

DAQP-LV

- **Voltage input:** 12 ranges (10 mV to 50 V)
- **Current input:** ± 20 mA using DAQ-SHUNT-1
 ± 5 A using DAQ-SHUNT-4 or DAQ-SHUNT-5
- **Bandwidth:** 300 kHz

Additional signal input using MSI

- **IEPE®** Constant current powered sensors (accelerometers, microphones); 12 ranges (10 mV to 5 V); requires MSI-V-ACC
- **RTD** Resistance Temperature Detector (Pt100 to Pt2000) 9 resistance ranges (8 to 4000 Ω); requires MSI-V-RTD
- **CHARGE** Charge up to 50000 pC requires MSI-V-CH-50

Module specifications

DAQP-LV	
Input ranges unipolar and bipolar	10 mV, 20 mV, 50 mV, 100 mV, 200 mV, 500 mV, 1 V, 2.5 V, 5 V, 10 V, 25 V, 50 V
Push button selectable ranges	10 mV, 50 mV, 200 mV, 1 V, 5 V, 10 V, 50 V
Rated input voltage	33 V _{RMS} ¹ , 46.7 V _{PEAK} ¹ , 70 V _{DC} according to EN-61010-1 and EN-61010-2-30
DC accuracy	Range Accuracy
Bipolar	10 mV to 50 mV ± 0.02 % of reading ± 40 μ V
	100 mV to 50 V ± 0.02 % of reading ± 0.05 % of range
Unipolar	10 mV to 50 mV ± 0.04 % of reading ± 40 μ V
	100 mV to 50 V ± 0.04 % of reading ± 0.05 % of range
Input coupling	DC or AC software selectable (1.5 Hz standard, custom on request down to 0.01 Hz)
Gain linearity	0.01 % of full scale
Gain drift range	Typically 10 ppm/ $^{\circ}$ K (max. 20 ppm/ $^{\circ}$ K)
Offset drift	Uni- and bipolar
10 mV to 200 mV	3 μ V/ $^{\circ}$ K
500 mV to 50 V	10 ppm of Range/ $^{\circ}$ K
Long term stability	100 ppm/sqrt (1000 hrs)
Input resistance	1 MOhm
Bandwidth (-3 dB)	300 kHz
Filter selection	Push button or software
Filters (low pass)	10 Hz, 30 Hz, 100 Hz, 300 Hz, 1 kHz, 3 kHz, 10 kHz, 30 kHz, 100 kHz
Filter characteristics	10 Hz to 100 kHz: Butterworth or Bessel 40 dB/dec (2nd order; ± 1.5 dB @ f ₀) 300 kHz: Bessel 60 dB/dec (3rd order; 0 to -3 dB @ 300kHz)
Typical SFDR and SNR:	300 kHz bandwidth 100 kHz bandwidth 10 kHz bandwidth
	SFDR SNR SFDR SNR SFDR SNR
20 mV	100 dB 72 dB 98 dB 76 dB 97 dB 84 dB
1 V	102 dB 82 dB 99 dB 93 dB 97 dB 96 dB
50 V	102 dB 82 dB 99 dB 93 dB 97 dB 96 dB
Typical CMRR	10 mV to 1 V range: 2.5 V to 50 V range:
	>100 dB @ 50 Hz 90 dB @ 50 Hz
	>100 dB @ 1 kHz 65 dB @ 1 kHz
	83 dB @ 10 kHz 55 dB @ 10 kHz
Input overvoltage protection	350 V _{DC}
Isolation voltage	1 kV _{RMS} ¹⁾
Sensor supply	± 9 V (± 1 %), 12 V (± 5 %), 200 mA resettable fuse protected ²⁾
Output voltage	± 5 V
Output resistance	<10 Ohm
Maximum output current	5 mA
Output protection	Short to ground for 10 sec.
Power On default settings	Software programmable
Power supply	± 9 V _{DC} ± 1 %
Power consumption	0.8 W without sensor supply
RS-485 interface	Yes
TEDS	Hardware support for TEDS (Transducer Electronic Data Sheet)
Supported TEDS chips	DS2406, DS2430A, DS2432, DS2433, DS2431
Supported MSI	MSI-V-ACC; MSI-V-RTD, MSI-V-CH-50

¹⁾ Although the rated input voltage is 33 V_{RMS}¹, 46.7 V_{PEAK}¹ or 70 V_{DC} according to EN-61010-1 and EN-61010-2-30, the galvanic isolation has been tested with 1 kV_{RMS} for 1 min.

