



Engineering Note

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Title:	Hydro-View mains inlet fuse problems
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Summary:	This note describes remedial action which may be taken if the mains inlet fuse repeatedly fails on a Hydro-View model HV-02 unit.

Symptoms

The mains inlet fuse keeps blowing immediately when power is applied.

Cause

A high mains surge has caused mains input transient suppressors to fail to a short circuit condition in order to protect the equipment. As a consequence, the mains inlet fuse will then trip. The transient suppressors must be replaced to remedy this condition.

Remedial action

This problem has only affected a small number of installations out of several hundred since the Hydro-View model HV02 was introduced and is therefore not a serious problem. The problem seems to occur most frequently in installations prone to mains surges, such as those powered from on-site generator sets. If a unit fails once in this way then the site conditions mean that it is likely to fail again and therefore the following course of action is recommended.

1. Remove the lid of the Hydro-View.
2. Slide off the rubber boot covering the back of the IEC inlet.
3. Locate the three black transient suppressors soldered to the back of the IEC inlet. Note that these are connected between L-N, L-E and N-E.
4. Replace the transient suppressors with three Metal Oxide Varistors (MOV) Siemens type S10K300 (Farnell part number 580-302) connected in the same way.
5. Replace the rubber boot.
6. Replace the lid.
7. Replace the mains inlet fuse if necessary.

The MOV devices are available from Hydronix if you have difficulty.

This modification has been proven effective to mains surge immunity testing. Whilst removing the transient suppressors has some effect on fast transient immunity, the immunity level is still well within EMC requirements.

It is generally NOT advisable to simply remove the transient suppressors, since there will then be no protection whatsoever from damage caused by mains surges, although this can be used as an 'emergency' fix.

Please contact Hydronix technical support if you have any difficulties with these modifications.