

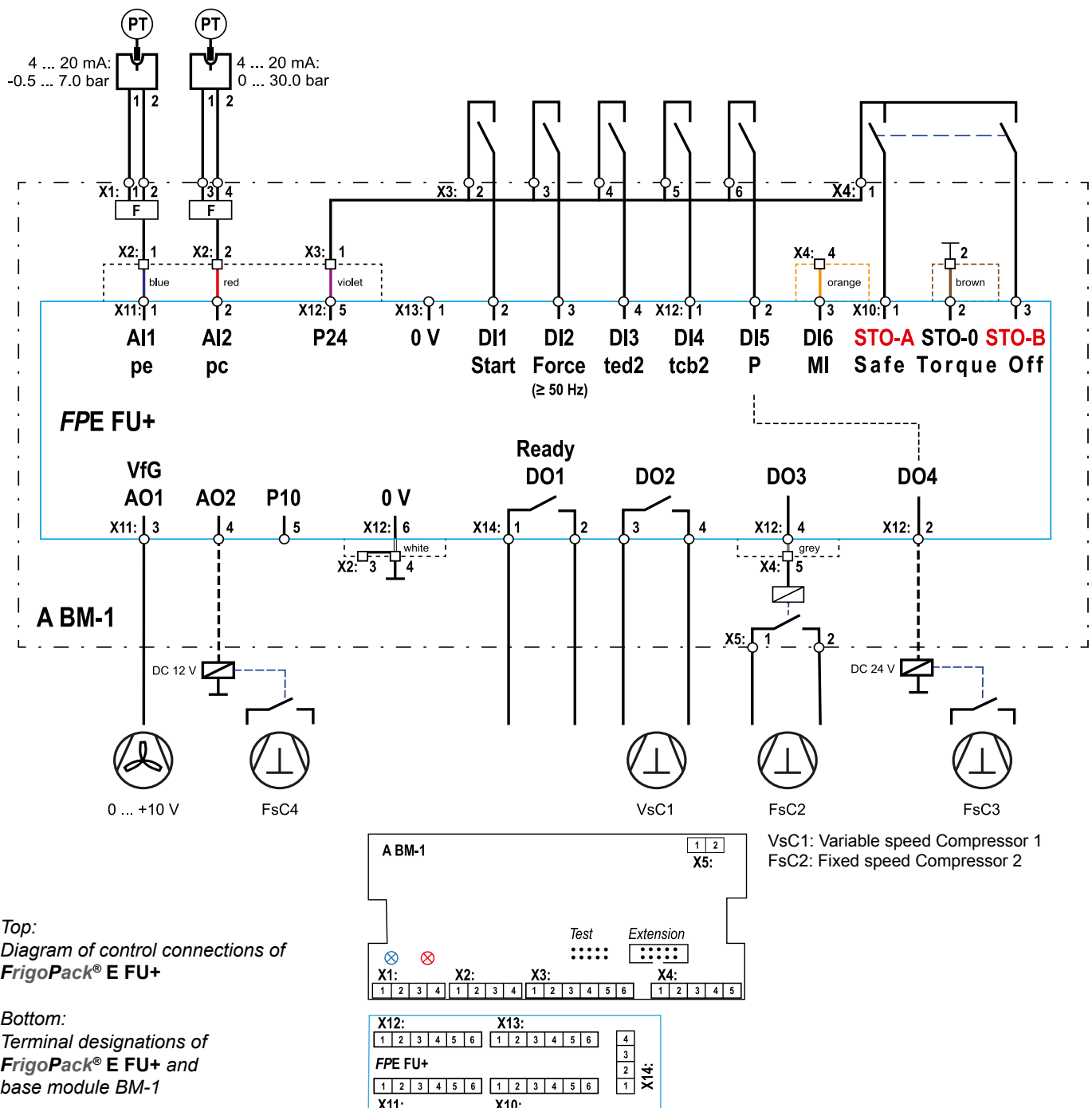
FrigoPack® E FU+/11 Quick-Start Guide (abbr. Version)

Refrigeration Inverters with INTEGRATED PRESSURE CONTROL



Warning: This is an abbreviated and customized version with recommendations for a first setup of this product. Please refer to the document "Planning Guide *FrigoPack® E FU+*" for detailed information.

0. FrigoPack® E FU+ Connections



1. Basic information on first set-up

Ensure that all recommendations for compliance to mounting, electrical safety, EMC and UL regulations have been adhered to.

1.1 Pressure transmitters

Warning: Only use approved pressure transmitters!

