1159   | 0x0487 |
| 1100   | 0x044C | 1120   | 0x0460 | 1140   | 0x0474 | 1160   | 0x0488 |
| 1101   | 0x044D | 1121   | 0x0461 | 1141   | 0x0475 | 1161   | 0x0489 |
| 1102   | 0x044E | 1122   | 0x0462 | 1142   | 0x0476 | 1162   | 0x048A |
| 1103   | 0x044F | 1123   | 0x0463 | 1143   | 0x0477 | 1163   | 0x048B |
| 1104   | 0x0450 | 1124   | 0x0464 | 1144   | 0x0478 |        |        |
| 1105   | 0x0451 | 1125   | 0x0465 | 1145   | 0x0479 |        |        |
| 1106   | 0x0452 | 1126   | 0x0466 | 1146   | 0x047A |        |        |
| 1107   | 0x0453 | 1127   | 0x0467 | 1147   | 0x047B |        |        |

| REGISTER | READ EVENT LOG<br>DATA MAPPING OF THE 4-REGISTER BLOCK: |
|----------|---------------------------------------------------------|
| 0        | MsByte = Timestamp year, 0..99 (decimal)                |
| 0        | LsByte = Timestamp month, 1..12 (decimal)               |
| 1        | MsByte = Timestamp day, 1..31 (decimal)                 |
| 1        | LsByte = Timestamp hour, 0..23 (decimal)                |
| 2        | MsByte = Timestamp minute, 0..59 (decimal)              |
| 2        | LsByte = Source identifier, see below                   |
| 3        | MsByte = Event identifier, see below                    |
| 3        | LsByte = Parameter, see below                           |

## READ SINGLE STATUS FLAGS

Function code: 0x03 or 0x04

| MODBUS |        | Read single status flags from separate registers               |
|--------|--------|----------------------------------------------------------------|
| DEC    | HEX    |                                                                |
| 1280   | 0x0500 | Fire alarm relay output is activated                           |
| 1281   | 0x0501 | Fault alarm relay output is activated                          |
| 1282   | 0x0502 | Fan 1 relay output is activated                                |
| 1283   | 0x0503 | Fan 2 relay output is activated                                |
| 1284   | 0x0504 | Hardware nighttime input is activated                          |
| 1285   | 0x0505 | Hardware external fire alarm input is activated                |
| 1286   | 0x0506 | Hardware pressure sensor input is activated                    |
| 1287   | 0x0507 | Hardware auxiliary input (AUX) is activated                    |
| 1288   | 0x0508 | Communication error on damper bus (latching)                   |
| 1289   | 0x0509 | Exhaust fan test is in progress in FG1 (function group 1)      |
| 1290   | 0x050A | Exhaust fan test is in progress in FG2 (function group 2)      |
| 1291   | 0x050B | Damper test is in progress in FG1 (function group 1)           |
| 1292   | 0x050C | Damper test is in progress in FG2 (function group 2)           |
| 1293   | 0x050D | Exhaust fan test pending but still blocked by active AUX input |
| 1294   | 0x050E | Damper test pending but still blocked by active AUX input      |

