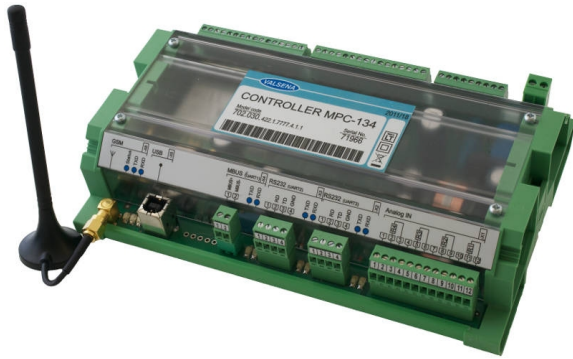




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## MPC-134



**Main features:**

- Freely chosen interfaces: up to 4 interfaces
- Supported interfaces: RS485, RS232, Opto (Kamstrup), Mbus, GSM/GPRS
- Discrete inputs: up to 16 devices
- Discrete outputs: up to 8 devices
- Analog inputs: up to 4 devices
- Wide choice of Analog inputs (Current, Voltage, Thermoresistance (Pt100, PT1000, NTC), Resistance)
- Supported protocols: Modbus RTU, Modbus TCP/IP, IP, ICMP, UDP, TCP, DHCP, PPP, ARP, SNTP, IEC60870-5-104:200 and transparent
- Power: 9-36 VDC (10VA)

|   |   |   |
|---|---|---|
| <b>First interface</b> (galvanically isolated)  |   |   |
| RS485   | distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s             |   |
| RS232   | distance up to 15m, speed up to 19,2Kbit/s                                    |   |
| Opto  | (Kamstrup) data transfer interference   |   |
| Mbus  | up to 8 devices   |   |
| <b>Second interface</b> (galvanically isolated) |   |   |
| RS485   | distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s             |   |
| RS232   | distance up to 15m, speed up to 19,2Kbit/s                                    |   |
| <b>Third interface</b>                          |   |   |
| RS485   | distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s             |   |
| RS232   | distance up to 15m, speed up to 19,2Kbit/s                                    |   |
| <b>Fourth interface</b>                         |   |   |
| GSM/GPRS  | 3 band 900/1800/1900 MHz  |   |
| <b>Discrete and Analog interfaces</b>           |   |   |
| Discrete IN                                     | 16  | sink contact  |
| Discrete OUT                                    | 8   | open collector, >50VDC and >500mA                           |
| Analogi IN                                      | 4   | resistance, voltage or current, reading 10 times per second |
| <b>Protocols</b>                                |   |   |
|   | Modbus RTU<br>Modbus TCP/IP<br>IP<br>ICMP<br>UDP<br>TCP<br>DHCP<br>PPP<br>ARP |   |

|  |   |   |
|--|---|---|
|  | SNTP<br>IEC60870-5-104:2000<br>DynDNS<br>FTP server<br>FTP client<br>DNS client |   |
| <b>General</b>                               |   |   |
| Power  | 9-36 VDC  |   |
| Galvanic isolation                           | >1000V  |   |
| Capacity                                     | 300mA max   |   |
| <b>Specification</b>                         |   |   |
| CPU  | ARM7  |   |
| Memory                                       | archive storage 1-8 MB, independant data storage without power about 5 years    |   |
| <b>LED indication</b>                        |   |   |
| Power  | +   |   |
| Status of discrete input, for each port      | +   |   |
| Serial ports read/write for each port        | +   |   |
| GSM/GPRS modem status                        | +   |   |
| <b>Programing and updating</b>               |   |   |
| Remote                                       | GSM/GPRS  |   |
| Locally                                      | USB, RS232, RS485   |   |
| <b>Physical characteristics</b>              |   |   |
| Dimmensions                                  | 197x128x50 mm   |   |
| Weight                                       | 450 g   |   |
| Mounting type                                | on DIN32 rail   |   |
| Safety class                                 | IP20  |   |
| <b>Climate conditions</b>                    |   |   |
| Operating temperature                        | -25..+60 °C   |   |
| Storage temperature                          | -40..+60 °C   |   |
| Humidity range                               | 5-95%, non-condensing   |   |
| <b>Other fuetures</b>                        |   |   |
| Real time clock                              | +   |   |
| Mbus auto setup                              | +   |   |
| 24 months warranty period                    | +   |   |
| <b>MAX number of interfaces (for filter)</b> |   |   |
| Number of supported interfaces               | 4   |   |
| RS485  | +   | distance up to 1,2km, max 32 transivers, speed up to 19.2 Kbits/s |
| RS232  | +   | distance up to 15m, speed up to 19,2Kbit/s                        |
| Opto   | +   | (Kamstrup) data transfer interference                             |
| Mbus   | +   | up to 8 devices   |
| Current Loop                                 | -   | Active or Pasive, 2 or 4 wire                                     |
| Ethernet                                     | -   | twisted pair, 10/100 Mbps, distance up to 100m                    |
| USB (device)                                 | +   | Type B, ver. 2.0  |
| USB (host)                                   | -   | Type A, ver. 2.0  |
| HART   | -   |   |
| Power for exteranal devices                  | -   | 3,7/5/6/8/10 V  |
| Universal                                    | -   | Jumper switchable   |
| GSM/GPRS                                     | +   | 4 band 850/900/1800/1900 MHz                                      |

