

12 Lead ECG Amplifier



Features

- **Continuous Signals - 12 Simultaneous Leads**
- **Low Profile Rack Mount / Table Top Enclosure**
- **High Fidelity Diagnostic Mode Filtering .05 – 500Hz**
- **Convenient Front Panel Input & Output Connections**
- **Defibrillation Protected with Manual Baseline Reset**
- **Less Than 10 μ A Input Risk (Leakage) Current**
- **Locking Toggle Switch For Calibration Signals**

This ECG Amplifier has been design to meet the demanding requirements of the pre-clinical research community. The amplifier accurately conditions up to twelve simultaneous surface ECG leads. The leads are; I, II, III, aVR, aVF, aVL (derived from Einthoven's Triangle) and six V leads (referenced to Wilson's central terminal). The RL (Right Leg) is driven by a signal derived from either Wilson's central terminal or Iso-common. Patient (subject) connections are accomplished via an industry standard ten-lead ECG cable. Analog outputs are ± 5.0 Volts Full Scale, available from twelve front panel mounted BNC connectors.

Technical Data Sheet

Model 13-1100-64, 13-1100-64EPP

12 Lead ECG Amplifier(s)

ELECTRICAL SPECIFICATIONS

Signal Output

Connector type	BNC, shield connected to chassis
Gain	x1000
Output Impedance	100 Ohms
Short circuit	Output protected
Maximum output current	+/- 10 mA

Signal Input

The ECG inputs are available on the front panel via a captive 15 pin female, D-sub connector.

Input Leads	RA, LA, LL, RL, and V1-V6
Dynamic Range	±5.0mV
Max input DC offset	±300mV
Input Impedance	³ 10M Ohms
CMRR	³ 90dB @ 60Hz with 51k Ohm, 0.047µF source imbalance
Input Risk Current	< 10µA @ 240VAC 60Hz, all leads to chassis
Defibrillator Protection	360 Joules delivered at 5000V
Defibrillator Recovery	8 seconds or manual reset with Cal/Sig/Zero switch
Isolation	> 1500VDC for 1 minute, isolated circuits to chassis
Noise	< 20µV peak-to-peak, RTI, 0.05 to 500Hz
Amplitude Inaccuracy	< 5% input to output
Bandwidth	
Diagnostic Mode	-3dB at 0.05Hz to 500Hz, ±20%
Monitor Mode	-3dB at 0.5Hz to 30Hz, ±20%

POWER

AC Operation	
Input Voltage	120/240VAC, auto ranging
Input frequency	50/60 Hertz
Power Consumption	45 watts max.

PHYSICAL SPECIFICATION

Packaging - This product is packaged in a 1.75 inch high rack mountable enclosure (mounting hardware is included).

Height	1.75 inches
Width	17 inches
Depth	12.256 inches

PHYSICAL

Weight	< 5 pounds
Temperature:	
Operating	20 to 40°C
Storage	0 to 70°C
Humidity RH, non-condensing	
Operating	10% to 95%
Storage:	5% to 95%
Cooling	Convection only

SAFETY SPECIFICATIONS

AC line leakage	<100 uA max enclosure leakage at 264 VAC line.
CAN/CSA-C22.2	Medical Electrical Equipment-Part
No. 601.2.25-94	2: Particular Requirements for the Safety of Electrocardio graphs.
UL Std No. 2601.1	Medical Electrical Equipment Part 1: General Requirements for Safety.

ORDERING INFORMATION

Part Number	Description
13-1100-64	12 Lead ECG Amplifier
13-1100-64EPP	12 Lead ECG Amplifier with embedded acquisition interface
Accessories	
P01763	10 Lead Input Cable
P01765	10 Lead Patient Cable Set (Banana)
P01764	10 Lead Patient Cable Set (Grabber)
P01766	(5 PK) Lead Wire Shorting Plugs
J02938	BNC Cable Set - (12) BNC to BNC Cables

*Specifications are current at publication.
Due to DSI's continuing product improvement program,
specifications may change without notice.*

DSI products are not intended for the purposes of diagnosis of disease or other conditions, or in the cure, mitigation, treatment, or prevention of disease, or used as a life support device. Use of DSI products are solely for the purposes of conducting life science research.