

July 24th, 2023

Product Change Notification

Title: **PCN #2023006 TDK-Lambda Americas Inc. PAF600F280 series control IC change**

The Renesas control IC (HA16163TELL-E) used in TDK-Lambda's PAF600F280 series of DC-DC converters is going obsolete. To accommodate an alternative IC from Texas Instruments (UCC28950PWR) which uses burst mode operation at light load, a number of changes have been made to the specification and instruction manual.

Production of the new design will commence in January 2024.

1. The PAF600F280-12 maximum ripple and noise specification was 120mV, now 270mV
2. The PAF600F280-12 maximum adjustment range at 200Vdc input was 105% of the 12V nominal voltage, this has been reduced to 102%. See figure 1.

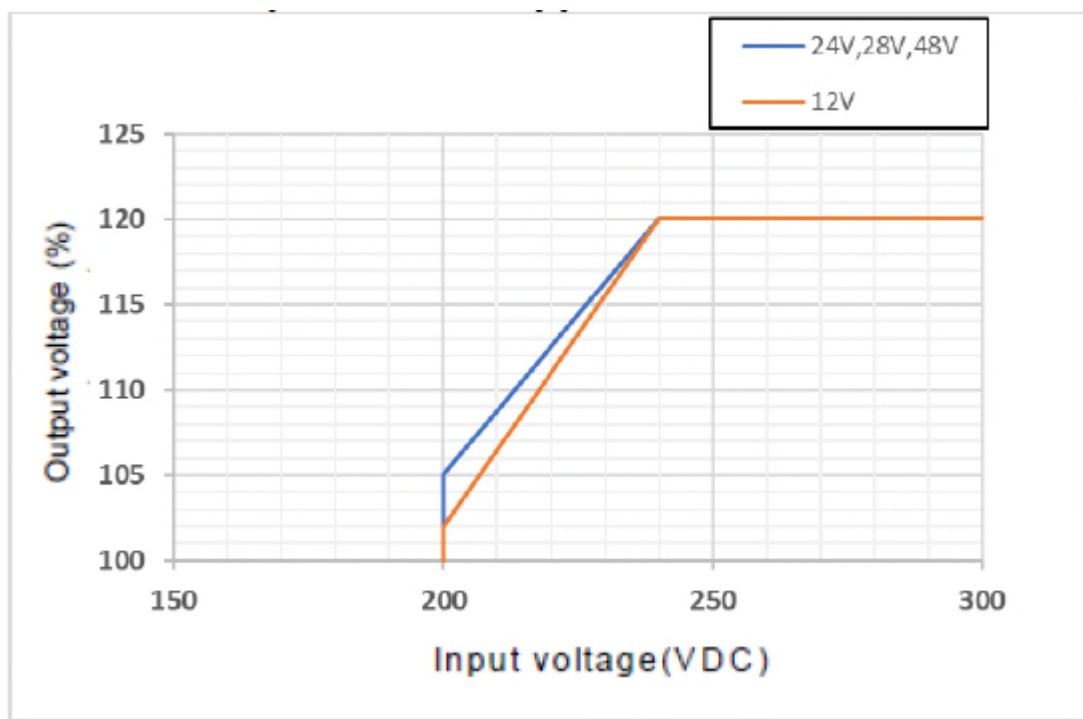


Figure 1: PAF600F280 output adjustment range vs. input voltage

3. The Inverter Operation Good (IOG) signal was an open collector output, now is an open drain output. No change to performance.
4. When configured to use remote sense compensation, the maximum compensating voltage between -V (output) and -S (sense) has been reduced from 2V to 0.1V to ensure initial start-up.



401 Mile of Cars, Suite 325,
National City, CA 91950
www.us.lambda.tdk.com

5. Up to 11 converters can be connected in parallel. Derating for parallel operation was previously stated as 95% of the total rated output current. Figure 2 shows the revised limits.

Number of paralleled converters	Maximum output current
2 units	95% of nominal output current
3 – 8 units	90% of nominal output current
9 – 11 units	85% of nominal output current

Figure 2: Revised derating with parallel operation

6. It is not recommended to parallel the original converters with the original Renesas IC with the new converters with the Texas Instrument IC.

The new converters can be identified from the Lot Number label on the side of the module by the red circled ">>" marking shown in Figure 3.

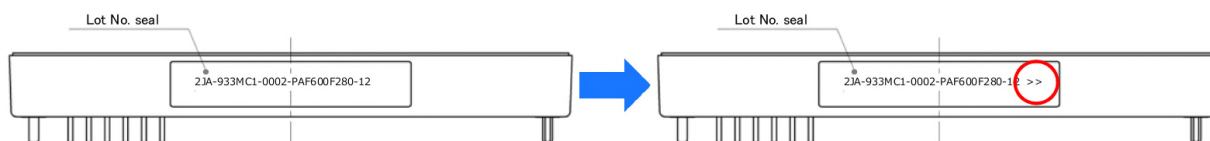


Figure 3: ">>" marking to identify new converters

A small number of samples for testing are available upon request. If a last time buy order is being considered, please contact your local salesperson to secure the appropriate number of Renesas control ICs for that order.

For any other questions concerning this notification, contact your local sales office or TDK-Lambda Americas Inc. customer service.

Tom Tillman
Director of Marketing

Attached is a pdf file of the new instruction manual.

Full Model Number List
PAF600F280-12
PAF600F280-12/T
PAF600F280-24
PAF600F280-24/T
PAF600F280-24/T
PAF600F280-28
PAF600F280-28/T
PAF600F280-48
PAF600F280-48/T