

µPDB Module System Application Specification

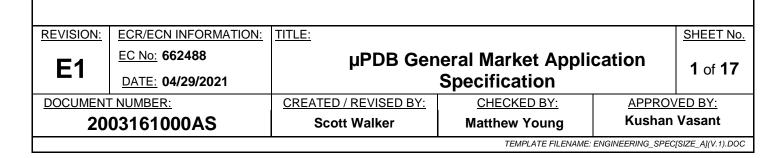




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E1	<u>EC No:</u> 662488	µPDB Gen	cation	2 of 17	
E1	<u>DATE:</u> 04/29/2021	-			
DOCUMENT	<u>NUMBER:</u>	CREATED / REVISED BY:	CHECKED BY:	<u>APPROV</u>	<u>'ED BY:</u>
2003161000AS		Scott Walker	Matthew Young	Kushan	Vasant
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1.0 PRODUCT WARNINGS

1.1 Scrap if Dropped Warning

If the Micro PDB is dropped from any height, it is required to be **scrapped** as per the label warning on the laser marking.

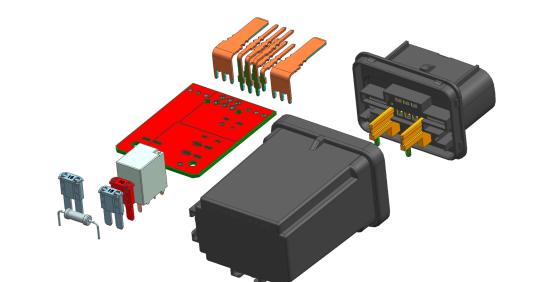


2.0 SCOPE

This Application Specification covers the relay and fuse μ PDB modules that utilize the MX150 hybrid (8, 9, 10 way) connector system. Within this document a provided guideline is detailed for connector mating, mounting, and troubleshooting of the μ PDB.

