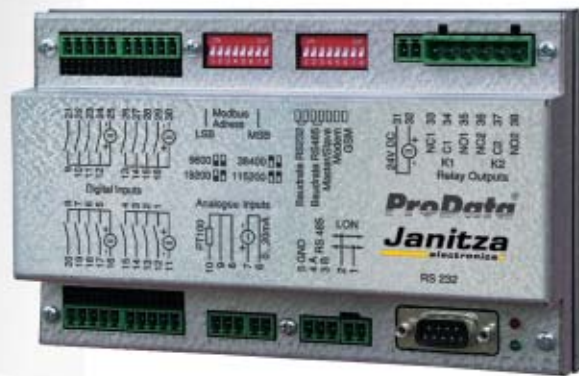


Data

Collecting

Device

ProData[®]



Data Collection Storage And Supervision





LON



Data Collecting Device

Application

The data collecting device Prodata is suitable for collection and storage of counters, operating conditions and process data. These data can be used for evaluation of the consumption of electrical energy, water, steam, gas etc., operating hours or the supervision of switching conditions and disturbances in buildings, factories or other facilities. In case of disturbances or threshold violations, the alarm call is carried out via relay outputs, analogue modem or SMS with GSM-modem.

Analogue Input

- 1 analogue input is programmable in the range of 0(4)-20 mA or -20/20mA
- 1 input for the temperature feelers Pt100, Pt200, Pt500 or PT1000

These measured values can be read out via Modbus. The temperature value and the scaled 20mA value is available via LON.

Relay outputs

- 2 internal relay outputs (changer)
- 31 decentral relay outputs (optional)

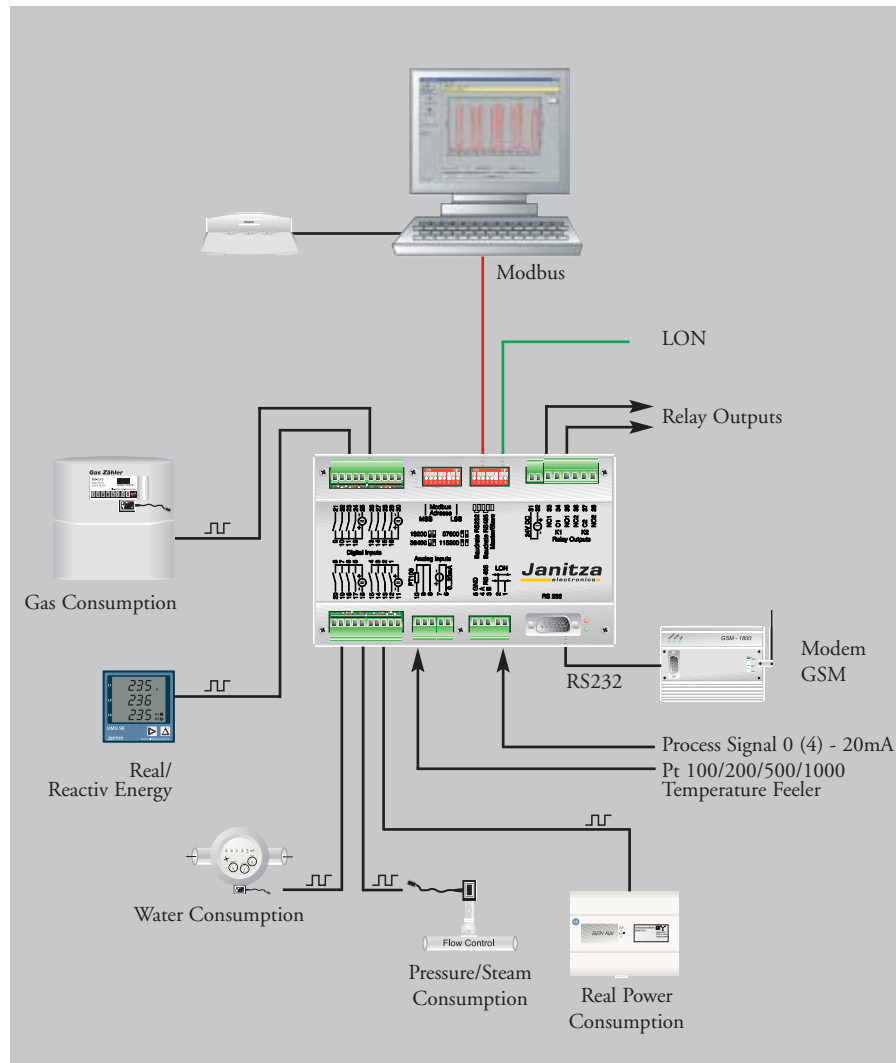
The relay outputs can be used as: Threshold or alarm contact and yearly switching clock. The device can manage up to 31 decentral outputs in Modbus master mode.

