

BOX

DISCONNECTING BOX

SAFETY INSTRUCTIONS FOR OPERATING AND MAINTENANCE

AS-XP-95240726 - AS-XP-95240727



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Instructions

REF : 8695 5869

Original instructions

LINCOLN[®]
ELECTRIC

Thank you very much for the trust you have shown by choosing this piece of equipment. It will give you trouble-free service if it is used and maintained as recommended.

Its design, component specifications and manufacturing are in accordance with applicable European directives.

Please refer to the CE declaration enclosed to identify the directives applicable to it.

The manufacturer shall not be liable for any combination of parts not recommended by it.

For your safety, please follow the non-limitative list of recommendations and obligations, a large part of which are included in the Labour Code.

Please inform your supplier if you find any error in this instruction manual.

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INFORMATION

DISPLAYS AND PRESSURE GAUGES

Measurement instruments or displays of voltage, intensity, speed, accuracy etc. are to be considered as indicators, whether they are analogue or digital.

For operating instructions, adjustments, troubleshooting and spare parts, please refer to the special instructions for safe operating and maintenance.

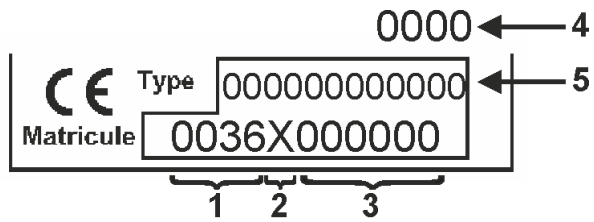
The technical documentation is intended for the following machines/products:

- **1 POWERWAVE disconnecting box**
- **2 POWERWAVE disconnecting box**

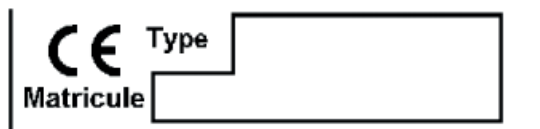
A - IDENTIFICATION

The information below should be provided in all correspondence.

Please note the serial number of your equipment in the box below:



1	Manufacturing plant code	4	Year of manufacture
2	Year of manufacture code	5	Type of product
3	product serial number		



B - SAFETY INSTRUCTIONS



For general safety instructions, please refer to the specific manual supplied with the equipment.



AIRBORNE NOISE:

Refer to the special instructions 8695 7051 supplied with the equipment.

1 - Particular safety instructions

Disconnecting boxes are devices with high electrical power ratings, and must therefore be used with extreme precaution. Avoid direct contact with the components of the box.



Before working on the machinery located after the box, make sure you set the disconnecting switch to the 0 position and padlock the handle.



CAUTION when the handle is on the 0 position!!!!
Voltage is still present at the upstream terminals of the disconnecting switch.



The use of Personal Protective Equipment (PPE) is **mandatory**.



Any work on the box must be carried out by approved personnel. The emergency stop does not shut down the power feeders from the box.



The box is supplied with 400V power. Risk of electric shock or electrocution. It is locked with a removable key.
After the work, lock the box once again before switching on the power.

1 - Description

For compliance with European safety standards, welding equipment must be connected to the electricity supply via a wall-mounted cabinet with an individual protective disconnecter with appropriate rating and breaking power.

For compliance with those standards, we have designed disconnecting boxes that can be adapted to all welding equipment.

This disconnecting box has the following functions:

- electrically separating each of the elements from the customer's supply system.
 - The **LINC-MATIC CB LM-LF** boom
 - The **POWERWAVE® AC/DC 1000® SD** welding power source or sources
 - The (**ROTAMATIC, POSIMATIC, etc**) positioning equipment
- protecting each of these elements from short circuits.



2 - Available boxes

The part number of the box depends on the number of power sources installed on the **LINC-MATIC CB**.

Number of power sources POWERWAVE® AC/DC 1000® SD	Box part number
1	AS-XP-95240726
2	AS-XP-95240727

3 - Composition of boxes

Number of power sources	Power supply LINC-MATIC CB FU2	Power supply Power source 1 FU3	Power supply Power source 2 FU2	Power supply Positioning device 1 FU7	Power supply Positioning device 2 FU8
1	X	X		X	X
2	X	X	X	X	X

1 - Installation conditions

The box must necessarily be mounted on a wall near the protected equipment. The customer must provide a means to support and protect cables from mechanical, chemical or thermal damage, from the box up to the point of use in the installation

You can handle the box using the slinging eyes placed in the holes provided.

The section and protection of the power cable and the power earth wire of the box (customer supply) must be suitable for the box power rating. However, the section and protection may be modified depending on applicable standards.

Le câble d'alimentation et le fil de terre d'alimentation du coffret (fourniture du client) devra avoir une section et une protection correspondante à la puissance du coffret. Néanmoins, cette section et protection peuvent être modifiées en fonction des normes en vigueur.

