

Instruction Manual

PVEK Valves Electrical Service Kit

Description	Item Number
Electrical Service Kit PV10/16EK, 110 V	C41101805
Electrical Service Kit PV10/16EK, 240 V	C41101806
Electrical Service Kit PV25EK, 110 V	C41301805
Electrical Service Kit PV25EK, 240 V	C41301806
Electrical Service Kit PV40EK, 110 V	C41401805
Electrical Service Kit PV40EK, 240 V	C41401806



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For return of equipment, complete the HS Forms at the end of this manual.

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Associated publications

Publication title	Publication number
Vacuum pump and vacuum system safety	P400-40-100

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Contents

1 Introduction

1.1 Scope and definitions

This manual provides installation instructions for the replacement of the printed circuit assembly in the Edwards range of PVEK valves. You must follow the instructions specified in this manual.

Read this manual before you attempt to install the printed circuit assembly. Important safety information is highlighted as **WARNING** and **CAUTION** instructions; you must obey these instructions. The use of **WARNINGS** and **CAUTIONS** is defined below.



WARNING

Warnings are given where failure to observe the instruction could result in injury or death to people.

CAUTION

Cautions are given where failure to observe the instruction could result in damage to the equipment, associated equipment and process

The units used throughout this manual conform to the SI international system of units of measurement.

1.2 Tools and equipment

- Pozidrive screwdriver
- Earth continuity tester
- Flash tester.

1.3 Replace the printed circuit assembly



WARNING

Replacement of the printed circuit assembly should only be performed by a service engineer or a suitably trained and supervised technician.



WARNING

Do not remove the yellow-green earth wire attached to the valve body. This is required for safety purposes.

Refer to Figure 1 for item numbers in brackets.

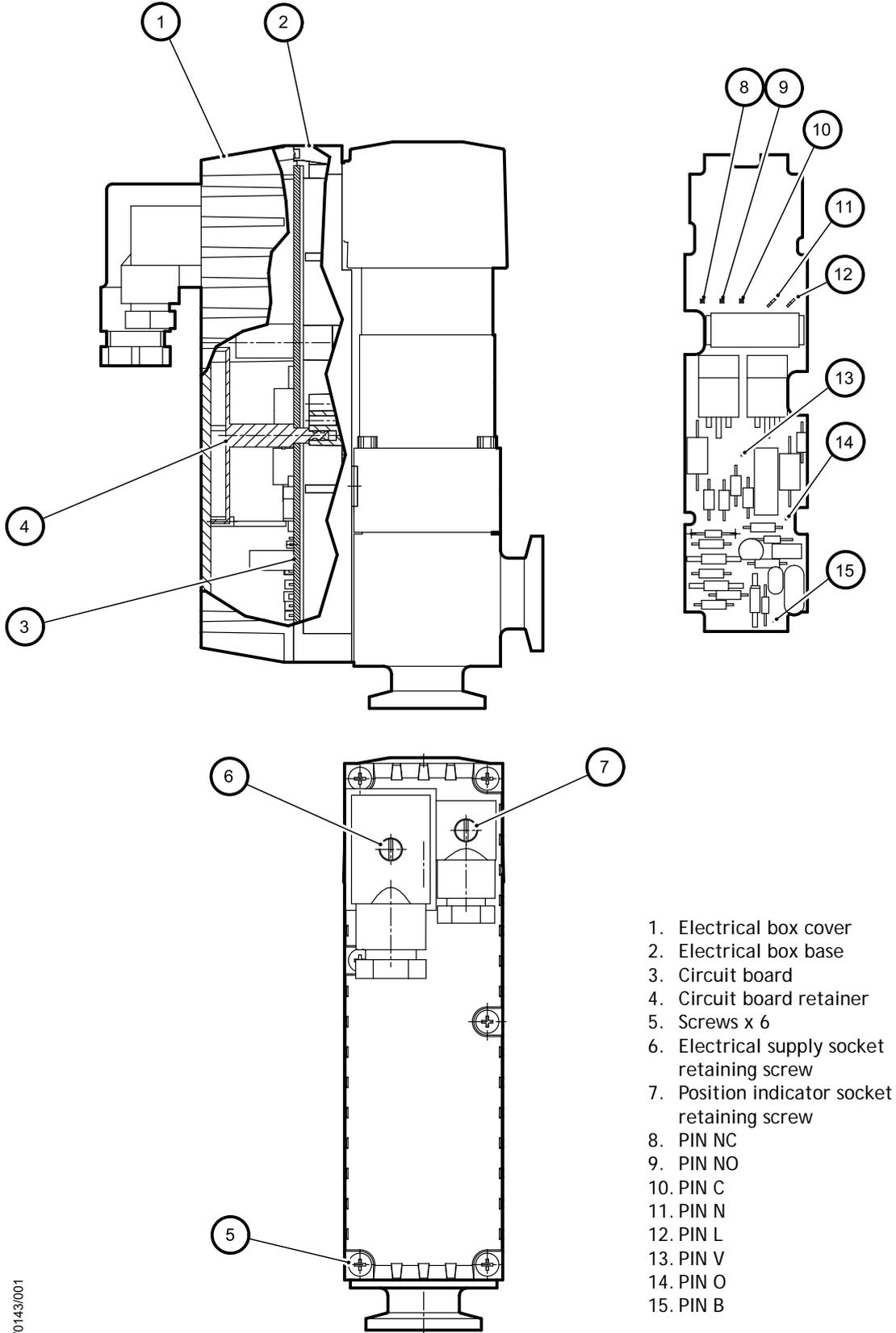
1. Isolate the valve from the electrical supply.
2. Undo the six screws (5) and remove the electrical box cover (1).
3. Pull out the circuit board retainer (4).
4. Remove the wires from the circuit board and dispose of the old circuit board according to Section 1.4.
5. Pass the three coil wires upwards from under the replacement circuit board through the cut-out to the right of pin 'O' and connect the coil wires to the correct pins on the circuit board:

