Product Change Notification No. 015

Applies to	TSD80, TSD130 of Revision 5C, 5D, 5E
Document	PCN015-TSD80-IntTemp
Doc. Rev.	A
Date	2024-08-13

Summary

Triamec servo-drives TSD80 and TSD130 of revisions 5C, 5D and 5E can have issues with the internal temperature measurement, which could cause local overheating.
The new revision 5F fixes this issue physically. For the revisions 5C, 5D and 5E there is a firmware update available to circumvent the issue.

Revision History

Date	Rev.	Who	Change
2024-08-13	A	UP	Initial edit

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1 Type of Change

The assembly of the servo drive is slightly modified for the new revision 5F of TSD80 and TSD130 to address the issue.

A firmware update for older revisions 5C, 5D and 5E is available to circumvent the issue.

No firmware update is needed for the new revision 5F, it runs with all firmware versions which are compatible with 5E.

2 Products Affected

The following table lists all affected products:

Product	Rev.	Serial-No.	Prod. Date	Description
TSD80-xx	5C,5D,5E	any	any	Dual Axis 80V/10Arms or 15Arms
TSD130-xx	5C,5D,5E	any	any	Dual Axis 130V/10Arms

3 Description of Changes

For the new revision 5F, the assembly process of the servo-drive is optimized in order to achieve better temperature measurement within the servo-drive. No firmware change is needed.

For the older revisions 5C and 5D, the new firmware 4.22.4 addresses the issue with the use of an I^2T-thermal model of the power bridge instead of the local temperature sensors.

Up to the date of writing, we have observed a failure rate of 0.2% due to the issue. However, we expect a higher number of undetected issues, where the temperature measurement is only slightly influenced, or only on one of the two measurements.

Therefore we recommend to update the firmware of older servo-drives as follows:

For the **TSD80-10** (10 ampere models): The likelihood of overheating is low, but there is a possibility of wrong temperature measurements causing the drive to stop. A **firmware upgrade is recommended** to ensure continuous operation.

For the **TSD80-15** (15 ampere models) and **TSD130-10** (10A models), the **firmware upgrade is *highly* recommended**, as overheating could damage the drive.

4 Reason for Change

The electrical properties of the thermal interface material used are inhomogenous. This can cause local lateral conductivity with currents <1mA. The currents influence the thermal sensor (NTC), which then indicates a temperature that is too low. In consequence, the thermal control logic leaves the fan speed at a level which is insufficient for effective cooling of the power stage.

5 Effect of Change

Form:

- No change

Fit:

- No change

Function:

- No change

Quality:

- No change

Reliability:

- Improvement due to better cooling.

6 Ship Dates

Last ship date for servo drives with revision 5E:
2024-07-31

First ship date for servo drives with revision 5F:
2023-08-05

7 Last Time Buy Date

Not available.

8 Further information

None.

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