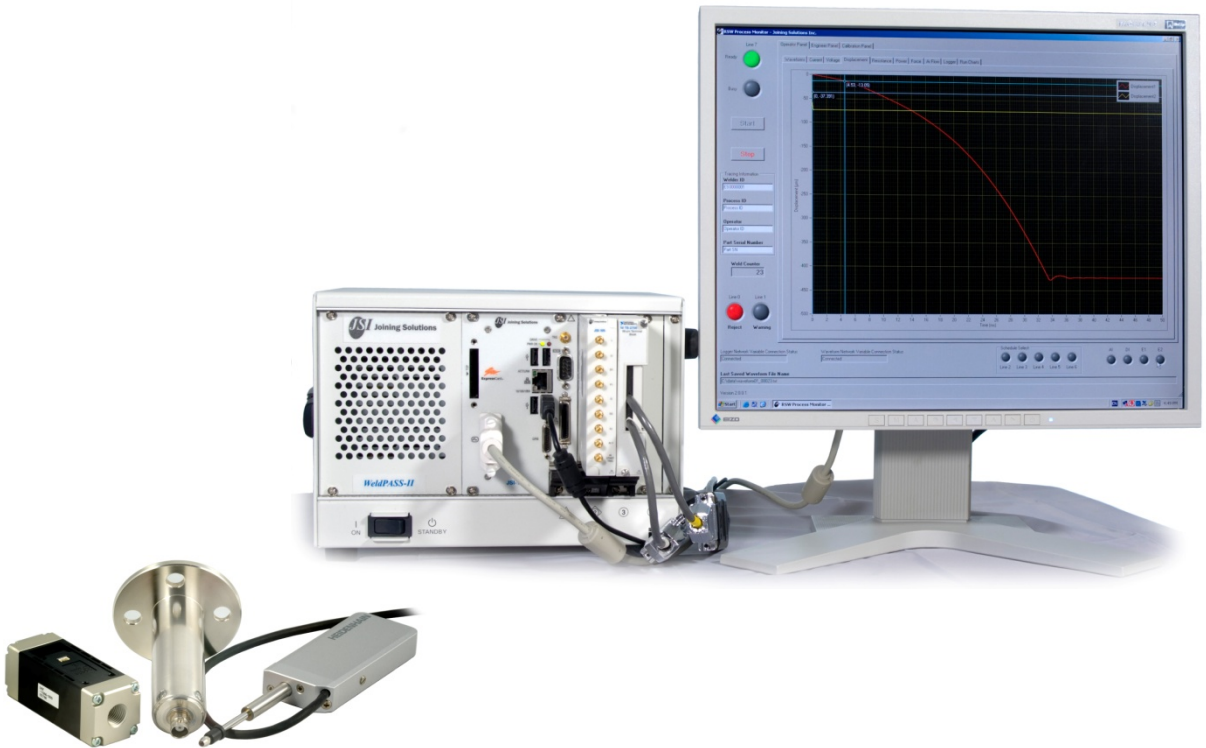


Process Monitoring



WeldPASS-II

Resistance Spot Welding Process Monitor

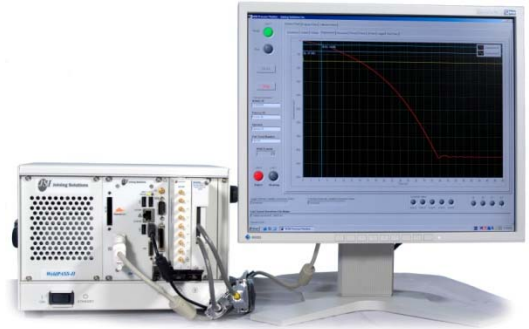
by JoiningSolutions

A Joining Engineering Company



WeldPASS-II Resistance Spot Welding Process Monitor

The WeldPASS-II offers capability of joining process monitoring, quality analysis and traceability. It utilizes sensors and high speed data acquisition card to measure welding force, displacement, shielding gas flow rate, current, and voltage during welding for each weld.

