Power Wave® R350

Processes
Stick, DC TIG, Pulsed DC TIG, MIG, Pulsed MIG, Flux-Cored

Product Number
K3022-1

See back for complete specs

Input Voltage
208/230/380-415/460/575/1/3/50/60

Input Current @ Rated Output
3 Ph/40% Duty Cycle: 39/35/19/17/14 A
1 Ph/40% Duty Cycle: 60/67/NA/NA/NA A

Output Range
5 - 350 Amps

Rated Output
GMAW: 350A/31.5V/40%
GMAW: 300A/29V/100%

Weight/Dimensions (H x W x D)
85 lbs. (38.6 Kg)
20.4 x 14.0 x 24.8 in.
(518 x 356 x 630 mm)

Compact Multi-Process Robotic Power Source

The Power Wave® R350, with built-in wire feeder control, is especially designed for use in robotic welding applications. It provides an extremely fast arc response, includes over 65 standard welding waveforms for optimized performance on almost any application and efficiently converts input power to reduce operational costs – all in a compact, rugged case.

FEATURES

- **Built-In Feeder Control** - Standard internal control for compatible wire feeders, allowing the user to modify settings at the robot pendant.
- **PowerConnect™ Technology (patent pending)** - Automatically adjusts to input power while maintaining a constant welding output throughout the entire input voltage range.
- **Tribrid™ Power Module** - Exceptional welding performance with high power factor and efficiency.
- **Production Monitoring™ 2.1** – Track equipment usage, store weld data and configure fault limits to aid in production analysis and process improvements.
- **Auxiliary Power Surge Blocker™ Technology (patent pending)** – Welding performance is not compromised by simultaneous use of grinders and other devices requiring high starting current (60A or more peak surge current) using the standard 115V (10A) AC duplex auxiliary power receptacle.
- **Compact and Durable Case** - IP23 rated to withstand harsh environments.
- **Standard Ethernet** - Allows easy software upgrades through powerwavesoftware.com.

APPLICATIONS

- Robotic Fabrication

WAVEFORM CONTROL TECHNOLOGY® PROCESS CAPABILITIES

- Pulse
- Pulse-on-Pulse®
- Power Mode®
- RapidArc®
- Upgradeable for additional processes to be developed in the future.

INPUT

50/60 Hz

OUTPUT

CC

DC

THE LINCOLN ELECTRIC COMPANY
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PH: 216-481-8100 • www.lincolnelectric.com

www.lincolnelectric.com/green

Two Year Extended Warranty Available in U.S.A. and Canada.

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KEY CONTROLS

FRONT
1. Status Light
2. Thermal Fault Indicator Light
3. Lug Style Output Terminals
4. Work Sense Lead Receptacle
5. Main Power Switch
6. Reversible Handle

BACK
7. 115V (10 Amp) AC Duplex Auxiliary Power Receptacle and Circuit Breaker
8. ArcLink® Welding System Component Communication Cable Receptacle
9. Circuit Breaker
10. Sync Tandem/STT® Receptacle
11. Optional DeviceNet™ Kit (Requires K2827-1 Kit)
12. Input Power Cable Connection
13. Robotic Wire Feeder Cable Receptacle
14. Ethernet Cable Receptacle
15. Reversible Handle

Built-In Wire Feeder Control - Streamlined component systems approach eliminates a user interface at the power source or at the feeder. Instead, wire feeder setting changes, including wire feed speed and other parameters, are consolidated at the robot pendant.

Modular Components - Take advantage of the R350’s modular component design and add an STT® (Surface Tension Transfer®) module for exceptional arc control on thin sheet metal or critical pipe welding applications.
**ArcLink® XT Features:**

**New Standard Features** - Ethernet capability is standard on the Power Wave® R350 with no additional hardware or kit costs. Lincoln Electric’s Production Monitoring™ software utility is also included for welding process monitoring, analysis and reporting.

**Performance Based Design** - The fast 100Mbps, full duplex Ethernet interface offers a reliable and consistent hardware platform for industrial environments and makes software upgrades and expansion easy.

**Lower Purchase Costs** - System costs are reduced for multi-equipment (multi-arm) applications. Multiple Power Wave® R350 units for multiple robotic arm applications can be used together without the addition of an outboard network Ethernet switch. No additional cards or hardware are required.

**Tribrid™ Power Module**
Patent-pending Tribrid™ Power Module features Lincoln Electric’s PowerConnect™ technology, Planar Transformer™ Technology and 120kHz output to provide exceptional welding performance while still maintaining a high power factor and efficiency.

**iARC™ High Speed Digital Controls**
iARC™ (Intelligent Architecture for Regulation and Control) digital welding controls are more than 10 times faster than the previous generation, with 128 times more RAM, and 8 times more flash memory. It also features 100Mbps Full Duplex Ethernet to support Lincoln’s Production Monitoring™ 2.1 and run with advanced diagnostics.

