Analog Input / Output Modules

DMS202
Strain Gauge Input Module

The strain gauge input module DMS202 is a two-channel, micro controller operated measuring module to read quickly changing strain gauge signals up approx. 1 kHz with a sample time of only 12.5 µs.

- 2 strain gauge measurement inputs
- High-quality plug-in connector
- 2 analog measurement outputs
- Automatic measuring range selection (input)
- Wire break detection on the measurement inputs
- Monitoring of the external supply voltage

<table>
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<tr>
<th>Item</th>
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<tbody>
<tr>
<td>DMS202</td>
<td>00009884-00</td>
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</tbody>
</table>
## DMS202

### Bridge supply
- Carrier frequency: 5 kHz ±2%
- Amplitude: 4 VRMS ±2%
- Synchronization of the carrier frequency: Optional
- Synchronization range: 5 kHz ±2%

### Strain gauge amplifier input
- Input resistance: > 5 MΩ
- Desired signal bandwidth: 1 kHz
- Resolution: 12 bit
- Max. input common mode voltage: 10 V (no overdrive)
- CMRR (0 to 5 kHz): > 80 dB
- Wire break monitoring: Yes, error message
- Galvanic isolation from system: 500 V
- Monitoring of the ext. voltage: Yes, power-fail signal
- Conversion time: 12.5 µs for one channel, 25 μs for two-channel operation
- Measurement range selection: 2.0 / 4.0 / 8.0 / 16.0 mV or Auto Range
- Measurement range switchover: Automatic or via software

### Measurement outputs
- Output voltage: 0 to 10 V
- Internal resistance: < 2 Ω
- Load resistor: > 2.5 kΩ
- Special functions: Peak value capture, Electronic capacity comparison, Carrier frequency synchronization

### External power supply
- Voltage range: 18 to 34 VDC
- Current consumption external: 100 mA at 24 VDC
- Reverse polarity protection: Yes
- Galvanic isolation from system: 500 V

### Approvals / Certificates
- General: CE, UL/cUL, CCC

### Ambient conditions
- Operating temperature: 0 to +60 °C
- Rel. humidity operation: 5 to 95 % without condensation
- Storage temperature: -40 to +85 °C
- Rel. humidity storage: 5 to 95 % without condensation
- Pollution degree: 2 (without condensation; according to IEC 60664-1)
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<td>DMS202</td>
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<td>Strain gauge measurement, 2x full bridge; ±2/4/8/16mV; 25µs sampling time; 5 kHz carrier frequency, 12bit; isolated</td>
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<td>Accessories</td>
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<tr>
<td>S-DMS/G</td>
<td>00008472-00</td>
<td>Lemo Connector directly</td>
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<tr>
<td>S-DMS/W</td>
<td>00010134-00</td>
<td>Lemo Connector angle</td>
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<tr>
<td>KZ-DMS202 B</td>
<td>00012054-30</td>
<td>Terminal set Phoenix cage clamp (1x KZ 51/02; 1x KZ 35/03) with labeling strip</td>
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