Key features

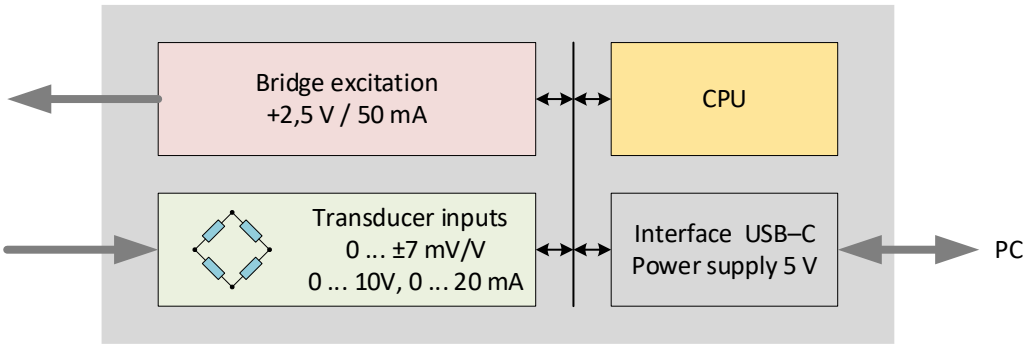
- Available in 3 configurations :
  - differential input for strain gauge sensors
  - analog input 0 – 10 V
  - analog input 0 – 20 mA
- Supply voltage from USB (5 V)
- USB bus communication
- Managing and collecting data in MS Excel

The EMS720 converter is designed to digitize signals from strain gauge force sensors or other signal sources. It is available in various input configurations, allowing for the construction of different devices, such as digitizers, weighing terminals, measurement control units, and more. The converter communicates via a USB bus and is controlled using the Control700 add-in, which runs within the Excel environment. The Control700 program can simultaneously control up to 4 EMS720 converters.

EMS720 versions

Type	Input range
EMS720 – SG	0 ... ± 7 mV (sensitivity of the resistive bridge)
EMS720 – Volt	0 ... 10 V
EMS720 – Curr	0 ... 20 mA

Block diagram of the device



2026-03

Technical specifications

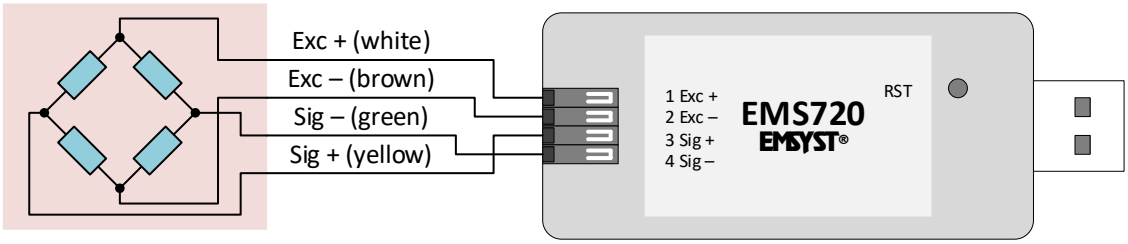
Electronic specifications	
Inputs [1]	
differential input for a strain gauge sensor	0 ... ± 7 mV/V
voltage input	0 ... 10 V
current input	0 ... 20 mA
Sensor power supply	2,5 V / 60 mA
ADC	Sigma-Delta, 24-bit internal resolution
Temperature coefficient	
of input voltage (offset)	0,5 µV / °C
of gain	20 ppm / °C
On-line data transmitting (monitor)	
Sampling rate	1 sample per second
Recording data in an Excel spreadsheet	
Sampling rate	1 ... 100 samples per second
Max recording capacity	1.000.000 samples
Power supply	
Voltage (USB)	5 VDC
Max current draw, including the sensor	50 mA
Connecting to a PC	
Connection type	USB (virtual Com Port)
Parameters	115200 Bd, 8 bit, no parity,1 stop
Protocol	JSON protocol
Operating conditions and mechanical design	
Working temperature	0 ... + 50 °C
IP	IP40
Dimension (L x W x H)	65 x 30 x 15,5 mm

