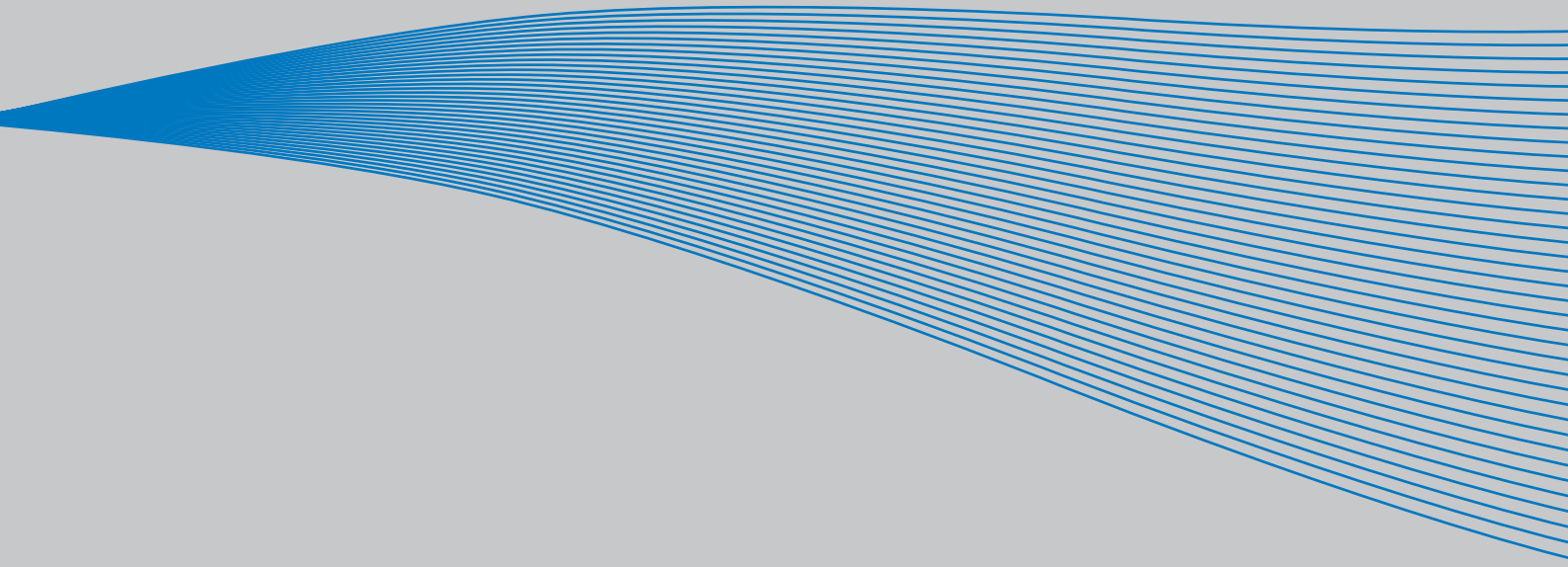
VACON® NX
AC DRIVES

IP54 CONTROL BOX
INSTALLATION INSTRUCTIONS



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1. CONTENTS OF THE DELIVERY

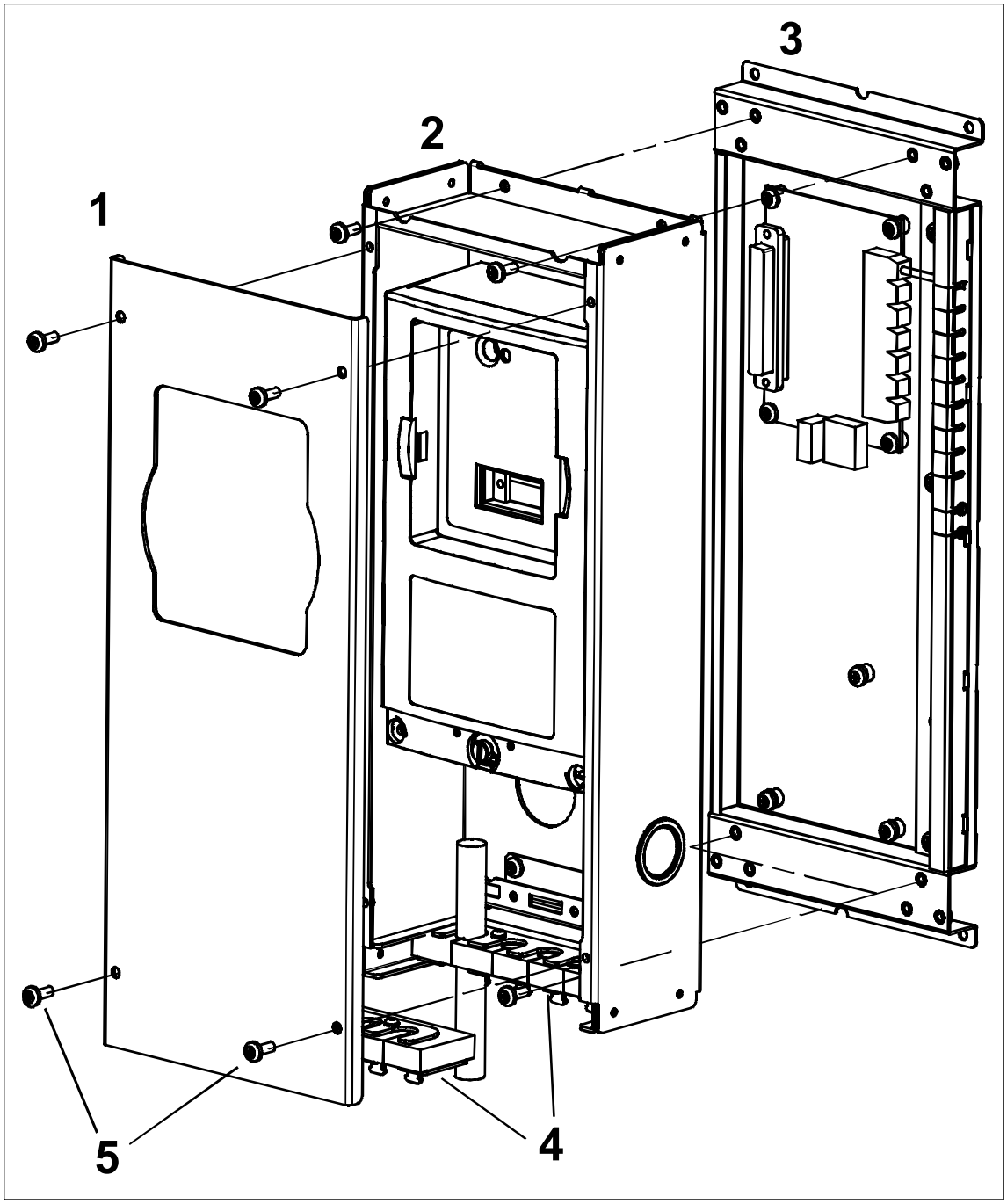

Figure 1. Contents of the IP 54 control box delivery

1 IP54 control box
2 IP54 cable entry grommet plates
3 Grease for the grommet plates
4 Screws (4x10)
5 Plastic pins

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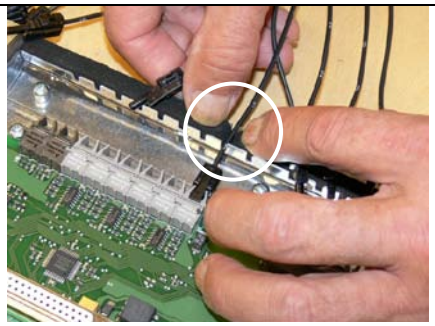
2. INSTALLATION