## READ ALL STATUS FLAGS

Function code: 0x03 or 0x04

| MODBUS |        | Read all status flags as a single register |                                                                    |
|--------|--------|--------------------------------------------|--------------------------------------------------------------------|
| DEC    | HEX    |                                            |                                                                    |
| 1296   | 0x0510 | Bit 15                                     | (MSBit): Always 0                                                  |
|        |        | Bit 14                                     | 1 = Damper test pending but still blocked by active AUX input      |
|        |        | Bit 13                                     | 1 = Exhaust fan test pending but still blocked by active AUX input |
|        |        | Bit 12                                     | 1 = Damper test is in progress in FG2 (function group 2)           |
|        |        | Bit 11                                     | 1 = Damper test is in progress in FG1 (function group 1)           |
|        |        | Bit 10                                     | 1 = Exhaust fan test is in progress in FG2 (function group 2)      |
|        |        | Bit 9                                      | 1 = Exhaust fan test is in progress in FG1 (function group 1)      |
|        |        | Bit 8                                      | 1 = Communication error on damper bus (latching)                   |
|        |        | Bit 7                                      | 1 = Hardware auxiliary input (AUX) is activated                    |
|        |        | Bit 6                                      | 1 = Hardware pressure sensor input is activated                    |
|        |        | Bit 5                                      | 1 = Hardware external fire alarm input is activated                |
|        |        | Bit 4                                      | 1 = Hardware nighttime input is activated                          |
|        |        | Bit 3                                      | 1 = Fan 2 relay output is activated                                |
|        |        | Bit 2                                      | 1 = Fan 1 relay output is activated                                |
|        |        | Bit 1                                      | 1 = Fault alarm relay output is activated                          |
|        |        | Bit 0                                      | (LSBbit): 1 = Fire alarm relay output is activated                 |

## Function code: 0x03 or 0x04

| MODBUS |        | Readback of writable registers for verification               |
|--------|--------|---------------------------------------------------------------|
| DEC    | HEX    |                                                               |
| 4096   | 0x1000 | Damper test in progress or pending (Note 1)                   |
| 4097   | 0x1001 | Exhaust fan test in progress or pending (Note 1)              |
| 4098   | 0x1002 | An alarm reset was recently written to this register (Note 2) |
| 4099   | 0x1003 | The event log is empty (Note 3)                               |
| 4000   | 0x1004 | 0x0000..0x0002 = The last data written to this address        |
| 4101   | 0x1004 | 0x0000..0x0002 = The last data written to this address        |

### Note 1:

These bits indicate that a damper test or exhaust fan test is either already in progress or is pending i.e. waiting to start as soon as the test blocking signal on the hardware AUX input disappears.

The registers will be cleared to 0x0000 as soon as the corresponding test is finished. The main purpose of these registers is to provide a feedback to verify that writes to the registers were successful.

### Note 2:

Alarm reset is a transient event, not a "setting". After a successful write of 0x0001 to this register, it will return 0x0001 for 30 seconds after the write and then fall back to 0x0000.

### Note 3:

A read from this register returns the "log empty" status regardless if the last write to this register was successful or not.

## READ EXTERNAL DIGITAL INPUT STA

In case of KSUC input modules, the register bits follow the the physical KSUC inputs:

KSUC input low (grounded, green LED on) => corresponding register bit = 0

KSUC input high (open, green LED off) => corresponding register bit = 1

### Function code: 0x03 or 0x04

| MODBUS |        | Digital In | READ EXTERNAL DIGITAL INPUT STATUS (E.G. KSUC INPUTS) |       |
|--------|--------|------------|-------------------------------------------------------|-------|
| DEC    | HEX    | DI         | BIT                                                   |       |
| 4352   | 0      | 1          | 15                                                    | MSBit |
| 4353   | 0x1101 | 2          | 14                                                    |       |
| 4354   | 0x1102 | 3          | 13                                                    |       |
| 4355   | 0x1103 | 4          | 12                                                    |       |
| 4356   | 0x1104 | 5          | 11                                                    |       |
| 4357   | 0x1105 | 6          | 10                                                    |       |
| 4358   | 0x1106 | 7          | 9                                                     |       |
| 4359   | 0x1107 | 8          | 8                                                     |       |
| 4360   | 0x1108 | 9          | 7                                                     |       |
| 4361   | 0x1109 | 10         | 6                                                     |       |
| 4362   | 0x110A | 11         | 5                                                     |       |
| 4363   | 0x110B | 12         | 4                                                     |       |
| 4364   | 0x110C | 13         | 3                                                     |       |
| 4365   | 0x110D | 14         | 2                                                     |       |
| 4366   | 0x110E | 15         | 1                                                     |       |
| 4367   | 0x110F | 16         | 0                                                     | LSBit |
| 4368   | 0x1110 | 497        |                                                       |       |
| 4369   | 0x1111 | 498        |                                                       |       |
| 4370   | 0x1112 | 499        |                                                       |       |
| 4371   | 0x1113 | 500        |                                                       |       |
| 4372   | 0x1114 | 501        |                                                       |       |
| 4373   | 0x1115 | 502        |                                                       |       |
| 4374   | 0x1116 | 503        |                                                       |       |
| 4375   | 0x1117 | 504        |                                                       |       |
| 4376   | 0x1118 | 505        |                                                       |       |
| 4377   | 0x1119 | 506        |                                                       |       |
| 4378   | 0x111A | 507        |                                                       |       |
| 4379   | 0x111B | 508        |                                                       |       |
| 4380   | 0x111C | 509        |                                                       |       |
| 4381   | 0x111D | 510        |                                                       |       |
| 4382   | 0x111E | 511        |                                                       |       |
| 4383   | 0x111F | 512        |                                                       |       |

