




# COMPRESSOR INTERFACE CABLE

100058-1, -4, & -5.

|  |   |   |   |
|--|---|---|---|
|  <p><b>Installation and servicing of Danfoss Turbocor® compressors by qualified and product trained personnel only. Follow these instructions and sound refrigeration/electrical/servicing practices relating to installation, commissioning, maintenance, and service.</b></p> |   |   |   |
| <p>Consult the appropriate Danfoss Turbocor Compressors Inc. (DTC) Service Manual on <a href="http://www.turbocoroem.com">www.turbocoroem.com</a> for detailed service instructions.</p>   | <p><b>Never operate compressor without covers in place and secured.</b></p> <p><b>Removing the mains input cover will expose you to a voltage hazard of up to 575V. Ensure the mains input power is off and locked out before removing cover.</b></p> <p><b>Before removing top cover, wait at least 20 minutes after isolating AC power to allow the high voltage capacitors to discharge.</b></p> | <p>Always wear appropriately rated safety equipment when working around equipment and/or components energized with high voltage.</p> <p><b>This equipment contains hazardous voltages that can cause serious injury or death.</b></p> | <p><b>Recover all refrigerant from compressor in accordance with local codes and ensure pressure is fully vented before the removal of refrigerant containing components.</b></p> |

## 1 - Introduction

COMPRESSOR INTERFACE CABLE Removal and Installation - The interface cable connects the compressor to the compressor I/O board. I/O wiring specifications for this kit are shown in Figure 1 below. **Figure 1 – I/O Cable Wiring Specifications**

**... CAUTION ...**

Compressor Interface Cables longer than 10m (32.8 ft) of total length exceed the maximum recommended length and could lead to inconsistent and unreliable performance on communication and stepper motor interfaces. It is recommended to consult DTC Product Support to see if the 20M is appropriate for your application.

This kit contains the Compressor Interface Cable Harness. Please refer to our Service Manual for details regarding the replacement of the cable assembly.

We have made the **TT Series Service Manual** available to anyone. To access the manual, you may scan the applicable QR code below or you may go to our DTC website at [www.turbocoroem.com](http://www.turbocoroem.com). At the bottom of the page there is a Section named "Categories" that includes various menus including one for Manuals.

Refer to the applicable QR code below to download the TT Series Service Manual.

**English**

**Chinese**

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## 2 - Electrical Isolation

Before servicing the Compressor, isolate the compressor power by completing the following steps:

### ... DANGER! ...

- This equipment contains hazardous voltages that can cause serious injury or death. Only qualified and trained personnel should work on Danfoss LLC equipment.
- Always wear appropriately-rated safety equipment when working around equipment and/or components energized with high voltage.
- Removing the Mains Input Cover will expose the technician to a high voltage hazard of up to 632 VAC. Ensure the Mains Input power is turned off and locked out before removing the Mains Input Cover.

1. Turn off the Mains Input power to the compressor.
2. Lock Out/Tag Out (LOTO) the mains disconnect to ensure no accidental or unauthorized reapplication of the Mains Input power can occur.

### NOTE

The Mains Input fast-acting fuses are installed in the power panel for all compressor models except the TTS300/TGS230.

3. Remove the Mains Input Cover only.
4. Using an appropriately-rated voltage meter, confirm the absence of AC voltage.

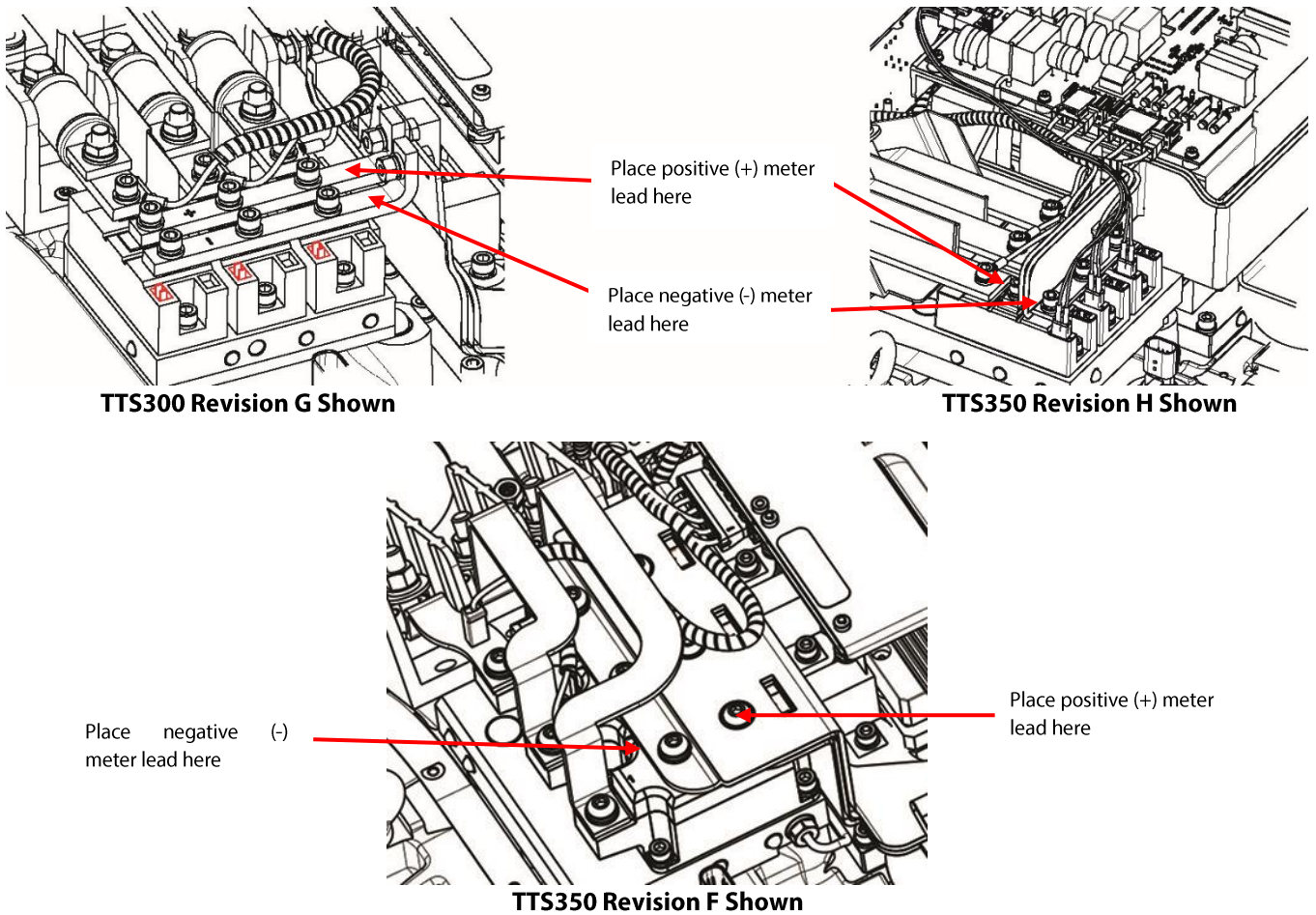
### ... DANGER! ...

