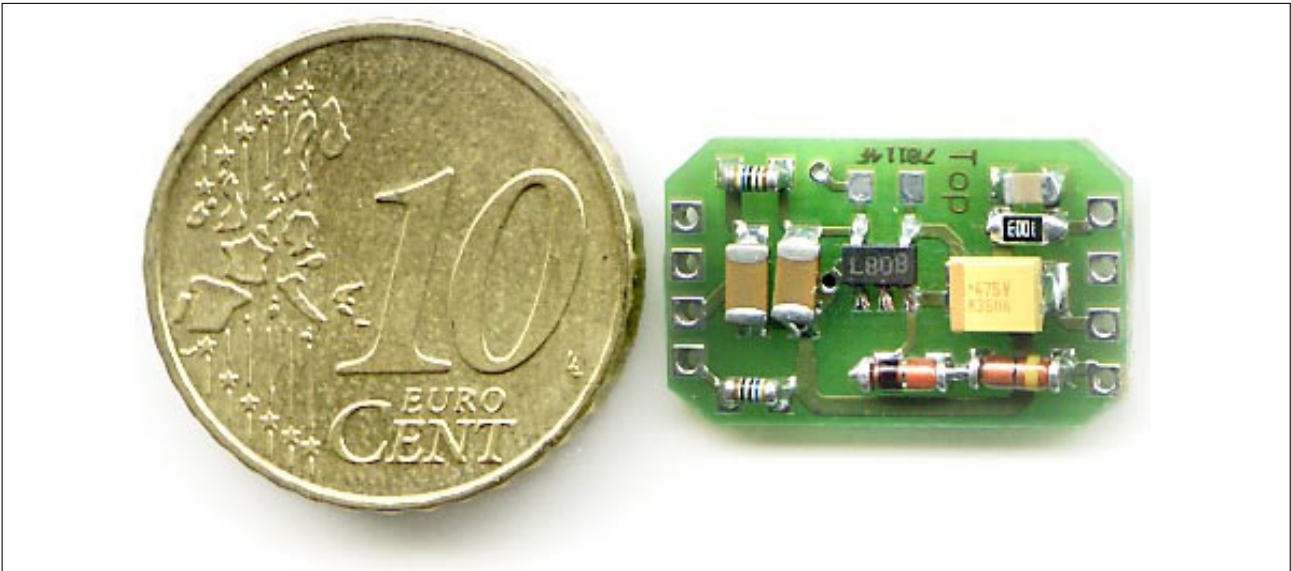


## Sensor-Interface (Option for Strain Gauge Sensors)

**LMV**

- Amplifier Board with smallest Dimensions, integrable in Sensor
- Passive Strain Gauge Sensors can be connected to a PLC, directly
- Long interference-safe feed line from Sensor to Evaluation possible



### Description

The sensor interface LMV is designed for the interface adaption between sensor and evaluation. The passive output signals of strain gauge-sensors are raised to a interference-safe level. Thus, the measurement safety and the measurement accuracy is crucially increased.

The supply voltage range of  $24V \pm 10\%$  and the analog output of  $0 \dots 9.8V$  allow the direct signal processing with a PLC-control.

The passive strain gauge sensor is being supplied with stabilized  $4VDC$  voltage which is being generated from the interface supply. The precision measuring amplifier converts the output signals of the sensor into a standardized signal.

The small dimensions of the amplifier board allow an integration in various force and torque sensors without an additional amplifier housing. Thus, the level of protection of the sensor is not being influenced.

### Calibration

Optionally many passive strain gauges sensors of LORENZ product range can be implemented with the LMVU-interface. The calibration of the now active sensor system depends on the direction of load of the chosen sensor:

- **Type LMVU/1-9** Direction of load unipolar:  
Load 0% Correlates 0.75 .. 1.25V  
Load +100% Correlates 8.75 .. 9.25V

- **Type LMVU/5±4** Direction of load bipolar:  
Load -100% Correlates 0.75 .. 1.25V  
Load 0% Correlates 4.75 .. 5.25V  
Load +100% Correlates 8.75 .. 9.25V

The exact calibration data are expelled on the calibration certificate.

### Specifications

Type	LMVU/1..9	LMVU5±4
Art.-No.	103921	103922

#### Evaluation Side

Direction of load		Unipolar	Bipolar
Supply	Supply voltage	24VDC $\pm 10\%$	
	Ripple	<10%	
	Current consumption	<30 mA	
Signal output	Output signal	Approx. 1 .. 9V 1 mA	5±4V 1 mA
		Linearity Ripple Gain drift Zero point drift Output resistance	0.1% <25 mV <0.15%/10 K <0.3%/10 K <1 $\Omega$

#### Sensor Side

Excitation	Excitation voltage for sensor	4V
	Strain gauge resistance of the sensor	350 $\Omega$
	TC excitation voltage	0.1 mV/K
Signal input	Input voltage	2 .. 16 mV

#### Miscellaneous

Cut-off frequency	>500 Hz -3 dB
Nominal temperature range	10 .. 40°C
Service temperature range	0 .. 60°C
Storage temperature range	-10 .. 70°C
Dimensions (W x L x H)	12 x 19 x 5 mm

### Options/ Accessories

Art.-No.	Type	Description
110564	mV/V	mV/V adjusted sensitivity

For further Interfaces of our Product Range, see LCV