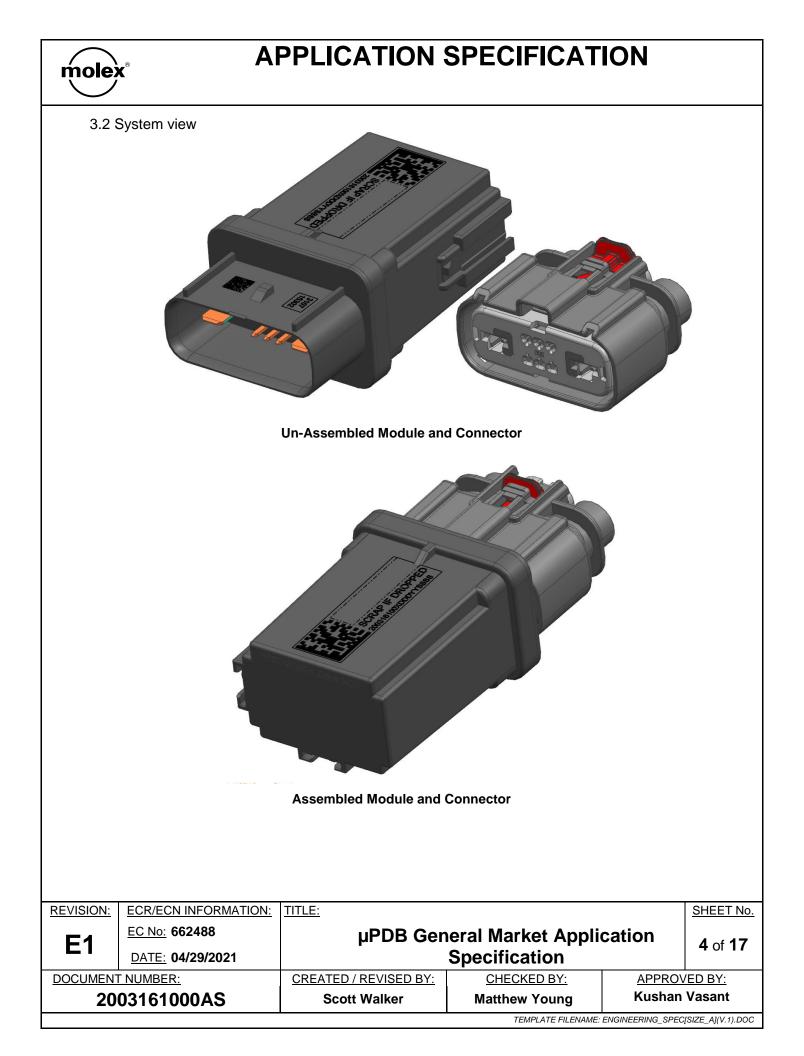
3.0 PRODUCT DESCRIPTION

3.1 Module Exploded view



Exploded View of Example Module (Internal Components shown Left to Right: Board Components, PCB, Header Blades, Module Cover, Header Shroud)

REVISION:	ECR/ECN INFORMATION:	TITLE:			SHEET No.		
E1	<u>EC No:</u> 662488	µPDB Ger	neral Market Appli	cation	3 of 17		
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DOCUMEN	NUMBER:	CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:			
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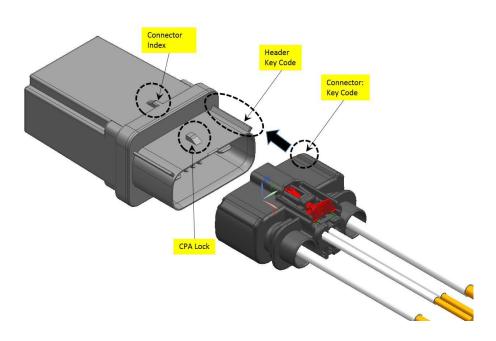


Part Numbe	Product Summary Description	Example	Figure		Page
		Applications	rigare		Number
200316110	1 1 Relay 1 Resistor	-Cooling Fan -Blower Motor -Headlights -Convertible Car Roof Control			11
2003161102	2 1 Relay 1 Slow Blow Fuse 1 Resistor	-All Wheel Drive Module -Headlights -Aftermarket Headlights -Front/Rear Defogger -Power Liftgate			12
2003161103	3 1 Relay 3 Fast Blow Fuses 1 Resistor	-UREA System (Module, Pump Heater, Line Heater) -Wiper Motor (Two Loads) -Tail Lights (Two/Three Loads) -Day Light Running Light (DRL)			13
200316112	1 2 Relays 4 Fast Blow Fuses 1 Resistor	-4 CYL Diesel Engine Glow Plugs (Can Combine Multiple Modules for 6 and 8 CYL) -Day Light Running Light (DRL)			14
2003161122	2 2 Relays 4 Fast Blow Fuses 1 Resistor	-4 CYL Diesel Engine Glow Plugs (Can Combine Multiple Modules for 6 and 8 CYL) -Day Light Running Light (DRL)			15
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200)3161000AS	Scott Walker	Matthew Young	Kushan	Vasant

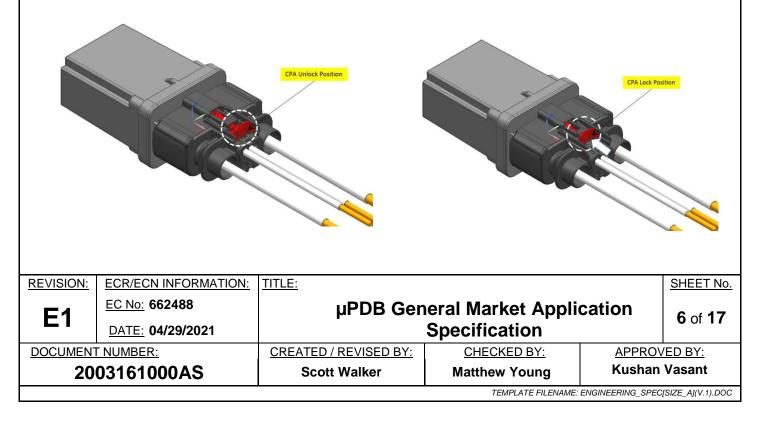


4.0 Procedure

- 4.1 Connector Mating/Unmating
 - 1) Verify the Connector and Header Key Codes

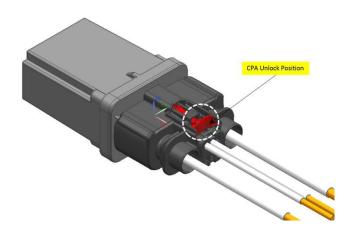


- 2) Engage connector to header shroud until audible click and lock feeling
- 3) Push the sliding CPA to the CPA lock position to verify that the connector is locked on the header

