# 1 Pumpengruppe OE 2



**GEFAHR**

**Bei Arbeiten an elektrischen Komponenten:**

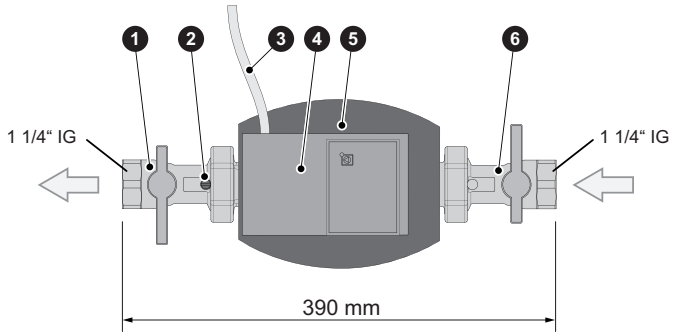
***Lebensgefahr durch Stromschlag!***

Für Arbeiten an elektrischen Komponenten gilt:

- ❒ Arbeiten nur durch eine Elektrofachkraft durchführen lassen
- ❒ Geltende Normen und Vorschriften beachten

  ➥ Arbeiten an elektrischen Komponenten durch Unbefugte ist verboten

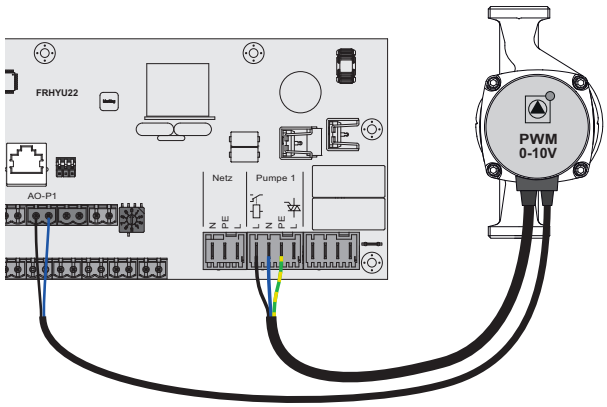
*Übersicht Pumpengruppe OE 2*




| | | | |
|---|---|---|---|
| **1** | Kugelhahn 1 1/4“ IG | **5** | Wärmedämmschale |
| **2** | Rückschlagventil | **6** | Kugelhahn 1 1/4“ IG |
| **3** | 230V-Versorgungskabel<br>3-polig, 3 m<br>PWM-Signalkabel, 3 m | **o.A.** | Flachdichtungen EPDM |
| **4** | Hocheffizienzpumpe | | |

## 1.1 Elektrischer Anschluss

*Anschluss der Hocheffizienzpumpe*



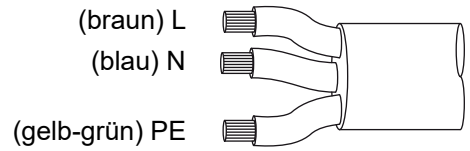
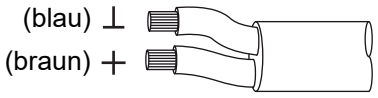

- ❒ Mitgelieferte Kabel an der Pumpe entsprechend der Hersteller-Dokumentation verbinden
- ❒ Spannungsversorgung der Pumpe am jeweiligen Pumpenausgang (im Beispiel „Pumpe 0.1“ am Hydraulikmodul mit Adresse 0) anschließen
- ❒ PWM-Signalkabel am zugehörigen PWM-Ausgang (im Beispiel „AO-P1“) anschließen

  ➥ Auf richtige Belegung (Polung) gemäß Anschlussplan der Pumpe achten!
- ❒ An der Pumpe gemäß Hersteller-Dokumentation die Betriebsart „PWM“ auswählen

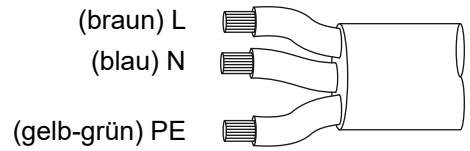
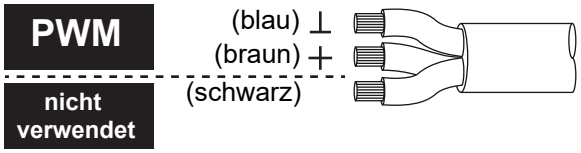
### 1.1.1 Anschlusshinweise nach Pumpentypen

