WM-200A

Industry 4.0-Ready Networked Resistance Weld Monitor



The WM-200A high resolution, high speed networked resistance weld monitor is designed to closely monitor the welding process, and capture, store, and send critical weld data to an on-premise or remotely located central server, enabling multiple users to view and analyze data from anywhere in the world in real time.

- Industry 4.0 networked to visualize manufacturing around the globe
- High speed, full waveform data acquisition and visualization for deep view into welding process in both R&D and manufacturing settings
- Standard data format outputs for easy handling in advanced data analysis software and AI/ML algorithms
- Monitor all key weld parameters simultaneously for better control of production

BASIC CONFIGURATION FOR BENCHTOP

- WM-200A Process Module
- WM-Inspect software
- Computer with display
- Server software
- Voltage lead
- Toroidal coil

KEY FEATURES

- ISO 17657 compliant current measurement
- 8 channel hardware monitoring capability
- Monitors current, 2 channels voltage, 2 channels force, 2 channels displacement, auxiliary
- High speed, full waveform data acquisition and visualization
- Collects high resolution data and stores welding process data
- Unifies global welding processes by combining data from multiple global manufacturing plants
- AI/ML ready
- Port data into 3rd party analysis software for SPC, OEE
- Remote access GUI
- Allows live view of the welding process
- Central server and databases with ODBC access to the database