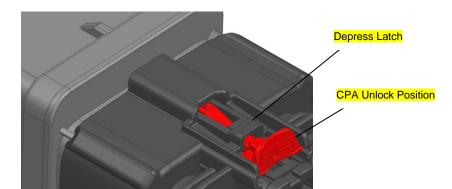




4) To remove the connector from the module, pull the sliding CPA back to the unlocked position



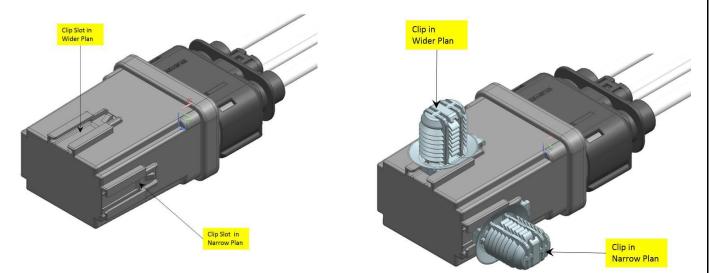
5) Depress the latch on the connector while simultaneously pulling the connector back to remove the module



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- 4.2 Mounting Micro-PDB
 - 4.2.1 Mounting by Clip
 - 1) Verify clip slot location: The Micro-PDB has two clip slots which are located in the wider plane and narrow plane of the cover.
 - 2) Select a clip slot location to fully insert a mounting clip. The mounting clip must be compliant with the USCAR 11.0mm standard clip slot per EWCAP-005-11

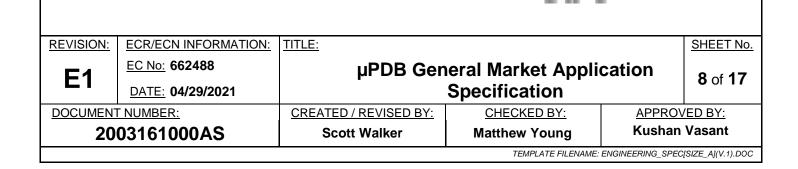


3) The mounting clip on the Micro-PDB should be fully inserted into the sheet metal hole that is located within the vehicle.

Vehicle Sheet Metal

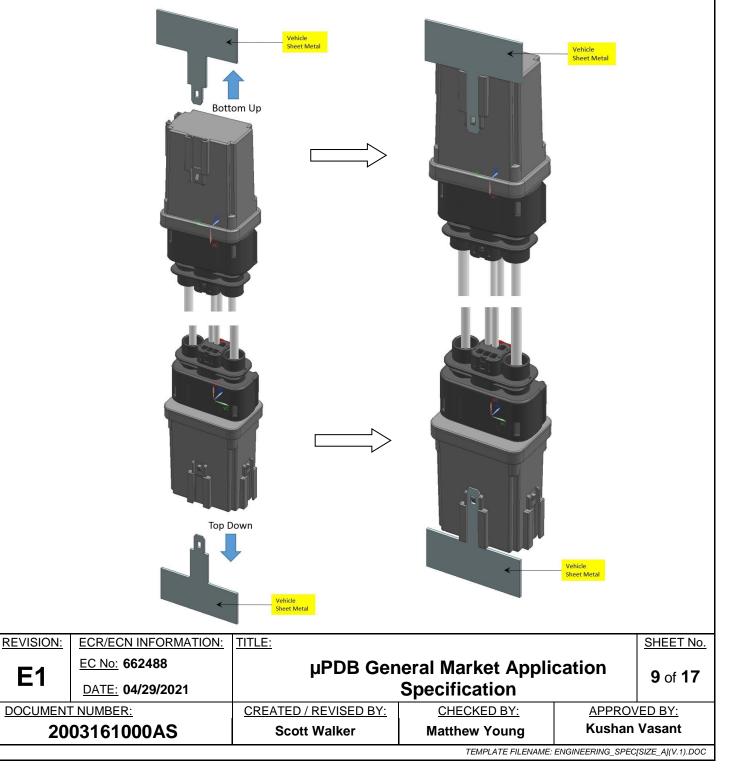
- Preferred connector orientation: Positioned in the downward orientation
 - o Engage Force: ≤45N
 - Clip Slot: EWCAP-005-11