Abhängig vom Pumpentyp wird beim Anschluss zwischen 2-poligem, 3-poligem und 4-poligem Steuerkabel unterschieden. Entsprechend dem eingesetzten Pumpentyp sind bei der Verkabelung folgende Anschlusshinweise zu beachten:

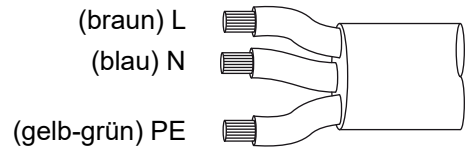
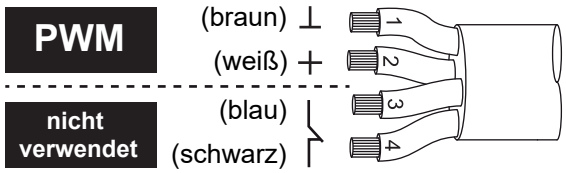
*Pumpentyp mit 2-poligem Steuerkabel*

| Spannungsversorgung | Steuerkabel 2-polig |
|---|---|
|  |  |
| Spannungsversorgung am Pumpenausgang der Platine verkabeln | Steuerkabel am PWM-Ausgang der Platine anschließen, dabei auf korrekte Polung achten:<br>- blauer Draht an Masse<br>- brauner Draht an Plus |

*Pumpentyp mit 3-poligem Steuerkabel*

| Spannungsversorgung | Steuerkabel 3-polig |
|---|---|
|  |  |
| Spannungsversorgung am Pumpenausgang der Platine verkabeln | Steuerkabel am PWM-Ausgang der Platine anschließen, dabei auf korrekte Polung achten:<br>- blauer Draht an Masse<br>- brauner Draht an Plus<br>Den schwarzen Draht nicht verwenden und ggf. isolieren |

*Pumpentyp mit 4-poligem Steuerkabel*

| Spannungsversorgung | Steuerkabel 4-polig |
|---|---|
|  |  |
| Spannungsversorgung am Pumpenausgang der Platine verkabeln | Steuerkabel am PWM-Ausgang der Platine anschließen, dabei auf korrekte Polung achten:<br>- brauner Draht an Masse<br>- weißer Draht an Plus<br>Die beiden anderen Drähte (blau, schwarz) nicht verwenden und isolieren |

# 1 Pump assembly OE 2



**DANGER**

**When working on electrical components:**

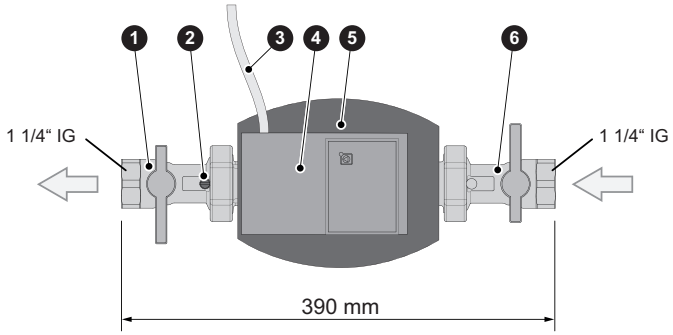
***Risk of electrocution!***

When work is carried out on electrical components:

- ❒ Always have work carried out by a qualified electrician
- ❒ Observe the applicable standards and regulations

