Amphenol PCD

Engineering Change Request		ECR Number	R10669W
Initiator	Rock	Date	Oct 9th 2026

Part number description

Item	K3 Code material part numbers	Drawing/ Doc Number	Version of current related document	New Version
	See attached excel	See attached excel	See attached excel	See attached excel

Reason of change:

☐Customer requirement (list the feasibility analysis of customer specification: _____)

☐Supplier request (list the PCR number: _____)

■internal improvement ☐corrective ☐other

Please describe here in detail:

To further enhance the strength and operational stability of the electronic lock under potential overvoltage conditions, the following changes will be implemented.

- *Move up the position of the boss slightly to eliminate the gap between lever and limitation boss during unlocking*
- *Change the lever material to enhance the impact strength.*

Change level and impact assessment (Please tick in the appropriate position)

Change level	Change content	Concerned area(Shenzhen, Hermosillo, Chennai)	Whether to notify the customer
Level 1	☐Operator change		☐It is not necessary to notify the customer for approval
	☐Correct the clerical errors of the drawing, BOM, etc., and this change will not affect the production process		
Level 2	☐Change of Main production equipment or tools/Jigs		■ Customers should be notified for approval ☐It is not necessary to notify the customer for approval, the reasons ar as follows:
	☐Change of main measuring equipment or tools/Jigs		
	☐Appearance changes that do not affect product functions		
	☐Changes in production process or processing technology		
	☐Product structure or specification changes that have not been transferred to mass production		
	■ Product structure or specification changes that have been transferred to mass production		
	☐Supplier's production process change or supplier's production site change or addition or replacement of suppliers		
Level 3	☐Change of production site		☐Customers should be notified for approval
	☐Product material changes		
	☐Change of packaging method		
	☐Changes proposed by the customer		

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Before change	After change
See attached PPT	See attached PPT

Disposition of old materials	Expect date to switch to new material
☐Rework ■Use as it is ☐scrap ☐Other (please describe)：_____. ☐N/A	Nov. 2026

Approval by the supervisor of requester.:	Approval by the head manager of the request dept.:
Derek	

Customer approval：

☐Approved ☐No approved ☐Conditional approval（please describe）：

Signature： Date：

Remark:

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Test Report

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Report Number: TR-20260904041EA

Information of Client	Engineering Dept
Sample Details	12V electronic lock NEVDCB12VELOCKLXXXX , HVELB12SSXXX Production address: APCD ,HVELA12MSXXX Date of manufacture: 2026.09.04 Quantity: 16pcs Note: Before improvement: #1 to #8 After improvement: #9 to #16
Date of Receipt	2026.09.03
Test Date	2026.09.04

Environmental:

Temperature: 22 to 26˚C Humidity: 50% to 67%RH Air pressure: 100kPa to 101kPa

Conclusion:

- Sample #1 to #8 before improvement cannot meet the 24V high voltage impact test, after impact test, cannot meet the basic function
- Sample #9 to #16 after improvement can meet the 24V high voltage impact test, after impact test, can meet the basic function

Statement:

- This report is confidential and only for designated Amphenol PCD Clients
- This report is considered invalid without approved signature and special seal
- The sample and sample information was provided by the client or requester and responsible for its authenticity
- The results shown in this report refer only to the sample tested
- If there is any objection concerning the report, please inform us within 15days from the date of receiving the report

Tested by	Reviewed by	Approved by
Darwin		
Date: 2026.09.08	Date: 2026.09.08	Date: 2026.09.08