This refrigeration application is preset for use with the following **Huba Control** pressure transducers:

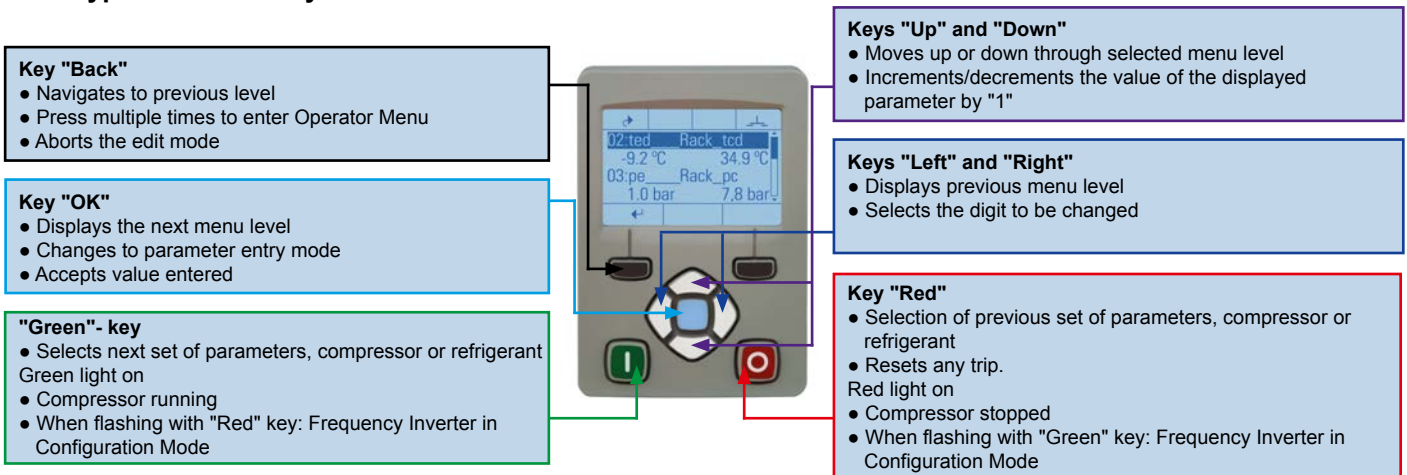
| | |
|--|--|
| Low Pressure pe: -0.5 ... 7.0 bar A REFR-P-TRANSD-LP7+PL | High Pressure pe: 0 ... 30 bar A REFR-P-TRANSD-HP30+PL |
|--|--|

For alternative pressure ranges refer to Parameter Sp0, p. 6 of Planning Guide.

1.2 Recommendations

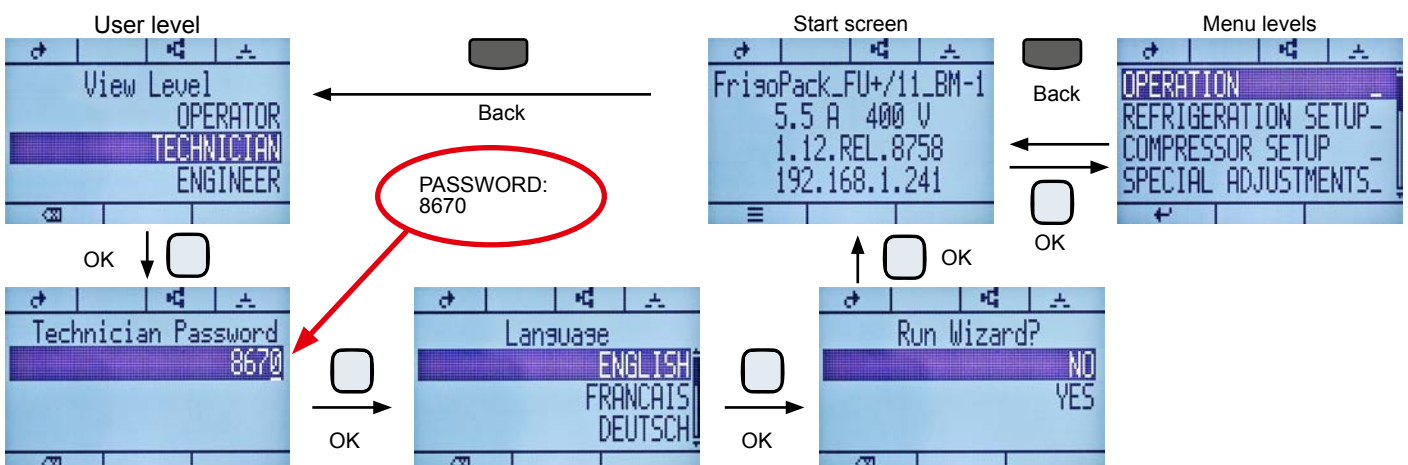
- It is important to ensure that an interlocked safety contactor is fitted between the Refrigeration Inverter and the compressor if a parallel bypass connection is used.
- In particular ensure that two isolated contacts of a safety relay are connected to the Safe-Torque-Off inputs of **FrigoPack® FU+** Refrigeration Inverter: STO-A (Terminal X10:1) / STO-B (Terminal X10:3)
- Remove start command (cable to terminal X13:2)
- Connect main power supply
- Verify that the blue LED for suction pressure lights on module BM-1. If not, then check if the wiring of the pressure transmitter is correct.
- If a discharge pressure transmitter is used, then verify that the red LED lights on module BM-1. If not, then check if the wiring of the pressure transmitter is correct
- Measure the pressures with a refrigeration pressure gauge. Verify that the pressures indicated in menu OPERATI-ON at parameter 03: pe_RACK_pc agree with these external measurements