NOTE: Make sure that the clip is fully inserted within the clip slot on the Micro-PDB cover before mounting the Micro-PDB.





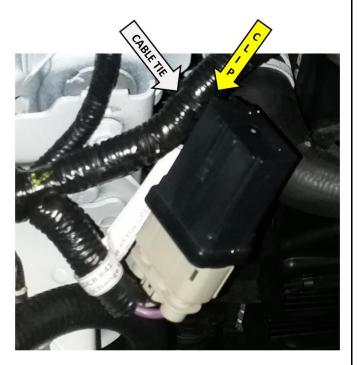
- 4.2.2 Mounting to Sheet Metal/Bracket
- 1) Applicable to both mounting methods, Top Down or Bottom Up.
- 2) Select a clip slot location to insert a fully assembled Micro-PDB into the sheet metal or bracket within the vehicle. The sharkfin lock should be fully seated within the bracket hole.
 - Preferred connector orientation: Positioned in the downward orientation





- 4.2.3 Mounting on Wire Harness by Cable Tie Clip
- 1) Select either clip slot located on the wide or narrow plane of the cover. Insert a cable tie clip that is compliant with the USCAR 11.0mm standard clip slot per EWCAP-005-11.
- 2) With the cable tie clip fully inserted into the clip slot located on the cover, place the Micro-PDB to be aligned with the center of the wiring harness. Fasten the cable tie around the wire harness until the cable tie is fully fastened. Trim excess cable tie.





4.3 Module Serviceability

The Micro PDB module utilizes adhesive to permanently seal with the cover. As a result, the module is **not serviceable**.

If the module experiences a failure it is advised to disconnect the module from the connector and replace with a new module. Reference section 3.1 for further instruction for connector mating/unmating.

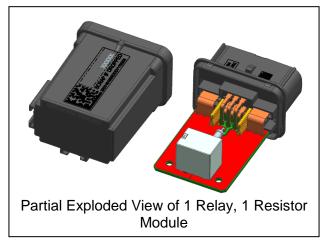
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E1	EC No: 662488	µPDB Ger	µPDB General Market Application				
	<u>DATE:</u> 04/29/2021	Specification					
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2003161000AS		Scott Walker	Matthew Young	Kushan	Vasant		
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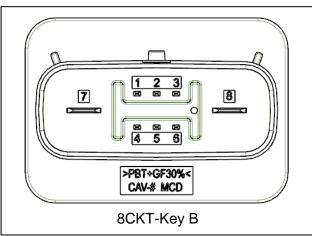


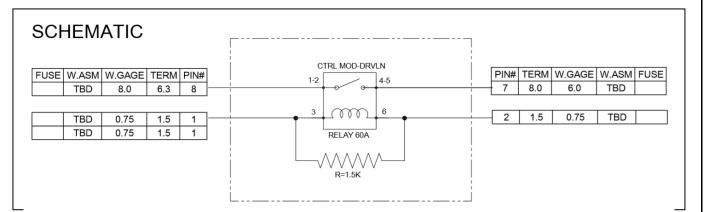
5.0 Trouble Shooting

Un-mate the Micro-PDB from the connector, measure the resistance of the corresponding blades/pins

5.1 2003161101 (1 Relay, 1 Resistor Module)