TYPICAL USAGES



Process development



Real time process monitoring



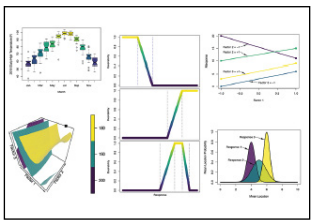
Quality Control



Data storage

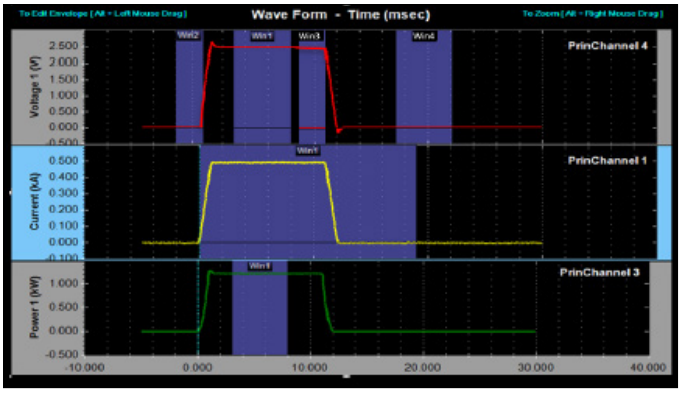


Equipment validation

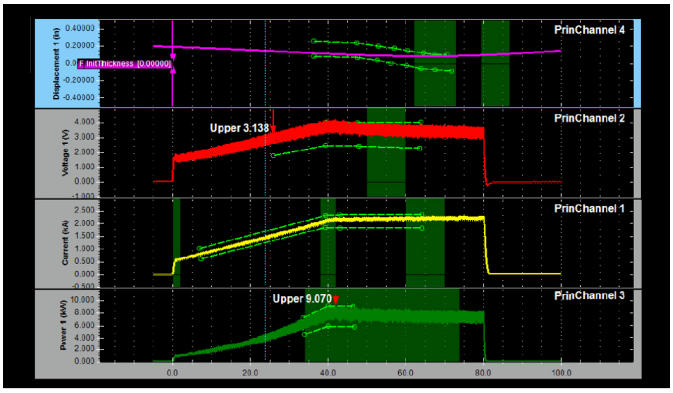


DOE tests

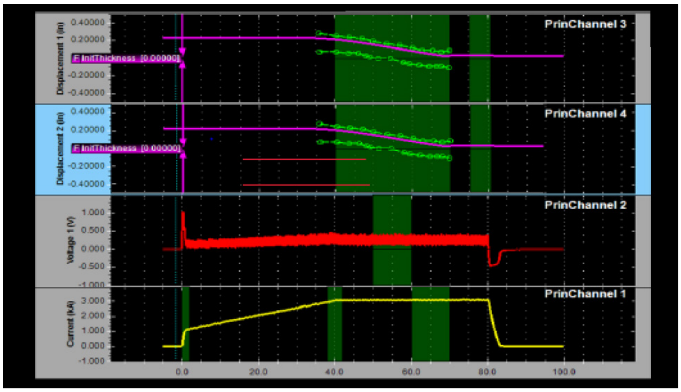
Feature	Benefit
Monitor up to 12 different weld parameters simultaneously	Capture waveform and aggregate data for each parameter at the set sampling rate for complete view of the process
Four aggregate measurement windows	Collect data from individual portions of the waveform, four windows per principle channel
Aggregate/envelope limits	Set envelope, max / min, and statistical limits
Dual channel displacement monitoring	Part detection, weld-to-displacement, final displacement
Remote connectivity	Control, view, and analyze remotely
Unit operates w/o display (automation)	Yes
High speed, real-time, full waveform data capture	5 microsecond sample rate
Readily integrates with MES	Yes
Remote maintenance access	Yes
Extensible software, easy to add new features	Yes
Web-based user interface available	Yes
Network interruption protection	On board 1 TB hard drive buffers data in event of network interruption
Communication	Digital I/O, Ethernet, Fieldbus
AI/ML Ready	Yes



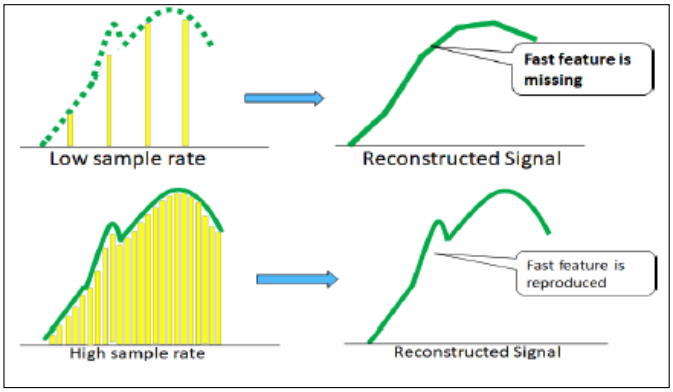
Set up to 4 regions of interest within the waveform: up-slope, weld, down-slope



Add envelope limits over regions of interest during the weld pulse or over the entire waveform. Limits can be inserted manually, or created with an offset or from statistical deviations in the area.



Monitor electrodes individually to facilitate successful weld schedule development



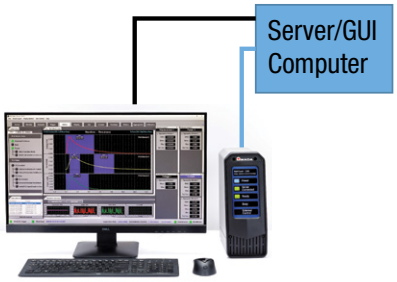
The WM-200A has the fastest sampling rate down to 200 kHz (5µs window) to capture all physical phenomena occurring during the process.

TYPICAL SETUP

The WM-200A Networked Weld Monitor is scalable: from R&D testing to high speed production.

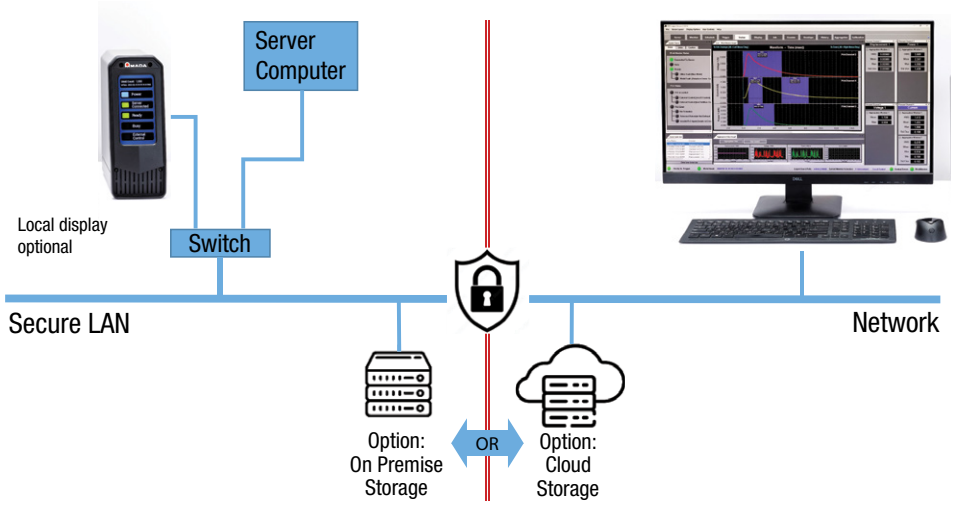
Benchtop RW Setup/Isolated Network

Isolated Network



Monitor single units in R&D and manual manufacturing workstations. WM-200A can be completely isolated from all external networks or connected to an internal network.

