



The digital input module romod 16 DI is used for signaling of up to 16 digital messages. These include operating messages, error messages such as frost, filter dirty or fan belt damaged, and status messages such as damper positions. The control of the inputs will be done with 24 V switched by external dry contacts that are connected to the module via terminals. The reference potential is defined via the COM terminals and can be both, 0 volts and 24 volts. When using a reference potential of 24 volts, a control of the digital inputs with 0 V potential can be realized. The two COM terminals are connected internally, but not with the GND of the power supply, i.e. that reference potential for the inputs has to be connected anyway.

Using the settings in Modbus registers, you can select open circuit or closed-circuit principle for each input separately. Also the color of each of the 16 LEDs is adjustable via a Modbus configuration register, either red, green or orange. Furthermore, the LEDs can be controlled via Modbus commands, provided that this option previously has been defined in a configuration register. This setting can be made individually for each LED.

The digital inputs can be used as counters. For each input, a prescaler may be adjusted in order to count, e.g., just every second or third pulse. A subsequent change of the prescaler also results in a (retroactive) amendment of the corresponding counter values. The pulse duration must be at least 10 ms to be reliably detected. There is a register that displays whether and which DI has changed since the last time this register has been read. When reading this register, all bits are reset to zero automatically. If a DI's status has altered several times, e.g. from 0 to 1 and back to 0, a change will be signaled, anyway.

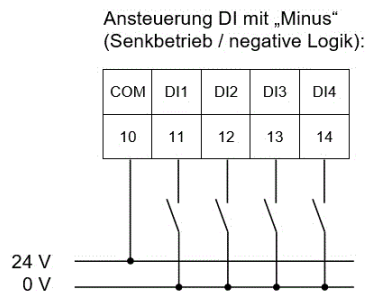
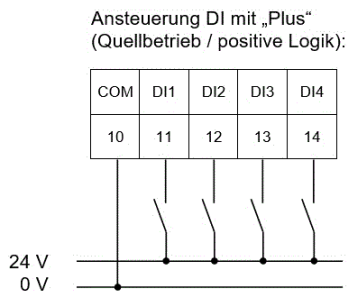
Regarding the system configuration (addressing, maximum number of modules connected to a Modbus Master interface, installation, connection to the bus etc.), please follow the instructions in the chapter Configuration.

romod 16 DI		Ansteuerung der DI mit 24V AC/DC																	
		GND	24V AC/DC	COM für Dis															
DI Nr. 1-8				1	2	3	4	5	6	7	8								
Klemme:				11	12	13	14	15	16	17	18								
DI Nr. 9-16				9	10	11	12	13	14	15	16								
Klemme:				19	20	21	22	23	24	25	26								
COM für Dis																			
Klemme:				10	27														
Spannungsversorgung																			
Klemme:				1	2														

Modbus-Anschluss	Klemme		
I-GND	3		
A (+)		4	
B (-)			5

Bei den Eingängen ist Quell- und Senkbetrieb möglich. Die beiden COM der Dis sind intern gebrückt!

Beispiele für Ansteuerung der digitalen Eingänge im Quell- und im Senkbetrieb:



Power supply: 24 V AC/DC, connection via terminals

Current consumption:
max. 150 mA (DC) / 220 mA (AC), all Dis loaded

Power dissipation
max. 3.6 W (DC) / 5,3 W (AC), all Dis loaded

Counting puls duration min. 10 ms
Max. counter value 4,294,967,296

Bus interface RS485

Supported baud rates
(Autobauding)
9,600 Baud, 19,200 Baud, 38,400 Baud, 57,600 Baud

Bus cycle time individually depending on the baud rate and the number of data points that will be addressed

Memory uPC internally

Configuration settings are stored in the internal EEPROM,
max. number of write cycles up to 100,000 times

Protocol Modbus rtu (RS485), Serial Port Parameter Setting 8-N-1

Environmental conditions
Operating temperature 0...50°C
Transport and storage temperature 0...70°C
Relative humidity 10...90%, non-condensing

Protection class IP 20