Laboratory of Amphenol PCD Shenzhen

1 Test Summary

No.	Test Item	Standard	Test request	Result	Judgement
1	Basic function	N/A	- Test voltage: 9V Test time: 0.45s Stop time: 2s Test voltage: 12V Test time: 1s Stop time: 2s - After the test, the electronic lock switches should be on and off normally - After the test, the signal wire should conductive when locking, the signal wire should not conductive when unlocking	- After the test, the electronic lock switches can be on and off normally - After the test, the signal wire is conductive when locking, the signal wire is not conductive when unlocking	Pass
2	High voltage impact	N/A	- Test voltage: 24V Test time: 1s Stop time: 2s A total of time: 30 cycles - Record the cycle number at which abnormal noise occurs in the samples	- See Table 1	Reference
3	Basic function	N/A	- Test voltage: 9V Test time: 0.45s Stop time: 2s Test voltage: 12V Test time: 1s Stop time: 2s - After the test, the electronic lock switches should be on and off normally - After the test, the signal wire should conductive when locking, the signal wire should not conductive when unlocking	- #4: Stuck at 9V #6: Stuck at 9V and 12V	Fail

Sample No.	Abnormal noise
#1	2nd
#2	3rd
#3	3rd
#4	3rd
#5	3rd

#6	7th
#7	24th
#8	2nd
#9	OK
#10	OK
#11	OK
#12	OK
#13	OK
#14	OK
#15	OK
#16	OK

Table 1

2 Test Equipment

No.	Appellation	Equipment No.	Calibration Due Date
1	Multimeter	APCD-QA-1455	2025.02.13 to 2027.02.12
2	Electronic lock tester	APCD-QA-991	2026.03.06 to 2027.03.05

END

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Test Report

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Report Number: TR-20260904042EA

Information of Client	Engineering Dept
Sample Details	CCS2 24V electronic lock NEVDCB24VELOCKLXXXX ,HVELB24SSXXX Production address: APCD HVELA24MSXXX Date of manufacture: 2026.09.04 Quantity: 16pcs Note: Before improvement: #1 to #8 After improvement: #9 to #16
Date of Receipt	2026.09.03
Test Date	2026.09.04

Environmental:

Temperature: 22 to 26˚C Humidity: 50% to 67%RH Air pressure: 100kPa to 101kPa

Conclusion:

Reference

- Sample #1 to #8 before improvement cannot meet the 48V high voltage impact test, after impact test, cannot meet the basic function
- Sample #9 to #16 after improvement can meet the 48V high voltage impact test, after impact test, can meet the basic function

Statement:

- This report is confidential and only for designated Amphenol PCD Clients
- This report is considered invalid without approved signature and special seal
- The sample and sample information was provided by the client or requester and responsible for its authenticity
- The results shown in this report refer only to the sample tested
- If there is any objection concerning the report, please inform us within 15days from the date of receiving the report

Tested by	Reviewed by	Approved by
		
Date: 2026.09.09	Date: 2026.09.09	Date: 2026.09.09

1 Test Summary

No.	Test Item	Standard	Test request	Result	Judgement
1	Basic function	N/A	- Test voltage: ±24V Test time: 0.45s Stop time: 2s A total of time: 3 cycles Test voltage: ±26V Test time: 1s Stop time: 2s A total of time: 3 cycles - After the test, the electronic lock switches should be on and off normally - After the test, the signal wire should conductive when locking, the signal wire should not conductive when unlocking	- After the test, the electronic lock switches can be on and off normally - After the test, the signal wire is conductive when locking, the signal wire is not conductive when unlocking	Pass
2	High voltage impact	N/A	- Test voltage: ±48V Test time: 1s Stop time: 2s A total of time: 30 cycles - Record the cycle number at which abnormal noise occurs in the samples	- See Table 1	Reference
3	Basic function	N/A	- Test voltage: ±24V Test time: 0.45s Stop time: 2s A total of time: 3 cycles Test voltage: ±26V Test time: 1s Stop time: 2s A total of time: 3 cycles - After the test, the electronic lock switches should be on and off normally - After the test, the signal wire should conductive when locking, the signal wire should not conductive when unlocking	- #2, #4, #6: Stuck at 24V and 26V	Fail

