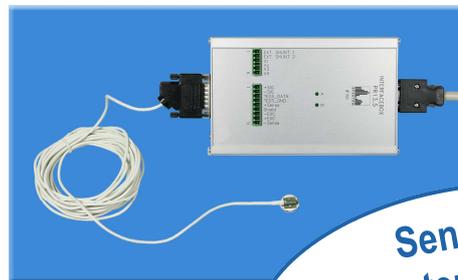
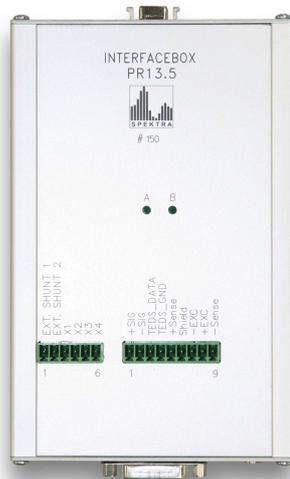


# CS18 Optional Extra PR Measurement (PR-M®)



Sensor  
Characterization of  
Piezo-Resistive  
Sensors

## Applications

- **PR signal conditioner** power supply of piezo-resistive (bridge), variable capacitance and similar sensors used with the CS18 calibration system

## Range of Use

- **Certified calibration laboratories**
- Departments of **measuring instrument verification** in research, development and industry, particularly in **automotive crash test laboratories**
- **Quality assurance** in sensor manufacturing

## Features

- **Calibration of piezo-resistive sensors**
- Determination of **aptitude for calibration** (bridge resistance, offset, offset drift) of PR sensors in conjunction with software **PR measurement**
- Measurement of **input and output resistance**
- **Static calibration** in the local earth gravity field (+/- 1 g)

# CS18 Optional Extra

## PR Measurement (PR-M®)



### Components

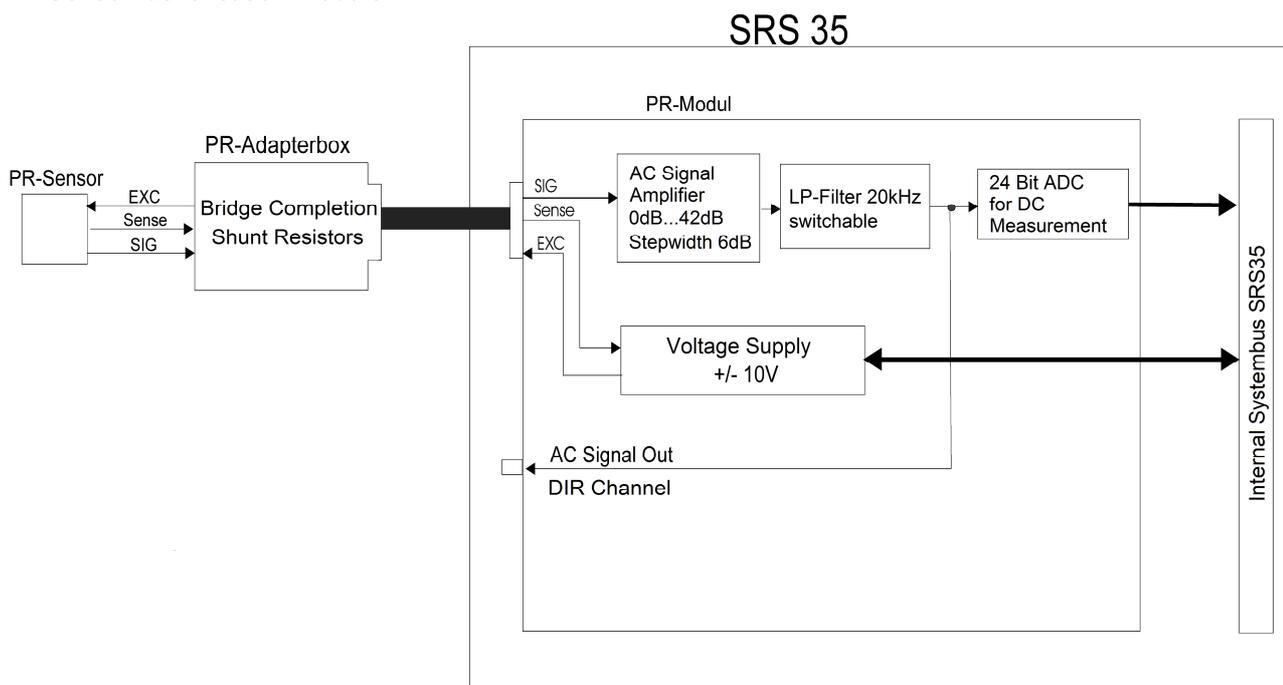
- Plug-in module to CS18 vibration control system **SRS-35**
- External connecting box for individual sensor adaptation
- Software for determining the electrical aptitude for calibration of PR sensors (measurement of bridge resistance, offset and offset drift, offset compensation, shunt calibration, isolation test)

### Technical Specification PR Module

<b>Bridge Power Supply</b>	4-wire or 6-wire technique
Voltage Range	-10 V <sub>DC</sub> ... 0 V <sub>DC</sub> ... +10 V <sub>DC</sub> , adjustable
Current	max. 100 mA
<b>Bridge Completion</b>	resistors for completing a quarter or half bridge can be integrated in a connecting box (dimensioning according to specific sensor)
<b>Shunt Resistors</b>	2 units can be integrated in a connecting box, resistance values can be stored in a EEPROM
<b>Accuracy of shunt calibration</b> for shunt resistors in the range of 40 kΩ to 320 kΩ	Measurement of the DC Voltage shift and calculation of the equivalent acceleration with an expanded measurement uncertainty of <b>1.0 %</b> with a coverage factor of k = 2.
<b>Amplifier</b>	0 ... 42 dB
Gain Steps (DC)	factors to be set by software: 1, 2, 4, 8, 16, 32, 64, 128
Offset	offset measurement and offset compensation can be performed

### Options for the PR Module

- Individual external connection boxes
- TEDS for PR sensors
- Sensor identification module



All data are subject to change without notice

February 2018