



MML-200A

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Laser Inline Monitor

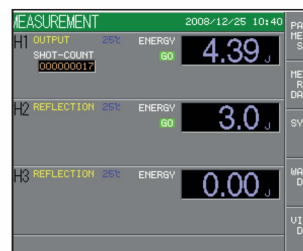
For better quality control of Laser Welding.

- Easy quality control and data saving
 - Measure and save the data of both emitted and reflected laser beams while welding.
 - Read and save the pictures of welded area taken by a CCD camera.
- Judgment standard based on the result data
 - The upper and lower limits can be set based on the data of good weld results.
- Brief check over the production process records
 - Display in a graph laser power and reflected beam intensity with the time records.
- Laser power at every welded point and reflected laser beam can be measured, judged and saved.

KEY FEATURES

- Measure all weld points and save those data.
- Display both emitted and reflected laser beam in waveforms.
- Configurable measuring range within a shot.
- Save measured data and waveforms on a CF card.
- Data communication through Ethernet.
- Simultaneous measurement up to four channels.
- Evaluate waveforms.
- Display in a graph the records of measured laser power and reflected laser beam.
- Display moving images taken by a CCD camera.
- Small footprint (25% smaller than the conventional models).

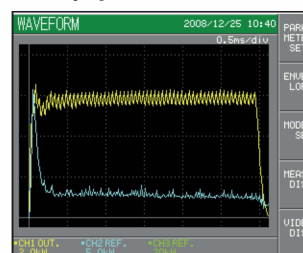
MONITORING



Display of measured values



Video image taken by a CCD camera



Display of waveform
 Yellow: laser beam
 Blue: reflection light

TECHNICAL SPECIFICATIONS

Model		MML-200A	
Sensor	Method	Light detection (Laser beam and reflection light)	
	Wavelength	1,064 nm	
Body	Power requirements	Single phase, 100V to 240 VAC \pm 10%, 50/60 Hz	
	Power consumption	150 W at max.	
	Interface	37 pin, D-sub female	
	Weight	Approx. 2.5 kg	
	Channels	4 channels at max.	
	Frequency	10 MHz at max. (100 ns)	
	Measuring range	Measuring time: 0.3ms to 100 sec, Peak value: 0.2 to 20 kW	
	Measuring accuracy	Laser beam: within \pm 6% (10.0J or below: within \pm 0.3J) Reflection light: within \pm 10% (3.0J or below: within \pm 0.3J)	
	Judgment reference	Analysis	Input waveform (Peak value / Integral value)
		Speed	500 pps @ 1ms at max. (Only in case of 2 ch or below)
	Data storage	Input waveform / Monitored value, Built-in memory and CF card	
Ambient temperature	5 to 40° (No condensing)		
Ambient humidity	85% RH or below (No condensing)		

DRAWINGS