You may fix the box with 4 **M8** screws.

Part number	Weight Dimensions Fastening centre distances
<p>AS-XP-95240726 AS-XP-95240727</p>	



Operator protection:
Helmet - Gloves - Safety shoes

2 - Connection

The references in the table below match those of the electrical diagram and the markings on the box components.

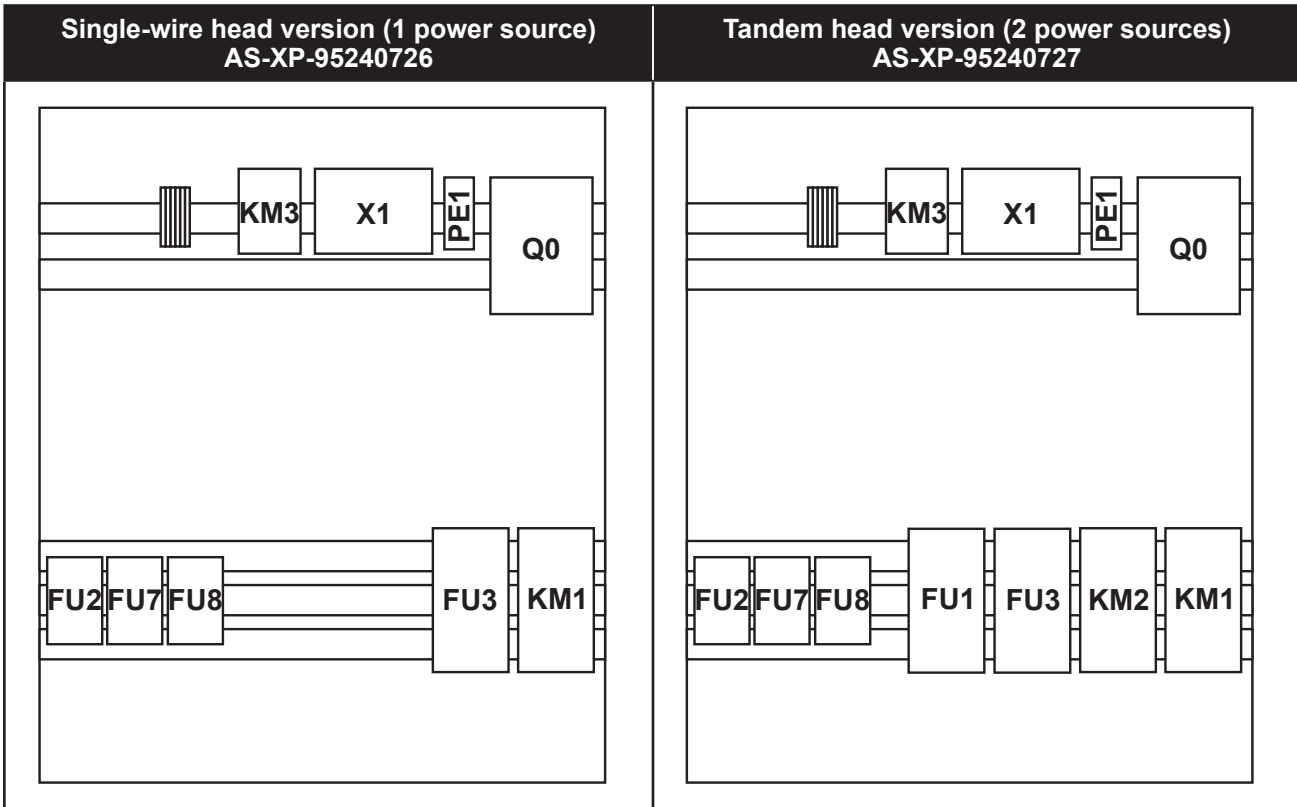


See electrical diagrams:

- 95240726 optional disconnecting box, single-wire head version (1 power source)
- 95240727 optional disconnecting box, tandem head version (2 power sources)



Only authorised personnel may access electrical cabinets, which must have locking systems.



• **Customer cable connection:**

Connect the 3 phases to **Q0**
Connect the earth to **PE1**

• **Machine connection:**

The power supply cable is to be connected to the lower terminals of the fuse holders **FU2** (put fuses appropriate for the machine into the fuse holders).

• **Connection to the power source or sources:**

The power cable is to be connected to the lower terminals of fuse holders:

FU3 for the first power source

FU8 for the second power source

Put fuses appropriate for the machine into the fuse holders.

• **Connection of positioning equipment:**

The power cable is to be connected to the lower terminals of fuse holders:

FU7 for the first device

FU1 for the second device

Put fuses appropriate for the device into the fuse holders.



All the earth conductors must be connected to the earth bar.

3 - Choice of box power supply

The power supply cable (optional) is not supplied with the disconnecting box.

To determine the box power cable, you need to define the maximum intensity consumed by your box by adding up the basic consumption by the box (10A) and consumption by the optional equipment. The choice is then made in the following table.

