AMADA

MG3 Digital Weld Monitor

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The Digital Weld Monitor MG3 is available in three versions: Digital Basic, Digital-W1 and Digital-W2.

MG3 Digital Basic monitors weld current and voltage and calculates its derived parameters w/dual channel capabilities. While the Digital-W1 version can be equipped with one the Digital-W2 version can be equipped with two displacement measuring sensors. Both Digital-W versions control parts, speed, force and displacement if applicable.

The Digital Weld Monitor MG3 is a proven and state of the art solution which meets the needs of many industry markets.

KEY FEATURES

- Premium Digital Weld Monitor designed to control welding processes reliably, efficiently and conveniently

- Dual channel capability offers simultaneous monitoring of two welds

- Configurable graphic user interface with 4 display quadrants, graphic and numeric indicators as well as intuitive online help gives maximum transparency for all relevant parameters

- Full on-screen SPC capability generates real time monitoring

- Up to 99 available schedules provides maximum control and can be password protected if needed

- Modern interface infrastructure w/RS232 or Ethernet IP

- Weld interrupt functions enable the operator to steer the welding process

- Convenient and safe data storage and data transfer with USB port

- MG3 Digital W versions offer displacement and force measuring with optional sensor(s)

TYPICAL APPLICATIONS

Automotive
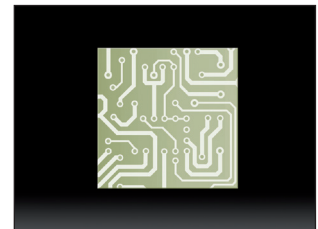
Electronics

Medical

IT&Multimedia

Aerospace

*Defence*

MG3 OPERATING PANEL

CONFIGURABLE RUN SCREEN

The high resolution colour display and user configurable run screen enables users to configure the display to show information relevant to their particular job function or chosen welding environment. The MG3 is operated easily by turning and pushing the toggle wheel. Up to 99 programs for various parameter settings can be stored


Welding osciloscope functions / process development

MG3 can be used as osciloscope for analysing measured waveforms and for comparing measuring values. A single screen shows different pen colours for up to four traces.
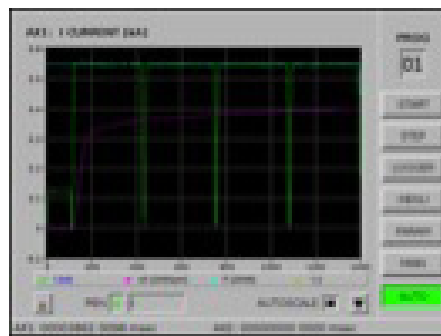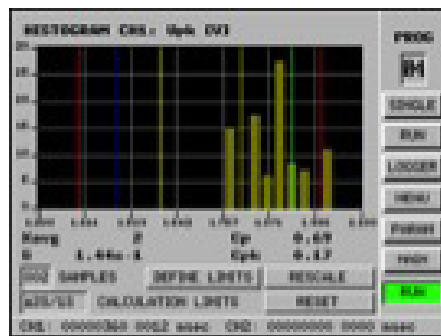

"Snapshot" saving function to USB stick

Pushing a button saves the current screen as .bmp on a USB stick. Waveforms can be saved as .csv for evaluation. All parameter settings can also be stored as backup file via USB. Standard interfaces are Digital I/O, RS 232, Ethernet TCP/IP, Modbus TCP.
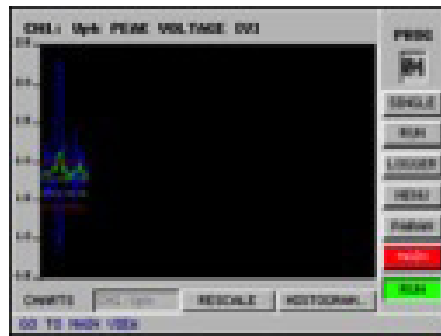
Statistical process control (SPC) and quality assurance

MG3 offers both data logging and on-screen SPC including run charts, histograms and analyses. The MIYACHI PECO WinWeld data collection and analysis software provides a comfortable method for process monitoring, comparison and storage.

TECHNICAL SPECIFICATIONS

	Digital Basic	Digital-W1	Digital-W2
Weld current types	Direct current, alternating current and capacitor discharging		
Configuration basic	1 closed toroidal coil d-70 mm and voltage measuring cables; 2-channel current and voltage measuring parallel with external BCD program selection, turn pressure knob for menu selection and parameter input	See Digital basic version and analog inputs for force or pressure plus the option to connect 1 displacement sensor	See basic version and analog inputs for force or pressure plus the option to connect 2 displacement sensors
Measuring functions	Current, voltage, charging, time, power, energy, resistance, pre-warning and limit values, envelope waveform function, counter, statistic process control (calculated values can be stored as limit values)	See Digital Basic version plus displacement, part detection, speed, pressure	
Options	WinWeld software; toroidal coils	Adapter box and displacement sensors w/varying resolution from 0.1 or 1.0 µm and varying strokes.	
Supply voltage	110 – 240 V AC		
Main frequency	50-60 Hz		
Connected rating	60 W		
Fusing	Internal 2 A delayed		
Connecting cable	3 x 0,75 mm², 2 m long		
Protection class	IP30		
Graphic display	120 x 90 mm		
Graphic scan	With measuring time <= 50 ms: 40 dots/ms With measuring time >= 50 ms: 5 dots/ms		
Storage device	USB stick via built-in USB port		
Current measuring range / accuracy	2 – 500 kA resp 0.2 – 50 kA (with coil x 10)/ +/- 1.5% of measurement range limit value (w/o coil)		
Voltage measuring range / accuracy	0.5 – 50 V / +/- 1.5% of measurement range limit value		
Monitor schedules	99		
Measuring times	DC: 1 - 2000 ms; AC: 1 – 5000 ms		
Scanning rate	12.5 µs per channel		
Analog input	I – channel 1 and 2; U –channel 1 and 2	Pressure, Force 0-10 V	
Analog output	I – channel 1 und 2		
Digital input	15-p. D-SUB male connector, BCD; 25-p, D-SUB male connector		
Digital output	15-p. D-SUB male connector, BCD; 25-p, D-SUB male connector		
Digital interfaces	Digital I/O, RS232, Ethernet TCP/IP, USB port and Modbus TCP are standard interfaces, Profibus or Ethernet/IP are optional features		
Serial interface RS232	Output of measuring values in ASCII compatible printer format		
Environment temp.	0-40 °C		
	Digital-W1	**Digital-W2**	
Pressure measuring range / accuracy	0 – 10 bar/ + 1 % measurement range limit value		
Pressure measured value resolution	According to sensor type 1.3 to 2.5 mbar		
Displacement measuring range / accuracy	0 – 12.5 mm / +/- 2 µm with sensor 1 µm		
Displacement measured value resolution	According to sensor type 1 to 0.1 µm digital		
Legal Approval	CE compliant		

WEIGHT & DIMENSIONS - LEGAL APPROVAL

	Digital Basic	Digital W1	Digital W2
Weight	approx. 5,4 kg		
Dimensions (LxHxD)	240x135x320 mm		

AMADA®

MIYACHI | MIYACHI | MIYACHI
UNITEK | PECO | EAPRO

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