

# NA-3S & NA-4 控制箱與送線馬達

焊接程序  
包藥, 潛弧焊

產品編號  
K210-2 NA-3S Controller  
K388-2 NA-4 Controller  
K208A NA-3S/NA-4 Head  
K209A NA-3SF/NA-4F Head

其他型號與完整規格詳見第4頁

AC輸入電源  
115/1/50/60

焊線線徑 (因型號而異)  
.035 - 7/32 in (0.9 - 5.6 mm)

送線速度範圍  
NA-3S: 25 - 650 ipm (0.6 - 16.5 m/min)  
NA-4: 依電弧電壓而定

淨重/尺寸 (H x W x D)

NA-3S:  
44 lbs. (20 kg)  
11.0 x 13.5 x 12.3 in.  
(279 x 343 x 312 mm)

NA-4:  
35 lbs. (16 kg)  
11.0 x 13.5 x 9.70 in.  
(279 x 343 x 246 mm)

## 自動焊接系統

使用NA-3S或NA-4自動送線機提升生產力。此套系統專為以最快速度熔化焊接金屬所打造，消除瓶頸並節省成本。

### FEATURES

- ▶ 多元化操作 - 輕鬆更換不同線徑及送線速度
- ▶ 外型輕巧且運用性高 - 小至輕型治具，大至複雜的自動化生產線皆可使用
- ▶ 結構堅固 - 減少停工時間與維護成本

### 建議使用的林肯焊接電源

- ▶ **NA-3S**  
Idealarc® DC-600, DC-655, DC-1000 and DC-1500
- ▶ **NA-4**  
Idealarc® AC-1200



K209A  
NA-3SF/NA-4F Head



K210-2  
NA-3S



K208A  
NA-3S/NA-4 Head



K388-2  
NA-4

### 所含配件

- ▶ 火嘴
- ▶ 控制電纜
- ▶ 焊接電源電纜
- ▶ 電源
- ▶ 送線架

### 所含配件

- ▶ 10 ft. (3.1 m) 控制電纜
- ▶ 每個送線馬達都有特殊的送線齒輪組

### INPUT



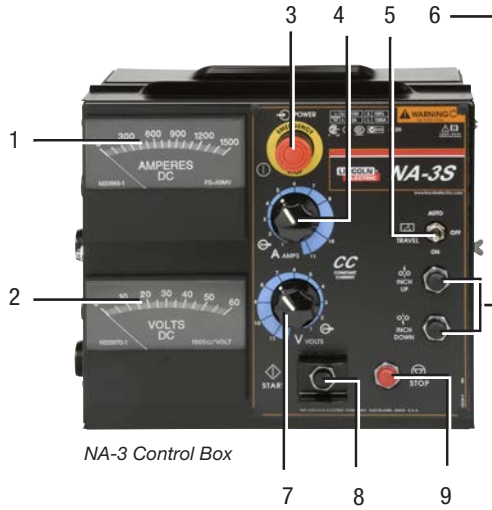
### OUTPUT



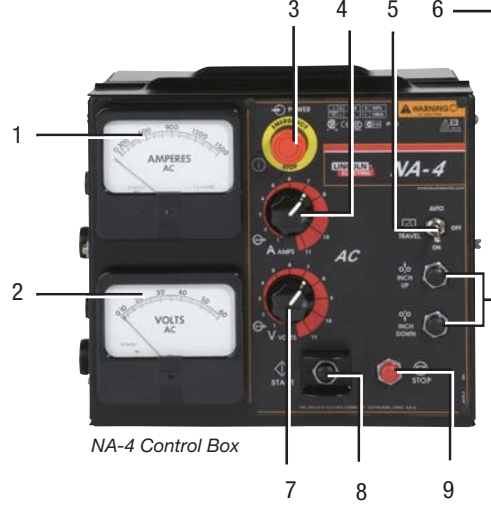
Two Year Extended  
Warranty Available in  
the U.S.A. and Canada

1. 電流表 – 僅於焊接時顯示電流
2. 電壓表 – 僅於焊接時顯示焊接電壓
3. 電源 – 開關送線機的輸入電源
4. 電流控制 – 如使用NA-3S，調整送線速度以控制焊接電流。如使用NA-4，控制焊接電源輸出來調整焊接電流。

