



SEA spol. s r.o.

Společnost pro elektronické aplikace

Company SEA spol. s r.o. was established in 1992 and holds the ISO 9001:2001 certificate.

SPA7, SPA7-GPRS, SPA7 BOX Control and Monitoring of Technology equipment via GSM

Basic Characteristics

SPA7 is a powerful remote control and monitoring device. It enables to monitor logical and analog inputs status and to control outputs via GSM network. SPA7 can use SMS messages, data connection or GPRS connection (version SPA7-GPRS). The behavior of a device and names of inputs and outputs are in SMS version fully selectable via USB cable or remotely (data connection) using supplied configuration software. The defined emergency conditions may result in sending a SMS message to the list of telephone numbers (boiler failure, gas leakage, rapid drop or rise of temperature or level) including information about the failure and restoration of power supply (SPA7-BOX).

The user can select analog inputs as voltage (0 to 10 V), current (0 to 20 mA) temperature (for KTY81-210 and Ni5000 sensors) or for function like another logical input. The analog inputs values can be send in actual units and values (configurable recalculation including non linear functions). SPA7 can save all the I/O values and signal changes in an optional HISTORY module. Events in the device like changes of logical inputs, analog inputs states, etc. are logged into this memory and can be readout locally and remotely as well.



Advantages of SPA7, SPA7-GPRS

- **Simple installation**
The device is delivered with a frame for mounting onto DIN rail
- **Easy monitoring**
just send a SMS message "STATE" to receive a message about the state of the device inputs and outputs
- **Configuration and Monitoring SW**
user friendly PC SW works either locally via USB port or remotely using data call (or GPRS in version SPA7-GPRS)
- **User selectable analog inputs HW mode configuration and SW recalculation parameter and analog inputs units selection**

Technical Data SPA7, SPA7-GPRS

Power supply:

8 – 30 V (max. 120mA for 12V)

Logical inputs galvanically separated:

8 inputs (8 - 30V / 5mA for 12V)

Logical outputs galvanically separated:

4 outputs (60 V / 100 mA)

Analog inputs:

2 inputs (12 bit converter) jumper selectable as

a) voltage 0 – 10 V

b) current 0 - 20 mA

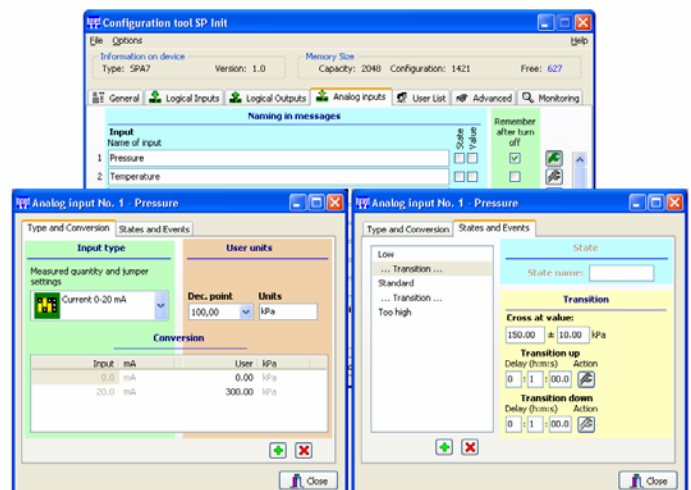
c) temperature, KTY81-210 sensor +/-1.5 ... +/-3°C

d) temperature, Ni5000 sensor +/-0.2 ... +/-0.5°C

e) another galv. separated logical input 8 ... 30V

Port: USB 1.0, 2.0

Operating temperature: -20 to +55 °C



Expansion Module SPA7-EXP



Both SPA7 and SPA7-GPRS are expandable by a SPA7-EXP board, which increases the number of inputs/outputs by 10 analog inputs, 4 logical outputs and 2 analog outputs and RS232/485 serial port. This expansion must be done only by a manufacturer, due to necessity of recalibration of the connected modules. Does not order separately; must be ordered together with SPA7!

Technical Data SPA7-EXP

Power supply:
powered from SPA7

Logical outputs galvanically separated:
4 outputs (60 V / 100 mA)

Analog inputs:
10 inputs (12 bit converter) jumper selectable as
a) voltage 0 – 10 V
b) current 0 - 20 mA
c) temperature, KTY81-210 sensor +/-1.5 ... +/-3°C
d) temperature, Ni5000 sensor +/-0.2 ... +/-0.5°C
e) another galv. separated logical input 8 ... 30V

Analog outputs:
2 outputs (0 – 5 V)

Port: RS232 and RS485 (ORed to one CPU port)

Operating temperature: -20 to +55 °C

Option with backup power supply – version BOX

The device is available in version BOX. The device with a power supply 230V AC and a backup battery are mounted into a plastic box which meets IP55 requirements. There is also separate power supply to be used on logical inputs and outputs circuits coming from/to noisy environment.

Advantages of SPA7-BOX

- **Simple installation**
the device is completed in a plastic box IP55 ready for wall mounting with a clear cover
- **Backup power supply**
power supply 230V AC and backup AKU 12 V/ 1,3Ah



Technical Data SPA7-BOX

Power supply: 230 V /5W
Inputs and outputs: see SPA7, SPA7-EXP
Protection: IP55
Operating temperature: -20 to +55 °C

Use of SPA7 / SPA7-GPRS / SPA7-BOX

- **Boiler houses, heating plants and heat pumps**
- **Industrial objects** – water plants, water reservoirs, small hydroelectric stations, boiler plants
- **Technology processes** – fault report, gas escape, drop or rise of temperature or level, freezing point monitoring