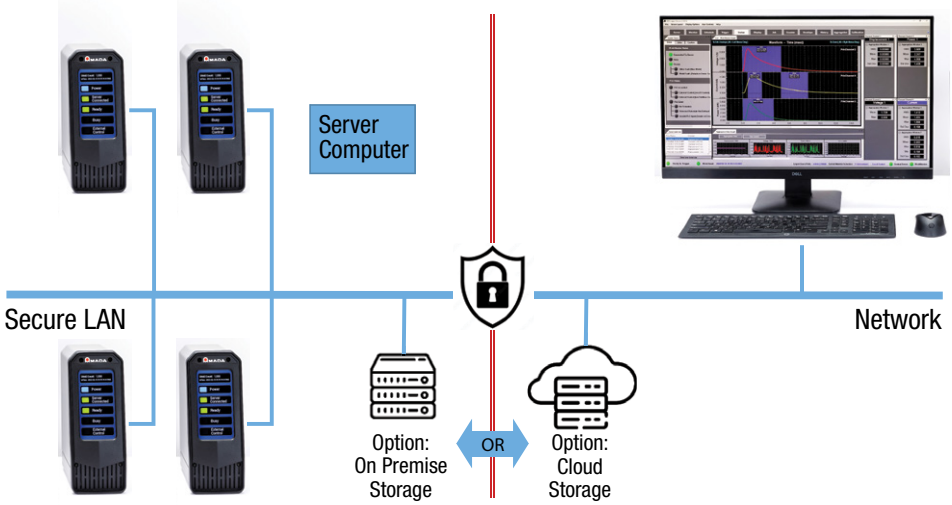
Remote RW Setup / Automation / Single Unit



Remove the display and WM-200A can be used as a remote monitor in a secure production network behind a firewall.

Data storage is achieved using a local on-premise or cloud server.