Molex		Continu	Test 1 uity Check (Relay-OFF)	Test 2 Resistance Check (Relay-ON)			
Part	Description			Input		Output	
Number		Circuit Pin No.	Pass Criteria (mΩ)	V1 (VDC)	Circuits Pin No.	Circuit Pin No.	Pass Criteria (mΩ)
	1 Relay	Pin 1-2	239Ω - 288Ω			Pin 7-8	Not to exceed 100 mΩ
2003161101	1 Resistor	Pin 1-7	Open, Greater than 1MΩ	7.3 -	Pin 1-2		
		Pin 2-7	Open, Greater than 1MΩ	16			
		Pin 1-8	Open, Greater than 1MΩ				
		Pin 2-8	Open, Greater than $1M\Omega$				
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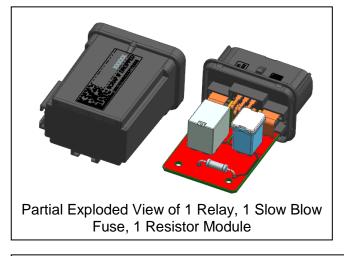
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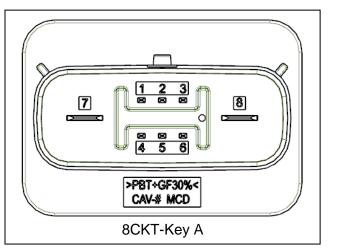
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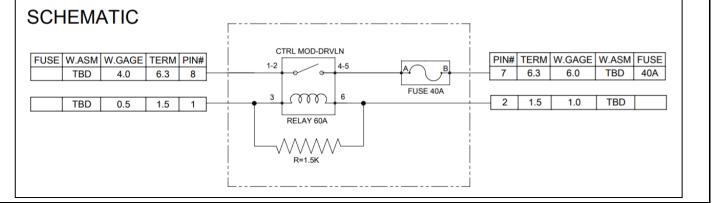
 2003161000AS
 Scott Walker
 Matthew Young
 Kushan Vasant



5.2 2003161102 (1 Relay, 1 Slow Blow Fuse, 1 Resistor Module)





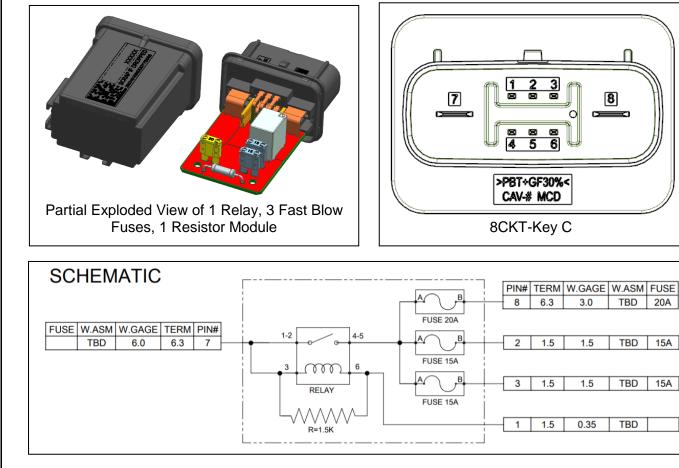


		Test 1 Continuity Check (Relay-OFF)				Test 2	
Molex				Resistance Check (Relay-ON)			
Part	Description			Input		Output	
Number		Circuit Pin No.	Pass Criteria (mΩ)	V1 (VDC)	Circuits Pin No.	Circuit Pin No.	Pass Criteria (mΩ)
	1 Relay	Pin 1-2	239Ω - 288Ω			Pin 7-8	Not to exceed 100 mΩ
2003161102	1 Slow Blow	Pin 1-7	Open, Greater than $1M\Omega$	7.3 -	Pin 1-2		
	Fuse	Pin 2-7	Open, Greater than $1M\Omega$	16			
	1 Resistor	Pin 1-8	Open, Greater than $1M\Omega$				
		Pin 2-8	Open, Greater than $1M\Omega$				

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5.3 2003161103 (1 Relay, 3 Fast Blow Fuses, 1 Resistor Module)



