

MODBUS TABLE ORGANIZATION

| Starting Address of the Group Registers (Dec) | Starting Address of the Group Registers (Hex) | System Version (Release) | System Version (Build) | Group Name (Text) | Group Code (Hex) | Group Complexity (Hex) | Group Version (Hex) | Object Code |
|---|---|--------------------------|------------------------|-------------------------------|------------------|------------------------|---------------------|-------------|
| 18432 | 4800 | 01 | 16 | Breaker Command | 62 01 | 10 | 01 00 | |
| 18432 | 4800 | 01 | 16 | Breaker Command Configuration | 62 01 | 10 | 01 00 | |

MODBUS PROTOCOL DETAILS

| Function Code (Dec) | Exception Codes (Dec) | Data Encoding |
|---|-----------------------|--|
| 2 (Read Discrete Inputs) | 1, 2, 3 | "Big Endian" (most significant byte first) |
| 1 (Read Coils) | 1, 2, 3 | "Big Endian" (most significant byte first) |
| 5/15 (Write Single/Multiple Coils) | 1, 2, 3 | "Big Endian" (most significant byte first) |
| 4 (Read Input Registers) | 1, 2, 3 | "Big Endian" (most significant byte first) |
| 3 (Read Holding register) | 1, 2, 3 | "Big Endian" (most significant byte first) |
| 6/16 (Write Single/Multiple Holding register) | 1, 2, 3 | "Big Endian" (most significant byte first) |

MODBUS OVER SERIAL DETAILS

| Physical Layer | Transmission Modes | Device Addressing | Baud Rates (bit/s) | Data Bits | Data bits transmission sequence | Parity | Stop Bits |
|--|--------------------|-------------------|--|-----------|---------------------------------|--------|-----------|
| standard EIA/TIA 485 (RS-485) two-wire configuration | RTU | 1÷247 | programmable (1200, 2400, 4800, 9600, 19200, 38400) | 8 | Least significant bit first | NONE | 1 |

MASTER/SLAVE COMMUNICATION TIMING

| Timer Description | Timer Value (msec) |
|---|-----------------------|
| Inter-character time-out | < 1,5 character times |
| Response delay (from master request) | - |
| Delay Time (between two master transmissions) | - |

REFER ALSO TO:

www.modbus.org

- MODBUS over serial line specification and implementation guide V1.02
- MODBUS APPLICATION PROTOCOL SPECIFICATION V1.1b

NOTE:

File and printed copies of this document are not subject to document change control.

| Register Number | Register Address (Dec) | Register Address (Hex) | Dimension [bit] | Description | Note | Read Function Codes (Dec) | Data Storing |
|--------------------------------|------------------------|------------------------|-----------------|-------------|------|---------------------------|--------------|
| (no DISCRETE INPUTS available) | | | | | | | |

| Register Number | Register Address (Dec) | Register Address (Hex) | Dimension [bit] | Description | Note | Read Function Codes (Dec) | Write Function Codes (Dec) | Data Storing |
|-----------------|------------------------|------------------------|-----------------|------------------------|------|---------------------------|----------------------------|--------------|
| 18433 | 18432 | 4800 | 2 | Breaker Command | | | | |
| 18433 | 18432 | 4800 | 1 | Open | | 1 | 5,15 | |
| 18434 | 18433 | 4801 | 1 | Close | | 1 | 5,15 | |

| Register Number | Register Address (Dec) | Register Address (Hex) | Dimension [word] | Bit Position | Description | Type | Scale | Unit | Range | Note | Read Function Code (Dec) | Data Storing |
|--------------------------------|------------------------|------------------------|------------------|--------------|-------------|------|-------|------|-------|------|--------------------------|--------------|
| (no INPUT REGISTERS available) | | | | | | | | | | | | |

| Register Number | Register Address (Dec) | Register Address (Hex) | Dimension [word] | Bit Position | Description | Type | Scale | Unit | Range | Note | Read Function Codes (Dec) | Write Function Codes (Dec) | Data Storing |
|-----------------|------------------------|------------------------|------------------|--------------|--------------------------------------|------|-------|------|-------|------------|---------------------------|----------------------------|--------------|
| 18433 | 18432 | 4800 | 6 | | Breaker Command Configuration | | | | | | | | |
| 18433 | 18432 | 4800 | 1 | | Command Open configuration | | - | - | | See Note 3 | 3 | 6,16 | |
| 18434 | 18433 | 4801 | 1 | | Activation Time Open Command | | 0,1 | sec | | | 3 | 6,16 | |
| 18435 | 18434 | 4802 | 1 | | Delay activation Time Open Command | | 0,1 | sec | | | 3 | 6,16 | |
| 18436 | 18435 | 4803 | 1 | | Command Close configuration | | - | - | | See Note 3 | 3 | 6,16 | |
| 18437 | 18436 | 4804 | 1 | | Activation Time Close Command | | 0,1 | sec | | | 3 | 6,16 | |
| 18438 | 18437 | 4805 | 1 | | Delay activation Time Open Command | | 0,1 | sec | | | 3 | 6,16 | |

Note 3

bit0:

"0": Normally Open (NO)

"1": Normally Close (NC)

bit1|2:

"00": Implusive command

"01": toggle command

"10": maniteined command

bit3:

"0": Indipendent outputs

"1": Interlocked outputs

bit4÷15: not used