1.3 Keypad functionality



1.4 Menus – Selection of user level for first set-up

After connection of the power supply the user level **TECHNICIAN** necessary for a first set-up is accessible for **10 minutes**. Please start setting-up now. After this period the inverter will automatically shift to user level **OPERATOR**. The steps shown below have to be followed for first set-up commissioning. Press key "Back" several times to access the menu "View Level". Password for user level **TECHNICIAN**: **8670**.







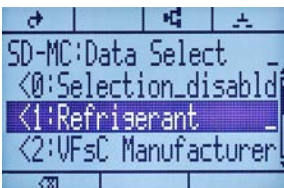

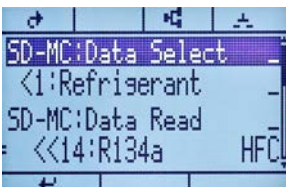


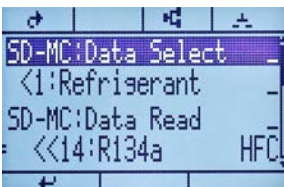





2. First set-up

2.1 Selection of refrigerant and Variable-speed Compressor (VsC)

For setting up this inverter it is first of all necessary to select the refrigerant and Variable-speed Compressor (VsC1) used. Compressor selection is made in several steps (manufacturer, type (e.g. semihermetic piston comp.), number of cylinders, supply voltage, compressor ID).

Warning: Please use keys  and/or  for selection of refrigerant and compressor data from SD card.

| | | | | | |
|---|--|--|---|--|---|
|  | <p>Start screen Line 1: FU+ Features Line 2: INenn, UNenn Line 3: Firmware version Line 4: IP address (optional)</p> | <p>OK </p> |  | <p>Menu level: Selection of submenus Select submenu FIRST SETUP</p> | |
| <p>Go to "FIRST SETUP" </p> |  | <p>Menu First Setup: Selection of refrigerant and Variable-speed Compressor (VsC)</p> | <p>OK </p> |  | <p>Menu levels of SD memory card Currently active: "Selection disabled"</p> |
| <p>Confirm "SD-MC Data Select" </p> |  | <p>Selection of refrigerant: Choose submenu "1:Refrigerant" for selection</p> | <p>Select "1:Refrigerant" </p> |  | <p>Submenu of 44 refrigerants for selection</p> |
| <p>OK </p> |  | <p>WARNING: Do not use arrow keys from here. Use "green" or "red" key for refrigerant selection</p> | <p>Select refrigerant  </p> |  | <p>e.g. R134a Selection of refrigerant completed. Use key "OK" to return to next higher level</p> |
| <p>OK </p> |  | <p>Selection of Variable-speed Compressor Follow sub-menus 2 to 6 for all compressor settings</p> | <p>Select "2:VFSC Manufacturer" </p> |  | <p>Choose compressor manufacturer</p> |

Data selection for setting the Variable-speed compressor (VsC) is also via sub-menus:

- <2:VFSc_Manufacturer
- <3:VFSc_Type
- <4:VFSc_Cylinders
- <5:Supply_Voltage
- <6:VFSc_Compressor

