Backing Pump Relay Boxes

Article number  PM 041 937 -A  
              PM 041 938 -T
1. Safety Instructions

Read and follow all instructions in this manual.

Inform yourself regarding:
- Hazards which can be caused by the unit;
- Hazards which can be caused by your system.

Observe the safety and accident prevention regulations.

Regularly check that all accident prevention measures are being complied with.

Take account of the ambient conditions when installing the relay boxes. The protection type is IP 65. The necessary measures must be taken if installation in an environment which requires other protection types.

Do not carry out any unauthorised conversions or alterations to the relay boxes.

Disconnect from mains power when working on the relay box.

1.1. For Your Orientation

Instruction in the text
➡ Working instruction: here, you have to do something.

Symbols used

- High vacuum flange
- Fore-vacuum flange

Position numbers
The same pump and accessory parts have the same position numbers in all illustrations.

1.2. Pictogram Definitions

Danger of damage to the pump or to the system

Danger of an electric shock.

Attention to particularly important information on the product, handling the product or to a particular part of the documentation.
2. Understanding The Relay Box

2.1. Main Features

Relay Box PM 041 937 -AT
The relay box with semiconductor relay PM 041 937 -AT is provided for intermittent operations on diaphragm vacuum pumps (MVP 015; MZ 2T; MD 4T).
The maximum relay contact load is 5 A.
The connection of mains voltage, single phase of 90 - 265 V is possible.

Relay Box PM 041 937 -AT (5 A)
20 Relay box, backing pump  
20a Control lead relay box/TC 600 or TCS 010  
20b Connection backing pump, PG 9  
20c Mains power input, PG 11

Relay Box PM 041 938 -T
The relay box with mechanical relay PM 041 938 -T is provided for the operation of larger vacuum backing pumps.
The maximum relay contact load is 20 A.
The connection of mains voltage, single phase of 90 - 265 V is possible.

Relay Box PM 041 938 -T (20 A)
20 Relay box, backing pump  
20a Control lead relay box/TC 600 or TCS 010  
20b Connection backing pump, PG 9  
20c Mains power input, PG 11

The customer is responsible for mains power supply and for the connection to the backing pump.

Proper Use
– The relay box may only be used to control a vacuum backing pump to PFEIFFER turbomolecular pumps with the integrated Electronic Drive Unit TC 600 and TC 100 with TCS 010.

Improper Use
Certain types of use are regarded as improper, e.g.:
– Using the relay box where contact loads are too high.
– The connection of a mains power voltage other than those shown above.

Improper use will cause any rights regarding liability and guarantees to be forfeited.
### 3. Installation

The electrical connections must be carried out in accordance with local regulations and by professionally qualified persons. During installation ensure that the mains connection plug is disconnected.

- Unscrew the cover on the relay box.
- Execute the wiring of the mains power connection and the backing pump in accordance with the following illustrations and connection plans.
- Close the relay box.

**CAUTION**

Take account of the maximum loadability and mains voltage range of the relay box.

**DANGER**

**Connection, Relay Box PM 041 937 -AT**

- 20a Control lead, relay box/TC 600 or TCS 010
- 20b Connection, backing pump
- 20c Mains power input

**Connection plan for PM 041 937 -AT (5 A)**

![Connection Plan PM 041 937 -AT](image)

- TC 600: Plug the control lead 20a into the connection “FV PUMP” of the TC 600 on the turbopump.
- TC 100: Plug the control lead 20a into the connection “Out1” or “Out2” of the TCS 010. The outputs should be configured in accordance with Operating Instructions PM 800 547 BN “Pumping Operations With The DCU”, Section 3.19.
- Connect the mains power cable to mains voltage.

**Connection, Relay Box PM 041 938 -T**

- 20b Connection, backing pump
- 20c Mains power input

**Connection plan for PM 041 938 -T (20 A)**

![Connection Plan PM 041 938 -T](image)
Connecting the backing pump to the turbopump with TC 600

1 High vacuum flange
2 Fore-vacuum flange
8 Electronic Drive Unit TC 600
20 Relay box, backing pump
20a Control lead relay box/TC 600
20b Connecting cable backing pump
20c Mains power cable
21 Backing pump
22 Intake line

Connecting the backing pump to the turbopump with TC 600

1 High vacuum flange
2 Fore-vacuum flange
8 Electronic Drive Unit TC 600
14 Pumping Station Control Unit TCS 010
20 Relay box, backing pump
20a Control lead relay box/TCS 010
20b Connecting cable backing pump
20c Mains power cable
21 Backing pump
22 Intake line

4. Dimensions

PM 041 937 -AT

PM 041 938 -T
Konformitätserklärung im Sinne folgender EU-Richtlinien:

– Elektromagnetische Verträglichkeit 89/336/EWG
– Niederspannung 73/23/EWG

Wir bestätigen Konformität mit der EU-Richtlinie über elektromagnetische Verträglichkeit 89/336/EWG und der EU-Niederspannungsrichtlinie 73/23/EWG.

Die angewandten Richtlinien, harmonisierten Normen, nationalen Normen und Spezifikationen sind unten aufgeführt.

Produkt:

Relaisbox Vorvakuumpumpe

Angewendete Richtlinien, harmonisierten Normen und angewendete, nationale Normen in Sprachen und Spezifikationen:

EN 61010, EN 55011, EN 50081-1, EN 50082-2, IEC 801 1-4, VDE 0843-6

Unterschrift:

Geschäftsführer (W. Dondorf)

Declaration of conformity pursuant to the following EU directives:

– Low Voltage Directive 73/23/EEC


The guidelines, harmonized standards, national standards and specifications which have been applied are listed below.

Product:

Backing pump relay box

Guidelines, harmonised standards, national standards in languages and specifications which have been applied:

EN 61010, EN 55011, EN 50081-1, EN 50082-2, IEC 801 1-4, VDE 0843-6

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