5. 移行 – 設定“Off”關閉移行功能; 設定“On”於非焊接時移行; 設定“Auto”進行焊接操作
6. 出線與回線 – 按下按鈕以經由內部面板設定的“inch Speed”速度送線
7. 電壓控制 – 調整電弧電壓
8. 開始 – 按下按鈕開始焊接程序
9. 停止 – 按下按鈕啟動停止程序



NA-3 Control Box



NA-4 Control Box

**NA-3S**

使用定電流或定電壓的DC焊接電源，搭配熱或冷啟動來傳遞電弧感應或送線定速  
適用於以下焊接應用:

- 單焊線或多焊線潛弧焊
- 自保護和氣保護包藥焊接

**NA-4**

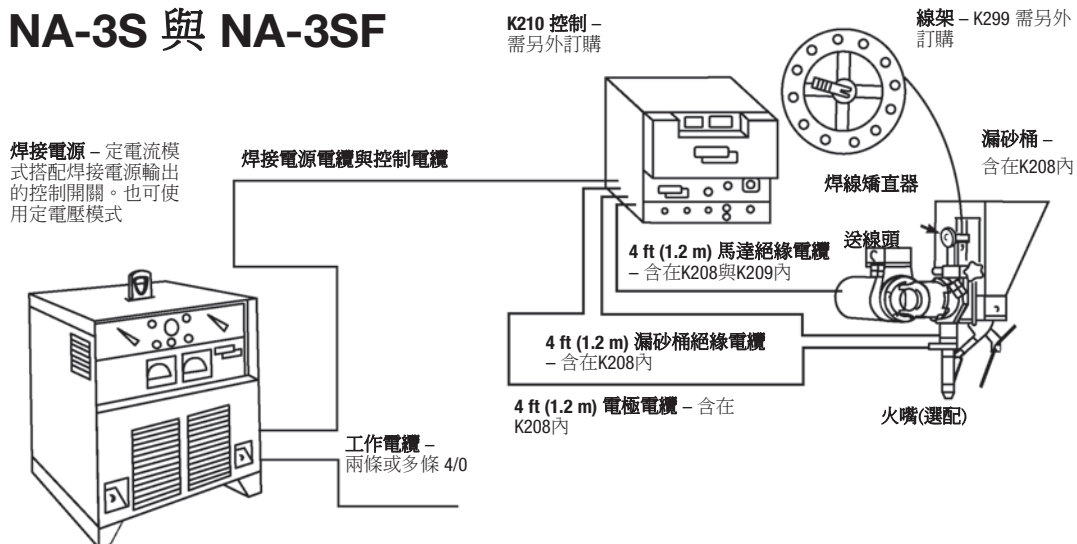
使用定電流的AC焊接電源進行潛弧焊接，搭配熱或冷啟動來傳遞電弧感應控制  
適用於以下焊接應用:

- AC-AC 雙極與 AC-AC-AC 三極系統
- DC焊接電源與移行速度會受到弧吹影響的單焊線潛弧焊

系統配置

AC 輸入電源的送線馬達與控制箱需為115 (110)伏特, 360伏安功率,60或50赫茲。林肯移行小車需要額外的250伏安，其他移行機構可能會需要更大伏安。此電源由焊接電源提供。

**NA-3S 與 NA-3SF**





**單焊線**

**潛弧焊用火嘴**

5/64至3/16 in. (2.0至4.8 mm) 線徑用，電流通常不超過600A。外部焊藥錐以能夠完整覆蓋焊道的最小量送料  
訂購編號 K231-1



**Innershield® 正極火嘴組件**

使用Innershield® 包藥焊線以高電流焊接。如使用超過600A，建議額外訂購水冷附件(T12928)  
訂購編號  
K148A 用於 3/32-1/8 in. (2.4-3.2 mm) 線徑  
K148B 用於 5/32-3/16 in. (4.0-4.8 mm) 線徑



