

	Doc or ECO #:	ECO-72183-001	Date:	12/04/2020	Author:	GD
	Rev. #:	A				
Updating Electronics	Engineering Approval:	aeg	Date:	12/04/2020	Quality Approval	ae

P/N #:	72183	Effective Date:	December 4, 2020
Title:	Adding missing transmission line circuitry to LX200V30 (RAK) Modem Adapter PCB for ROV		

1.0 Purpose / Summary

The transmission line circuitry is not present in the current version of LX200V30 Modem Adapter PCB for ROV (72183) causing thruster communication delays. This ECO is addressing the addition of this circuitry which involves an addition of a few more electronic components on this PCB.

2.0 Parts Affected

Part Number	Notes	Removed	Added	Modified	REV
72183	LX200V30 (RAK) Modem Adapter PCB for ROV	☐	☐	☒	C

3.0 Detail

RAK Modem G100 MSS Subsea Assembly (72247) is used to convert 4 wire Ethernet to 2 wire Ethernet and vice versa for Ethernet communication between the ROV and the top side ICB panel. In this assembly, 72183 (LX200V30 (RAK) Modem Adapter PCB for ROV) PCB is used as the baseboard.

However, it has been noticed that there may be severe timing delays present in thruster communications when the max thrust power is applied abruptly. Further investigation has revealed that RAK modem OEM recommended transmission line circuitry is missing in the current version of 72183 PCB causing the undesired timing delay. This ECO is addressing the addition of the missing transmission circuitry to the LX200V30 (RAK) Modem Adapter PCB for ROV (72183) which is the baseboard of 72247 assembly.

The subsea was tested to have less of an impact on performance. In the pro5 system it may have more of an influence.

Fielded defender systems with older revisions 72183 are fully compatible and appear to function without issue.

4.0 Disposition of Material

Update all builds in progress to new revision.

5.0 Action Items

Action	Department	Acknowledgement Initials
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Update PCB gerber files and BOM of 72183 PCB to reflect the new changes	Engineering	GD
Update Revision on 72183 entry in Epicor and note the BOM change New revision is C (skipped B to match PCB rev) with revision notes "Updating electronics - BOM updated" in Epicor	Engineering	

6.0 Modified / Referenced Documents:

Document	Current Revision
72183_LX200V30 Adapter PCB_rev3.zip file (contains all gerber files)	Rev.2
BOM-72183-Rev3	Rev.2

7.0 Revision History

Date Revised (mm-dd-yyyy)	Location of Change (section, paragraph no., step no., etc.)	Description of Change Made	Name of Person making the Change
July 11, 2019		Initial submission	GD
Dec. 4, 2020	Gerber files and BOM	Addition of transmission line circuitry	GD