

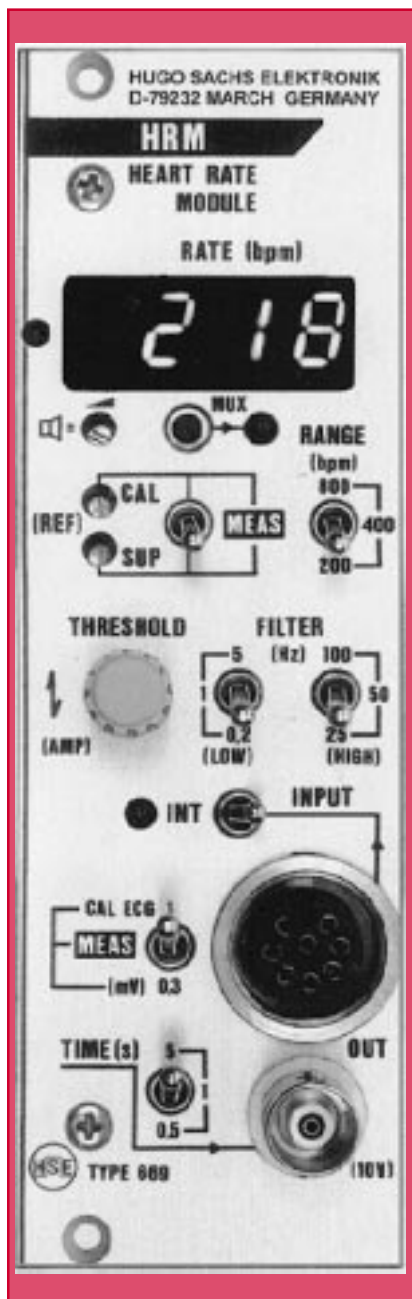
HSE-Harvard Heart Rate and ECG Amplifier Module (HRM)

- Heart ratemeter with wide range 20 to 1000 beats/min
- Includes an ECG preamplifier
- Can calculate heart rate from any signal (BP, LVP, ECG, etc.)
- Suitable for all species from mouse up to large animals

This module is used to calculate frequency (rate) within the range 20 to 1000 beats/min from a signal. The input signal is provided either from a PLUGSYS Preamplifier Module (e.g. TAM-A or TAM-D having a Blood Pressure Transducer or a Force Transducer connected via the PLUGSYS bus system or from a PLUGSYS external preamplifier over the external input on the front panel. The module also includes an ECG-Preamplifier. An appropriate cable can directly connect the ECG-electrodes (Single Lead) to the external input for reading heart rate. The ECG Signal is also available for recording.

Specifications

Input:	Selected by switch "INT/INPUT" (indication through LED)
Internally	'INT" signal through 96-pin connector from PLUGSYS bus system
Externally	"INPUT": Using ECG electrodes connected to built-in ECG amplifier and from external unit
Sensitivity	5 mV to 10 V; ECG Input: 0.1 mV to 25 mV
Input Filter	Band-pass, bottom and top frequency limit selected separately within ranges 0.2/1/5 Hz and 25/50/100 Hz
Trigger Operation	Adjustable over wide range through 10-turn potentiometer
Range:	3 ranges are available, selected by switch:
200	20 to 250 beats/min
400	40 to 500 beats/min
800	80 to 1000 beats/min
Indication	3-1/2 digit LED display (0 to 1000 beats/min); additional trigger response check through LED in display field
Outputs	Analog frequency signal available at BNC socket on front panel (0 to 10 V) and through connector on PLUGSYS bus system; external input signal (± 10 V) can also be transmitted to PLUGSYS bus system (e.g., ECG)
Output Filter	3 positions are provided for smoothing recording: 0.5 sec/1 sec/5 sec
Calibrating Heart Rate on Recorder	Sets rate (shown at display) in relation to pen deflection on recorder; recording range for heart rate is set by using trimmers CAL and SUP; adjustment is through 10-turn trimmers and CAL/SUP value is shown by the LED display; chosen CAL values are switched to display and to output for feeding into recorder by setting CAL switch to "CAL"
Calibrating ECG Output	After moving "CAL ECG" switch from "Meas" to "0.3 mV" or "1 mV", a square-wave signal of corresponding amplitude is available at ECG recording output
Signal Output MUX	After pressing MUX key, response signal is switched to input of optional digital voltmeter; response signal can be checked on display unit at BNC output; function is self-maintained; module previously selected is switched off
Power Supply	5 V, 450 mA, through connector from PLUGSYS bus system
Dimensions, H x W x D	128.7 x 40.5 x 220 mm (5.1 x 1.6 x 8.7 in)
PLUGSYS Width*	2 slot units
Connector	DIN 41612, 96-pin VG
Weight	0.4 kg (0.9 lbs)



Catalog No.	Product
CGS 8785.71	HRM Heart Rate Module with ECG Amplifier