

Projekt ARS 2000	<b>Application Note Nr. 97</b> <b>ARS 2340 Redesign Powerstage</b>	Seite 1 v. 3
Ersteller Metronix		Datum 05.10.2007

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## 2 Introduction

As part of the enhancement of its product range for its ARS 2000 family of servo positioning controllers, Metronix added a new device to its line-up. This new device is a servo positioning controller with a water cooled power stage and a nominal current of 60A called ARS 2360/W. In conjunction with this the power stages of the already available ARS 2340 servo positioning controllers have been redesigned and now use the same power stage, as the new ARS 2360/W drives.

As the redesign caused deep changes in the power stages electronics, there are some things, that must be concerned if using the new ARS 2340 drives.

This application note shall describe the differences between the old ARS 2340 and the ARS 2340 drives with the redesigned power stage. It shall point out possible problems that may occur at the customer, when using the ARS 2340 drives with redesigned power stage for example as replacement for an old ARS 2340.

## 3 Differences between new and old ARS 2340 drives

Due to the parallel use of the power stages of the new ARS 2340 drives in the ARS 2360/W drives, the power stages are designed to work with much bigger currents. Therefore the control of the power stages must be adapted.

This can only be reached by changing the firmware of the ARS 2000 family servo positioning controllers. As a result for the new **ARS 2340 drives with redesigned power stage** a firmware version **later than FW 3.4.0.1.2** must be used. An older version will not support the drive.

## 4 Behaviour if using old firmware in an ARS 2340 drive with redesigned power stage

If the user accidentally loads an firmware **earlier than FW 3.4.1.0.2** into a ARS 2340 drive with redesigned power stage, the drive will not start up correctly and shows an error message on its seven segment display. As the firmware is not completely running, the **error message** is shown by using a **blink code** on the decimal point of the seven segment display.



Figure 1: Display of error message on seven segment display

The error code, that is shown here is 25.1. It says, that the **hardware is not supported by the firmware**. The blink code is the following:

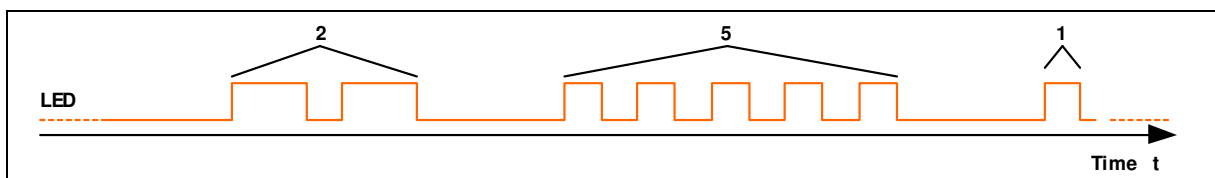


Figure 2: Blink code on seven segment display (error 25.1)

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## 5 Troubleshooting

If the behaviour, that is explained in chapter 4 occurs, the ARS 2340 servo positioning controller is **not broken and can be repaired by the customer**.

To bring the drive back to operation, the user simply has to download a new firmware with a version number later or equal to FW 3.4.0.1.2 into the drive. Afterwards the drive is ready for operation again.

## 6 Serial number of new ARS 2340 drives with redesigned power stage

All ARS 2340 drives with a serial number **higher than 373** are **equipped with the new power stage** and are affected by this behaviour.