## OVERVIEW

MPC-143 controller is created for data logging and analyzing in a real time. Using GPRS/GSM modem, controller sends saved data and reports to remote users. Controller supports most of protocols and interfaces (RS232, RS485, MBUS, Opto, Discrete inputs, Discrete

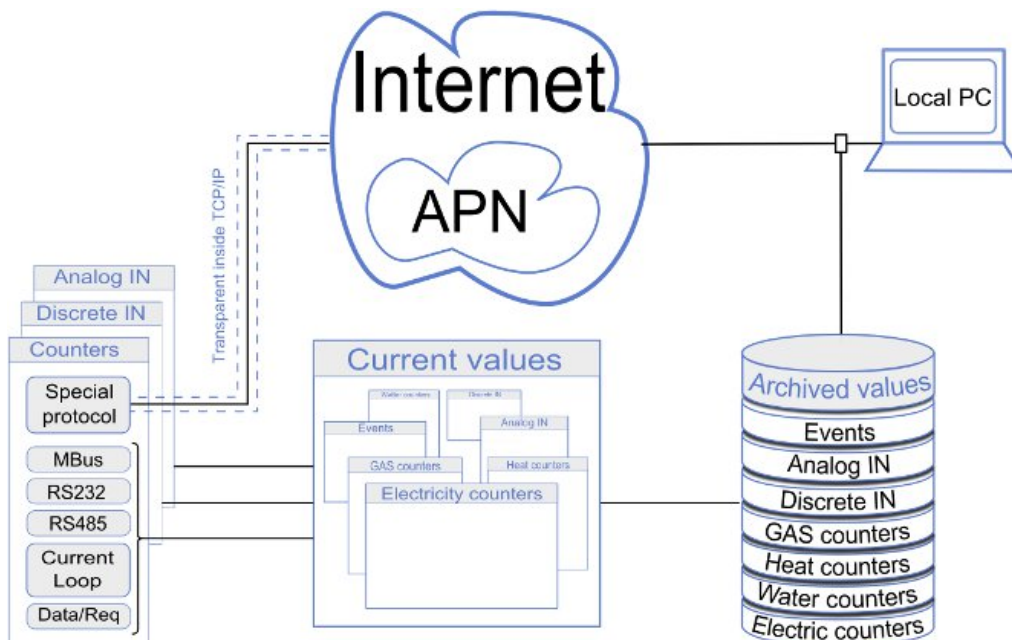
outputs, Analog inputs), so it can be used with different brands and models of counters. Our special **“TRANSPARENT”** data transfer protocol enables controllers to use with practically any device. Device supports wide range of protocols (and can be extended by our programmers, if you need some special). For data exchange over GPRS/GSM and/or any Serial interfaces, controller uses Modbus TCP/IP, Modbus RTU, IEC60870-5-104:2000, SNTP and other protocols. Our clients – GAS, Heat, Watering suppliers, Industry companies in EU, Ukraine, Central Asia.

### DEFAULT FEATURES

- Reading data from energy carrier meters;
- “TRANSPARENT” remote data reading from counters (special manufacturers protocols);
- Discrete input/output ports;
- Analog inputs;
- Independent data log (up to 8MB) with real time stamp;
- Remote configuration and upgrading possibilities over GPRS/GSM;
- Wide range of interfaces: GSM/GPRS, RS232, RS485, Opto, Mbus;
- Wide choice of Analog inputs (Current, Voltage, Thermoresistance (Pt100, Pt1000, NTC), Resistance);
- Some interfaces are galvanically isolated.