  ➥ Work must not be carried out on electrical components by unauthorised persons

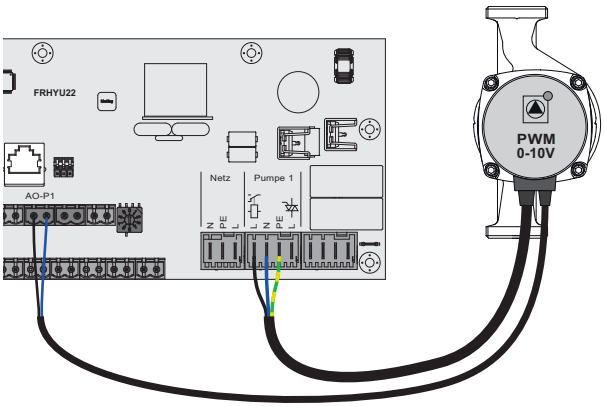
*Pump assembly OE 2 overview*




| | | | |
|---|---|---|---|
| **1** | Ball valve 1 1/4“ IT | **5** | Insulation jacket |
| **2** | Check valve | **6** | Ball valve 1 1/4“ IT |
| **3** | 230 V supply cable<br>3-pin, 3 m<br>PWM signal cable, 3 m | **Not pic-tured** | EPDM flat gasket |
| **4** | High efficiency pump | | |

## 1.1 Electrical connection

*Connecting the high efficiency pump*

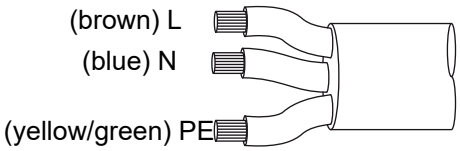
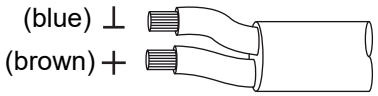



- ❒ Connect the supplied cable to the pump according to the manufacturer's instructions
- ❒ Connect the power supply for the pump to the appropriate pump outlet (in example: "Pump 0.1" on hydraulic module with address 0)
- ❒ Connect the PWM signal cable to the appropriate PWM outlet (in example: "AO-P1")
  - ➥ Make sure that the cables are configured correctly (polarity) in accordance with the connection diagram for the pump.
- ❒ Set the operating mode on the pump to "PWM" according to the manufacturer's documentation.

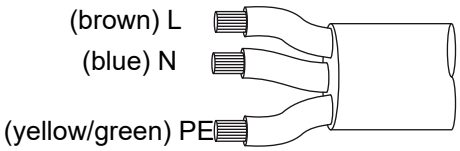
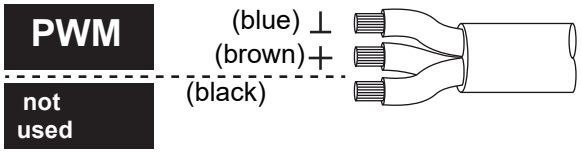
### 1.1.1 Connection information according to pump types

Either a 2-pin, 3-pin, or 4-pin control cable is used for the connection depending on the pump type. Please follow the connection instructions below for the wiring depending on the pump type used:

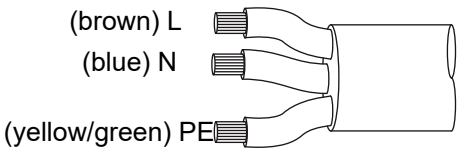
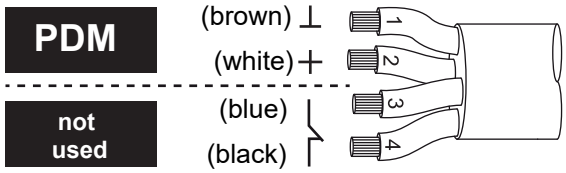
*Pump type with 2-pin control cable*

| Power supply | 2-pin control cable |
|---|---|
|  |  |
| Wire the power supply to the pump outlet on the board | Connect the control cable to the PDM output on the board, making sure that the polarity is correct:<br>- blue wire to earth<br>- brown wire to plus |

*Pump type with 3-pin control cable*

| Power supply | 3-pin control cable |
|---|---|
|  |  |
| Wire the power supply to the pump outlet on the board | Connect the control cable to the PDM output on the board, making sure that the polarity is correct:<br>- blue wire to earth<br>- brown wire to plus<br>Do not use the black wire and insulate if necessary |

*Pump type with 4-pin control cable*

| Power supply | 4-pin control cable |
|---|---|
|  |  |
| Wire the power supply to the pump outlet on the board | Connect the control cable to the PDM output on the board, making sure that the polarity is correct:<br>- brown wire to earth<br>- white wire to plus<br>Do not use the other two wires (blue, black) and insulate |