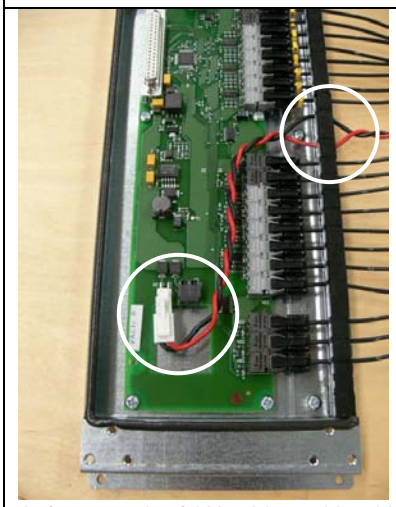
These instructions guide you through the installation of the IP54 control box that you have purchased for your FR12, FR14, FI12, FI14, CH64 or CH74 size frequency converter.

1. IP54 control box bottom plate with starcoupler board



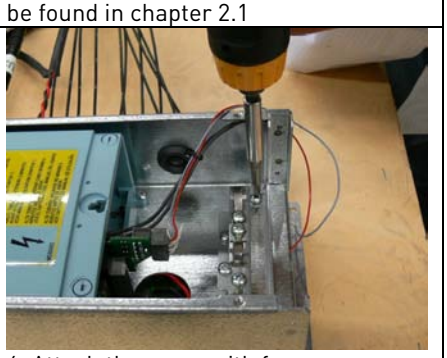
2. Connect the fibre optic cables. Push carefully the cables into the cellfoam bushings

3. Each fibre optic cable has a number 1...8 and 11...18 marked on the cable shield at both cable ends. Connect each cable to the connectors marked with the same number on the starcoupler board. The list of the optic signals can be found in chapter 2.1

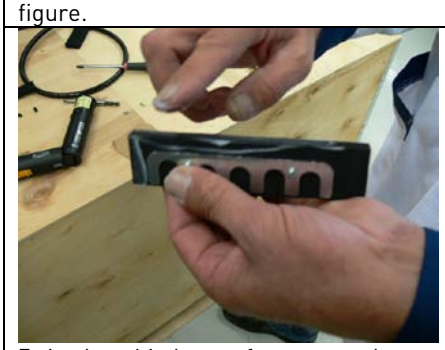


4. Connect the 24 V cable and lead it through the bushing as shown in the figure.

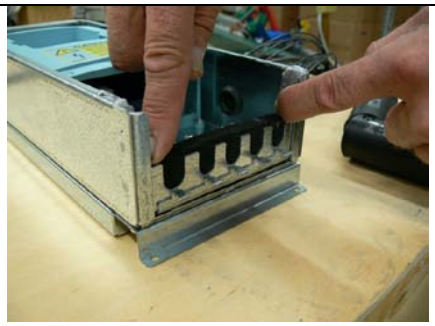
5. Close the cover by pushing it carefully down so that the D-connector connects thoroughly.



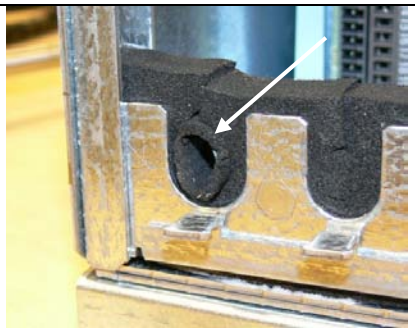
6. Attach the cover with four screws (tightening torque 1,5 nm)



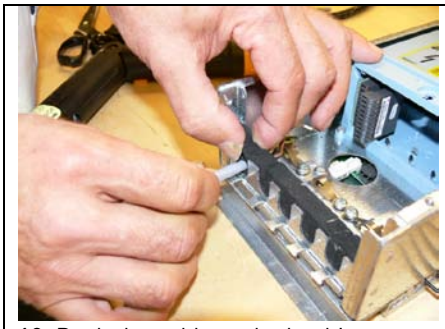
7. Apply a thin layer of grease to the cellfoam washers



