

MA08.2/MS08.2

Measurement Amplifiers for SMT Systems for Acquiring Voltages, Currents, IEPE Sensors and Voltage-Fed Transducers

optimize!
softing



The MS08.2 is used to acquire up to eight electrical voltages, currents or IEPE sensors. The MA08.2 provides an additional flexible voltage supply per measurement channel and thus supports a large number of standard transducers.



Signal Conditioning

The signal conditioning of both measurement amplifiers can be parameterized per channel. This applies to both the adjustable measuring ranges of the modules and the transducer supply of the MA08.2. The resulting combination possibilities guarantee flexible and thus efficient use of the measurement amplifiers.

Measurement Calculation

The measurement amplifiers are suitable for both linear and non-linear transducers. In the case of linear transfer behavior, measured values are calculated on the basis of transducer sensitivity and offset. For the acquisition of non-linear

transducers, polynomials up to the sixth order can be configured with freely selectable coefficients.

Transducer Parameter Memory

If required, all relevant channel parameters can be stored in the electronic data sheet of the transducer. This not only reduces the amount of time required for configuration but also reduces the danger of incorrect parameterization. Typical user errors, such as a transducer supply that has been set incorrectly or resolution loss due to unsuitable measurement ranges, are thus no longer possible.

Areas of Application

- Monitoring of supply voltages
- Acquisition of voltage and current signals (e.g. ECU or sensor outputs)
- Acquisition of IEPE sensors
- Measuring currents using (external) shunts
- Cell voltage monitoring

Advantages

- High safety and flexibility due to galvanically isolated measurement channels
- Versatile sensor support with settable signal conditioning and transducer supply
- Simple parameterization via transducer memory (can also be used in connection with externally- or non-fed transducers such as shunts)
- Optical indication of channel and module state



AUTOMOTIVE
automotive.softing.com

Technical Data

General	
Number of channels	8
Transducer	Voltage measuring, current signals Voltage-fed transducers with voltage output (absolute) IEPE sensors, currents (using external shunts)
Sampling rate	100 kSPS, time-synchronous over all channels
Data rate	1 SPS ... 50 kSPS online, can be set per module
Transducer memory	TEDS ready

Measurement Input		
U	Measurement range	± 100 mV ... ± 60 V (3 levels per decade)
	Input impedance	2.5 M Ω
	High-pass	1 Hz, can be connected per channel
I	Measurement range	± 20 mA
	Input impedance	100 Ω
IEPE	Power supply	4 mA from +24 V (internally applied to signal input)
	High-pass	1 Hz
Resolution	16 bit	
Anti-aliasing filter	Butterworth, 8th order, 21 kHz, can be switched on per channel	
Digital filters	FIR 10 Hz ... 10 kHz, in stages, can be set per module	
Galvanic isolation	Per channel	

Voltage Supply	MA08.2	MS08.2
Output voltage	± 5 V / ± 12 V / ± 15 V	+12 V
Output current	150 mA per individual voltage	25 mA
	Current-limited, short-circuit-proof	
Supply power over all channels	15.0 W	2.4 W
Galvanic isolation	Per module	Per channel

Environmental Conditions	
Storage	-30 °C ... +85 °C, 10 % ... 90 % rel. humidity, non-condensing
Operation	-30 °C ... +70 °C, 10 % ... 90 % rel. humidity, non-condensing

Order Numbers

MA08.2	Measurement amplifier for SMT systems for acquiring voltages, currents, IEPE sensors and voltage-fed transducers (8 channels)
MA08.2-CAL	MA08.2 calibration
MA08.2-ADJ	MA08.2 adjustment
MS08.2	Measurement amplifier for SMT systems for acquiring voltages, currents and IEPE sensors (8 channels)
MS08.2-CAL	MS08.2 calibration
MS08.2-ADJ	MS08.2 adjustment