Notes

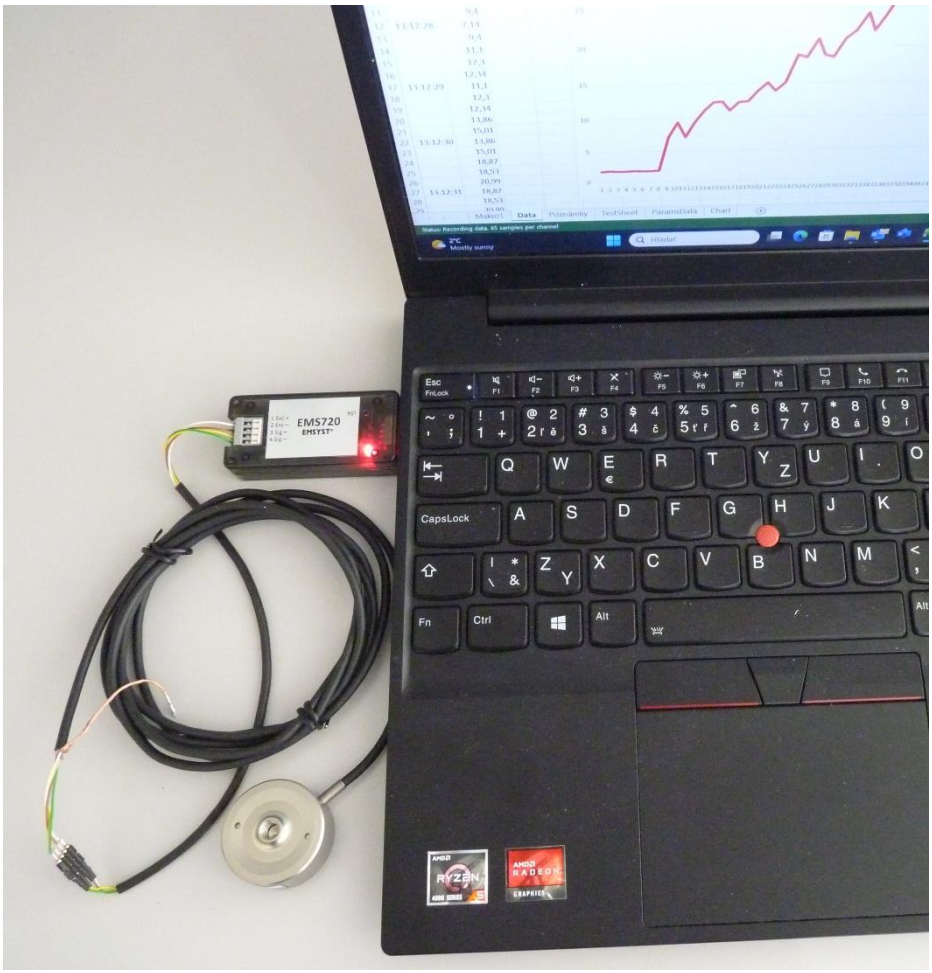
1 The converter has only one input; the required input type must be specified in the order.

Force sensor connection

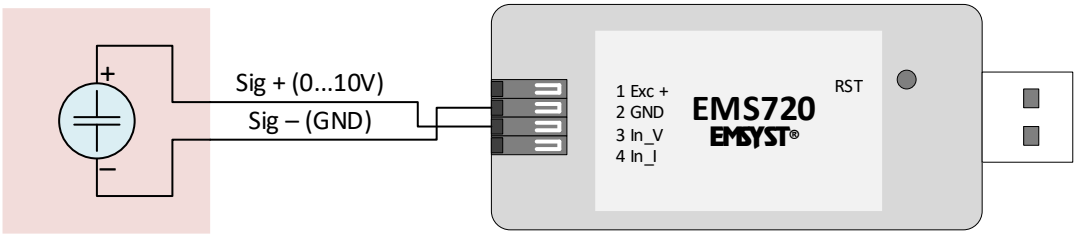
(The wire colours apply only to EMSYST sensors!)



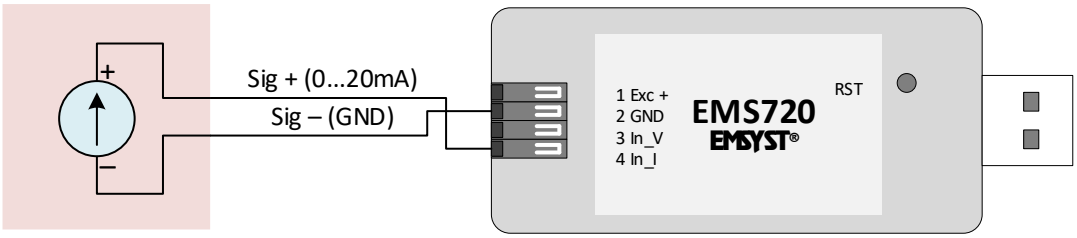
Connection to the PC



Connecting the voltage signal source



Connecting the current signal source



Legal information