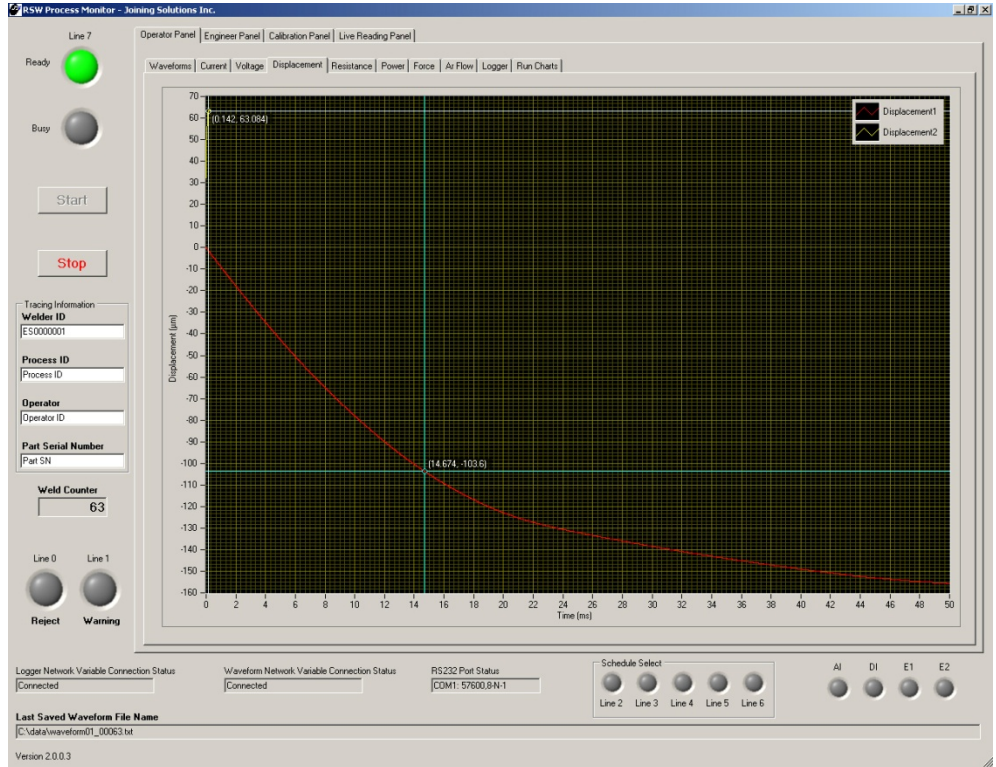


Hardware Features:

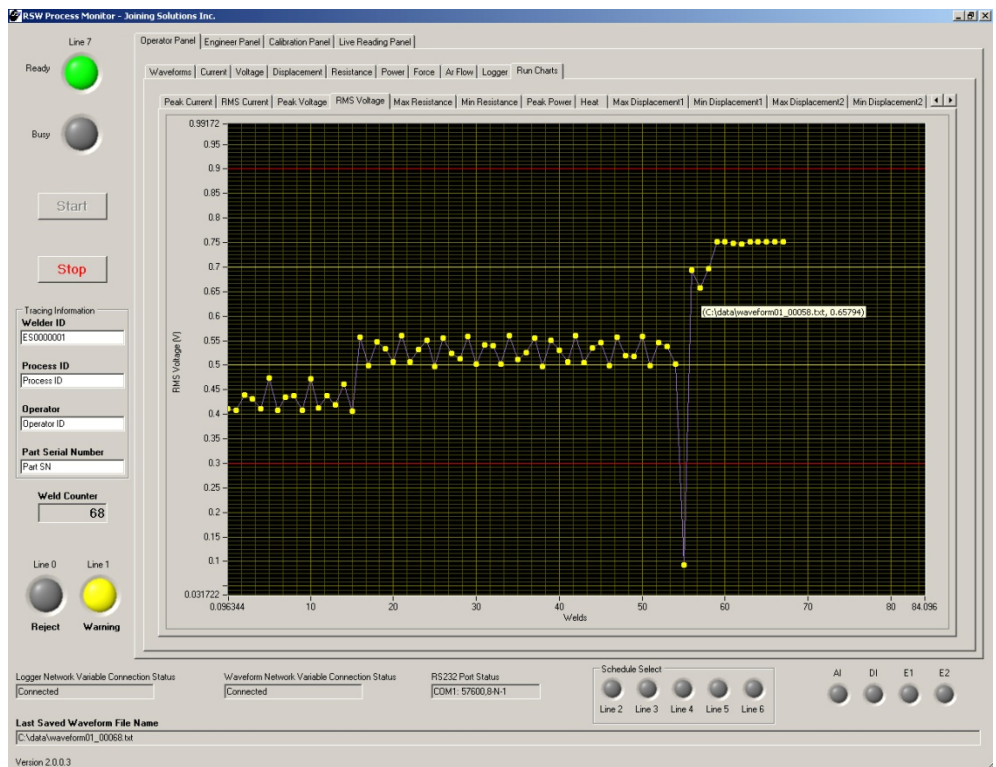
- Industrial standard PXI platform
- Measurements: current, voltage, displacement (2 channels), force (2 channels), gas flow rate.
- 16 bit high accuracy Analog-to-Digital conversion.
- High speed 500k samples/second/channel data acquisition.
- Digital I/O for communication with automated welder or other equipments. (Ready output, Reject output, Warning output, Schedule Selection input)
- Ethernet and RS232 communication ports available.

Software Features:

- 3 levels (Operator, Engineer and Calibration) secure configuration access administration.
- Record waveforms and measurement data for every weld.
- Run charts for all measurement data.
- Waveforms are indexed in log file.
- Accepts user Transfer Function input.
- Limit control and out-of-limit alarm for every weld.
- Source code of communication client software available for customer to tailor customized communication interface to corporate database.