Do not touch any components when removing the Mains Input Cover.

5. If AC voltage is not present, reinstall the Mains Input cover and wait at least 20 minutes before removing either the Mains Input or Top Side Cover. If AC voltage still exists, go back to Step 2 to determine why the compressor voltage is not isolated.
6. Remove the Top Cover, taking particular care not to touch ANY components underneath. Refer to Section 1.1.2 Top Cover on page 1.
7. Using an appropriately-rated voltage meter, check the DC Bus Bars for DC voltage level. If the voltage is above 30 volts direct current (VDC), wait five (5) minutes and recheck until voltage is below 30 VDC. Refer to **Figure 2 - DC Bus Voltage Test Points**.

### ... CAUTION ...

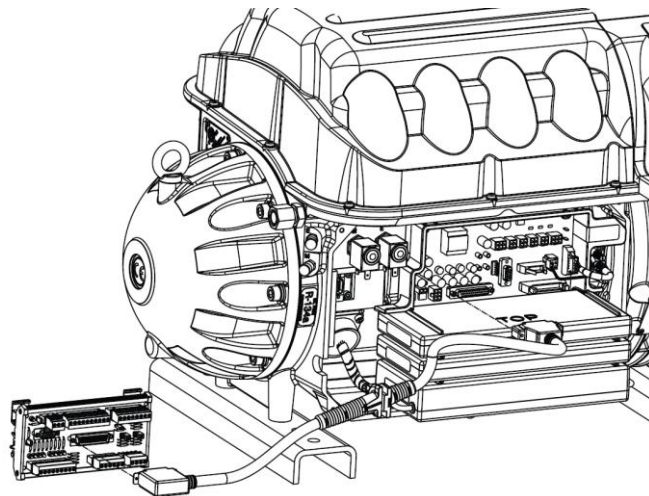
Even at low voltages, caution should be used around the capacitors to avoid quick discharge events, which can lead to reduced reliability.



**Figure 2 - DC Bus Voltage Test Points**

**3 - COMPRESSOR INTERFACE CABLE Removal:**

1. Isolate compressor power as described in the “Electrical Isolation” section above prior to performing any service procedures.
2. Wait for the green light (D9) on the CIM to turn off.
3. Remove the Service Side Cover.



**Figure 3 - I/O Cable Removal**

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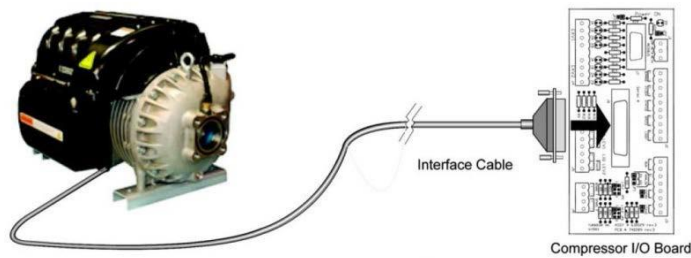
4. Remove the cable.

4 - COMPRESSOR INTERFACE CABLE Installation:

**... CAUTION ...**

Incorrect wiring of the terminals can severely damage components.

1. Install the cable into the J6 connector on the CIM and the J7 connector on the Backplane.
2. Ensure the cable is routed properly and that the grommet is properly positioned in the compressor housing notch.
3. Install the Service Side Cover.
4. Return the compressor to normal operation.



**Figure 4 – Compressor I/O Board Connections**

5 - Kit Contents

| Kit numbers | Compressor models |
|-------------|-------------------|
| 100058-1    | ALL FIE MODELS    |
| 100058-4    | ALL FIE MODELS    |
| 100058-5    | ALL FIE MODELS    |

| QTY | Part(s) Description   | Picture(s) |
|-----|---|------------|
| 1   | Compressor Interface Cable Harness Assembly<br>100058-1: 5m<br>100058-4: 10m<br>100058-5: 20m |            |

6 - List of Changes

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| Revision | Date     | Description of Change  |
|----------|----------|--|
| M        | 7/5/2023 | <ul style="list-style-type: none"><li>• Added kit 100058-5</li><li>• Removed obsoleted kit number 100058-2</li></ul> |

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