



Technical Service Bulletin – Metrix

14 Dec 2023

Advisory – MX2033 Drivers passing through 0°C (32°F)

Date of Occurrence:	8 Apr 2022 to 27 Nov 2023
Supplier:	Metrix Instrument Company
Part Numbers:	MX2033-AA-BB-CC-DD
Serial Numbers	145530 - 147826
Severity:	High
RCA Leader:	Vanda Simon

Units Affected:

MX2033 Digital Proximity System units produced between 8 Apr 2022 and 27 Nov 2023

Issue:

When the MX2033 Proximity Driver passes through the ambient temperature of 0°C (32°F), the proximity system may temporarily experience increased vibration levels up to 100 um pk-pk (4 mil pk-pk) and gap voltage changes up to 2 Vdc during the temperature transient. If the temperature of your MX2033 Driver passes through 0°C (32°F), and the unit was built between 8 Apr 2022 to 27 Nov 2023, then this Advisory applies to you. The MX2034 Proximity Transmitter is not impacted by this Advisory.

Details:

The MX2033 Driver, like other Drivers on the market, uses temperature compensation to meet the accuracy requirements of the API 670 operating range of -35°C (-31°F) to 65°C (149°F) for an oscillator demodulator. A firmware upgrade was implemented on 8 Apr 2022 for high-speed feature enhancements which caused a temperature compensation issue at or near freezing 0°C (32°F) that was not accurate. Original testing was conducted at and below 0°C (32°F), after a one-hour soak period for temperature stabilization, and successfully passed. During the steady state temperature testing, no unusual variances were noted. The corrective action is a transient temperature testing process that has been implemented at Metrix for all firmware upgrades and updates.

Applicability:

In a Reciprocating Machine measuring Rod Drop or Rod Position, this Advisory may not be applicable, depending upon how the measurement is being averaged over time. Looking at a running average over time, the changes due to temperature may not be noticeable. If one is



looking at an instantaneous value, like in an instantaneous Rod Drop or Rod Position measurement associated with a phase trigger, then a temporary shift in position may take place as the MX2033 passes through the ambient temperature of 0°C (32°F).

Solutions:

1. If the installed MX2033 application is not subject to a temperature which passes through 0°C (32°F), then no action is necessary.
2. If the installed MX2033 application requires operation through 0°C (32°F), contact Technical Support for a field deliverable firmware update for end user use. This firmware update takes approximately 3 minutes to complete.
3. Alternatively use the eRMA process and return the unit to the factory to have the firmware update installed. This firmware update does not impact any custom calibration that may have been stored in the MX2033. Metrix will pay for all shipping for this TSB.
<https://s2.renewityrma.com/metrix.htm>
4. It may be possible to contact your local Metrix Representative or Distributor to arrange assistance with the firmware update.

For further questions and support please see our website, or contact Technical Support, or contact your local Metrix Representative or Distributor.

Metrix Technical Support: techsupport@metrixvibration.com

To Find Local Support: <https://www.metrixvibration.com/distributor-search>