

# ADAM

## Advanced Data Analysis Monitor Welders

- 360° View of Your Weld Including Pre- and Post- Weld Trigger Data
- Measure Current, Voltage, Force, Displacement and Cover Gas Flow/Auxiliary Input
- Production Run Screen with Run Charts, Histogram and Process Results
- High Resolution Sensors
- Easy to Setup User-Interface Includes Large Color Display
- Monitor ANY Resistance Welder
- TCP/IP Communications Enabled
- Integrated database and Minitab® 15 Statistical Software\*

### ADAM is an invaluable tool for:

#### Production Monitoring with Real Time Limits and Machine I/O

- Run Charts, Histogram, Sigma, Cp, Cpk
- Data Logging, Setting Process Limits, Electrode Maintenance, Troubleshooting, Set-up
- Verification, Remote Welder Performance Interrogation, Statistical Process Control

#### Process Development

- Welding Evaluation and Research, DoE
- Studies, Process Optimization, Process Validation

#### Weld Quality Analysis

- Traceability, Process Certification and Analysis, Calibration Confirmation, Statistical Process Control

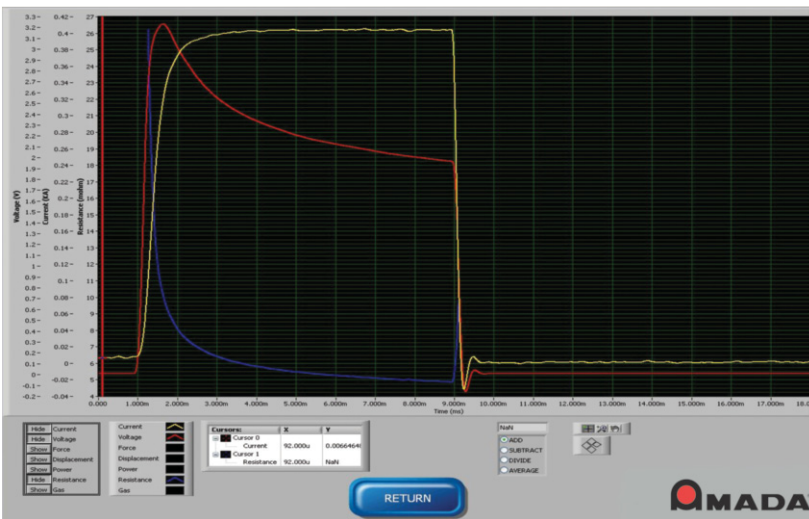
With an ever-increasing emphasis on process accountability, the Miyachi Unitek Advanced Data Analysis Monitor (ADAM) is the most advanced resistance welding monitor available from any manufacturer. It offers more of the information you need for process development, production monitoring and data to support your ISO, GMP and TQM requirements. Not only will it monitor what happens during the weld, but also before weld monitoring is triggered, giving you a true 360-degree view of your process!

Feature	Benefit
Current, Voltage, Power, Resistance Monitoring	Detects shifts in welding process
High Resolution Displacement Monitor with Part Detection	Improved process control
Force or Pressure Monitor	Ensures welding at proper electrode force
Cover Gas Flow Monitor	Confirms displacement of oxygen from weld area
PreTrigger Viewing	Captures important pre-weld data
Envelope Limits	Catches slight changes in waveform shapes
Numeric Limits	Evaluates peak and RMS data
Graphical Waveforms with Cursors	Interrogates waveforms for better understanding of process
Multi Level Security Screens	Protects settings from unauthorized changes
Comprehensive I/O for Automation	Easily integrated into automated systems
Wide Screen Color Display	Easy to view settings and process results
Multiple Schedules with Schedule Naming	Customized schedules for ease of use
Traceability to NIST standards	Meets regulatory guidelines
Ethernet Communications	Remote reading of database
Weld to Displacement	Improves process control



