

## Portable Strain Gage Welding Unit

### FEATURES

- Lightweight and compact size.
- Weld energy is continuously adjustable from 10 to 60 joules, making the Model 700B an excellent choice for installing weldable strain gages and temperature sensors, as well as small thermocouples and light-gage metal.
- Fast welding rate – up to 60 welds per minute
- Replaceable rechargeable battery allows smooth continuous operation.
- “Low-battery” indication to warn the user when the Li-ion battery requires charging.
- Optional carrying bag with shoulder strap and belt loops providing convenient storage space for cables, batteries, battery charger welding tips and instruction manual
- Optional ruggedized work case for safe storage of kit

### DESCRIPTION

The Model 700B is an update to our Model 700 welding and soldering unit which has been used for decades for installing many thousands of strain gages worldwide. It offers a modern, compact design with a removable Lithium-ion battery and has a rugged exterior for use in adverse field conditions.

This lighter unit (less than a third of the previous design) and compact dimensions simplifies installations in difficult-to-reach environments. An optional ballistic nylon bag with straps and a carabiner is available with additional space for storing accessories.

Weld energy can be changed from 10 to 60 joules in 1 joule increments, indicated on a digital display. It is capable of producing 60 welds/minute for fast installation. Approximately 1500 welds can be performed on a single



charge, equivalent to around 30 Micro-Measurements linear weldable gages. A removable battery pack and a 30-minute fast charger enables continuous working.

Successful and consistent welds require a proper earth connection; both mechanical clamp and magnetic mount earth leads are available. For additional safety and improved performance a resistance-to-ground check is performed for every weld.

The Micro-Measurements Model 700 Welder is ideal for installing Micro-Measurements CEA, LWK, LEA, LZN and LZE weldable strain gages. Proper installation techniques for weldable gages are detailed in our Instruction Bulletin B-131.

### SPECIFICATIONS

All specifications are nominal or typical at +73°F (+23°C) unless noted.

PARAMETER	SPECIFICATION
<b>GENERAL</b>	
Power for recharging	115 VAC or 230 VAC, 50-60 Hz. (different chargers)
Temperature range Operating and storage Battery storage	-4°F to +140°F (-20°C to +60°C) +40°F to +105°F (+4°C to +40°C) (recommended)
Size Main unit Handle Battery Cables (2)	8.25 x 7.5 x 3 in (210 x 191 x 76.2 mm) 6.25 x 1.85 x 3.3 in (159 x 47 x 84 mm) 1.9 x 1.2 x 3.4 in (48 x 30 x 86 mm) 60 x 0.31 in (1524 x 7.9 mm)
Weight	6.9 lb (3.14 kg)
Main unit material	Rugged powder-coated extruded aluminium, splash proof
<b>WELDING SPECIFICATIONS</b>	
Weld Energy Range	10 to 60 joules, in 1-joule steps, adjustable by front-panel control.
Maximum Weld Repetition Rate	60 per minute at 30 joules, typical

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PARAMETER	SPECIFICATION
Number Of Welds Per Battery Charge	Approximately 1500 at weld energy setting of 30 joules. This is equivalent to approx. 30 Micro-Measurements linear weldable gage installations
Battery charge time (from full discharge):	40 minutes typical
Battery	Replaceable rechargeable Li-ion battery, 3.0 Ah, 7.6 – 12.6 Vdc (10.8Vdc nominal)
Welding Probe	Manually fired with trigger control and “steady-rest”
Welding Cables	Two 5 ft (1.5 m), fully flexible
Ground cable	Magnetic mount & mechanical clamp options, 5 ft (1.5 m), 6AWG
Weld Energy Monitor	Calibrated front-panel control with READY indicator; audible indication selectable
<b>SAFETY</b>	
Auto detect ground	<1 Ohm resistance test on return ground path
Self-test on power-up	
<b>COMPLIANCE</b>	
FCC Part 15 Class B, CE	
<b>ACCESSORIES</b>	
<ul style="list-style-type: none"> <li>• Replaceable rechargeable battery</li> <li>• Battery charger</li>   <li>• Straight welding tip</li> <li>• Bent welding tip</li> <li>• Extension rod</li> <li>• Rugged carrying bag</li>   <li>• Ruggedized work case</li> </ul>	<p>Milwaukee® M12™ REDLITHIUM™ Li-ion 3.0 Ah battery                      Milwaukee® M12™ REDLITHIUM™ Li-ion battery charger (110VAC or 220VAC)</p> <p>Ballistic nylon bag with shoulder strap, belt loops, carabiner attachment, large pocket for cables and trigger with inner sleeve for spare parts</p>