# 1 Groupe de pompes OE 2



**⚠ DANGER**

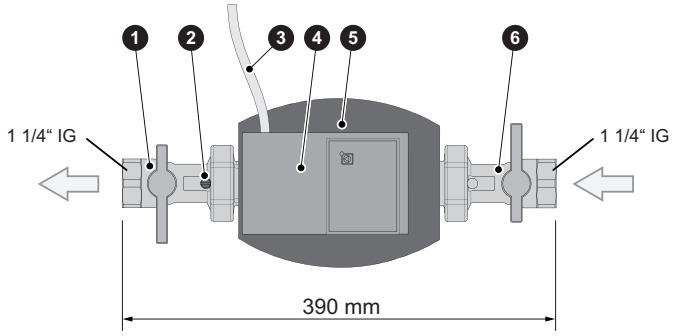
**Lors des interventions sur les composants électriques :**

***Danger de mort par choc électrique !***

Pour toute intervention sur les composants électriques :

- ❒ Les interventions doivent être réalisées uniquement par un personnel spécialisé en électricité
- ❒ Respecter les normes et prescriptions en vigueur.
  - ➥ Les interventions sur les composants électriques par des personnes non autorisées sont interdites

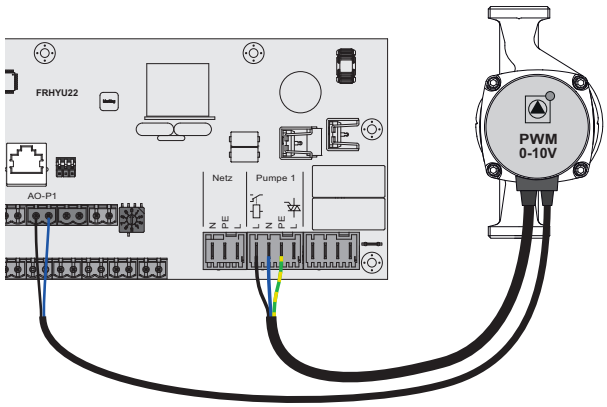
*Vue d'ensemble du groupe de pompes OE 2*




| | | | |
|---|---|---|---|
| **1** | Robinet à bille 1 filetage femelle 1/4“ | **5** | Coque d'isolation thermique |
| **2** | Soupape anti-retour | **6** | Robinet à bille 1 filetage femelle 1/4“ |
| **3** | Câble d'alimentation 230V 3 pôles, 3 m<br>câble de signal PWM, 3 m | **Non représenté** | Joints plats EPDM |
| **4** | Pompe haute performance | | |

## 1.1 Raccordement électrique

*Raccordement de la pompe haute performance*

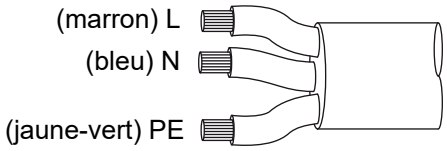
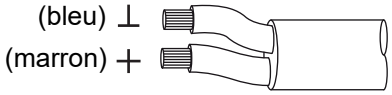



- ❒ Relier les câbles fournis à la pompe, en suivant la documentation du fabricant
- ❒ Raccorder l'alimentation électrique de la pompe sur la sortie de pompe concernée (dans l'exemple « Pompe 0.1 » sur le module hydraulique avec l'adresse 0)
- ❒ Raccorder le câble de signal PWM à la sortie PWM afférente (dans l'exemple « AO-P1 »)
  - ➥ Respecter la polarisation indiquée dans le schéma électrique de la pompe !
- ❒ Sur la pompe, sélectionner le mode de fonctionnement « PWM » conformément à la documentation du fabricant

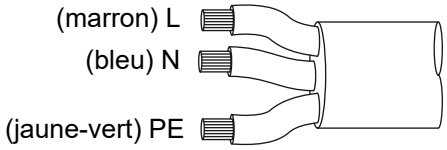
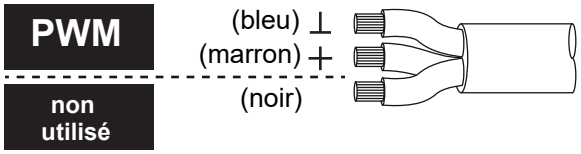
### 1.1.1 Consignes de raccordement selon les types de pompes

