

Power Wave® S350

Processes

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

Product Number

K2823-3 Power Wave® S350

K3005-1 Power Wave® S350 One-Pak® (Steel)

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: 39/35/19/17/14A

1 Ph / 40% Duty Cycle: 60/61/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)

20.40 x 14 x 24.80 in.

(518 x 356 x 630 mm)

Portable, Powerful, Multi-Process.

The multi-process Power Wave® S350 is packed with Lincoln Electric performance technology on both the input and output side. 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

- ▶ **PowerConnect™ Technology (Patent-Pending)** - Automatically adjusts to input power from 200-600V, 50 or 60 Hz, single phase or three phase. Welding output remains constant through the entire input voltage range.
- ▶ **Tribrid™ Power Module** - Exceptional welding performance with high power factor and efficiency.
- ▶ **Production Monitoring™ 2** – Track equipment usage, store weld data and configure fault limits to aid in production analysis and process improvements.
- ▶ **Optional 115V (10A) AC Duplex Auxiliary Power Receptacle** – Features patent-pending Surge Blocker™ Technology to ensure simultaneous welding performance is not compromised by high starting current devices such as grinders (typically requiring 60A or more peak surge current).
- ▶ **Compact and Durable Case** - IP23 rated to withstand harsh environments.
- ▶ **Standard Ethernet** - Allows for effortless software upgrades through powerwavesoftware.com

APPLICATIONS

- ▶ Construction
- ▶ Aerospace
- ▶ Fabrication
- ▶ Automotive
- ▶ Production
- ▶ Weld Training



WHAT'S INCLUDED

K2823-3 Base Unit Includes:

- ▶ 10 ft. (3.0 m) input power cord

RECOMMENDED WIRE FEEDERS

- ▶ Power Feed® 10M bench and boom models
- ▶ Power Feed® 25M

WAVEFORM CONTROL TECHNOLOGY® PROCESS CAPABILITIES

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

INPUT



OUTPUT



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



THE LINCOLN ELECTRIC COMPANY

KEY CONTROLS



Reversible handles shown

FRONT

1. Optional User Interface (K3001-1) for Stick, TIG and CV MIG with voltage sensing feeder
2. Status Light
3. Thermal Fault Indicator Light
4. Tweco®-Style Cam-Lock Output Terminals
5. Optional Output Control Receptacle – 12-pin (included with K3001-1 stick/TIG user interface)
6. Work Sense Lead Receptacle
7. Main Power Switch
8. Reversible Handles



BACK

9. 115V (10 Amp) AC Duplex Auxiliary Power Receptacle and Circuit Breaker (Optional - Order K2829-1 Kit)
10. Arclink® Welding System Component Communication Cable Receptacle
11. Circuit Breaker
12. Sync Tandem/STT® Receptacle
13. Optional DeviceNet™ Kit (Requires K2827-1 Kit)
14. Input Power Cable Connection
15. TIG Solenoid Kit Knockout (optional TIG Solenoid included with K3001-1 stick/TIG user interface)
16. Ethernet Cable Receptacle
17. Reversible Handles

OPTIONAL K3001-1 S-SERIES USER INTERFACE

To tap into the Power Wave® S350 Stick, TIG and CV MIG process capability without a Power Feed™ series wire feeder, add the K3001-1 User Interface Kit. This optional interface provides full control of welding parameters from the front panel of the power source for Stick and TIG processes. When used with a Power Feed™ series wire feeder, the feeder is typically used for controlling the system and the K3001-1 User Interface Kit meters can be used for viewing amps and volts. Kit also includes 12-pin Universal Remote Receptacle and TIG Gas Solenoid.

The User Interface Kit allows control over:

- **Volts/Amps Control** – Adjust volts in MIG and Flux-Cored welding or adjust amperage in Stick or TIG welding.
- **Welding Mode** – Select the stick, TIG or CV wire process.
- **Advanced Process Options** – Control pre- and post-weld settings to optimize arc starts and stops.
- **Arc Control** – Adjust arc characteristics to match individual preferences.



WHAT'S INCLUDED

Power Wave® S350 One-Pak® Packages

Order a Lincoln One-Pak® and get everything you need to complete a welding package – all in one order number. Shielding gas sold separately. (Packages are not assembled.)

Power Wave® S350 One-Pak® (for Steel)

- Power Wave® S350 Power Source
- Power Feed™ 10M Wire Feeder (Bench Model)
- .035 in. (0.9 mm) Drive Roll and Split Wire Guide Kit
- .045 in. (1.2 mm) Drive Roll and Split Wire Guide Kit
- Magnum® PRO 350 Gun and Cable Package
- Work Lead and Wire Feeder Power Source Cables Package – 350 amps, 60% duty cycle with Tweco® style CamLock connectors and Ground Clamp
- Inverter and Wire Feeder Cart
- Harris® Flowmeter and Regulator

Order K3005-1



Shown: K3005-1

DETAILS



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 and run with advanced diagnostics.



Production Monitoring™ 2

Production Monitoring™ 2, 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® S350 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

RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES

GENERAL OPTIONS



S-Series User Interface Kit

This kit allows local control of stick, TIG and wire processes from the power source control panel. Includes TIG Solenoid and Remote Control Connector.
Order K3001-1



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 K2827-1



Inverter and Wire Feeder Cart

Includes wide full-length side trays, storage for contact tips and drive rolls, instruction manual/procedures shelf, load-bearing handles for work, gun and power cables and oversized easy-rolling wheels.
Order K1764-1



115V Auxiliary Kit

Add a duplex 115V receptacle to the back of the machine. Includes PC board and harness which must be installed.
Order K2829-1

RECOMMENDED ACCESSORIES TO EXPAND MACHINE CAPABILITIES

STICK OPTIONS



Accessory Kit

Complete kit for stick welding. Includes 30 ft. (9.1 m) electrode cable, 25 ft. (7.6 m) work cable, headshield, work clamp and electrode holder.