**同心焊藥錐**

搭配K148使用，K148搭配K149，或K129火嘴。於焊線周圍提供同心的焊藥覆蓋  
訂購編號 K285



**窄縫深開槽用火嘴**

水冷潛弧焊火嘴，開槽深度介於5/8 in. (15.9 mm) 至10 in. (254 mm) 間。含焊藥送料管，焊藥軟管與可旋轉火嘴的架子，及兩顆火嘴  
訂購編號 K386



**接觸鉗口組件**

堅固的接觸鉗口可電流超過600A時延長壽命。適用於1/8 in.至7/32 in. (3.2 至 5.6 mm) 線徑  
訂購編號 K226R



**延長火嘴**

K148A或K148B 用的Linc-Fill™附件。需搭配伸長火嘴的焊接技術使用[2 - 5 in. (51-127 mm)]  
訂購編號  
K149-5/32 用於 5/32 in. (4.0 mm) 線徑



**5 in. 延長護套**

將焊線延長5 in. [最大線徑達1/4 in. (6.4 mm)]。僅適用於K231-X  
訂購編號 KP2721-1



**K231火嘴  
訂購編號  
重型**

KP2082-2B1  
5/64 in. (2.0 mm) 線徑用  
KP1962-3B1  
3/32 in. (2.4 mm) 線徑用  
KP1962-1B1  
1/8 in. (3.2 mm) 線徑用  
KP1962-4B1  
5/32 in. (4.0 mm) 線徑用  
KP1962-2B1  
3/16 in. (4.8 mm) 線徑用  
KP1962-5B1  
7/32 in. (5.6 mm) 線徑用



**延長使用年限**

KP3162-3B1  
3/32 in. (2.4 mm) 線徑用  
KP3162-1B1  
1/8 in. (3.2 mm) 線徑用  
KP3162-4B1  
5/32 in. (4.0 mm) 線徑用  
KP3162-2B1  
3/16 in. (4.8 mm) 線徑用  
KP3162-5B1  
7/32 in. (5.6 mm) 線徑用

**一般選配**

**啟動控制電路板**

調整NA-3S的啟動電流與電壓，及NA-4的電壓的可設定時間如所需來控制滲透、焊道尺寸或其他要素  
訂購編號 K221



**收弧控制電路板**

調整NA-3S結束時的電流與電壓，及NA-4電壓的可設定時間如所需來控制焊道尺寸或收弧  
訂購編號 K245



**送線頭水平調整器**

可以曲柄調整送線頭位置。水平移行距離為2 in. (51 mm)  
訂購編號 K96



**垂直升降調整器**

提供4 in. (102 mm) 的手動曲柄進行送線頭的垂直調整。另有3-3/4 in. (95.2 mm) 的水平進出調整，帶有可預設的止動點，以便簡單重複相同的調整  
訂購編號 K29



**TC-3 自推進高功率移行裝置**

可在焊道上以任一方向搬運送線頭。TC-3可自動或手動操作焊接控制。不需更換齒輪即可連續設定並校正送線速度。速度範圍為5至75 ipm (0.1至1.9 m/min)。插入自動控制箱上115 (110) 伏AC電壓，60或50 赫茲的移行插座  
訂購編號 K325HCS

**安裝套件**

將控制箱安裝於TC-3移行小車上  
訂購編號 T14469



**漏砂桶**

潛弧焊用。含焊藥電子閥  
訂購編號 K219



**焊線架**

含50-60 lb. (22.7-27.2 kg) 用線架，安裝座及制動器  
訂購編號 K299



**固態展弧器**

在行程路線上擺動送線頭。Oscillate the head across the line of travel. For hardfacing build-up using a 硬面需使用Twinarc® 或單弧火嘴。校正後的停留時間與擺動速度控制允許展弧器能or single arc nozzle. Calibrated dwell time and oscillation speed controls permit the Spreadarc迅速覆蓋大面積，使焊道表面平順並降低雜質成分。包藥焊線，可使用開放電弧與潛弧焊程序 to cover large areas quickly with smooth beads of minimum admixture. Flux-cored electrode, open arc and submerged arc procedures can be used. 訂購編號 K278-1