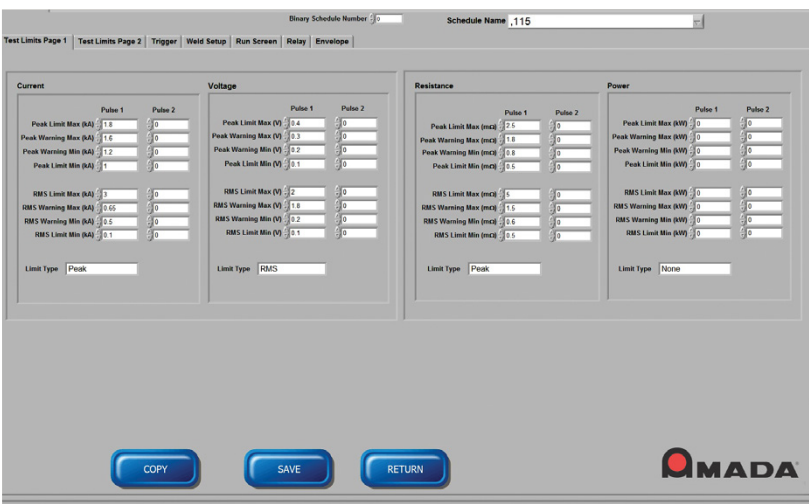
### RUN SCREEN:

Comprehensive production screen provides graphical and numeric viewing of the present weld as well as trend data. Two run charts with limits, histogram, event logger and alarm indications. Programmable weld counter with easy to view process monitor shows ratio of In/Out of limits welds.



### EXPANDED MONITOR SCREEN:

Expandable graphic data windows allow user to overlap multiple graphs to analyze the dynamic relationships between the variables. Waveform cursors with advanced measurement tools allow precise interrogation of the welding sequence.



### LIMITS SETUP SCREEN:

Programmable limits screen for setting upper and lower numeric limits on peak and RMS data. Envelope limits can be placed around waveforms to detect slight changes in process stability. Part thickness and displacement limits measure the mechanical aspects of the welding process.



### SCREEN FORMATS:

Very flexible formatting capabilities allows user to customize data, colors, and styles on graph displays for easy viewing and emphasis of key parameters.




## SPECIFICATIONS

<b>Measurement Capability</b>	Single Channel Current, Voltage, and Gas Flow/Auxiliary 0-10 volt input. Two channels each of Force and Displacement. (Displacement, Force, and Cover Gas Flow Sensors are optional.)
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<b>Parameter</b>	<b>Ranges</b>	<b>Displayed Resolution</b>
Current	2, 6, 20, 60, 200 kA	3 significant digits
Voltage	0-15 V	3 significant digits
Displacement	12, 25, 30mm	0.0001" or 0.01mm
Force	0-10V	3 significant digits
Gas flow/Auxiliary 0-10 Volt	0-10V	3 significant digits

Derived Parameters	Power and Resistance
Measurement Time	2 Seconds Maximum
Sampling Rates	125K Samples per Second
Repetition Rate	1 per second for 100 milli second measurement period
Limits	Numeric Peak and RMS; Min/Max; Graphical Envelope, Weld Time, Counter
Displayed Resolution	Approximately 1000 Data Points Per Waveform
Triggering	Current, Voltage, Force with Adjustable Threshold or External Signal
Digital Inputs	External Trigger, Reset, Tare Displacement, Reset Counter, Inhibit Measurement, Start Part Measurement, Initial Thickness Measurement
Digital Outputs	Ready to Measure, In Progress, In Limits, Out of Limits, In Warning, Out of Warning, Counter Limit, Force Fire, Thickness Pass, Thickness Fail
Relay Outputs	4 User Configurable Relays Rated: 30VDC and up to 1 A
Weld Counter	User Programmable Counter Limit
Power Supply Cutoff	Weld to Displacement Based on Electrode Position
Number of Schedules	Unlimited
Communications	RS-232 (output of weld data after each weld only) Ethernet TCP/IP (remote reading of database)
Memory	1 TB Hard Disc
Electrical Requirements	115V/230V 50/60 Hz (Note: Processing Module, Sensor Interface Module and Display will require power.)
Physical Characteristics	Processing Module plus Sensor Interface Module

<b>ADAM Ordering Guide</b>	
Basic System	Includes Data Processing Module, 21.6" (Diagonal) XGA Display, Keyboard, Mouse, Sensor Interface Module
Included SPC Package	Integrated Database and Minitab Statistical Software
Included Accessories	(Qty 1 each) MB-400k Current Coil, Voltage Pick-up Leads
Optional Accessories	Displacement Sensors, Force Sensor, Gas Flow Sensor (Part No. 270-473)
Displacement Sensor Part Nos.	(Part No. 270-458 25mm range, 0.2um accuracy), (Part No. 460-235 12mm range, 0.2um accuracy) (Part No. 311-022 30mm range, 1um accuracy), (Part No. 311-017 12mm range, 1um accuracy)

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