		Test 1		Test 2			
Molex			uity Check (Relay-OFF)		Resistance	Check (Re	elay-ON)
Part	Description				Input		Output
Number		Circuit		V1	Circuits	Circuit	Pass Criteria
		Pin No.	Pass Criteria (mΩ)	(VDC)	Pin No.	Pin No.	(mΩ)
		Pin 7-1	185Ω - 230Ω			Pin 7-8	Not to exceed
							100 mΩ
	1 Relay	Pin 7-2	Open, Greater than $1M\Omega$			Pin 7-2	Not to exceed
	3 Fast Blow						100 mΩ
2003161103	Fuses 1 Resistor	Pin 7-3	Open, Greater than $1M\Omega$	7.3 - 16	Pin 7-1	Pin 7-3	Not to exceed
	I Resision			10			100 mΩ
		Pin 7-8	Open, Greater than $1M\Omega$				
		Pin 1-2	Open, Greater than 1MΩ				
		Pin 1-3	Open, Greater than $1M\Omega$				
		Pin 1-8	Open, Greater than $1M\Omega$				
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	5.4 2003161	121 (2 Re	lays, 4	Fast Blow Fuses	1 Resi	istor Mo	dule)		
Partial Exploded View of 2 Relays, 4 Fast Blow Fuses, 1 Resistor Module									
FUSE W ASM W.GAGE TERM PIN# FUSE TBD 6.0 6.3 8 PIN# TERM W.GAGE W.ASM FUSE TBD 6.0 6.3 8 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0 0<									
			FUSE 25A	RELAY				G	
			Test 1			Test 2			
Molex Part	Description	Continuity Check (Rela			y-OFF) Resistance Check (Relay-ON) Input Output				
Number							-		-
		Circuit P	Pin No.	Pass Criteria	(mΩ)	V1 (VDC)	Circuits Pin No.	Circuit Pin No.	-
		Circuit P Pin 2		Pass Criteria 185Ω - 230Ω		V1	Circuits	Circuit	Pass Criteria (mΩ) Not to exceed
			2-5		2	V1	Circuits	Circuit Pin No.	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed
	2 Relays 4 Fast Blow	Pin 2	2-5 -All	185Ω - 230ú	Ω n 1MΩ	V1	Circuits	Circuit Pin No. Pin 7-1	Pass Criteria (m Ω)Not to exceed 100 m Ω Not to exceed 100 m Ω Not to exceed 0 m Ω
	2 Relays	Pin 2 Pin 7-	2-5 -All -All	185Ω - 230Ω Open, Greater tha	Ω n 1MΩ n 1MΩ	V1	Circuits	Circuit Pin No. Pin 7-1 Pin 7-4	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8-	2-5 -All -All	185Ω - 230Ω Open, Greater tha Open, Greater tha	n 1MΩ n 1MΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 8	2-5 -All -All -4 3-6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 19	n 1MΩ n 1MΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 1 Pin 1 Pin 3	2-5 -All -All -4 3-6 /3/5/6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω	n 1MΩ n 1MΩ Ω	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 4-2/ Pin 3-	2-5 -All -All -4 3-6 /3/5/6 /3/5/6 /3/5/6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Less than 1Ω Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 3 Pin 1-2/ Pin 4-2/	2-5 -All -All -4 3-6 /3/5/6 /3/5/6 /3/5/6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Less than 1Ω Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 4-2/ Pin 3-	2-5 -All -All -4 3-6 /3/5/6 /3/5/6 /3/5/6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number	2 Relays 4 Fast Blow Fuses	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 4-2/ Pin 3- Pin 3- Pin 6-	2-5 -All -All -4 3-6 /3/5/6 /3/5/6 /3/5/6	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 -	Circuits Pin No.	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed
Number 2003161121	2 Relays 4 Fast Blow Fuses 1 Resistor <u>ECR/ECN INFOR</u> <u>EC No:</u> 662488	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 4-2/ Pin 3- Pin 6- RMATION:	2-5 -All -All -4 3-6 /3/5/6 /3/5/6 -2/5 -2/5 -2/5	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 - 16 Marke	Circuits Pin No. Pin 2-5	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6	Pass Criteria (mΩ) Not to exceed 100 mΩ
Number 2003161121 2003161121 REVISION: E1	2 Relays 4 Fast Blow Fuses 1 Resistor ECR/ECN INFOR EC No: 662488 DATE: 04/29/20	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 4-2/ Pin 3- Pin 6- RMATION:	2-5 -AII -AII -4 -4 -4 -3-6 -2/5 -2/5 -2/5 -2/5 -2/5 -2/5 -2/5	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 - 16 Marke	Circuits Pin No. Pin 2-5	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6	Pass Criteria (mΩ) Not to exceed 100 mΩ SHEET No. 14 of 17
Number 2003161121 2003161121 <u>REVISION:</u> E1	2 Relays 4 Fast Blow Fuses 1 Resistor <u>ECR/ECN INFOR</u> <u>EC No:</u> 662488 <u>DATE:</u> 04/29/20 NUMBER:	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 3- Pin 4-2/ Pin 3- Pin 6- RMATION:	2-5 -AII -AII -4 -4 -3-6 -3/5/6 -2/5 -2/5 <u>TITLE:</u> <u>CREAT</u>	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha Open, Greater tha PDB Ge	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 - 16 Marke cificati	Pin 2-5 Pin 2-5	Circuit Pin No. Pin 7-1 Pin 8-3 Pin 8-6	Pass Criteria (mΩ) Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ SHEET NO. 14 of 17 ROVED BY:
Number 2003161121 2003161121 <u>REVISION:</u> E1 DOCUMENT	2 Relays 4 Fast Blow Fuses 1 Resistor ECR/ECN INFOR EC No: 662488 DATE: 04/29/20	Pin 2 Pin 7- Pin 8- Pin 1 Pin 3 Pin 1-2/ Pin 3- Pin 4-2/ Pin 3- Pin 6- RMATION:	2-5 -AII -AII -4 -4 -3-6 -3/5/6 -2/5 -2/5 <u>TITLE:</u> <u>CREAT</u>	185Ω - 230Ω Open, Greater tha Open, Greater tha Less than 1Ω Open, Greater tha Open, Greater tha Open, Greater tha Open, Greater tha Open, Greater tha	n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ n 1ΜΩ	V1 (VDC) 7.3 - 16 Marke cificati CHECKEI	Pin 2-5 Pin 2-5 Pin 2-5 Pin 2-5	Circuit Pin No. Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6	Pass Criteria (mΩ) Not to exceed 100 mΩ SHEET No. 14 of 17