En fonction du type de pompe, une différenciation est faite entre le câble de commande à 2 pôles, à 3 pôles et à 4 pôles pour le branchement. Selon le type de pompe utilisé, les consignes de raccordement suivantes doivent être respectées lors du câblage :

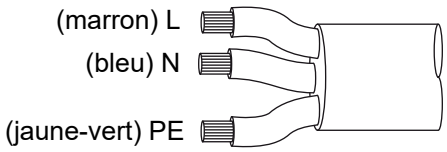
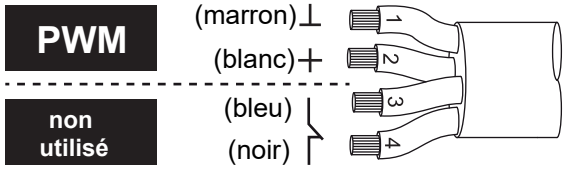
*Type de pompe avec câble de commande à 2 pôles*

| Alimentation électrique | Câble de commande à 2 pôles |
|---|---|
|  |  |
| Câbler l'alimentation électrique à la sortie de pompe de la carte | Raccorder le câble de commande à la sortie PWM de la carte ; pour ce faire, respecter la polarité :<br>- fil bleu à la masse<br>- fil marron à la borne positive |

*Type de pompe avec câble de commande à 3 pôles*

| Alimentation électrique | Câble de commande à 3 pôles |
|---|---|
|  |  |
| Câbler l'alimentation électrique à la sortie de pompe de la carte | Raccorder le câble de commande à la sortie PWM de la carte ; pour ce faire, respecter la polarité :<br>- fil bleu à la masse<br>- fil marron à la borne positive<br>Ne pas utiliser le fil noir et isoler le cas échéant |

*Type de pompe avec câble de commande à 4 pôles*

| Alimentation électrique | Câble de commande à 4 pôles |
|---|---|
|  |  |
| Câbler l'alimentation électrique à la sortie de pompe de la carte | Raccorder le câble de commande à la sortie PWM de la carte ; pour ce faire, respecter la polarité :<br>- fil marron à la masse<br>- fil blanc à la borne positive<br>Ne pas utiliser les deux autres fils (bleu, noir) et les isoler |

# 1 Gruppo pompa OE 2



**⚠ PERICOLO**

**In caso di interventi su componenti elettrici:**

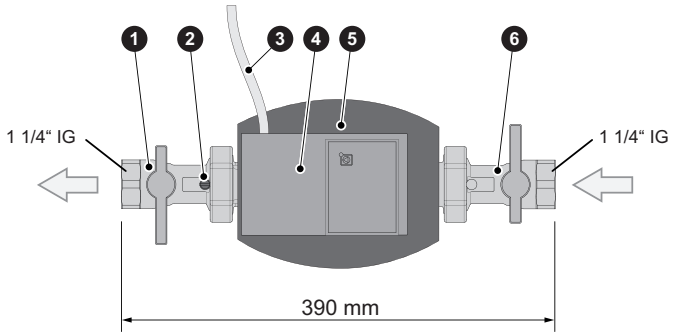
***Pericolo di morte per folgorazione!***

In caso di interventi su componenti elettrici attenersi a quanto segue:

- ❒ Gli interventi devono essere effettuati soltanto da un elettricista
- ❒ Attenersi alle norme e alle prescrizioni vigenti

  ➥ Ai non autorizzati è vietato eseguire interventi sui componenti elettrici

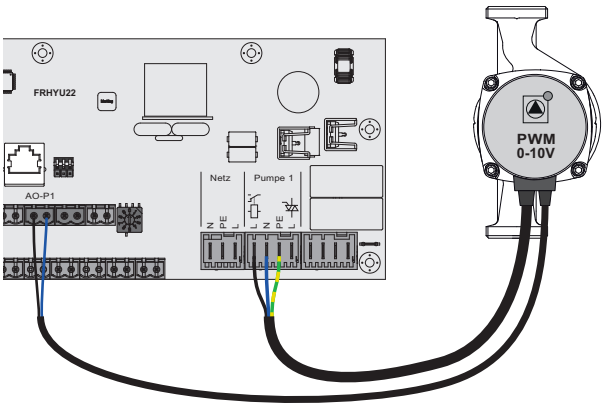
*Vista d'insieme gruppo pompa OE 2*




| | | | |
|---|---|---|---|
| **1** | rubinetto a sfera, filettatura interna 1 1/4" | **5** | isolamento termico |
| **2** | valvola di non ritorno | **6** | rubinetto a sfera, filettatura interna 1 1/4" |
| **3** | cavo di alimentazione 230 V tripolare, 3 m<br>cavo di segnale PWM, 3 m | **non raffigurato** | guarnizioni piatte EPDM |
| **4** | pompa ad alta efficienza | | |