use keys analog to selection of refrigerant

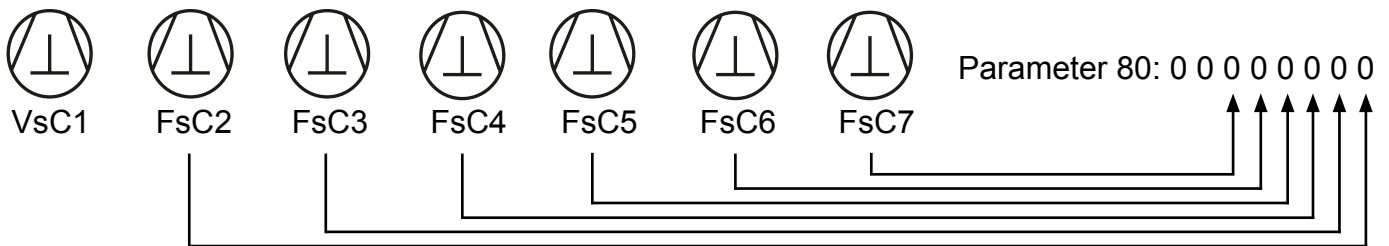
Warning: When all selections are done, sub-menu "0:Selection_disabled" has to be activated. Now you can leave menu "FIRST SETUP" with softkey "Back".

2.2 Setting of number of fixed-speed compressors (FsC) in the rack system

The number of fixed-speed compressors (FsCs) has to be set in the next step. (If there is only one compressor, please skip to 2.3). Go to menu COMPRESSOR SETUP (You may also check VsC settings in this menu.) Go to parameter **80:FsC PRIORITY CNTRL** for setting the number of fixed-speed compressors.



Press key "OK" to enter the parameter input window. Skip to next digit with arrow keys "Left" and "Right". Change value of digit with arrow keys "Up" and "Down". Every digit "1" corresponds to a FsC in the rack system, as shown below. The value of parameter 80 entered has to be confirmed with key "OK".

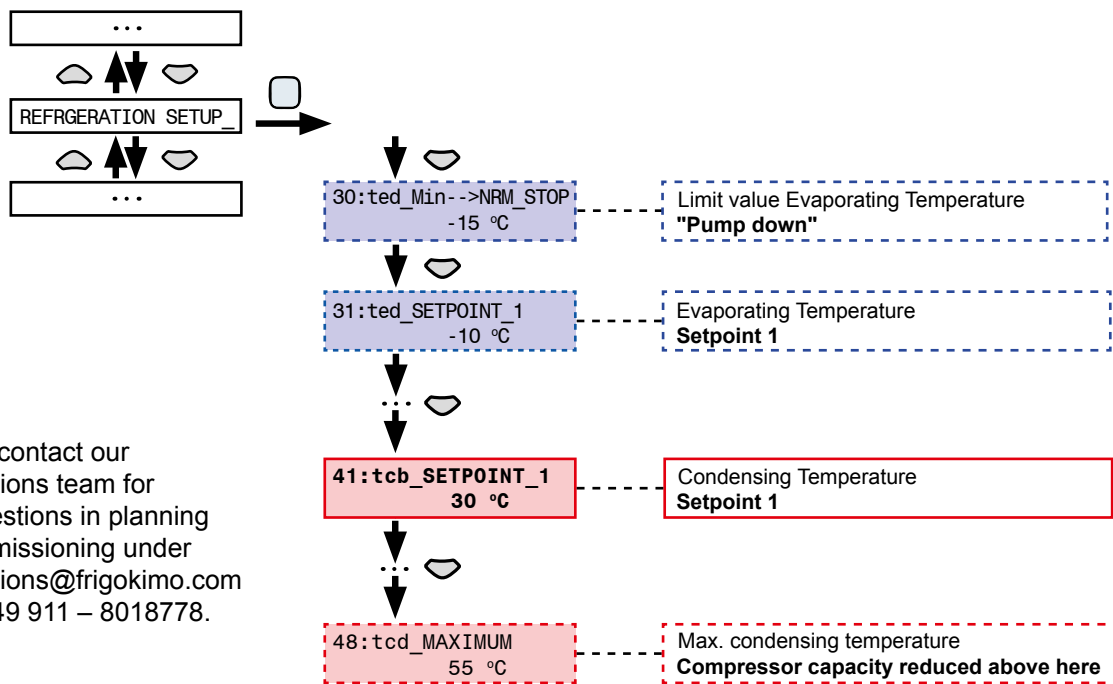


Example: In a rack system with one Variable-speed Compressor (VsC1) and two Fixed-speed Compressors (FsC2 & FsC3) parameter 80 has to be set to: 00000011

Warning: When setting parameter 80, keys "Green" and "Red" are flashing (configuration mode). Please confirm with key "OK" and then press key "Red" shortly to leave configuration mode!

2.3 Entering Setpoints

Select menu "REFRIGERATION SETUP" for entering setpoints. Use keys as described in 2.2 for setting the relevant parameters. Most important parameters are:



Please contact our applications team for any questions in planning or commissioning under applications@frigokimo.com or tel +49 911 – 8018778.

Connect start command (cable to terminal X13:2) to start the system!