



Key features

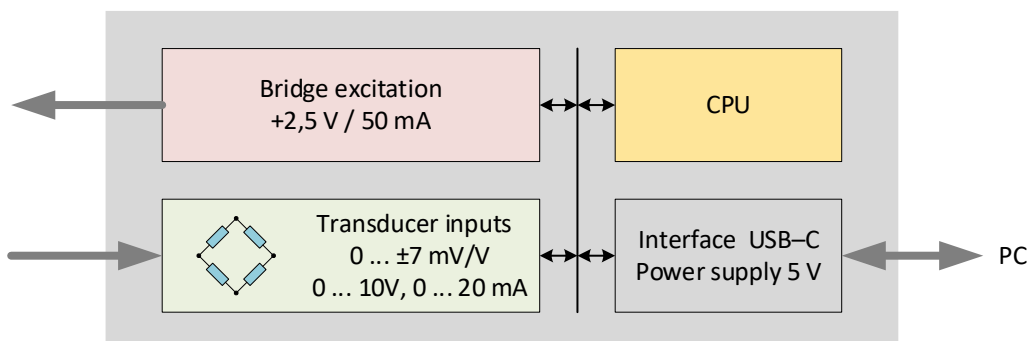
- Available in 3 configurations :
 - differential input for strain gauge sensors
 - analog input 0 – 10 V
 - analog input 0 – 20 mA
- Supply voltage from USB (5 V)
- USB bus communication
- Managing and collecting data in MS Excel

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



Technical specifications

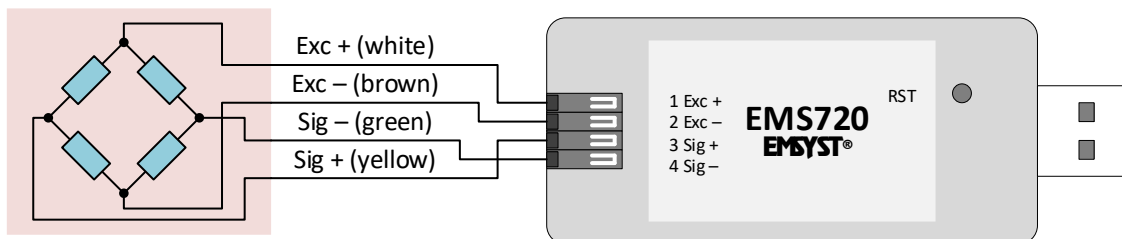
Electronic specifications	
<u>Inputs</u> ¹ differential input for a strain gauge sensor voltage input current input <u>Sensor power supply</u> <u>ADC</u> <u>Temperature coefficient</u> of input voltage (offset) of gain <u>On-line data transmitting (monitor)</u> Sampling rate <u>Recording data in an Excel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

Notes

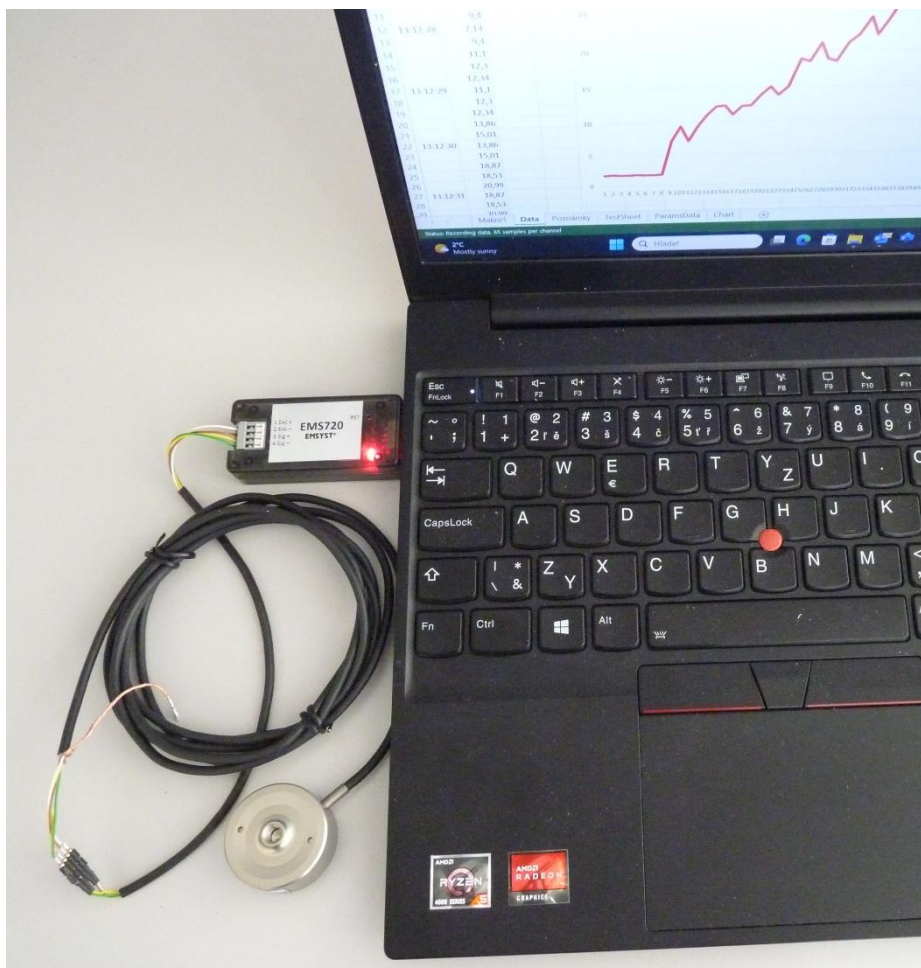
- 1 The converter has only one input; the required input type must be specified in the order.

