Basic 1M iso Digitizer with Unbalanced Differential Inputs

Specifications

GEN SERIES BASIC 1M ISO DIGITIZER

Basic 1M iso CARD

Analog Input Selection

Number of Channels	8
Input Type	Unbalanced differential(1), isolated
Input Connectors	Fully insulated BNC
Input Ranges	± 1.0 V, ± 2.0 V, ± 5.0 V, ± 10 V, ± 20 V, ± 50 V, plus variable gain in 1000 steps (0.1 %)
Offset (zero position)	1000 steps (0.1 %)
Input Coupling	DC, GND
Input Impedance	1 MΩ (± 2 %) // 65 pF (± 10 %)
Maximum Static Error (MSE)	0.1 % full scale
Noise	0.02 % full scale
Analog Bandwidth	500 kHz (–3 dB)
CMRR	› 72 dB @ 100 Hz
Overload Protection	250 V
Number of Slots	1, incl. signal conditioners

Isolation

Channel-to-chassis	250 V
Channel-to-channel	250 V
Non-destructive	250 V to chassis (earth)

Acquisition

Sample Rate	From 1 MS/s to 0.1 S/s
ADC Resolution	16 bit (0.0015 %)
Anti-Alias Filters	Bypass, Time-, Frequency- domain optimized
Time Domain	7-pole Bessel 220 kHz, optimal step response
Frequency Domain	7-pole Butterworth 370 kHz, extended frequency response
Digital Decimation Filters	Off, Frequency domain optimized
Frequency Domain	12-pole FIR at sample rate divided by 4, 10, 20, 40

Transient Memory

Standard 256 MS per card, shared by enabled channels.

8 channels	32 MS per channel

Triggering

Each channel has individual dual-level trigger detection with selectable hysteresis, modes and qualifiers.

Pre- and post-trigger	0 to full memory length
Trigger Rate	Up to 1000 triggers per second, zero re-arm time
Resolution	16 bit for each level (= 0.0015 %)

StatStream® Real-time Analysis

Each channel includes real-time extraction of Max, Min, Mean, Peak-to-peak, and RMS values.

Acquisition Modes

Sweeps	Triggered acquisition to RAM without sample rate limitations; for single or repetitive transients or intermittent phenomena
Continuous	Direct storage to PC or mainframe hard disc without file size limitations; triggered or untriggered; for long duration recorder type applications with up to 1 MS/s rate per channel; (maximum aggregate rate pending from mainframe configuration and PC)
Dual	Combination of Sweeps and Continuous; recorder type streaming to hard disc with simultaneously triggered sweeps in RAM

(1) An unbalanced differential input can be used to do differential, off ground, isolated measurements like a “real” differential input. The difference is the implementation using an unbalanced isolated circuitry rather than using a balanced differential one.

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HBM Genesis HighSpeed products were previously sold under the Nicolet brand. The **Nicolet** brand is owned by Thermo Fisher Scientific Inc. Corporation.

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