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### ORDERING INFORMATION:

MODEL NUMBER	DESCRIPTION	ITEM DETAILED CONTENT
700B	Welding Unit w/o Battery & Charger	700B – Welding Unit. This kit includes: - 700B Welder - Welding handle and cable assembly - Magnetic and mechanical ground cable assemblies <b>Battery and charger not included.</b>
700B-110	Welding Unit w/ Battery & 110V Charger	700B – Welding Unit with Battery and 110V Charger. This kit includes: - 700B Welder - M12 Battery 3AH - M12 Battery Charger 110VAC - Welding handle and cable assembly - Magnetic and mechanical ground cable assemblies
700B-220	Welding Unit w/ Battery & 220V Charger	700B Welding Unit with Battery and 220V Charger. This kit includes: - 700B Welder - M12 Battery 3AH - M12 Battery Charger 220VAC - Welding handle and cable assembly - Magnetic and mechanical ground cable assemblies

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MODEL NUMBER	DESCRIPTION	ITEM DETAILED CONTENT
700B-HNDL	Welding Handle Assembly (Spare or replacement unit)	Spare or replacement welding trigger handle and cable assembly. Includes: - One straight welding tip - Power cable, 5 ft (1.5 m) 6 AWG red cable - Trigger cable, 5 ft (1.5 m) 18/3 AWG yellow flexible cable
700B-GND	Ground Clamp Assemblies (Spare or replacement units)	Spare or replacement grounding cable assemblies. Includes: - Magnetic black grounding clamp assembly (5 ft (1.5 m) 6 AWG) - Mechanical black grounding clamp assembly (5 ft (1.5 m) 6 AWG)
700B-M12-3	M12 Battery 3.0 AH	Milwaukee M12™ REDLITHIUM™ 3.0 Amp battery
700B-CH-110	M12 Battery Charger 110 VAC	Milwaukee M12™ battery charger. 110VAC input
700B-CH-220	M12 Battery Charger 220 VAC	Milwaukee M12™ battery charger. 220VAC input
700B-WC	Ballistic Nylon Work Bag	The Ballistic Nylon work bag comes with shoulder strap and integral carabiner D-rings. Capable of carrying the 700B, two spare batteries, welding handle with cables, ground clamp assemblies, and spare welding tips. <b>Bag only.</b>
700B-ST-STR	Straight Welding Tip	Single straight welding tip
700B-ST-CUR	Curved Welding tip	Single curved welding tip
700B-ER	Welding Extension Rod	Single welding extension rod
700B-WU	Welding Main Unit (spare or replacement unit)	Welder main body only. No welding handle or ground clamp assemblies. <b>No battery or charger.</b>
700B-WNS	Wing Nuts Spares	Set of two (1/4-20 and 10-32) stainless steel wing nuts.
700B-TC	Ruggedized Work Case	Rugged watertight transit case with custom anti-static foam cut out for 700B. Conforms to FedEx/UPS and IATA guidelines for shipping Lithium-Ion batteries. Capable of holding the 700B, four M12-30 batteries, Ballistic Nylon Work Case, M12 Charger, spare welding tip kit. Interior dimensions: 20 x 14 x 7.7 Inches (51 x 36 x 20 mm).