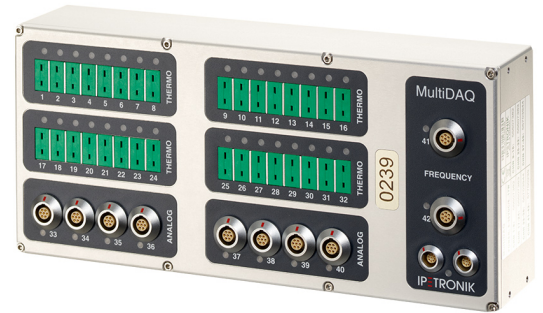


## MultiDAQ

### 42 channel multi-channel input: volt, temperature, current, frequency

- 8 channels: V, mA selectable for each input
- 8 sensor excitations (bipolar  $\pm 15$  V, up to  $\pm 45$  mA)
- 32 channel thermocouple inputs type K (NiCr/NiAl)
- 2 channel universal counter module with sensor excitation
- 2 sensor excitations (unipolar 15 V, up to  $\pm 60$  mA)
- Measurement data output to CAN
- Galvanic isolation (inputs, CAN, supply, enclosure)
- Kompakte und robuste Geräte für extreme Anforderungen



<b>Device</b>	
Maximum input protection voltage (channel)	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
Aggregate sample rate	320 Hz
Voltage supply	6 ... 36 VDC
Supply voltage thresholds	Switch-on $6 \pm 0.3$ VDC / Switch-off $6 \pm 0.3$ VDC
Power consumption, typical	6.0 W (all excitations off)
Working temperature range	$-40 \dots 85$ °C ( $-40 \dots 185$ °F)
Storage temperature range	$-55 \dots 125$ °C ( $-67 \dots 257$ °F)
IP-Code	IP 67 (ISO 20653 - 2013)
Relative humidity	5 ... 95 %
Dimensions	W261 mm x H116 mm x D55 mm (10.28 in x 4.57 in x 2.17 in)
Weight	1950 g (4.30 lb)
Configuration interface	CAN high speed
Data transfer rate	Software selectable up to 1 Mbit/s (ISO11898-2)
Input sockets	Miniature TC connector green (DIN IEC 584)
Input sockets	Lemo EGG 1B 307 (7-pin)
<b>Galvanic isolation</b>	
Input module power supply	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
Input CAN	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
Input enclosure	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
Input input	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
Input excitation	$\pm 100$ V (indefinitely), $\pm 200$ V (short-time, $t < 2$ ms)
<b>General channel properties</b>	
A/D converter	16 bit / SAR (successive approximation register)
Channel LED	Available
<b>Channel temperature</b>	
Measurement range temperature	Type K (NiCr/NiAl) $-60 \dots 1370$ °C ( $-76 \dots 2498$ °F)

Channel count	32
Channel sampling rates	1/ 2/ 5/ 10/ min – 1/ 2/ 5/ 10/ 20 Hz
Accuracy at ambient temperature 25 °C	±0.025 % ±3 K for full measurement range
Accuracy at ambient temperature 25 °C	±0.035 % in the range -60 ... 1000 °C (-76 ... 1832 °F)
Accuracy at ambient temperature 25 °C	±0.035 % ±3 K in the range 1000 ... 1370 °C (1832 ... 2498 °F)
Drift for ambient temperature -40 ... 85 °C	±20 ppm/K
Drift for ambient temperature 85 ... 120 °C	±30 ppm/K
Linearization of sensor characteristic line	Numerical interpolated
Cold junction compensation (CJC)	8 PT100 (1 for 4 inputs)
Hardware filter (fixed)	1 Hz, filter type RC-low-pass
<b>Channel SENS</b>	
Measurement range SENS	±0.1/ 0.2/ 0.5/ 1/ 2/ 5/ 10/ 20/ 30/ 50/ 60/ 100 V
Channel sampling rates	1/ 2/ 5/ 10/ 50/ 100/ 200/ 500/ 1000/ 2000 Hz
Aggregate sample rate	16 kHz
Accuracy at ambient temperature 25 °C	±0.13 % (unipolar measurement ranges)
Accuracy at ambient temperature 25 °C	±0.05 % (bipolar measurement ranges)
Drift for ambient temperature -40 ... 85 °C	±40 ppm/K
Channel impedance	10 MΩ
Hardware filter (switchable)	150 Hz, Butterworth (8-pole)
Hardware filter (switchable)	Accuracy 10 %
Special functions	Offset adjust, during measurement, multiple groups
<b>Channel current</b>	
Sensor excitation ranges	Bipolar ±2.5/ ±5/ ±7.5/ ±10/ ±12.5/ ±15V
Sensor excitation current	25 mA, short-circuit proof (software controlled)
Sensor excitation current	30 mA (for V output ±2.5 / ±10.0 V)
Sensor excitation current	40 mA (for V output ±5.0 / ±12.5 V)
Sensor excitation current	45 mA (for V output ±7.5 / ±15.0 V)
<b>Excitation</b>	
Sensor excitation ranges	Unipolar 2.5/ 5/ 7.5/ 10/ 12.5/ 15V
Accuracy excitation at ambient temperature 25 °C	±5.0 %
Sensor excitation current	60 mA (for V output ±2.5 / ±15.0 V)
<b>Channel CNT</b>	
Channel sampling rates	1/ 2/ 5/ 10/ 50/ 100/ 200/ 500/ 1000/ 2000/ 5000 Hz
Drift at ambient temperture -40 ... 85 °C	±1.5 ppm/K
Drift at ambient temperture 85 ... 105°C	±2.5 ppm/K
Drift at ambient temperture 105 ... 125°C	±5.0 ppm/K
Adjustable trigger threshold	±40 V resolution 0.20 V
Adjustable trigger threshold	±4 V resolution 0.025V
Acuracy of trigger threshold at ambient temperature 25 °C	±3 %
Acuracy of trigger threshold at ambient temperature -40 ... 125 °C	±8 %
Mode: frequency	0.03 ... 200 kHz

Mode: duty cycle	0.01 ... 99.99 %
Mode: duty cycle	0.03 Hz (minimum frequency)
Mode: duty cycle	10 kHz (maximum frequency)
Resolution of duty cycle	1 $\mu$ or 1/100 fc filter (higher value)
Mode: period duration, pulse duration, pause duration	1 $\mu$ s (minimum duration)
Mode: period duration, pulse duration, pause duration	200 s (maximum duration)
Resolution Period duration, pulse duration, pause duration	1 $\mu$ or 1/100 fc filter (higher value)
Hardware filter types	Bessel (5-pole)
Hardware filter (selectable)	1 ... 30 kHz
Filter damping at ambient temperature 25 °C	$\pm$ 1.5 dB (variance)
Filter damping at ambient temperature -40 ... 125 °C	$\pm$ 3.0 dB (variance)
DC compensation	0.8 Hz (lower cut-off frequency -3 dB)
DC compensation damping at ambient temperature 25 °C	$\pm$ 1 dB (variance)
DC compensation damping at ambient temperature -40 ... 125 °C	$\pm$ 3 dB (variance)
<b>Accessories</b>	
System cable	620-561.pdf
System cable	620-502.pdf
System cable	620-560.pdf
System cable	620-567.pdf
System cable	620-509.pdf
Input cable	600-807.pdf
Input cable	600-866.pdf
Input cable	600-858.pdf
Input cable	600-810.pdf
Input cable	600-857.pdf
System cable	M-CAN-ABS.pdf
System cable	M-DEF-200.pdf