Digital inputs

16 Digital inputs, which can be used as:

- Total pulse counter at each input, maximum frequency 50Hz, 64-Bit-counter
- Pulse counter with automatic reset in a programmable time range of 1sec. up to 12h or external synchronization with automatically saved meter indication at last reset
- Recognition of the total operation and disconnection time of each input, for example working hours counter, service intervals etc. Resolution 1 second, maximum time > 100 years
- Supervision of operation and disconnection times
- Frequency measurement at each input for supervision of flow meters, power etc.

The above mentioned values can be read out via Modbus. Via LON, the total pulse counters are available as 32-Bit values. The digital inputs (4x4) can be set by plug bridges as pulse (S0 interface) or message inputs.



Data storage

The analogue measured values can be saved in programmable time intervals (1s...12h) as mean, minimal and maximum value. The difference between the total counter and the last saved counter indication is created in programmable time intervals (1s...12h) and stored. Changes of condition of the inputs can be saved with date and time in the memory with 1 second resolution. Various internal events (for example voltage breakdown and return) are stored. Alarm messages or exceeding of programmed thresholds can be saved with date and time. All stored values and events are saved in a ring buffer, which includes 430kB and is sufficient to save all digital counters for three months in a 15 minutes interval.

Comparators

Prodata has got 128 programmable comparators, which compare an input value to an upper and lower threshold (with hysteresis), if its value is within or out of the defined window. The result can be combined with the result of another comparator by a logical combination (AND, OR, NOT). Depending on the result, several action can be carried out. Delays for switching on or off can be programmed separately. Each internal measured value or content of a register can be used as input value for a comparator. In Modbus master mode, also the measured values or registers of a slave device can be read and used as input value.

The following actions are possible:

- Switch on or off relay output or LED.
- Set internal condition flag.
- Save event in the ring buffer.
- Switch relay output or LED for a programmable time.
- Write the result of the comparator into a register of a Modbus slave.
- Alarm via analogue modem, sending SMS via GSM modem.

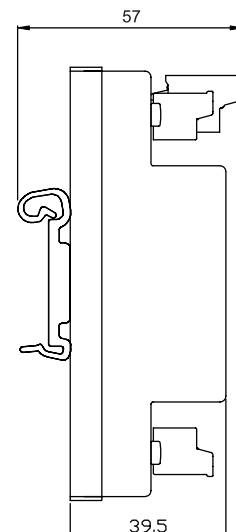
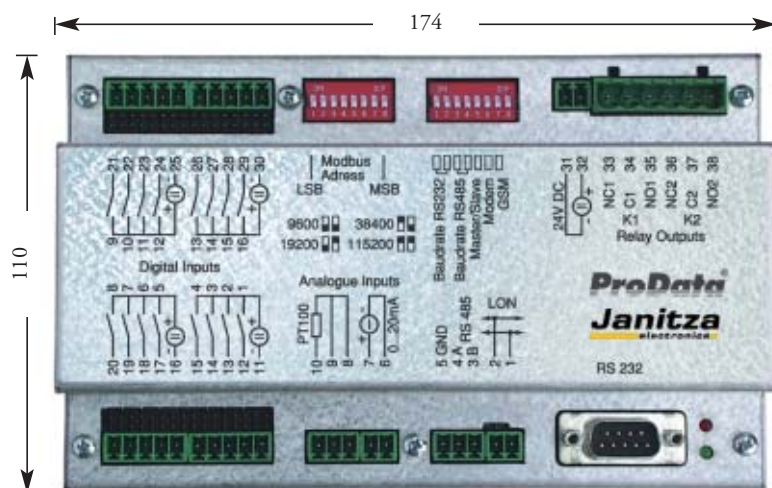
The internal condition flags (4 pieces) can be read out via LON, the relays and LED can be switched via LON.

Modbus-Master

The RS485 interface can be switched in the master mode. In this mode, Prodata can read registers of other Modbus devices (for example other Prodata or UMG 503). Furthermore, Prodata can write the results of the programmable comparators into the registers of other devices. Hence, the number of relay outputs can be increased by connecting a respective module to Modbus as a slave. In Modbus master mode the Modbus telegrams, that reach the RS232 interface, but should not be used by Prodata, are transmitted to the connected slaves at RS485 bus.

Technical data

| | |
|----------------------|---------------------------|
| Ambient temperature: | -10°C up to +55°C |
| Mounting position: | Any |
| Voltage supply: | 24V; DC |
| Digital inputs: | 4x4 Optokoppler / S0 |
| Counter frequency: | max. 50 Hz |
| Relay outputs: | 2 changers (2A, 250V; AC) |
| Protection class: | IP20 according to IEC 529 |



Data storage

Technical data

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Representative