MISTRAS
A World of NDT Solutions
Products & Systems Division

2/4/6 Preamplifier

Description:

The 2/4/6 preamplifier was designed to be used with all available AE systems that have power supplied via the output signal BNC. It is supplied with 20/40/60 dB gain (switch selectable) and operates with either a single ended or differential sensor. Plug in filters provide the user with flexibility to optimize sensor selectivity and noise rejection. These filters are provided in the Low Pass (LP), High Pass (HP), and Band Pass (BP) configurations, and offers constant insertion loss for easy filter swapping without the need for recalibration. Automatic Sensor Test (AST) is standard. This option provides the sensor with the ability to characterize its own condition as well as send out a simulated acoustic emission wave that other sensors can detect.

Features:

- 20/40/60 Selectable Gain
- Wide Dynamic Range > 90dB Standard
- Low Noise < 2¤V (With Standard* Filter & Input Shorted)
- Large Output Signal 20Vpp into 50¤
- Single Power/Signal BNC or Optional Separate Power/ Signal BNC
- Plug-in Filters (Utilizes the same filter as the SPARTAN 2000)
- High Input Impedance
- Standard Auto Sensor Test
- Input Protection

Electrical Specifications:

- Gain Selectable: 20/40/60 dB + 0.5% dB
- Input Impedance: 10KΩ // 15pF
- Power Required: 18-28V DC
- Operating Current: 30mA (With AST Installed)
- 28mA (Without AST Installed)
- Dynamic Range: 80dB (Utilizing an R15 Sensor)
  90dB (50Ω Input

Environmental Specifications:

- Temperature: -40 C to +65 C

Gain Selection	20dB	40dB	60dB
• Bandwidth (-3dB):	10kHz-2.5MHz	10kHz-2.0MHz	10kHz-900kHz
• Output Voltage (50Ω Load):	6Vpp	20Vpp	20Vpp
• CMRR (500kHz):	42dB	42dB	42dB
• Noise (RMS rti):			

Filter Frequency Response Hz	20dB With R15 Sensor	40dB With R15 Sensor	60dB With R15 Sensor	20dB Input Shorted	40dB Input Shorted	60dB Input Shorted
135k-185k	3 µV	1.4 µV	1.5 µV	2.0 µV	0.6 µV	0.42 µV
100k-300k*	3 µV	1.8 µV	1.8 ¤V	2.3 µv	1 µV	0.8 µV
10k-2.0M	5 µV	4 µV	3 µV	4 µV	3 µV	2.5 µV

**Standard filter*

195 Clarksville Road, Princeton Junction, NJ 08550 USA
Phone: (609) 716-4000 • Fax: (609) 716-0706
Email: sales.systems@mistrasgroup.com • www.mistrasgroup.com

Copyright © 2011 MISTRAS Group, Inc.. All Rights Reserved. Specifications subject to change without notice.