**Production Monitoring™ 2.1**
Production Monitoring™ 2.1, the welding industry’s most advanced weld data collection and monitoring tool, allows fabricators to analyze their welding operations and processes. It will also aid in your company’s ISO, Six Sigma, statistical process control (SPC), quality cost delivery (QCD), overall equipment effectiveness (OEE) and lean manufacturing efforts. Download from powerwavesoftware.com.

**Rugged Reliability**
Like all Lincoln Electric welding equipment, the Power Wave® R350 was tested under severe conditions to ensure proper operation in the harshest environments:
- Extreme Temperature Ranges
- Extreme Humidity
- Rain
- Dirt and Dust
- IP23 Rated Performance
On 230 Volt/1 Phase inputs, the peak rating is at a duty cycle of 30%, except for GTAW processes.

On 208 Volt inputs, the maximum output is limited to 300 amps.

Occasionally, purchasers may ask Lincoln Electric for information or advice about their use of our products. Our employees respond to inquiries to the best of their ability based on information provided to them by the customers and the knowledge they may have concerning the application. Our employees, however, are not in a position to verify the information provided or to evaluate the engineering requirements for the particular weldment. Accordingly, Lincoln Electric does not warrant or guarantee or assume any liability with respect to such information or advice. Moreover, the provision of such information or advice does not create, expand, or alter any warranty on our products. Any express or implied warranty that might arise from the information or advice, including any implied warranty of merchantability or any warranty of fitness for any customers’ particular purpose is specifically disclaimed.

Lincoln Electric is a responsive manufacturer, but the selection and use of specific products sold by Lincoln Electric is solely within the control of, and remains the sole responsibility of, the customer. Many variables beyond the control of Lincoln Electric affect the results obtained in applying these types of fabrication methods and service requirements.

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### Product Specifications

<table>
<thead>
<tr>
<th>Product Name</th>
<th>Product Number</th>
<th>Input Voltage</th>
<th>Input Current @ Rated Output</th>
<th>Rated Output Current/Voltage/Duty Cycle</th>
<th>Output Range (lbs.)</th>
<th>H x W x D (inches)</th>
<th>Net Weight (lbs.)</th>
</tr>
</thead>
<tbody>
<tr>
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<td>1 Ph/40% Duty Cycle: 31/29/15/14/11</td>
<td>GMW: 300A/29V/100%</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>3 Ph/100% Duty Cycle: 31/28/15/14/11</td>
<td>GMW: 325A/33V/40%20</td>
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<tr>
<td></td>
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<td></td>
<td>1 Ph/100% Duty Cycle: 60/51/275/NA/NA</td>
<td>GMW: 250A/30V/100%</td>
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<tr>
<td></td>
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<td></td>
<td>1 Ph/100% Duty Cycle: 60/53/NA/NA/NA</td>
<td>GTAW-DIC: 350A/24V/40%</td>
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(2) On 208 Volt inputs, the maximum output is limited to 300 amps.

(2) On 230 Volt/1 Phase inputs, the peak rating is at a duty cycle of 30%, except for GTAW processes.


### Customer Assistance Policy

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### Recommended Accessories

**WIRE DRIVE CONTROL CABLE (14-PIN TO 14-PIN)**

<table>
<thead>
<tr>
<th>Description</th>
<th>Cable Length</th>
<th>Order Number</th>
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</thead>
<tbody>
<tr>
<td>For use with FANUC® arms having integrated cable</td>
<td>16 (4.8) heavy duty</td>
<td>K1785-16</td>
</tr>
<tr>
<td></td>
<td>25 (7.6) heavy duty</td>
<td>K1785-25</td>
</tr>
<tr>
<td></td>
<td>50 (15.2)</td>
<td>K1785-50</td>
</tr>
<tr>
<td></td>
<td>100 (30.4)</td>
<td>K1785-100</td>
</tr>
<tr>
<td>For external dress of FANUC® arm or hard automation</td>
<td>25 (7.6)</td>
<td>K2709-25</td>
</tr>
<tr>
<td></td>
<td>50 (15.2)</td>
<td>K2709-50</td>
</tr>
<tr>
<td></td>
<td>100 (30.4)</td>
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</tbody>
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**GENERAL OPTIONS**

**DeviceNet** Kit
- The kit allows DeviceNet connectivity to control the power source. Includes internal harness and 5-pin DeviceNet receptacle for mounting on power source back panel.
- Order Number: K2827-1

**Sense Lead Kit**
- Recommended for extended cable length. Application allows machine to sense voltage directly at the work piece for improved arc performance.
- Order Number: K940-25 (for 25 ft. (7.6 m))
- Order Number: K940-75 (for 75 ft. (23 m))

**Welding Fume Extractors**
- Lincoln Electric offers a wide variety of welding fume extraction environmental system solutions, ranging from portable systems easily wheeled around the shop to shipwide central systems servicing many dedicated welding stations.
- Request Publication MCO8-70.

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<td>AutoDrive® 4R100</td>
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<td>GMW: 350A/31.5V/40%20</td>
<td>S-350A</td>
<td>20.4 x 14.0 x 24.8</td>
<td>85 (38.6)</td>
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<td>AutoDrive® 4R220</td>
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