Force sensor connection

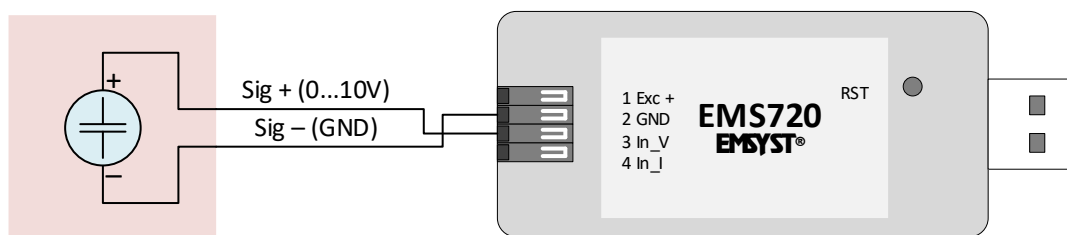
(The wire colours apply only to EMSYST sensors!)



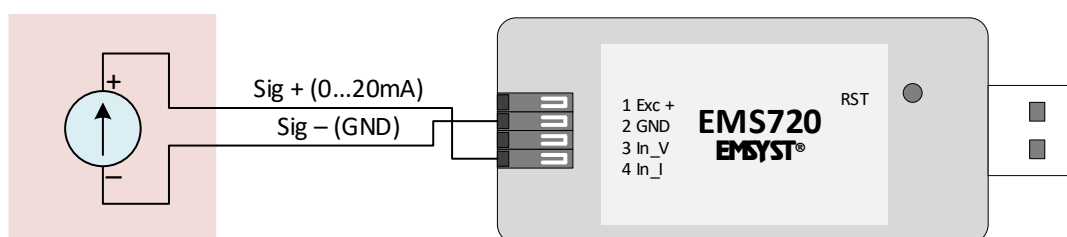
Connection to the PC



Connecting the voltage signal source



Connecting the current signal source



Legal information

The company EMSYST, spol. s r. o., registered office: Súvoz 111, 911 01 Trenčín, ID No.: 34 115 749, VAT No.: SK2020386115, registered in the Commercial Register maintained by the District Court Trenčín, section: Sro, file No.: 502/R (hereinafter referred to as the "Company"), hereby informs that any texts, descriptions, information, graphic and technical data contained in this document are subject to Company's copyright in accordance with the provisions of Act no. 185/2015 Coll. Author's of the Act, as amended. These materials are intended for customers of the Company and it is not possible to copy, modify or reproduce it without previous written consent of the Company.

The company further informs that any information that has been made available for customers, resulting from this document (primarily prices, technical know-how, or other special specification), relating to the Company's products and processes are the subject of a special trade secret of the Company and are subject to legal protection resulting from the provisions of § 17 et seq. Act No. 513/91 Coll. Commercial Code as amended.