

SIQUAD Uni4

Universal amplifier supported by the Federal Ministry of Economics and Technology based on a resolution by the German Bundestag.

Characteristics

The SIQUAD **Universal Amplifier** offers computer-controlled signal conditioning of manifold sensors. It has 1 DSP per channel. Signal output is digital via Ethernet and CAN and optional with high precision via analog outputs. Parameter setting is done with the software DaSoft. Signal filtering can be configured from 3..3000 Hz at 20 kS/s sample rate.

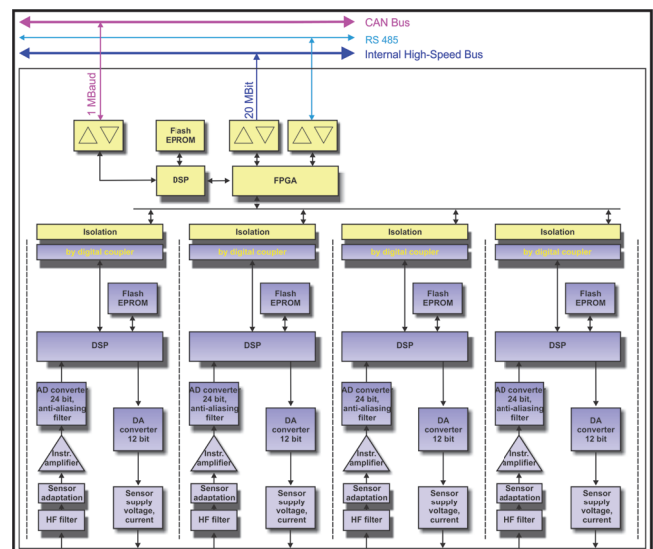


Technical Data

General	Accuracy	see sensors
	Channels/unit	4, isolated
	AD converter	24 bit / channel
	Sample rate	20 kHz
	Band width	5 kHz
	Analog output optional	± 10 V / 12 mA (short proof) 16 bit resolution
	Digital output	SPI (internal), CAN
	Input protection	± 100 V, ESD IEC 1000-4-2
	Supply voltage	+5 V / 500 mA
	Sensor supply	0.5, 1.0, 2.5, 4.5 V (50 mA), 24 V (40 mA) opt. external n.i. up to 40 V (max. 250 mA)
Strain gauge bridges	Environmental temperature	0..+50 °C
	Range	0.5, 1, 2, 4, 5, 10, 25, 50 mV/V
	Accuracy	± 0.03 %
	Sensor supply	0.5, 1, 2.5, 4.5 V (> 120 Ω)
	Type of bridge 4-wire/6-wire	Full / half bridge (> 120 Ω), quarter bridge (120 Ω, 350 Ω)
Voltage	Range	0.1, 0.2, 0.5, 1, 2, 5, 10, 20, 50, 80 V
	Accuracy	± 0.05 %
	max. input voltage	80 V
	Impedance	100 kΩ (> 5 V range)
Signal current	Diff. input	yes
	Range	± 20 mA, 4..20 mA
Current transmitter	Accuracy	± 0.1 %
	Sensor supply	24 V (max. 40 mA)
Potentiometer 3-wire conn.	Range	6.25, 12.5, 25, 50, 100 %
	Accuracy	± 0.1 %
	Sensor supply	2.5 V
Thermo couples J, K (others opt.)	Range	±100, ±200, -200..+500, -200..+1000 °C
	Accuracy	± 0.1 % (without CJC)
Pt100	Adapter cable with integrated CJC (Binder resp. Lemo to TC-Mini) required	
	Range	±100, ±200, -200..+500, -200..+1000 °C
ICP® sensors	Accuracy	± 0.1 %
	Range	1, 2, 5, 10 V
	min. input frequency	appr. 7 Hz
	Accuracy	± 0.1 %
ICP® sensors	Sensor supply	4 mA, 22 V

Frequency analog	Range	5, 10, 20, 50, 100, 200, 500 Hz, 1, 2, 5, 10, 20 kHz
	Accuracy	± 0.05 %
	Input voltage	± 0.02..70 V
Frequency digital	Range	5, 10, 20, 50, 100, 200, 500 Hz, 1, 2, 5, 10, 20, 50, 100, 200, 500 kHz
	Accuracy	± 0.05 %
	Input voltage	TTL / CMOS (≥ 3.5 V)
Torque meter, Telemetry (Discriminator)	Range	Free entry of mid frequency and stroke, max. 100 kHz
	Accuracy	± 0.05 %
	Input voltage	TTL / CMOS (≥ 3.5 V)
Incremental encoder	Range	Variable, set by no. of pulses
	Accuracy	± 0.05 %
	Input voltage	TTL / CMOS
PWM sensors	Direction sense/sync	without, static, dynamic / with sync, without sync
	Range	100 Hz, 1 kHz, 10 kHz
	Accuracy	± 0.2 %
PWM sensors	Input voltage	TTL / CMOS (≥ 3.5 V)

Block Diagram



Dimensions

19" plug-in unit, 3 U height, 5 U width, depth 160 mm

Ordering Code

SIQUAD-Uni4- 1 - 2 - 3

1. Terminal	
BB7	7-pole Binder socket (standard)
LB7	7-pole Lemo socket
2. Option bridge	
1/4 BR	1/4-bridge with 2 resistance values (120, 350 Ω) switchable
3. Options output	
4 AO BNCR	4 analog outputs wired to back panel with BNC sockets
4 AO BNCF	4 analog outputs wired to front panel 10 U with BNC sockets parallel to input sockets