Screenshot showing displacement waveform



Screenshot showing Run Chart



Operator Panel | Engineer Panel | Calibration Panel | Live Reading Panel

Wavelengths | Current | Voltage | Displacement | Resistance | Power | Force | Air Flow | Logger | Run Charts

	i (A)	start_U (ms)	end_U (ms)	U_peak (V)	U_rms (V)	start_R (ms)	end_R (ms)	R_max (mC)	R_min (mC)
C:\data\waveform	6.27	1.0	20.0	0.445	0.508	1.0	20.0	0.5100	0.0000
C:\data\waveform	1.60	1.0	20.0	0.751	0.561	1.0	20.0	0.5096	0.0000
C:\data\waveform	0.00	1.0	20.0	0.751	0.505	1.0	20.0	0.5107	0.0000
C:\data\waveform	0.93	1.0	20.0	0.667	0.535	1.0	20.0	0.5110	0.0000
C:\data\waveform	3.73	1.0	20.0	0.722	0.547	1.0	20.0	0.5109	0.0000
C:\data\waveform	38	1.0	20.0	0.751	0.500	1.0	20.0	0.5109	0.0000
C:\data\waveform	4.89	1.0	20.0	0.751	0.557	1.0	20.0	0.5092	0.0000
C:\data\waveform	3.36	1.0	20.0	0.556	0.519	1.0	20.0	0.5111	0.0000
C:\data\waveform	6.53	1.0	20.0	0.751	0.519	1.0	20.0	0.5099	0.0000
C:\data\waveform	6.46	1.0	20.0	0.751	0.558	1.0	20.0	0.5097	0.0000
C:\data\waveform	50	1.0	20.0	0.275	0.499	1.0	20.0	0.5114	0.0000
C:\data\waveform	1.84	1.0	20.0	0.751	0.546	1.0	20.0	0.5102	0.0000
C:\data\waveform	4.71	1.0	20.0	0.751	0.538	1.0	20.0	0.5093	0.0000
C:\data\waveform	6.75	1.0	20.0	0.376	0.503	1.0	20.0	0.5107	0.0000
C:\data\waveform	59	1.0	20.0	-0.093	0.093	1.0	20.0	0.4977	0.4969
C:\data\waveform	5.22	1.0	20.0	0.751	0.693	1.0	20.0	0.5007	0.5002
C:\data\waveform	4.73	1.0	20.0	0.751	0.658	1.0	20.0	0.5007	0.5002
C:\data\waveform	3.60	1.0	20.0	-0.696	0.696	1.0	20.0	0.4996	0.4995
C:\data\waveform	0.92	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	0.92	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	5.30	1.0	20.0	0.756	0.748	1.0	20.0	0.5081	0.0000
C:\data\waveform	4.41	1.0	20.0	0.756	0.747	1.0	20.0	0.5081	0.0000
C:\data\waveform	1.01	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	0.99	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	1.24	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	1.01	1.0	20.0	0.751	0.751	1.0	20.0	0.5004	0.5004
C:\data\waveform	1.25	1.0	20.0	0.751	0.751	1.0	20.0	0.5005	0.5004
C:\data\waveform	1.13	1.0	20.0	0.751	0.751	1.0	20.0	0.5004	0.5003
C:\data\waveform	1.39	1.0	20.0	0.751	0.751	1.0	20.0	0.5004	0.5003

Logger Network Variable Connection Status: Connected
Waveform Network Variable Connection Status: Connected
RS232C Port Status: COM1: 57600,8N-1

Last Saved Waveform File Name: C:\data\waveform01_00070.bat

Version 2.0.0.3

Screenshot showing Logger

Operator Panel | Engineer Panel | Calibration Panel | Live Reading Panel

Unlock Panel | Lock Panel

Timing Configuration
Trigger Edge: Falling
Start Delay (ms): 20.0
Measurement Duration (ms): 50.0
Low Pass Filter (Hz): 5000.0

Schedule Selection
Schedule 01

Evaluation Duration
Start (ms): 1.0
End (ms): 20.0

Current: 1.0
Voltage: 1.0
Resistance: 1.0
Power: 1.0
Diapl. 1: 1.0
Force 1: 1.0
Air Flow: 1.0
Diapl. 2: 1.0
Force 2: 1.0

Destination Waveform File Name: C:\data\waveform01.bat
Destination Log File Name: C:\data\logfile01.txt

Transfer Function
Function Output: 0.0

Logger Network Variable Connection Status: Connected
Waveform Network Variable Connection Status: Connected
RS232C Port Status: COM1: 57600,8N-1

Last Saved Waveform File Name: C:\data\waveform01_00068.bat

Version 2.0.0.3

Screenshot showing Engineer Panel