5.5 2003161122 (2 Relays, 4 Fast Blow Fuses, 1 Resistor Module)									
	Partial Exploded View of 2 Relays, 4 Fast Blow SCHEMATIC								
	SCHEMATI FUSE W.ASM W.GA TBD		COM O NO RELAY	A FUSE A FUSE	B 15A	N# TERM W.GAGE 3 1.5 6 1.5	W.ASM FUSE TBD 15A TBD 15A		
	TBD	1.5 5	TVS D1			2 1.5	TBD		
	15A TBD	1.5 1							
	15A TBD	1.5 4 A	B NO COM E 15A RELAY	:		7 6.3	TBD		
			Test 1				Test 2	-	
Molex Part	Description	Continuit	ntinuity Check (Relay-OFF)			Resistance nput	· · · · · · · · · · · · · · · · · · ·	elay-ON) Output	
Number		Circuit Pin No).		V1	Circuits	Circuit	Pass Criteria	
			Pass Criteria (n	nΩ)	(VDC)	Pin No.	Pin No.	(mΩ)	
		Pin 2-5	Pass Criteria (n 185Ω - 230Ω	nΩ)	(VDC)	Pin No.	Pin No. Pin 7-1	Not to exceed	
		Pin 2-5 Pin 7-All		•	(VDC)	Pin No.		Not to exceed 100 mΩ Not to exceed	
	2 Relays 4 Fast Blow		185Ω - 230Ω	1MΩ			Pin 7-1	Not to exceed 100 mΩ	
2003161122	4 Fast Blow	Pin 7-All Pin 8-All Pin 1-4	185Ω - 230Ω Open, Greater than Open, Greater than Open, Greater than Less than 1Ω	1MΩ	(VDC) 7.3 - 16	Pin No. Pin 2-5	Pin 7-1 Pin 7-4	Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed	
2003161122	4 Fast Blow Fuses	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω	1MΩ 1MΩ	7.3 -		Pin 7-1 Pin 7-4 Pin 8-3	Not to exceed 100 mΩ Not to exceed	
2003161122	4 Fast Blow Fuses	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ	7.3 -		Pin 7-1 Pin 7-4 Pin 8-3	Not to exceed 100 mΩ Not to exceed	
2003161122	4 Fast Blow Fuses	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ	7.3 -		Pin 7-1 Pin 7-4 Pin 8-3	Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ	
2003161122	4 Fast Blow Fuses	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6 Pin 4-2/3/5/6	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ	7.3 -		Pin 7-1 Pin 7-4 Pin 8-3	Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ	
2003161122	4 Fast Blow Fuses 1 Resistor	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6 Pin 4-2/3/5/6 Pin 3-2/5	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ	7.3 -		Pin 7-1 Pin 7-4 Pin 8-3	Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ	
REVISION:	4 Fast Blow Fuses 1 Resistor	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6 Pin 4-2/3/5/6 Pin 3-2/5	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ	7.3 - 16 Marke	Pin 2-5	Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6	Not to exceed 100 mΩ	
REVISION: E1	4 Fast Blow Fuses 1 Resistor <u>ECR/ECN INFOR</u> <u>EC No:</u> 662488 <u>DATE:</u> 04/29/20	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6 Pin 4-2/3/5/6 Pin 3-2/5 MATION: TITLE	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ eral Spec	7.3 - 16 Marke	Pin 2-5	Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6 Cation	Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ Not to exceed 100 mΩ SHEET No. 15 of 17	
REVISION: E1	4 Fast Blow Fuses 1 Resistor	Pin 7-All Pin 8-All Pin 1-4 Pin 3-6 Pin 1-2/3/5/6 Pin 4-2/3/5/6 Pin 3-2/5 MATION: TITLE	185Ω - 230Ω Open, Greater than Open, Greater than Less than 1Ω Less than 1Ω Open, Greater than	1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ 1ΜΩ eral Spec	7.3 - 16 Marke	Pin 2-5 Pin 2-5 et Applic ion	Pin 7-1 Pin 7-4 Pin 8-3 Pin 8-6 Cation	Not to exceed 100 mΩ SHEET No.	