Remote RW Setup / Automation / Multi Unit

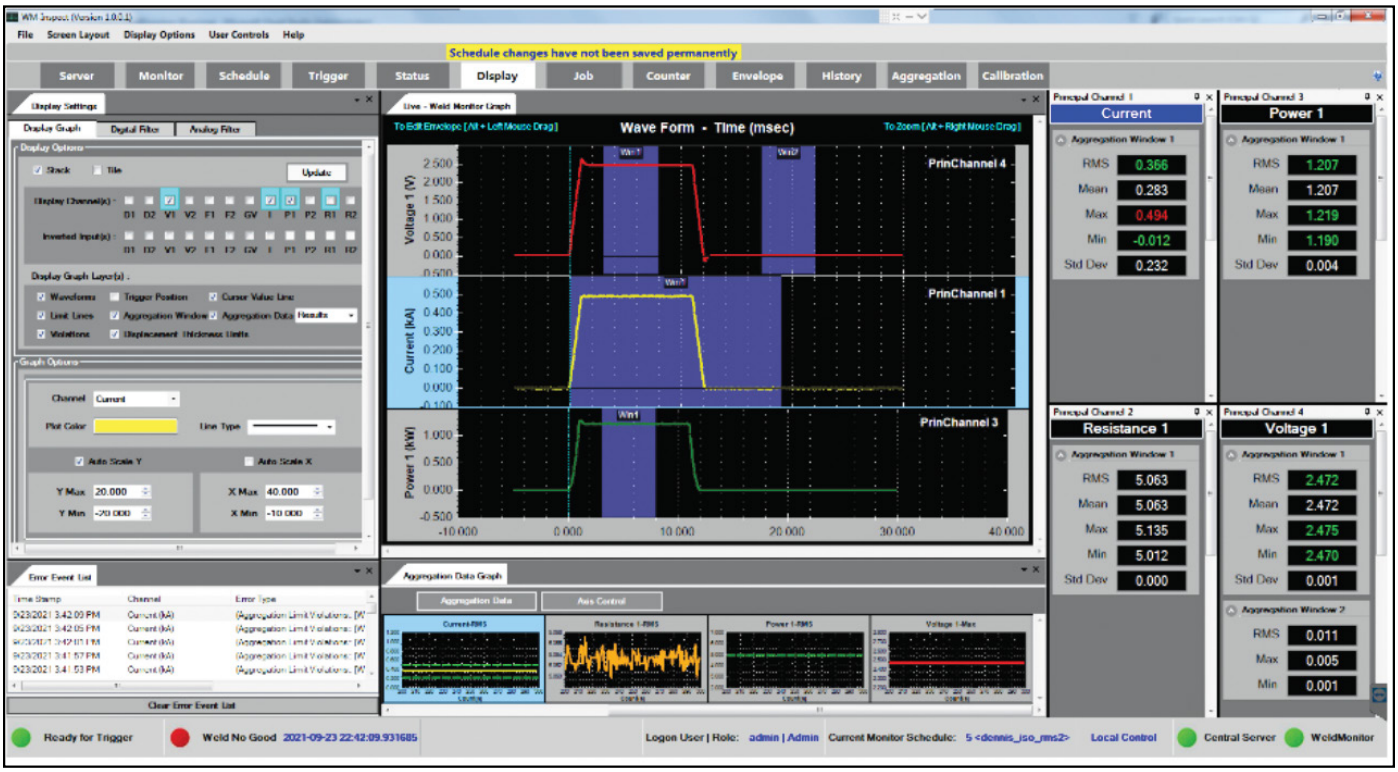


Expand production to multiple lines - potentially in remote geographic locations - and connect multiple units using one - or more locations to visualize the data coming from each.

WM-INSPECT GUI

Powerful, configurable software. View any WM-200A on a network where access is granted.

ENGINEER/ PROCESS DEVELOPMENT PRESET



STACKED/ TILED

User-configurable screens allow the user to generate a monitor or run screen that fits their needs. Up to 9 waveforms can be shown simultaneously with aggregated data and weld counters.

GRAPHIC/NUMERIC

View full wave-forms (graphical display) or aggregated values (numeric display).

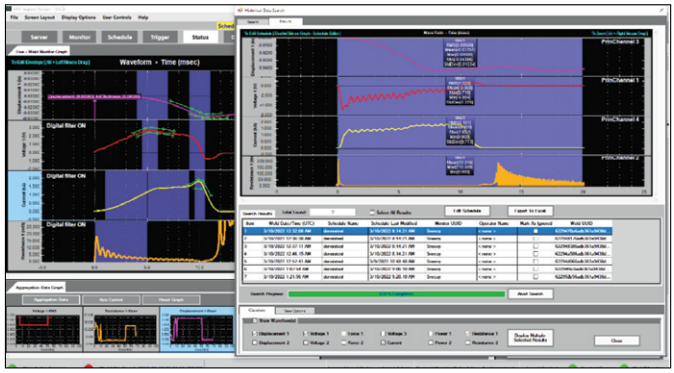
WINDOWS AND LIMITS

Four aggregate windows can be placed over each waveform displaying weld data for each individual window. Envelope and limit lines placed along the waveform in the measurement window provide in depth monitoring of each weld parameter.



OPERATOR/RUN CHARTS

Monitor the health of the welding process. Trending facilitates evaluation of the process over long periods of time. Analysis of these trends enables operators to perform scheduled maintenance before problems with the weld process occur.



HISTORY SCREENS

A powerful search engine enables users to view and export waveform and aggregate data from any monitor connected to the network.

Connecting Manufacturing Process Data Around the World

Having manufacturing and process data stored on a network means that it is now possible to collect, visualize, and analyze that data from anywhere in the world enabling process engineers, plant managers, and corporate managers to make real time decisions based on the live data coming in from around the globe.



