

MTala010

Alarm tableau



Summary

The MTala010 is a microprocessor-controlled, communicative 6 signals alarm module. The module uses a RS485 bus for communication, and can be easily integrated in a variety of supervision and control systems.

Applications

- HVAC and industrial control systems – alarm indication

Functions

The MTala010 module has six LEDs which are controlled from the process station via bus. The communication is the same as for the M300 module: DO 1 to 6 correspond to the LEDs 1 to 6, DO8 disables the buzzer if true.

Removable connectors are used for incoming and outgoing data line so that mounting is fast and easy.

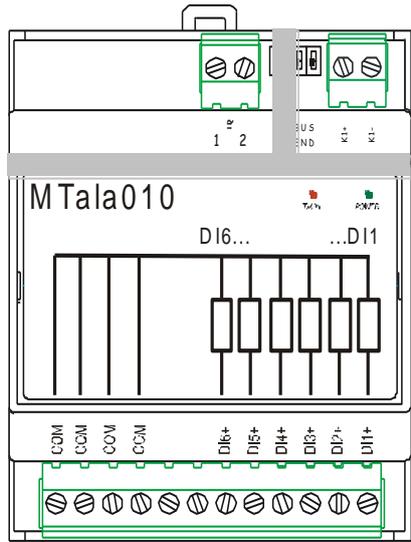
The communication circuits are protected against overvoltage. If the module is terminating the communication bus, i.e. it is the last in line, a terminating 120 Ω resistor may be switched on by short-circuiting of the BUS END piano switch. Two LEDs located inside of the housing enable fast diagnostics – power up and communication.

All settings are backed up in a EEPROM chip. The module is equipped with a watchdog circuit and the communication part is galvanically separated.

Technical data

| | |
|-----------------------------------|--|
| Supply voltage | 10 V \div 35 V DC, 14 V \div 24 V AC |
| Consumption | 1000 mW |
| Working temperature of the module | 0 \div 70°C |
| Communication | RS485, 1200 ... 19200 bit/s |
| Max. bus length | 1200m |
| Max. number of modules on the bus | 250 |
| Number of signals | 6 LEDs signals |
| Buzzer acknowledge | Pushbutton or remote |
| Dimensions | see below |

Terminals



| Marking | Description |
|--------------|---|
| DI1+ to DI6+ | hardware alarm inputs (for future versions, not used) |
| COM | common input ground |
| 1, 2 | power, any polarity |
| K1+, K1- | communication bus |

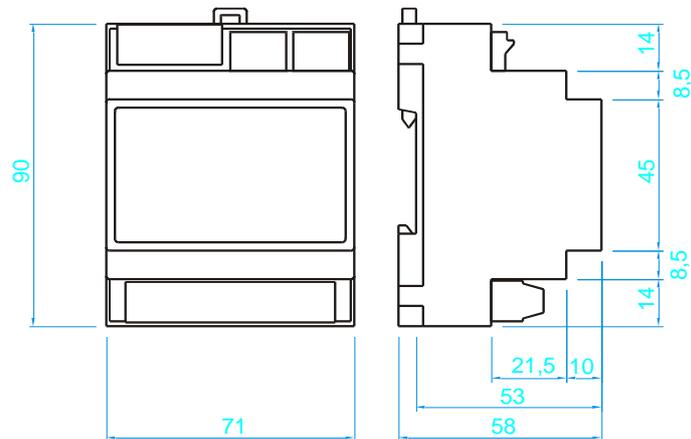
Connection

In current version, only bus and power are to be connected. The hardware inputs will be used in future firmware releases.

If a DO is set to true, the corresponding LED lights and buzzer is activated. It can be disabled by pushing the button or setting DO8 to true. The LED goes off not sooner than after setting the DO back to false.

Attached is a set of white self-adhesive labels for correction of the alarm description.

Dimensions



The MTala010 Modbus table

| Register name | Address | Type | Description | Notes |
|----------------|---------|------------|--|---|
| module LSB | 1 LSB | R | module identification lower byte | module identification 0120 _{hex} |
| module MSB | 1 MSB | R | module identification upper byte | |
| firmware LSB | 2 LSB | R | firmware version lower byte | value 01 |
| firmware MSB | 2 MSB | R | firmware version upper byte | value 00 |
| status LSB | 3 LSB | R, W RAM | module status lower byte bit 0 – enables EEPROM writing | |
| status MSB | 3 MSB | R | module status upper byte bit 0 - 0 normal mode - 1 init mode bit 1 - 1 at the next EEPROM write attempt will all data be written to EEPROM 0 at the next EEPROM write attempt will all data be written to RAM only bit 2 bit 3 bit 4 - 1 bit 5 - 0 bit 6 - 1 bit 7 - 0 | |
| address | 4 LSB | R,W EEPROM | module address | the change is active only after reboot |
| baud rate | 4 MSB | R,W EEPROM | communication, no parity 10 _{dec} ... 1 200bps 11 _{dec} ... 2 400bps 12 _{dec} ... 4 800bps 13 _{dec} ... 9 600bps 14 _{dec} ... 19 200bps 15 _{dec} ... 38 400bps 16 _{dec} ... 57 600bps 17 _{dec} ... 115 200bps | the change is active only after reboot |
| inputs | 5 LSB | R | input readouts | bit 0 = input 1 ... bit 7 = input 8 |
| latched values | 5 MSB | R | latched values 0 – after latch enable there has not been active state at the bits 1 - after latch enable there has been active state at the bits | reset the bits by latch disabling and enabling - see latch enable bit 0 = input 1 ... bit 7 = input 8 |
| latch state | 6 LSB | R,W EEPROM | state to be considered as active 0 – log. 0 will be caught 1 – log. 1 will be caught | |
| input as alarm | 6 MSB | R,W EEPROM | enable the input as alarm (applies for DI1 to DI6) 0 – the input is not an alarm input 1 – the input is an alarm input | |

| | | | | |
|---------------------|-------|---------|--|---|
| alarm | 7 LSB | R,W RAM | alarm register (applies for bit 0 to bit 5 and bit 7) bit 0 to bit 5 – 1 alarm is active bit 0 to bit 5 – 0 alarm is inactive bit 6 – 1 disable beep when alarm active bit 6 – 0 enable beep when alarm active | by writing 1 to a particular bit an alarm is invoked, which remains until the acknowledge button is pushed |
| latch enable | 7 MSB | R,W RAM | enable latch for each input separately – write 1 to set the latched value for the corresponding bit to log. 0. The bit remains in 0 until the corresponding input is active. After reboot, the complete register is set to 0. | Reset the latched bits in the latched value register by disable and enable the bits in the latch enable register. |

The names of the most frequently used registers are printed in bold.