**TWINARC®**

**Tiny Twinarc® Contact Assemblies**

Feeds two electrodes for high speed submerged arc welds. Includes contact nozzle, wire guides, drive rolls and guides, and a second wire reel and mounting bracket.  
Order  
K129-1/16  
for 1/16 in. (1.6 mm) wire  
K129-5/64  
for 5/64 in. (2.0 mm) wire  
K129-3/32  
for 3/32 in. (2.4 mm) wire



**Large Wire Twinarc®**

Feeds two 5/64, 3/32, or 1/8 in. (2.0, 2.4, or 3.2 mm) electrodes for high speed submerged arc welding on "Fast Fill" joints or hardfacing beads.  
Order K225



**Tiny Twinarc® Wire Straightener**

Straightens wire diameters .045 in. thru 3/32 in. (1.2 thru 2.4 mm). Particularly valuable on longer electrical stickout procedures. Order K281



**TANDEM ARC**

**Tandem Arc Framework** Provides mountings with desired positioning adjustments for two standard Automatic Wire Feed Heads. Includes insulation and hardware to permit direct mounting to a high capacity TC-3 Carriage, or to the user's gantry or fixture for either direction of travel.  
Order K387



**Tandem Arc Wire Reels**

For mounting two wire reels on TC-3 Travel Carriage.  
Order K390



**Flux Hopper for Tandem Arc**

Flux Hopper for K387 mountings.  
Order K389

## RECOMMENDED ACCESSORIES

### WELD POWER CABLES

Product Number	Description
K2163-35	Lug to Lug, 4/0, 35 ft. (10.7 m) (Two cables per package)
K2163-60	Lug to Lug, 4/0, 60 ft. (18.3 m) (Two cables per package)
K1842-110	Lug to Lug, 4/0, 600A, 60% duty cycle, 110 ft. (33.5 m)



K1797-L Control Cable Extension.



K1798 Control Cable Adapter.

### DRIVE ROLL/GUIDE TUBE KITS

Wire Size in. (mm)	Product Number
3/32 – 7/32 (2.4 – 5.6) 1/16, 5/64, 3/32 (1.6, 2.0, 2.4)	KP1899-1 KP1899-2
.035, .045, .052 (0.9, 1.1, 1.3) .045 – .052 Cored (1.1 – 1.3)	KP1899-3 KP1899-4

### CONTROL CABLE, EXTENSIONS AND ADAPTERS

Product Number	Description
K1820-10	Control Cable Female 9 pin to Male 14 pin, 10 ft. (3.1 m)
K1797-10*	Control Cable Extension, Male 14 pin to female 14 pin, 10 ft. (3.1 m)
K1797-25*	Control Cable Extension, Male 14 pin to female 14 pin, 25 ft. (7.6 m)
K1797-50*	Control Cable Extension, Male 14 pin to female 14 pin, 50 ft. (15.2 m)
K1798	Control Cable Adapter Female 14 pin to terminal strip

\* Requires K1820-10

### PRODUCT SPECIFICATIONS

Product Number	Description	Wire Feed Speed Range ipm (m/min)	Wire Size Range in. (mm)	Gear Ratio
K210-2	NA-3S Contoller	25-650 (0.6-16.5)	.035 – 7/32 (0.9-5.6)	--
K388-2	NA-4 Contoller	Subject to arc voltage used	.035 – 7/32 (0.9-5.6)	--
K208A	NA-3S / NA-4 Head	Subject to arc voltage used	3/32 – 7/32 (2.4-5.6)	142:1
K208B	NA-3S / NA-4 Head	Subject to arc voltage used	.035 – 3/32 (0.9-2.4)	95:1
K209A	NA-3SF / NA-4F Head	Subject to arc voltage used	3/32 – 7/32 (2.4-5.6)	142:1
K209B	NA-3SF / NA-4F Head	Subject to arc voltage used	.035 – 3/32 (0.9-2.4)	95:1

"F" suffix indicates model for machinery and fixture builders. The following parts are excluded: head mounting, electrode cables, cross seam adjuster, flux hopper and pointer.

**For best welding results with Lincoln Electric equipment,  
always use Lincoln Electric consumables. Visit [www.lincolnelectric.com](http://www.lincolnelectric.com) for more details.**

**Manufactured at a facility with certified ISO Quality and Environmental Management Systems.**

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