Sample No.	Abnormal noise
#1	OK
#2	15th
#3	12th
#4	26th
#5	OK
#6	11th
#7	7th
#8	3rd
#9	OK
#10	OK
#11	OK
#12	OK
#13	OK
#14	OK
#15	OK
#16	OK

Table 1

2 Test Equipment

No.	Appellation	Equipment No.	Calibration Due Date
1	Multimeter	APCD-QA-1455	2025.02.13 to 2027.02.12
2	Electronic lock tester	APCD-QA-2125	/

END


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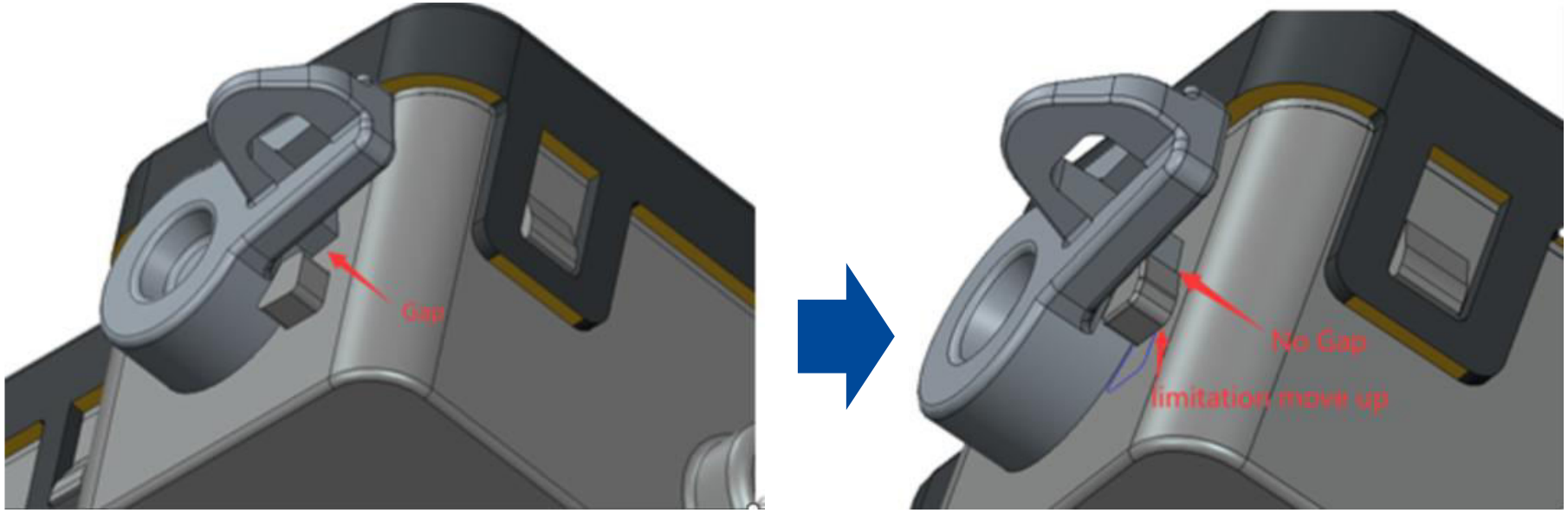
- ***Adjusted the position of the boss slightly to ensure proper limiting of the handle during unlocking***
  调整电子锁壳体上手柄限位柱的位置，让其解锁时能很好的限位住手柄

Given that there is a certain gap between the E-lock lever and the limiting boss after unlocking, to prevent potential overvoltage during use (beyond the warranted voltage in the drawing), the position of the boss has been slightly adjusted to ensure proper limiting of the lever during unlocking. See the before-and-after screenshots below for comparison.

