

Xantrex GT3.0-NA-DS-240 PV Inverter "Max Utility Backfeed" Current

Technical Bulletin

GT3.0-NA-DS-240

976-0109-01-01 Rev A

This technical bulletin provides information on the Xantrex GT3.0-NA-DS-240 PV Inverter. It confirms that the "Max Utility Backfeed" current is zero amps

Both UL1741 and NEC 690 have requirements addressing backfeed current that can flow from any source other than the solar array, onto the array wiring. In UL 1741, any current that can flow from the utility grid onto the array wiring through an inverter is called the "max utility backfeed current" and the standard requires labeling the inverter with that value. In addition, NEC article 690.9 requires that overcurrent protection for array wiring must take into account the current from all sources, including possible utility backfeed current through inverters.

To simplify the original evaluation of the GT3.0-NA-DS-240, the value of this backfeed current was assumed to be equal to the overcurrent protection provided in its AC output circuit. That reasoning led to a marking of 20A for model GT3.0-NA-DS-240 based on its internal 20 amp AC output fuse rating.

A careful evaluation of the circuit by Xantrex and CSA has shown that there is no normal or single fault condition that can cause backfeed of any AC current through the GT3.0 onto the PV array wiring. Therefore, the correct value for the maximum utility backfeed current is determined to be 0 amps.

Unfortunately, there are units shipped out from the factory (prior to the above determination) which show the backfeed current to be 20 amps. That marking is resulting in questions in the field relating to the need for overcurrent protection of array wiring. With the determination that the actual backfeed is zero and the marking should have been zero, there is no backfeed current contribution to the array wiring, and therefore no impact on the required overcurrent protection.

Attached is a statement from CSA International that supports this conclusion and authorizes Xantrex to label GT3.0 inverters with a utility backfeed current rating of 0.0 amps.

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Attention: Electrical Inspectors & PV system installers

Subject: Xantrex GT3.0-NA-DS-240 PV Inverter “Max Utility Backfeed”
current is zero.

CSA has evaluated the GT3.0 design and determined that the Utility Backfeed Current rating should have been 0 amps, and have therefore authorized Xantrex to label inverters manufactured after August 2005 with this value, as is already done with CSA Certified inverters in the GT3.3 and GT2.5 series.

Xantrex GT3.0-NA-DS-240 inverters manufactured before August 2005 were incorrectly labeled with max utility backfeed current of 20.0 amps. Please note that for those previously manufactured units the correct value is again 0 amps.

This information is provided to assist Electrical Inspectors & PV system installers in determining that there is no risk of utility current being backfed to the PV array wiring through the GT series inverters. For the purposes of the PV array fusing requirements of NEC article 690.9, the backfeed current through these inverters is zero.



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