Example:

- Basic consumption of the machine power supply box \approx 10A
- Consumption by a power source (case of **POWERWAVE® AC/DC 1000® SD**) \approx 100A
- Consumption by a positioning device \approx 6A

Total intensity consumed 116A

Based on the table below, take a 4x25mm² cable

Intensity	110A	116A	122A	210A	216A	222A
Dimensions	4 x 25mm ²	4 x 25mm ²	4 x 25mm ²	4 x 1x50mm ²	4 x 1x50mm ²	4 x 1x50mm ²
Part number	PC5511921	PC5511921	PC5511921	PC5519003	PC5519003	PC5519003



Important: the stated sections are designed for a maximum length of 20 metres. For longer lengths, please enquire with a qualified electrician.

4 - Fuse ratings



The boxes are powered with 400V.

Reference	Fuse rating
FU1	100A 22x58 aM
FU2	10A 10x38 aM
FU3	100A 22x58 aM
FU7	6A 10x38 aM
FU8	6A 10x38 aM



Q0	Position 1	Disconnecting box powered up
	Position 0	Disconnecting box powered down

1 - Care

For a long and trouble-free life, the machine requires a minimum level of care and maintenance.

The frequency of such maintenance is indicated for production in one work shift per day. For higher production rates, increase the maintenance frequencies accordingly.

Your maintenance department could photocopy these pages to track maintenance frequencies and times and the operations completed (tick the appropriate box).



Before working on the machine, it is **MANDATORY** to lock out all the supplies of utilities to the machine (electricity, air, gas etc.). Locking an emergency stop button is not sufficient.

2 - Maintenance schedule

Sub-assembly	Component	Type of inspection	Action	Frequency			Time (in hours)			Step
				1 month	6 months	1 year	200	2500	6000	
Electrical cabinet	Electrical contact	Visual	Clamping		X					A

Step	Operation	OK	NOK
A	<i>Electrical contact</i>	✓	X
	Tighten all the electrical contacts		

3 - Troubleshooting



Before any work inside the box, set the disconnecting switch to the 0 position and padlock the handle.

Problem	Cause	Solution
One or more elements in the installation are not powered	The handle of the disconnecting switch is on 0.	Set the handle of the disconnecting switch to 1
	The fuses protecting the relevant elements have blown	Replace the relevant fuses
The POWERWAVE® AC/DC 1000® SD power source is not supplied with power	The power source contactor is not powered	Check the power supply of the switch
	The switch has failed	Replace the switch

4 - Spare parts

Ordering procedure:

Almost all the parts of a machine or installation are referenced in the photographs and sketches.

The descriptive tables contain three types of item:

- items normally held in stock: ✓
- items not held in stock: ✗
- articles upon request: no reference

(For such parts, please complete the list of parts page and send us a copy. In the Order column, state the number of parts required and indicate the type and number of your equipment.)


For items referenced in the photographs or sketches but not included in the tables, please send us a copy of the relevant page and highlight the relevant reference.

Example:

✓	normally held in stock.
✗	not in stock
	upon request.

Ref.	Part no	Stock	Order	Description
E1	W000XXXXXX	✓		Machine interface board
G2	W000XXXXXX	✗		Flow meter
A3	P9357XXXX			Printed front plates


- While ordering parts, please indicate the quantity and note the number of your machine in the box above.

 Type <input type="text"/> Matricule <input type="text"/>	→	TYPE:
	→	Number:

✓	normally held in stock.
✗	not in stock
	upon request.

Ref.	Part no	Stock	Order	Description
Q0	PC5702566			Disconnecting switch 3x160A (manufacturer part no 26053017)
KM1	PC5701095			Contacteur (manufacturer part no LC1D95BD)
KM2	PC5701095			Contacteur (manufacturer part no LC1D95BD)
KM3	PC5701731			Contacteur (manufacturer part no LC1D25BD)
FU1	PC5705156			3x 22x58 fuse holder (manufacturer part no E331135)
	PC5705188			Fuse 22X58 - 100A - aM
FU2	PC5705157			3x 10x38 fuse holder (manufacturer part no E1062696)
	PC5705038			Fuse 10x38 - 10A - aM
FU3	PC5705156			3x 22x58 fuse holder (manufacturer part no E331135)
	PC5705188			Fuse 22X58 - 100A - aM
FU7	PC5705157			3x 10x38 fuse holder (manufacturer part no E1062696)
	PC5705037			Fuse 10x38 - 6A - aM
FU8	PC5705157			3x 10x38 fuse holder (manufacturer part no E1062696)
	PC5705037			Fuse 10x38 - 6A - aM

- While ordering parts, please indicate the quantity and note the number of your machine in the box above.

 Type <input type="text"/> Matricule <input type="text"/>	TYPE:
	Number:

The references in the table above-mentioned match those of the electrical diagram and the markings on the box components.