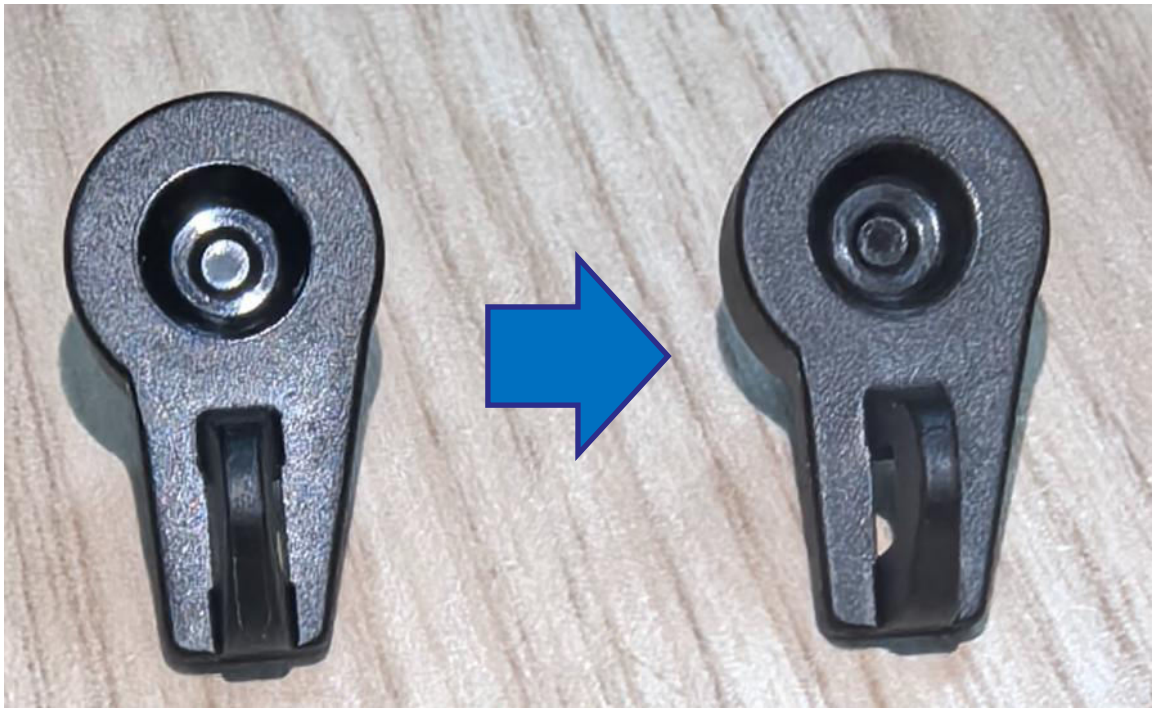
因为解锁后在手柄和壳体之间有一定的间隙，此间隙在使用中存在过压时，即超过图纸定义的额定电压可能造成手柄或内部齿轮冲击受损，现对壳体上的限位柱位置进行调整，使变更后的凸台能够更好的限位好手柄，见以下截图对比。



- ***Change the lever material to reinforce the impact strength***
  优化手柄的材料，提高耐冲击性

Charpy Notched Impact Strength upgrade from 10 kJ/m² to be 18 kJ/m²，lever color change slightly less dark than the current one, see below comparison

夏比缺口冲击强度由10 kJ/m² 提高到18 kJ/m²，手柄的颜色相比提高前稍微偏红一点，见以下对比

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Dear Customer,

Attached pls find the ECR R10669W is to further enhance the strength and operational stability of the electronic lock under potential overvoltage conditions.

Kindly review and sign it back within two weeks. Absence of any feedback or objections **within this two-weeks** window will be deemed as your implicit acceptance. Please pay attention to the part numbers listed in following table which you have placed orders for.

P/N	Description	End cust
P08B012966	CCS2 INLET DC 1000V 150A AC 480V 32A HVCOCFD11BL1200	Aurrigo
P08B011927	CCS2 INLET 200A 1000V HVCOCF0219DNPTCL3000	REV Mob
HVEL24MS001	MCS DC 24V E-LOCK	
NEVDCB12VELOCKL0500	DC 12V ELOCK 0.5M SINGLE CORE WIRE	