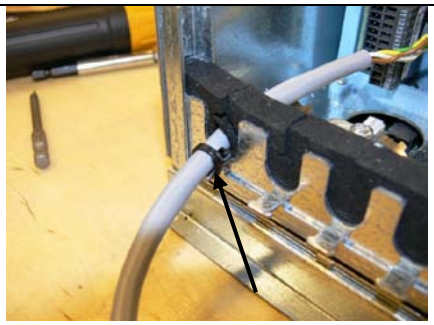
8. Push the cellfoam washer into the guides in the enclosure.



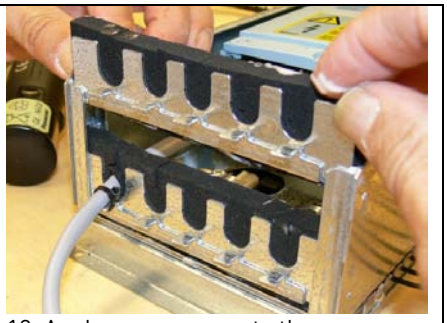
9. Open the bushing for the cable. Pull away the right size of piece according to the cable size (in this figure 8 mm).



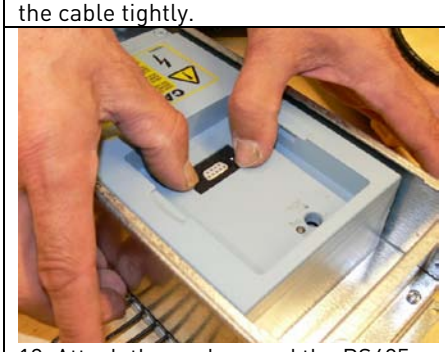
10. Push the cable to the bushing. Make sure that the cellfoam surrounds the cable tightly.



11. Attach the cable to the washer with a plastic binder

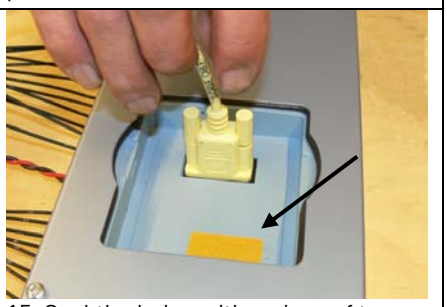


12. Apply some grease to the upper cellfoam washer and push it to its place.

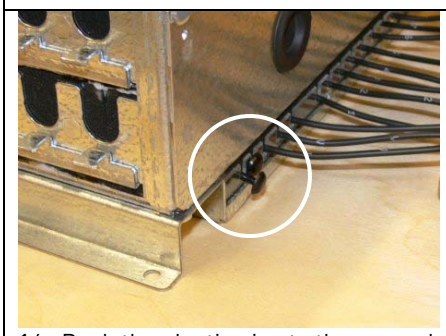


13. Attach the seal around the RS485 connector.

14. Attach the cover plate with four screws



15. Seal the holes with a piece of tape and attach the RS485 cable



16. Push the plastic pins to the unused cable entries .

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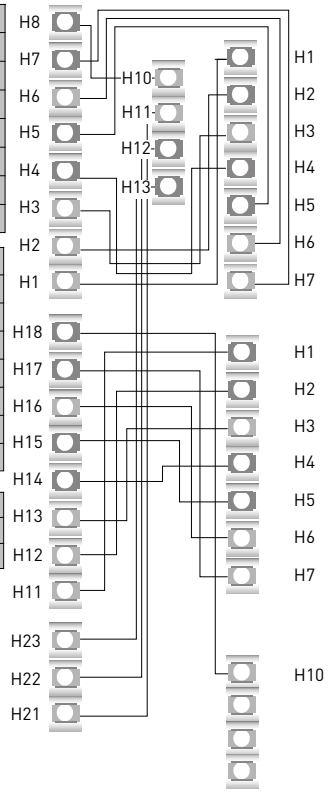
2.1 Optic fibre cable, signal listing and connections

