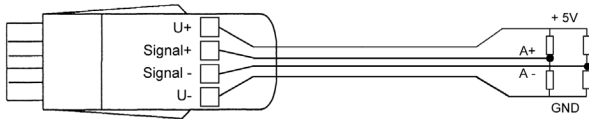


## Digital ALMEMO® D7 measuring connector for bridge differential mV

For force transducers (tension / compression), torque transducers, or strain gauges

High-speed measuring at 1000 measuring operations per second (mops) and resolution 50,000 digits or high-level resolution at up to 200,000 digits and 10 mops

Only for latest ALMEMO® V7 measuring instruments, including ALMEMO® 500, 710, 809, 202.



The new ALMEMO® D7 measurement plug enables high measuring speeds or high measuring accuracy applicable for a vast variety of measuring tasks. The user can select the preferred configuration quickly and easily on the ALMEMO® V7 measuring instrument itself.

### Technical data and functions

- The digital ALMEMO® D7 measuring connector uses its own integrated A/D converter. The overall accuracy of the measuring operation is unaffected by the presence of an ALMEMO® V7 display device / data logger. The whole measuring chain, comprising e.g. a force transducer and the connected ALMEMO® D7 measuring connector, can be calibrated end-to-end.
- The measuring rate is determined entirely and exclusively by the integrated A/D converter. On the ALMEMO® V7 measuring instrument all D7 measuring connectors operate in parallel at their own measuring rate. The measuring instrument's very short scan cycle is determined by the measuring rates of the D7 measuring connectors - irrespective of their number.
- For measuring dynamic processes the ALMEMO® D7 measuring connector operates in the high-speed range at a fast conversion rate. The ALMEMO® V7 measuring instrument saves the measured values; the measuring software WinControl

displays them in graphical form. If high-level resolution and stable values are required, e.g. precision transducers for force, the ALMEMO® D7 measuring connector operates in the „High-level resolution“ range but at a reduced conversion rate.

- Measurements are taken using a full bridge with a 4-conductor circuit. The bridge is powered from the ALMEMO® D7 plug.
- The sensor is scaled to its actual physical quantity (e.g. end value 1 kN with characteristic 2 mV / V); this is performed via the ALMEMO® V7 device (device itself or ALMEMO® Control software). - zero-point adjustment, - scaling of end value by entering characteristic mV / V or adjustment by loading the bridge with end value. The assigned units can be up to 6 characters in length. Sensor identification can be programmed with designations up to 20 characters in length.

### Technical data

Sensor type	Full bridge, 4 conductors
Measuring input	electrically interconnected with the power supply (ALMEMO® device ground)
Input range	-29.3 to +29.3 mV
Display range, Conversion rate,	see variants
Bridge power supply	5 V
	Accuracy 0.01 %
	Temperature drift 10 ppm / K

System accuracy	0.02 % +2 digits at 10 measurements / second
Nominal temperature	+22 °C ±2 K
Temperature drift	0.003 % / K (30 ppm)
Supply voltage	from 6 V up. from ALMEMO® device (sensor supply voltage)
Current consumption	approx. 15 mA (without force transducer)
Environmental conditions	see page 01.04 onwards

### Types:

Range	Display range	Conversion rate
DMS1*	±200 000 digits	10 mops
or		
DMS2	±50 000 digits	1000 mops

\* Factory setting : The desired measuring range can be programmed on the ALMEMO® V7 device itself.

**Option:** Configuration of ALMEMO® D7 measuring connector; measuring rate 1000 mops

**Order no.**

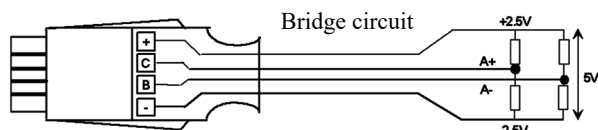
**ZKD700FS**

**OA9007PRM1000**

# Input connectors for measuring bridges

## ALMEMO® Connector for measuring bridges, millivolt / volt differential

With zero-symmetrical voltage supply of  $\pm 2.5$  V stabilized from the ALMEMO® device



### Technical Data

Sensor supply	
Voltage $U_F$ :	$5V \pm 0.05V$
Temperature coefficient:	$<50\text{ppm}/^\circ\text{C}$
Output current:	25 mA at $U_G = 12$ V 30 mA at $U_G = 9$ V 50 mA at $U_G = 6$ V
Ruhestrom:	approx. 3 mA
Energy saving	So long as the measuring point is not selected, the bridge voltage remains switched OFF.

### Types:

Model	Meas. Range	Resolution	Order no.
55mV DC	-10.0 to +55.0	1 $\mu\text{V}$	<b>ZA9105FS0</b>
26mV DC	-26.0 to +26.0	1 $\mu\text{V}$	<b>ZA9105FS1</b>
260mV DC	-260.0 to +260.0	10 $\mu\text{V}$	<b>ZA9105FS2</b>
2.6V DC	-2.6 to +2.6*	0.1 mV	<b>ZA9105FS3</b>

\* Data may vary depending on device; (see data sheet per device)