- Connect the violet wire to the pin 'V' in the centre of the circuit board.
 - Connect the black wire to the pin 'B' in the end of the circuit board.
 - Connect the orange wire to the pin 'O' in the side of the circuit board.
6. Insert the circuit board in the electrical box base (2); ensure that you do not trap the coil wires. Route the yellow-green earth (ground) wire out of the box, through the cut-out in the end of the circuit board above pins NC, NO, C, N and L.
 7. Fit the signal wires and internal electrical supply wires from the electrical box cover (1) to the circuit board (3).
 - Fit the yellow wire to pin 'NO'
 - Fit the white wire to pin 'NC'
 - Fit the black wire to pin 'C'
 - Fit the brown wire to pin 'L'
 - Fit the blue wire to pin 'N'
 8. Fit the electrical box cover (1); ensure that you do not trap the wires between the electrical box cover and the electrical box base (2). Fit the six screws (5) to secure the electrical box cover in place.
 9. Test the earth (ground) continuity of the assembled valve; the continuity between the cable earth (ground) and the valve body must be less than 0.1 W.
 10. Flash test to 2.5 kV d.c. the following items:
 - Six screws (5) which secure the electrical box cover (1) to the electrical box base (2) to ensure no wires have become trapped.
 - The three terminals to the position indicator.
 - The electrical supply socket retaining screw (6).
 - The position indicator socket retaining screw (7).

1.4 Disposal

Dispose of the printed circuit assembly in accordance with all local and national safety and environmental requirements.

Figure 1 - Printed circuit assembly



- 1. Electrical box cover
- 2. Electrical box base
- 3. Circuit board
- 4. Circuit board retainer
- 5. Screws x 6
- 6. Electrical supply socket retaining screw
- 7. Position indicator socket retaining screw
- 8. PIN NC
- 9. PIN NO
- 10. PIN C
- 11. PIN N
- 12. PIN L
- 13. PIN V
- 14. PIN O
- 15. PIN B

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Introduction

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Return the equipment or components for service

Before you send your equipment to us for service or for any other reason, you must send us a completed Declaration of Contamination of Vacuum Equipment and Components - Form HS2. The HS2 form tells us if any substances found in the equipment are hazardous, which is important for the safety of our employees and all other people involved in the service of your equipment. The hazard information also lets us select the correct procedures to service your equipment.

We provide instructions for completing the form in the Declaration of Contamination of Vacuum equipment and Components - Procedure HS1.

If you are returning a vacuum pump, note the following:

- If a pump is configured to suit the application, make a record of the configuration before returning the pump. All replacement pumps will be supplied with default factory settings.
- Do not return a pump with accessories fitted. Remove all accessories and retain them for future use.
- The instruction in the returns procedure to drain all fluids does not apply to the lubricant in pump oil reservoirs.

Download the latest documents from www.edwardsvacuum.com/HSForms/, follow the procedure in HS1, fill in the electronic HS2 form, print it, sign it, and return the signed copy to Edwards.

Note: *If we do not receive a completed HS2 form, we will not accept the return of the equipment.*