DATA ANALYSIS

- WM-200A provides an easy way to collect and store data. Combine with 3rd party software to analyze and review the data
- Easy connection to SPC, OEE, MES, and other manufacturing software
- ODBC connectors, standard data formatting

NOTIFICATIONS

- Set up email and text alerts for warnings and manufacturing summaries
- Configurable time intervals

TECHNICAL SPECIFICATIONS

Measurement capability	Single channel current, dual channel voltage, force, and displacement. Single channel auxiliary 0-10 Volt input. Force and displacement sensors sold separately.	
Parameter	Ranges	Accuracy
Current **Voltage** **Displacement** **Force** **Auxiliary input**	2, 6, 20, 60, 200 kA +/- 20 V +/-15 mm, +/- 30 mm +/- 10 V +/- 10 V	1.5% of full scale +/-0.5% of reading or +/- 5 mV 0.0005 in or 0.01 mm +/-0.5% of reading or +/- 0.125 lb +/-0.5% of reading or +/- 5 mV
Derived parameters	Power and resistance	
Measurement time	5 ms - 910 seconds	
Sampling rates	200 kHz (5 µs) for all channels	
Repetition rate	3.2 per second for 50 ms measurement period, full waveform capture	
Limits	Numeric Min/Max , ISO-RMS, RMS, Mean, standard deviation, graphical envelope, counter	
Triggering	Current, voltage, force , displacement, external input	
Digital inputs	External trigger, reset error, zero displacement, reset counter, PLC control, initial thickness measurement, end of weld, weld time, schedule bits	
Digital outputs	Ready, error primary Ch 1 - 4, good, no good, no weld detect, machine error, weld count up, displacement cut off, part detect NG, PLC CTL out	
Weld counter	User programmable counter limit	
Power supply cutoff	Weld to displacement based on electrode position	
Number of schedules	Unlimited (128 addressable via I/O)	
Communications	Field Bus, Ethernet TCP/IP, Digital I/O	
Memory	1 TB local storage	
Electrical requirements	90-264 VAC 50/60 Hz	

WEIGHT & DIMENSIONS

Dimensions (W x D x H)	**WM-200A**	**Display Monitor**
Enclosure closed	6 in x 13 in x 14 in (155 mm x 330 mm x 360 mm)	21.5 in display size
Weight	14.0 lb (6.35 kg)	5.5 lb (2.5 kg)

* Size of the monitor may vary

ACCESSORIES

Part Number	**Description**
4-41610-01	Voltage sense cable, 3 meters
MB-400M	ISO toroidal coil, flexible, 4.7" (120 mm) diameter
MB-800M	ISO toroidal coil, flexible, 9.8" (250 mm) diameter
4-41574-01	Current coil conversion cable. For use when converting connection from MB400/800K to WM-200A
4-41680-01	PC/server kit. Includes PC with server software and 21" monitor
4-42113-01	Ono Sokki displacement sensor conversion cable. For use when connecting GS-1813/GS-1830 to WM-200A

USA Headquarters and Western Technical Center
AMADA WELD TECH
1820 S. Myrtle Ave. • Monrovia, CA 91016 US • T: (626) 303-5676
info@amadaweldtech.com • www.amadaweldtech.com
ISO 9001:2015 Certified Company • 24/7 Repair Service: 1-866-751-7378

AMADA WELD TECH
(Eastern Technical Center)
High Point, North Carolina
T: (941) 544-5762
southsales@amadaweldtech.com

AMADA WELD TECH
(Midwest Technical Center)
Detroit, Michigan
T: (248) 313-3078
midwestsales@amadaweldtech.com

AMADA WELD TECH GmbH
Puchheim, Germany
T: +49-89-839403-0
infode@amadaweldtech.eu

AMADA WELD TECH SHANGHAI CO., LTD.
Shanghai, China
T: +86-21-6448-6000
jwu@amadaweldtech.com.cn

AMADA WELD TECH KOREA CO., LTD.
Seoul, Korea
T: +82-31-8015-6810
sales@amadaweldtech.co.kr

AMADA TAIWAN CO., LTD.
Taipei, Taiwan
T: +886-3-328-3511

AMADA (THAILAND) CO., LTD.
Bangkok, Thailand
T: +66-2170-5900
info@amada.co.th

AMADA VIETNAM CO., LTD.
Ha Noi, Vietnam
T: +84-24-6261-4583
thuyet@amada.co.jp

AMADA WELD TECH INDIA PVT., LTD.
Bangalore, India
T: +91-80-4092-1749
info@amadaweldtech.in

Specifications subject to change without notice. Copyright© 2026 AMADA WELD TECH INC. The material contained herein cannot be reproduced or used in any other way without the express written permission of AMADA WELD TECH INC. All rights reserved.

follow us on:

06/22 10/26