

Engineering Department

Engineering Change Order (ECO)

ECO #: PN4-003-002

Effective Date: July 21, 2017

Title: Video Noise reduction and improving video quality on PRO4 ROV systems

Author: GD
 Engineering Approval: aeg
 Operations Approval: aeg

Date: July 21, 2017
 Date: August 1, 2017
 Date: August 1, 2017

Summary:

A simple fix for significant video quality improvement by reducing video noise on Pro4 ROV systems
 All in-stock PN4-004 should be reworked with this modification.
 All repaired PN4-004 should receive this modification.

Parts Affected:

Part Number	Notes	Removed	Added	New	Modified
PN4-003	PRO4 Panel Power Supply PCB	☐	☐	☐	☒

Detail:

Pro4 ROV system has been known to show video noise to a certain extent since its inception. As a result, the video quality has always been an issue. Over the years video quality has been improved by various improvements to the electronics. This change is another such improvement.

The main power supply PCB inside the control panel injects noise into the video signal via 75V- probably due to the way that the power supply PCB has been designed.

As an expedient fix to reduce the above said video noise, a 33nF/200V ceramic capacitor:

VR P/N: 52367

Manuf PN: KEMET C322C330J2G5TA

Digikey PN: 399-4355-ND)

has been introduced between 75V- and GND pins on power supply PCB (as shown in the photo).

In future much more effective improvement can be made by redesigning the power supply PCB with ground and power layers instead of traces.



Action Item:

Action	Department	Acknowledgement Initials
Create a VR part number for 33nF/200V ceramic capacitor (D/K 399-4355-ND) in Epicor and update BOM accordingly	Engineering	CH
Begin purchasing replacement 33nF/200V ceramic capacitor (D/K 399-4355-ND)	Purchasing	NS
Update Contract Manufacturer (PPI)	Purchasing	NS
Follow up with Contract Manufacture (PPI)	Engineer	CH
Modify in-stock panels	Production	KK

Modified / Referenced Documents:

Document	Current Revision
Click here to enter text.	Click here to enter text.

-- END OF ORDER --