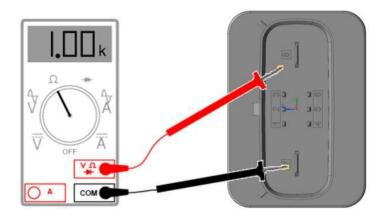


5.6 Test 1 Continuity Check (Relay-OFF)

- 1) Continuity check: Measure resistance pin to pin. See corresponding table per each module
- 2) Reference criteria resistance. See corresponding table per each module

5.7 **Test 2** Resistance Check (Relay-ON)

- 1) Relay ON: Apply V1 to specified pins listed in the reference tables above
- 2) Measure the resistance from pin to pin
- 3) Refer criteria resistance
- 4) If the standard criteria is not met, replacement of the Micro-PDB is necessary



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DOCUMENT	NUMBER:	CREATED / REVISED BY:	CHECKED BY:	<u>APPRO\</u>	ED BY:
2003161000AS		Scott Walker	Matthew Young	Kushan	Vasant
			TEMPI ATE EII ENAME	ENGINEERING SPEC	ISIZE AI(V 1) DOC



6.0 Traceability

Traceability Laser Marking:



- 2D Data Matrix Code (2D DMC)
 - Marking and reading standard: Data Matrix (ECC200)
 - o 14mm x 14mm Size
 - \circ Information to be encoded:
 - PPPP = Last Four Digits of Molex Part Number
 - YY = Year
 - DDD = Day of the Year
 - SSSS = Incremental Serial Number
 - Human Readable Code (HRC)
 - 10 Digits Molex Part Number
 - 5 Digits Julian Manufacturing Date (DDDYY)
 - o 4 Digits Incremental Serial Number

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DOCUMENT NUMBER:		CREATED / REVISED BY:	CHECKED BY:	APPROVED BY:	
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