

ENGINEERING TOMORROW

# Bulletin | Danfoss Turbocor Compressors Customer Notification

**B-CN-180-EN** 

06/27/2019

# **SUBJECT:** Service Monitoring Tools (SMT) 3.4.1 Released

#### Purpose

The purpose of this bulletin is to inform our customers of the newly released Service Monitoring Tools (SMT) software application. This new version of the SMT has been posted to the Danfoss Turbocor website. This version of the SMT is backwards compatible with all previous versions of BMCC compressor firmware and is fully compatible with the upcoming 4.2.0 BMCC firmware.

### Summary

#### Background

This latest release contains several improvements and resolved some defects which have been identified internally and by customers. For more information on any of the features introduced by Firmware 4.2.0, please refer to Customer Notification B-CN-165-EN Software Release Notes for 4.2 Firmware.

### **Frequency Adjustment**

Firmware version 4.2.0 introduced the ability to adjust the frequency for all models and voltages.

Connection Setti Direct Remote Host	ngs TCP/IP    Shared Port	Access Code Submit Compressor Info
ocalhost	503	Connected
Disconne	ct from Remote Host	Access Level OEM
Slave Address	0	Compressor RTC 6/12/2019 10:35:53 AI
Serial Port	0000001	Sync Compressor/Computer Time
Baud Bate	38400	Compressor Model TT700
	None	Mains Frequency 50 Hz $\checkmark$
Parity		Configured Voltage 50 Hz 60 Hz
Stop Bits	One	Refrigerant R513a V
Connect	Disconnect	CC Version 4.2.0
		DSP Serial Number 17958-16923-0
Recent Compressors		Software Part Number 180617-346
		Connected To RS-232
Search Addresses 0-20		Units Metric $\vee$
		Parameter Saving
		O RAM Only    RAM & EEPRO



# **Stepper Control Changes**

Firmware version 4.2.0 introduced the ability to include a Fast Restart on the EXVs, as well as the ability to adjust the Valve Reset Speed for the EXVs.



### **Startup Cooling**

Firmware version 4.2.0 introduced the ability to disable Passive Cooling mode during startup and enable Dynamic Cooling.



### **Minimum Motor Current**

In particular, one defect that was identified was the calculation for Minimum Motor Current, register 41817. Previous SMTs used the scaling factor of 1:88. This was incorrect and would have achieved the Minimum Motor Current criteria at a lower current setting than what was entered in SMT. In general, this would not cause any difficulties with exiting startup, because the Minimum Motor Current is usually achieved before the other criteria are reached for exiting startup. This parameter is correctly calculated with the following equation:

```
Minimum Motor Current = (Register 41817 Value/32767) * 41899 DC Bus Current Scaling Factor * 0.707
```

If this parameter is being adjusted during commissioning, this scaling change must be considered.

# **Action Required**

The latest revision of our SMTs are available on our website. Please navigate to <u>www.turbocoroem.com</u>, select login, and enter the **Customer Support and Service Section** of the website. For more information or instructions, please refer to the SMT Manual or contact your Key Account Manager or a DTC Service Technician. The SMT Manual is automatically installed and accessible under the start menu of your computer once the SMT is installed.

Access to our website is restricted to customers and other authorized users. If access is needed, please use the "Sign Up" link to submit your information. For additional details, please contact your Key Account Manager.

#### **Need Assistance**

For further questions, please contact your Key Account Manager or our Product Support group at <u>turbocor.ps.na@danfoss.com</u> or <u>eu.support@danfoss.com</u> for inquiries within Europe.

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