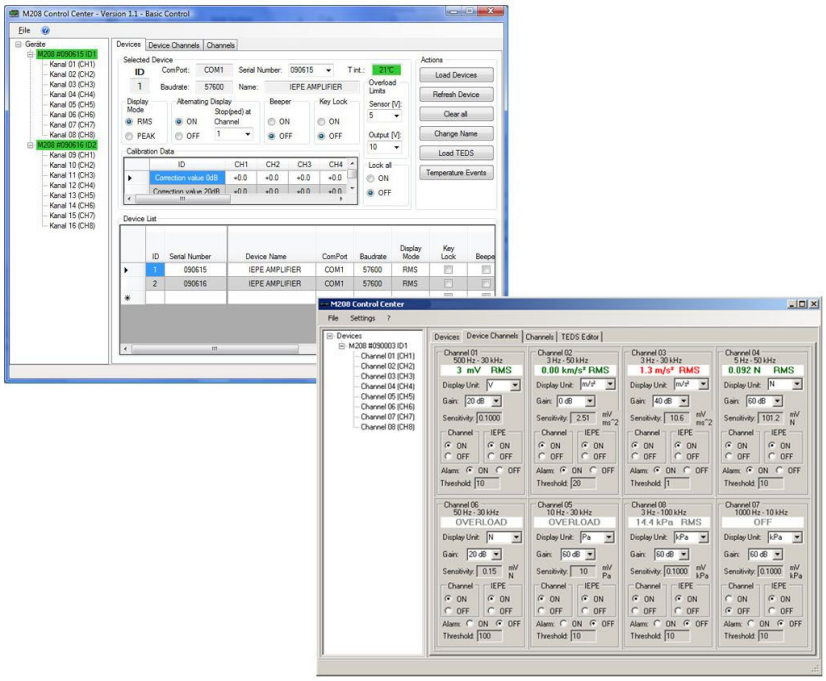
M208A

IEPE Signal Conditioner



Application

- Signal conditioning in laboratory or field with IEPE compatible piezoelectric sensors for acceleration, force or pressure and IEPE
- Front end for PC based data acquisition systems
- Measurement and display of RMS and peak values
- Vibration monitoring with relay output
- Remote measurement via Ethernet interface and web browser

Properties

- Low cost solution for multichannel applications
- Incremental gain from 0.1 to 1000 for normalization by input of transducer sensitivity
- Wide frequency range from 0.1 Hz to 100 kHz
- Plug-in high pass, low pass and integrator modules
- Display of RMS and peak values with mechanical units
- Full IEEE 1451.4 TEDS support with automatic transducer sensitivity normalization
- Ethernet interface and embedded web server for remote RMS / peak measurement and setup
- PC control of up to 8 units via serial interfaces (daisy chain)
- PC control software included; additionally ASCII command set
- Relay output with adjustable trip levels
- Shared output and Sub-D socket* for outputs 1 to 8 at rear panel
- Overload and sensor indicator LEDs for each channel
- Operation with mains plug adapter or DC supply
- 19" rack mounting enclosure with low depth

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Technical Data

Measurement functions

Measurands	Vibration acceleration	
	Vibration velocity/severity; with FBV integrator module	
	Vibration displacement; with FBD integrator module	
Overall values	RMS and peak display on LCD (multiplex)	
Measuring range acceleration	0.00001 to 5 (Transducer sensitivity 1000 mV/ms-2)	m/s²
	0.001 to 500 (Transducer sensitivity 10 mV/ms-2)	m/s²
	0.1 to 50000 (Transducer sensitivity 0.1 mV/ms-2)	m/s²
Voltage gain	1; 10; 100; 1000	
Gain selection	Push buttons; Interface	
Input of transducer sensitivity	5 digits; 0.1 to 12000; keypad and display or interface	
Accuracy	±0.5 (5 to 100 % full scale; band center; 0 to 30°C)	%
Cross-talk attenuation	>80	dB
Output noise	<0.4 (0 dB; 0.1 to 30000 Hz)	mVRMS
	<5 (20 dB; 0.1 to 30000 Hz)	mVRMS
	<6 (40 dB; 0.1 to 30000 Hz)	mVRMS
	<10 (60 dB; 0.1 to 30000 Hz)	mVRMS
Lower frequency limit acceleration	0.1 to 1000 (with FB3 filter module)	Hz
Lower frequency limit velocity	3 (with FBV integrator module)	Hz
Lower frequency limit displacement	5 (with FBD integrator module)	Hz
Upper frequency limit acceleration	100 to 100000 (with FB2 low pass module)	Hz
Upper frequency limit velocity	1000 (with FBV integrator module)	Hz
Upper frequency limit displacement	200 (with FBD integrator module)	Hz
Indication	Graphical LCD for setup and measurement; 4 digits	
	2 gain LEDs per channel	
	8 IEPE LEDs: OK; cable break; short circuit	
	8 LED for overload	

Connectors

Input channels	8	
Input signals	IEPE; AC voltage <±10 V	
Input connector	8 x BNC front	
IEPEconstant current	3.5 to 4.5	mA
TEDS support	IEEE 1451.4; templates 25, 27, 28	
Output connector	8 x BNC front	
	BNC front; D-Sub 25 rear	
	±10 V	
	Impedance <100 Ω	
Relay output	30 VAC; 1 A; individual trip level for each channel	
Digital interfaces	2 x RS-232 rear; master/slave; daisy chain	
	Ethernet (RJ45); 10 Base-T; rear	

Power Supply

External supply voltage	10 to 28	VDC
External supply current	<1500	mA
Supply connection	DIN 45323; 1.9 mm; rear	

Case Data

Dimensions without connectors	483 x 44 x 124 (L x W x D)	mm
Case material	Aluminum, hard anodized	
Weight	1700	g
Operating temperature range	-10 to 50 (95 % rel. humidity without condensation)	°C

Scope of delivery Mains plug adapter 115/230 VAC; 15 VDD; <1600 mA

Optional accessories FB2/FB3 filter modules; FBV/FBD integrator modules

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