Order K875 for 150 amps



Remote Output Control with 12-pin Universal Connector

Permits remote adjustment of output. Requires K3001-1 Stick/TIG User Interface.

Order K857-2 for 25 ft. (7.6 m)

TIG OPTIONS



PTA-17 150 Amp Air-Cooled TIG Torch

Order K1782-1 for 12.5 ft.

(3.8 m) length, 1-cable

Order K1782-3 for 25 ft.

(7.6 m) length, 1-cable



PTA-26 200 Amp Air-Cooled TIG Torch

Order K1783-1 for 12.5 ft.

(3.8 m) length, 1-cable

Order K1783-3 for 25 ft.

(7.6 m) length, 1-cable



Parts Kits

Magnum® Parts Kits provide all the torch accessories you need to start welding. Parts kits provide collets, collet bodies, a back cap, alumina nozzles and tungstens in a variety of sizes, all packaged in an easy to carry reclosable box.

Order KP508 for PTA-17

Order KP509 for PTA-26



Foot Amptrol™ with 12-pin Universal Connector

Provides 25 ft. (7.6 m) of remote current control for TIG welding. Requires K3001-1 Stick/TIG User Interface.

Order K870-2



Hand Amptrol™ with 12-pin Universal Connector

Provides 25 ft. (7.6 m) of remote current control for TIG welding. Requires K3001-1 Stick/TIG User Interface.

Order K963-4



Welding Fume Extractors

Lincoln offers a wide variety of welding fume extraction environmental system solutions, ranging from portable systems easily wheeled around the shop to shop-wide central systems servicing many dedicated welding stations.

Request Publication MC05-183



Tweco® Style TIG Torch Adapter

Allows a one-cable TIG Torch to connect to the machine's Tweco® style output terminal.

Order K960-3



Tweco® Style Cam-Lock Adapter Plug for Work & Electrode Cables

Cable plug for 2/0 (50 mm²) cable.

Order K2946-1



Work Voltage Sense Lead Kit

Required to accurately monitor voltage at the arc.

Order K940-25 for 25 ft. (7.6 m)

Order K1811-75 for 75 ft. (22.9 m)



Deluxe Adjustable Gas Regulator & Hose Kit

Accommodates CO₂, Argon, or Argon-blend gas cylinders. Includes a cylinder pressure gauge, dual scale flow gauge and 4.3 ft. (1.3 m) gas hose.

Order K586-1



Work and Wire Feeder 2/0 Weld Package

Includes Tweco®-style Cam-Lock connectors, work clamps, 15 ft. (4.5 m) work cable and 10 ft. (3.0 m) electrode cable. Rated 350 amps, 60% duty cycle.

Order K1803-2



12-pin to 6-pin Adapter

Allows older 6-pin remote controls (K870, K963-3, K857) to be used with 12-pin Universal Connection.

Order K2909-1

PRODUCT SPECIFICATIONS

Product Name	Product Number	Input Voltage	Input Current @ Rated Output	Rated Output Current/Voltage/Duty Cycle	Output Range ⁽³⁾	H x W x D inches (mm)	Net Weight lbs. (kg)
Power Wave® S350	K2823-3	208/230/380-415/460/575/1/3/50/60	3 Ph / 40% Duty Cycle: 39/35/19/17/14 3 Ph / 100% Duty Cycle: 31/28/15/14/11 1 Ph / 40% Duty Cycle: 60/67 ⁽¹⁾ /NA/NA/NA 1 Ph / 100% Duty Cycle: 60/53/NA/NA/NA	GMAW: 350A/31.5V/40% ⁽²⁾ GMAW: 300A/29V/100% SMAW: 325A/33V/40% ⁽²⁾ SMAW: 250A/30V/100% GTAW-DC: 350A/24V/40% GTAW-DC: 300A/22V/100%	5-350A	20.40 x 14 x 24.80 (518 x 356 x 630)	85 (38.6)
Power Wave® S350 One-Pak® (Steel)	K3005-1	208/230/380-415/460/575/1/3/50/60	3 Ph / 40% Duty Cycle: 39/35/19/17/14 3 Ph / 100% Duty Cycle: 31/28/15/14/11 1 Ph / 40% Duty Cycle: 60/67 ⁽¹⁾ /NA/NA/NA 1 Ph / 100% Duty Cycle: 60/53/NA/NA/NA	GMAW: 350A/31.5V/40% ⁽²⁾ GMAW: 300A/29V/100% SMAW: 325A/33V/40% ⁽²⁾ SMAW: 250A/30V/100% GTAW-DC: 350A/24V/40% GTAW-DC: 300A/22V/100%	5-350A	52 x 39 x 26 (1321 x 991 x 660)	450 (204.1)

(1) Based on the U.S. National Electrical Code

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

(3) On 208 Volt inputs, the maximum output is limited to 300 amps

For best welding results with Lincoln Electric equipment,
always use Lincoln Electric consumables. Visit www.lincolnelectric.com for more details.

CUSTOMER ASSISTANCE POLICY

The business of The Lincoln Electric Company is manufacturing and selling high quality welding equipment, consumables, and cutting equipment. Our challenge is to meet the needs of our customers and to exceed their expectations. On occasion, 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.

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ELECTRIC
THE WELDING EXPERTS®