



MG3 Digital Weld Monitor

# MG3

## Digital Weld Monitor

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.

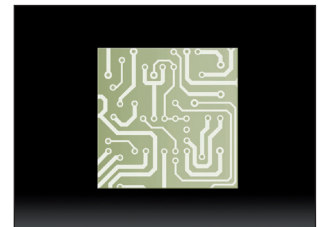
### KEY FEATURES

- 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**

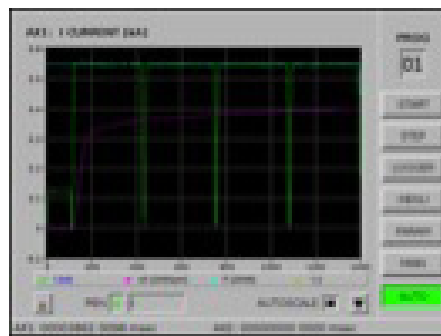
**CONFIGURABLE RUN SCREEN**

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



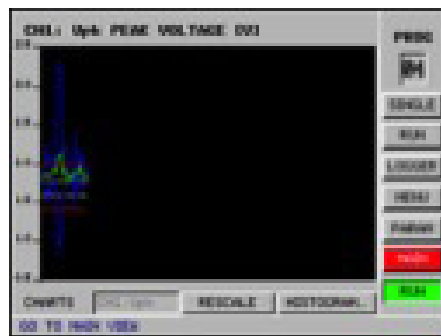
**Welding oscilloscope functions / process development**

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



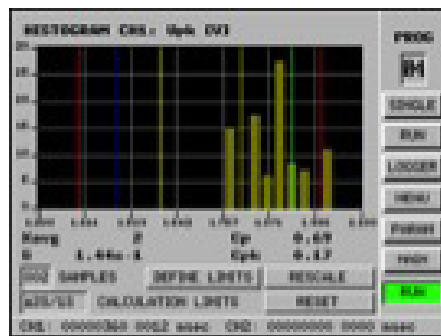
**“Snapshot” saving function to USB stick**

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
<b>Weld current types</b>	Direct current, alternating current and capacitor discharging		
<b>Configuration basic</b>	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
<b>Measuring functions</b>	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	
<b>Options</b>	WinWeld software; toroidal coils	Adapter box and displacement sensors w/varying resolution from 0.1 or 1.0 µm and varying strokes.	
<b>Supply voltage</b>	110 – 240 V AC		
<b>Main frequency</b>	50-60 Hz		
<b>Connected rating</b>	60 W		
<b>Fusing</b>	Internal 2 A delayed		
<b>Connecting cable</b>	3 x 0,75 mm <sup>2</sup> , 2 m long		
<b>Protection class</b>	IP30		
<b>Graphic display</b>	120 x 90 mm		
<b>Graphic scan</b>	With measuring time <= 50 ms: 40 dots/ms With measuring time >= 50 ms: 5 dots/ms		
<b>Storage device</b>	USB stick via built-in USB port		
<b>Current measuring range / accuracy</b>	2 – 500 kA resp 0.2 – 50 kA (with coil x 10)/ +/- 1.5% of measurement range limit value (w/o coil)		
<b>Voltage measuring range / accuracy</b>	0.5 – 50 V / +/- 1.5% of measurement range limit value		
<b>Monitor schedules</b>	99		
<b>Measuring times</b>	DC: 1 - 2000 ms; AC: 1 – 5000 ms		
<b>Scanning rate</b>	12.5 µs per channel		
<b>Analog input</b>	I – channel 1 and 2; U – channel 1 and 2	Pressure, Force 0-10 V	
<b>Analog output</b>	I – channel 1 und 2		
<b>Digital input</b>	15-p. D-SUB male connector, BCD; 25-p, D-SUB male connector		
<b>Digital output</b>	15-p. D-SUB male connector, BCD; 25-p, D-SUB male connector		
<b>Digital interfaces</b>	Digital I/O, RS232, Ethernet TCP/IP, USB port and Modbus TCP are standard interfaces, Profibus or Ethernet/IP are optional features		
<b>Serial interface RS232</b>	Output of measuring values in ASCII compatible printer format		
<b>Environment temp.</b>	0-40 °C		
	<b>Digital-W1</b>	<b>Digital-W2</b>	
<b>Pressure measuring range / accuracy</b>	0 – 10 bar/ + 1 % measurement range limit value		
<b>Pressure measured value resolution</b>	According to sensor type 1.3 to 2.5 mbar		
<b>Displacement measuring range / accuracy</b>	0 – 12.5 mm / +/- 2 µm with sensor 1 µm		
<b>Displacement measured value resolution</b>	According to sensor type 1 to 0.1 µm digital		
<b>Legal Approval</b>	CE compliant		

## WEIGHT &amp; DIMENSIONS - LEGAL APPROVAL

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



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