## READ RTC DATE AND TIME

### Function code: 0x03 or 0x04

| MODBUS |        | REGISTER | READ RTC DATE AND TIME<br>DATA MAPPING OF THE 4-REGISTER BLOCK: |
|--------|--------|----------|-----------------------------------------------------------------|
| DEC    | HEX    |          |                                                                 |
| 1536   | 0x0600 | 0        | MsByte = Year MSByte, year = 2015..4095 (decimal)               |
| 1537   | 0x0601 | 0        | LsByte = Year LSByte                                            |
| 1538   | 0x0602 | 1        | MsByte = Month, 1..12 (decimal)                                 |
| 1539   | 0x0603 | 1        | LsByte = Day, 1..31 (decimal)                                   |
|        |        | 2        | MsByte = Hour, 0..23 (decimal)                                  |
|        |        | 2        | LsByte = Minute, 0..59 (decimal)                                |
|        |        | 3        | MsByte = Second, 0..59 (decimal)                                |
|        |        | 3        | LsByte = Day of week, 0..6, 0 = Sunday, 1 = Monday etc.         |

Special requirements:

1. The starting adress **must** be 0x0300
2. The register count **must** be 0x0004

All values are unsigned binary (not BCD).

Year is a 16-bit binary value, all other values are 8-bit binary.

## SET RTC DATE AND TIME

### Function code: 0x10 (16 decimal)

| MODBUS |        | REGISTER | SET RTC DATE AND TIME<br>DATA MAPPING OF THE 4-REGISTER BLOCK: |
|--------|--------|----------|----------------------------------------------------------------|
| DEC    | HEX    |          |                                                                |
| 1536   | 0x0600 | 0        | MsByte = Year MSByte, year = 2015..4095 (decimal)              |
| 1537   | 0x0601 | 0        | LsByte = Year LSByte                                           |
| 1538   | 0x0602 | 1        | MsByte = Month, 1..12 (decimal)                                |
| 1539   | 0x0603 | 1        | LsByte = Day, 1..31 (decimal)                                  |
|        |        | 2        | MsByte = Hour, 0..23 (decimal)                                 |
|        |        | 2        | LsByte = Minute, 0..59 (decimal)                               |
|        |        | 3        | MsByte = Second, 0..59 (decimal)                               |
|        |        | 3        | LsByte = Day of week, 0..6, 0 = Sunday, 1 = Monday etc.        |

Special requirements:

1. The starting adress **must** be 0x0300
2. The register count **must** be 0x0004

All values are unsigned binary (not BCD).

Year is a 16-bit binary value, all other values are 8-bit binary.