## 1.1 Collegamento elettrico

*Collegamento della pompa ad alta efficienza*

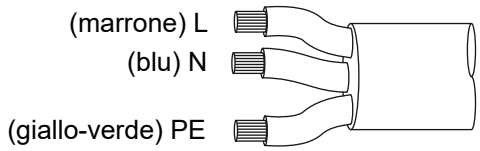
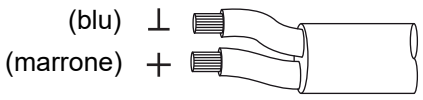



- ❒ Collegare alla pompa i cavi in dotazione secondo la documentazione del produttore
- ❒ Collegare l'alimentazione elettrica della pompa alla rispettiva uscita della pompa (nell'esempio "pompa 0.1" sul modulo idraulico con indirizzo 0)
- ❒ Collegare il cavo di segnale PWM alla relativa uscita PWM (nell'esempio "AO-P1")
  - ➥ Prestare attenzione alla corretta configurazione (polarità) facendo riferimento allo schema elettrico della pompa!
- ❒ Selezionare il modo operativo "PWM" sulla pompa in base alla documentazione del produttore

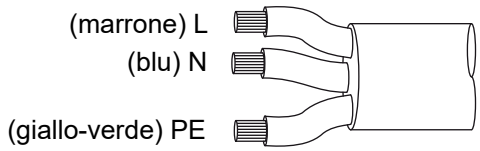
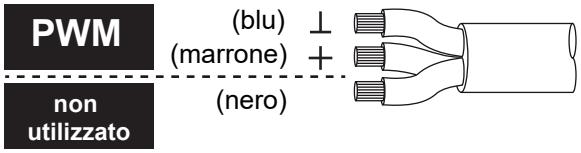
### 1.1.1 Istruzioni di collegamento in base ai tipi di pompa

A seconda del tipo di pompa, per il collegamento i cavi di comando si distinguono in bipolari, tripolari e quadripolari. A seconda del tipo di pompa utilizzato, per il cablaggio attenersi alle seguenti istruzioni di collegamento:

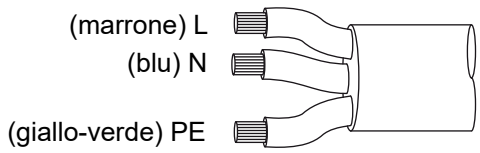
*Tipo di pompa con cavo di comando bipolare*

| alimentazione elettrica | cavo di comando bipolare |
|---|---|
|  |  |
| Cablare l'alimentazione sull'uscita pompa della scheda | Collegare il cavo di comando all'uscita PWM della scheda prestando attenzione alla corretta polarità:<br>- filo blu alla terra<br>- filo marrone al polo positivo |

*Tipo di pompa con cavo di comando tripolare*

| Alimentazione elettrica | Cavo di comando tripolare |
|---|---|
|  |  |
| Cablare l'alimentazione sull'uscita pompa della scheda | Collegare il cavo di comando all'uscita PWM della scheda prestando attenzione alla corretta polarità:<br>- filo blu alla terra<br>- filo marrone al polo positivo<br>Non utilizzare il filo nero ed eventualmente isolarlo |

*Tipo di pompa con cavo di comando quadripolare*

| alimentazione elettrica | cavo di comando quadripolare |
|---|---|
|  |  |
| Cablare l'alimentazione sull'uscita pompa della scheda | Collegare il cavo di comando all'uscita PWM della scheda prestando attenzione alla corretta polarità:<br>- filo marrone alla terra<br>- filo bianco al polo positivo<br>Non utilizzare gli altri due fili (blu, nero) e isolarli |