

Stimulus Generator 3008 – FA

Technical Specifications

Note: While featuring an amplification function (FA filter amplifier), the STG3008-FA needs to be connected to a data acquisition for recording.

General	
Operating temperature	10 °C to 50 °C
Storage temperature	0 °C to 70 °C
Dimensions (W x D x H)	220 mm x 170 mm x 60 mm
Weight	1050 g
Fuse	Internal, 3.15 A slow blow
Number of analog output channels	8
Output voltage	-8 V to +8 V @ max. ± 20 mA
Output voltage resolution	1 mV
Rise time (10 - 90 %) voltage	1.7 μ s @ $\Delta U = 8$ V
Time lag between Sync Out and voltage output	15 \pm 2 μ s for continuous pulses 40 \pm 5 μ s for a first or a single pulse
Output current	-1.6 mA to +1.6 mA @ max. 120 V compliance voltage (between +I and -I)
Output current resolution	200 nA
Output current slope	600 μ A / μ s @ $R_L = 10$ k Ω
Rise time (10 - 90 %) current, 0 – 100 μ A	1.4 μ s @ $R_L = 10$ k Ω
Time lag between Sync Out and current output 0 - 100 μ A	15 \pm 2 μ s @ $R_L = 10$ k Ω
Resolution	14 bit
Time resolution	20 μ s
Output signals	Freely programmable (rectangular, ramp, sinus)
Maximum frequency (rectangular waveform)	25 kHz
Memory capacity for stored waveforms	64 MB
Timing on external trigger	
Minimum time length of trigger input (TTL)	40 μ s
Time lag between trigger input and Sync Out	70 \pm 10 μ s
Maximum trigger input frequency	10 kHz

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European Standards: EN 55011, EN 61000-6-1

Interface and Connectors	
Sync Out for synchronization	1 Lemo connector
Trigger In for synchronization	1 Lemo connector
Analog Out for analog channels	8 Lemo connector
Interface (connection to computer)	USB 2.0 High Speed
Download rate	Maximal 480 Mb per second
Filter Amplifier	
Number of amplifiers	8
Input voltage range	± 500 mV
Input impedance	$> 10^9 \Omega$ parallel to 10 pF
Input noise	< 1 V RMS (full bandwidth, inputs short circuited)
Noise density	$e_n = 9$ nV / $\sqrt{\text{Hz}}$
Output voltage range	± 5 V
Output current	10 mA
Bandwidth	1 Hz to 2200 Hz
Gain options	100, 200, 500 or 1000
Power supply unit (MPU30)	
Input voltage	100 – 240 VAC @ 47 – 63 Hz
Output voltage	11 – 13 V
Max. Power	30 W
Software	
MC_Stimulus II	Version 3.4.4 and higher
Operating system	Microsoft Windows ® 10, 8 and 7 (32 or 64 Bit) English and German versions supported