



## DSP Unit Digital Signal Processor Z4



The compact, programmable Signal Processor is designed for a universal use with various functions.

- Digital SG- amplifier
- Multiplier / Voltage- controlled- amplifier
- PID Controller
- Potenzial Isolation / impedance transformer

Best Temperature and long- term stability, as well as high measurement accuracy is achieved by digital measurement accuracy.

The galvanic isolation on the sensor signals guarantees reliable signal processing.

The configuration on the desired functions is carried out at the factory by software.

According to the function, the external wiring is different.

A comprehensive software package with data logger-function characterized this device.

### **Size:**

Compact case (plastic) for Mounting on DIN rail EN  
Installation dimensions: 108x 22,5x 115mm (Hx Wx D)

### **Signal inputs:**

SG- Sensors half- or full bridge circuit

### **Special features:**

High noise immunity and service reliability

Direct, 24V DC Power supply, reverse polarity protection, with wide Input Voltage Range 18...30VDC, LED operation display, Integrated DC/DC converter for galvanic isolation between power supply and measuring circuit.

High stable Bridge Voltage to power the Sensor  
Adjustment of the Sensor via software

Connection of power supply and output signals via screw terminal

Data-logger Measurements – Recording up to 32h possible



## Technical Data DSP Unit:

|  |   |
|--|---|
| Connectable Sensors:   | <b>&gt;150 <math>\Omega</math> SG- Full Bridge</b>  |
| Bridge supply  | <b>5V</b> corresponding to Ground (GND)   |
| Accuracy of power  | <b>0,2%</b>   |
| Temperature drift of bridge supply voltage                             | <b>10ppm/°C</b>   |
| Setting Range  | <b>200...10.000</b>   |
| Nominal gain $G_{nom}$   | <b>2000</b>   |
| Nominal Measuring Range $U_{sig}$                                      | <b>5 mV</b>   |
| Input impedance  | <b>1 M<math>\Omega</math></b>   |
| Cut- off frequency (-3dB)  | approx. <b>500 Hz</b>   |
| Output Standard  | absolute Signal   |
| Software switchable  | absolute Signal<br>Bridge Signal  |
| AD- Converter Input  | <b>2,5V</b>   |
| Control range Zero   | <b>60%</b> of the AD- Converter input   |
| Temperature range  | <b>0...+60°C</b>  |
| Operating temperature  | <b>0...+60°C</b>  |
| Storage temperature  | <b>-25...+75°C</b>  |
| Temperature dependency per 10°C<br>to the zero at the amplifier output | <b>0,6 .mV</b>  |
| Supply voltage   | <b>18...30 VDC</b>  |
| Power consumption  | <b>max. 3W</b> - integrated DC/DC Converter<br>for galvanic isolation between supply and<br>Measuring circuit |
| Connection measuring amplifier   | Screw terminals for flexible cable<br><b>0,2...2,5 mm<sup>2</sup></b>   |
| Connection Sensor  | Screw terminals for flexible cable<br><b>0,2...2,5 mm<sup>2</sup></b>   |
| Protection class   | <b>IP20</b>   |
| Weight   | approx. <b>200g</b>   |
| Size (HxWxD)   | Compact housing (108x 22,5x 115 mm)   |
| Mounting   | Snap- in mounting on DIN rail EN  |