### BENEFIT TO THE CLIENT

- Economy, because controller does a lot of mechanic work, so your professionals can do more important work;
  - Increase efficiency, because the data are sent to a central computer continuously. If connection is lost, data will be safe kept in controllers memory, until connection will be reestablished;
  - Increases security, because the relevant information is rapidly shorten response time;
  - Versatile, because this controller can retrieve data from different manufacturers and even different types of meters;
  - Simplicity, because of intuitive control and optimally assembled LED’s it is easy to monitor and maintain equipment;
- A good partner, because we not only help you customize and will make equipment, but also flexibly adapt controller, if your demands will change.



### CUSTOMIZING DEVICE

The exceptional feature of this device - a flexible hardware and software configuration, it depends on customer needs, you can choose the desired interface and functionality.



| Interface | RS232 | RS485 | Opto | MBUS | GSM (GPRS) |
|-----------|-------|-------|------|------|------------|
| A         | ○*    | ○*    | ○*   | ○*   |            |
| B         | ○*    | ○*    |      |      |            |
| C         | ○     | ○     |      |      |            |
| D         |       |       |      |      | ○          |

○-optional one interface per socket; \*-galvanically isolated

|                    |           |                     |          |                  |          |
|--------------------|-----------|---------------------|----------|------------------|----------|
| <b>Discrete IN</b> | <b>16</b> | <b>Discrete OUT</b> | <b>8</b> | <b>Analog IN</b> | <b>4</b> |
|--------------------|-----------|---------------------|----------|------------------|----------|

Manufacturers code:

702.030.

|          |  |          |  |
|----------|--|----------|--|
|          |   |          |   |
| <b>A</b> | 0 - none<br>1 - RS485<br>2 - RS232<br>3 - Opto<br>4 - Mbus   | <b>B</b> | 0 - none<br>1 - RS485<br>2 - RS232   |
| <b>C</b> | 0 - none<br>1 - RS485<br>2 - RS232   | <b>D</b> | 0 - none<br>1 - GPRS / GSM   |
| <b>E</b> | 0 - none<br>1 - Current analog input<br>2 - Voltage -5...+5V analog input<br>3 - Voltage -10...+10V analog input<br>4 - Thermoresistor (P1000) analog IN<br>5 - Thermoresistor (P1000) analog IN<br>6 - Resistance 0...10kΩ analog IN<br>7 - Resistance 0...300Ω analog IN<br>8 - Thermoresistor 0...5%ΔC (NTC) analog IN<br>9 - Thermoresistor 0...3%ΔC (NTC) analog IN | <b>F</b> | 0 - none<br>1 - Current analog input<br>2 - Voltage -5...+5V analog input<br>3 - Voltage -10...+10V analog input<br>4 - Thermoresistor (P1000) analog IN<br>5 - Thermoresistor (P1000) analog IN<br>6 - Resistance 0...10kΩ analog IN<br>7 - Resistance 0...300Ω analog IN<br>8 - Thermoresistor 0...5%ΔC (NTC) analog IN<br>9 - Thermoresistor 0...3%ΔC (NTC) analog IN |
| <b>G</b> | 0 - none<br>1 - Current analog input<br>2 - Voltage -5...+5V analog input<br>3 - Voltage -10...+10V analog input<br>4 - Thermoresistor (P1000) analog IN<br>5 - Thermoresistor (P1000) analog IN<br>6 - Resistance 0...10kΩ analog IN<br>7 - Resistance 0...300Ω analog IN<br>8 - Thermoresistor 0...5%ΔC (NTC) analog IN<br>9 - Thermoresistor 0...3%ΔC (NTC) analog IN | <b>H</b> | 0 - none<br>1 - Current analog input<br>2 - Voltage -5...+5V analog input<br>3 - Voltage -10...+10V analog input<br>4 - Thermoresistor (P1000) analog IN<br>5 - Thermoresistor (P1000) analog IN<br>6 - Resistance 0...10kΩ analog IN<br>7 - Resistance 0...300Ω analog IN<br>8 - Thermoresistor 0...5%ΔC (NTC) analog IN<br>9 - Thermoresistor 0...3%ΔC (NTC) analog IN |
| <b>I</b> | 0 - none<br>1 - 4 discrete inputs<br>2 - 8 discrete inputs<br>3 - 12 discrete inputs<br>4 - 16 discrete inputs   | <b>J</b> | 0 - none<br>1 - 8 discrete outputs   |
| <b>K</b> | 0 - none<br>1 - Real Time Clock (RTC)  |          |  |

702.030.412.1.1400.2.8.1 - (Mbus, RS485, RS232, GPRS, Current Analog\_IN, Thermoresistor (P1000) Analog\_IN, 8 Discrete\_IN, 8 Discrete\_OUT, RTC)