Star coupler board on control unit

H8	Trip signal from power module 1
H7	VaconBus data from ASIC 1 to control board
H6	VaconBus data from control board to ASIC 1
H5	ADC synchronization, power module 1
H4	Phase W control, power module 1
H3	Phase V control, power module 1
H2	Phase U control, power module 1
H1	Gate control enable, power module 1

H18	Trip signal from power module 2
H17	VaconBus data from ASIC 2 to control board
H16	VaconBus data from control board to ASIC 2
H15	ADC synchronization, power module 2
H14	Phase W control, power module 2
H13	Phase V control, power module 2
H12	Phase U control, power module 2
H11	Gate control enable, power module 2

H23	Feedback phase W
H22	Feedback phase V
H21	Feedback phase U



Terminals on ASIC board of power module 1

H1	Gate control enable
H2	Phase U control
H3	Phase V control
H4	Phase W control
H5	ADC synchronization
H6	VaconBus data from control board to ASIC
H7	VaconBus data from ASIC to control board

Terminals on FB board of power module 1

H10	Trip signal
H11	Feedback phase U
H12	Feedback phase V
H13	Feedback phase W

Terminals on ASIC board of power module 2

H1	Gate control enable
H2	Phase U control
H3	Phase V control
H4	Phase W control
H5	ADC synchronization
H6	VaconBus data from control board to ASIC
H7	VaconBus data from ASIC to control board

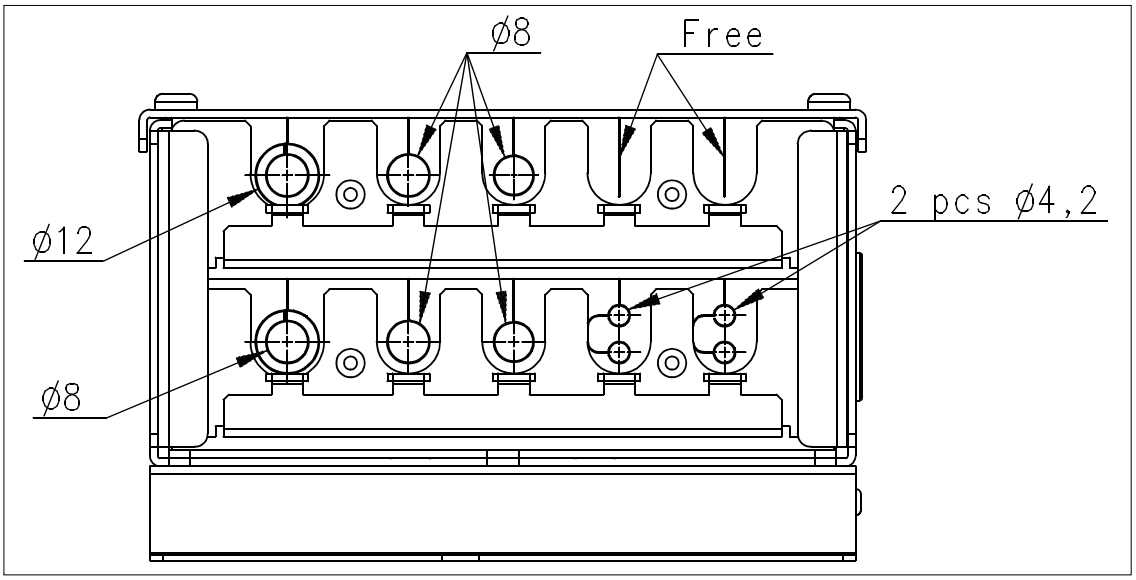
Terminals on FB board of power module 2

H10	Trip signal

Figure 2. Internal fibre cable connections

2.2 Cable bushing diameters

Figure 3. Cable bushing diameter



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