**Function code: 0x06 or 0x10 (16 decimal)**

| MODBUS |        | Write triggers and day/night control                        |
|--------|--------|-------------------------------------------------------------|
| DEC    | HEX    |                                                             |
| 4096   | 0x1000 | Write 0x0001 to trigger start of damper test                |
| 4097   | 0x1001 | Write 0x0001 to trigger start of exhaust fan test           |
| 4098   | 0x1002 | Write 0x0001 to reset alarms                                |
| 4099   | 0x1003 | Write 0x0001 to erase the event log                         |
| 4100   | 0x1004 | Force day or night operation:                               |
|        |        | Write 0x0000 for local day/night control via hardware input |
|        |        | Write 0x0001 to force night operation                       |
|        |        | Write 0x0002 to force day operation                         |
| 4101   | 0x1005 | Write 0x2BAD to trigger a total system restart (CPU reset)  |

**Note:**

If function code 0x10 is used to write two or more of these registers and address or register data error(s) occur with some of the register(s), the returned exception code will be that of the last failing register write i.e. some register writes may execute successfully while other writes fail.

Function code: 0x06 or 0x10 (16 decimal)

**DIAGNOSTICS****Function code: 0x08**

| Special functions<br>Request | Diagnostics                                  |
|------------------------------|----------------------------------------------|
| 0x08                         | Function code                                |
| 0x00                         | Sub-function MSByte                          |
| 0x00                         | Sub-function LSByte                          |
| 0x??                         | Any even number (0, 2, 4..250) of data bytes |

**Response:**

Exactly the same as the request message.

## Function code: 0x2B (43 decimal)

| Special functions Request                                                           | Read product information                                               |
|-------------------------------------------------------------------------------------|------------------------------------------------------------------------|
| 0x2B                                                                                | Function code                                                          |
| 0x0E                                                                                | MEI type = Read device identification                                  |
| 0x01                                                                                | Read device ID code = Basic device ID readout with stream access       |
| 0x00                                                                                | Starting object ID, must be 0x00 here (VendorName)                     |
| Response                                                                            |                                                                        |
| 0x2B                                                                                | Function code (same as in request)                                     |
| 0x0E                                                                                | MEI type (same as in request)                                          |
| 0x01                                                                                | Read device ID code (same as in request)                               |
| 0x01                                                                                | Conformity level = Basic ID with stream access only                    |
| 0x00                                                                                | More follows = FALSE (all requested data is contained in this message) |
| 0x00                                                                                | Next object ID = 0x00 because "More follows" = FALSE above             |
| 0x03                                                                                | Number of objects = 3                                                  |
| 0x00                                                                                | Object ID 0 = VendorName                                               |
| 0x0D                                                                                | Object length = 13 characters (in this example)                        |
| "On Control AB" VendorName ASCII string, here 13 characters/bytes (in this example) |                                                                        |
| 0x01                                                                                | Object ID 1 = ProductCode                                              |
| 0x04                                                                                | Object length = 4 characters (in this example)                         |
| "SUSA" ProductCode ASCII string, here 4 characters/bytes (in this example)          |                                                                        |
| 0x02                                                                                | Object ID 2 = MajorMinorRevision                                       |
| 0x05                                                                                | Object length = 5 characters (in this example)                         |
| "v1.03" MajorMinorRevision ASCII string here 5 characters/bytes (in this example)   |                                                                        |



**Bortskaffande av uttjänta elektriska och elektroniska apparater  
(gäller för EU samt andra europeiska länder med särskilda insamlingssystem)**

Om produkten eller dess förpackning är försedd med denna symbol ska den inte hanteras som hushållsavfall. Den ska i stället lämnas till lämpligt insamlingsställe för återvinning av elektriska och elektroniska apparater. Genom att svara för att denna produkt omhändertas på rätt sätt hjälper du till att förhindra den negativa påverkan på miljö och människors hälsa, som annars skulle kunna bli en följd av olämplig avfallshantering av denna produkt. Materialåtervinning bidrar till hushållningen av naturresurser. För att få närmare information om återvinning av denna produkt, kan du kontakta din kommun, ditt renhållningsföretag, eller den återförsäljare du köpt produkten av.