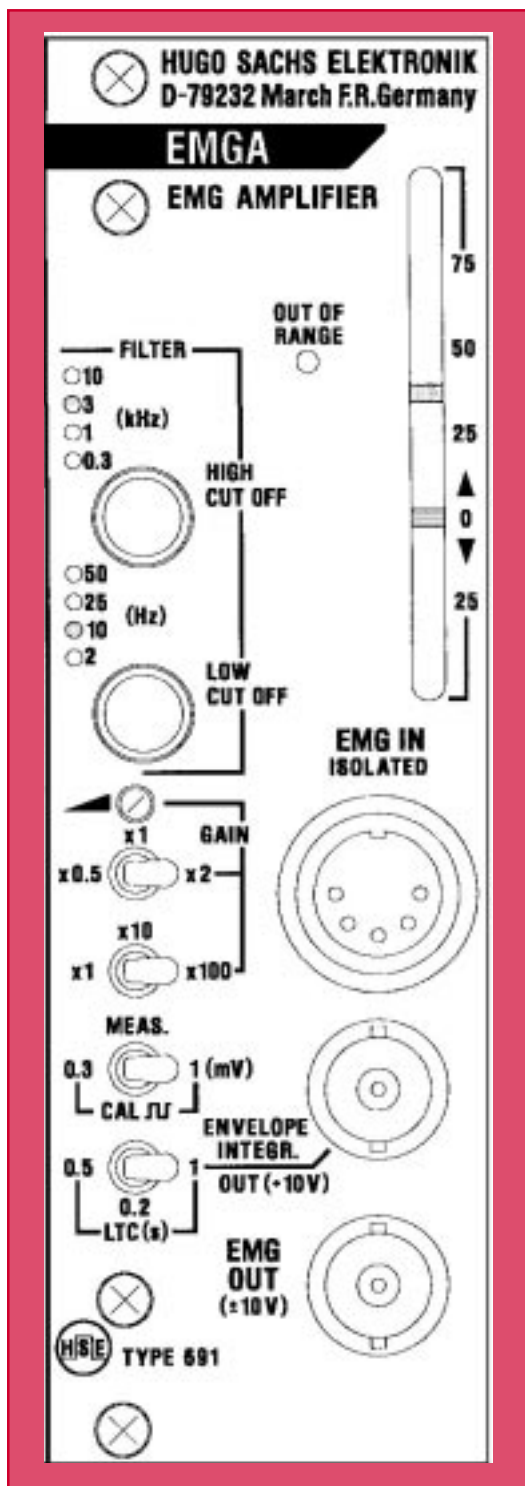


## HSE-Harvard\* EMG Amplifier Module (EMGA)

- Amplifier for single EMG signals recording
- Floating input
- Frequency range suitable for all species from mouse up to large animals

This module is especially designed to amplify EMG signals in the PLUGSYS system. A floating input circuit is used to avoid hum and grounding problems. A bar graph display is integrated in the module to visualize the EMG signal. The filters are designed for EMG signals up to 10 kHz. The analog EMG signal is available at a BNC connector on the front panel and also internally on the PLUGSYS system bus. Both outputs can be used for recording on a chart recorder or for data acquisition. A square-wave signal generator with 0.3 mV and 1 mV amplitude is incorporated for calibration. For EMG integration an envelope integration circuit is provided. This signal is also available on the front panel and on the PLUGSYS bus.



### Specifications

<b>Input</b>	Floating differential input, isolated barrier internally clamped to 300 V, with protection against static discharges and 10 kHz input filter for h.f. suppression		
<b>Input Connector</b>	5-pin binder socket with screw lock; pin connections correspond to those of standard 3-pin EMG input cable		
<b>Input Impedance</b>	10 <sup>10</sup> Ω		
<b>Common Mode Rejection</b>	106 dB		
<b>Filters:</b>	Low-Pass Filter (HIGH CUT OFF) 10 kHz, 3 kHz, 1 kHz, 0.3 kHz High-Pass Filter (LOW CUT OFF) 50 Hz, 25 Hz, 10 Hz, 2 Hz Envelope Curve (Leakage Time Constant) 0.2 s, 0.5 s, 1 s		
<b>Filter Indication</b>	By green LEDs on front panel		
<b>Gain Trimmer:</b>			
Switch	<b>x1</b>	<b>x10</b>	<b>x100</b>
In Position x0.5	100 to 500	1000 to 5000	10000 to 50000
In Position x1	200 to 1000	2000 to 10000	20000 to 100000
In Position x2	400 to 2000	4000 to 20000	40000 to 200000
<b>Display</b>	Bar graph 0.75 V/LED		
<b>Outputs</b>	BNC connector on front panel for EMG and envelope signal (±10 V) output signals also available on PLUGSYS system bus		
<b>Calibration</b>	Square-wave signal generator with amplitudes of 0.3 mV and 1 mV amplitude		
<b>Recorder Output</b>	Internal outputs are connected to bus system via jumpers; EMG signal and envelope signal are connected to recorder via Recorder Output Module (ROM); also possible to connect recorder directly to BNC connectors 'EMG OUT' and 'Envelope Integration' at front panel		
<b>Quick Start</b>	For rapid discharge of coupling capacitors by pressing QUICK START key		
<b>Power Supply</b>	5 V/600 mA, through connector from PLUGSYS bus system		
<b>Dimensions, H x W x D</b>	128.7 x 40.5 x 220 mm (5.1 x 1.6 x 8.7 in)		
<b>PLUGSYS Width*</b>	2 slot units		
<b>Connector</b>	DIN 41612, 96-pin VG		
<b>Weight</b>	400 g		

<b>Catalog No.</b>	<b>Product</b>
CGS 8419.71	EMGA EMG Amplifier Module