PRODUCT SPECIFICATION

MXP120 SEALED ASSEMBLY
CABLE SEAL

REVISION:	ECR/ECN INFORMATION:	TITLE:	SHEET No.
4	EC No: **UAU2016-1371** DATE: **03/23/2016**	**MXP120 SEALED ASSEMBLY** **CABLE SEAL**	**1** of **10**

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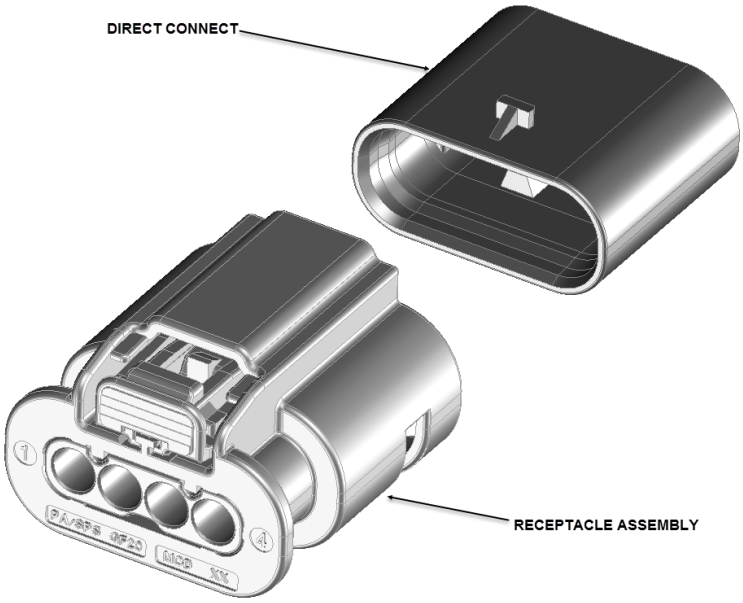
1.0 SCOPE

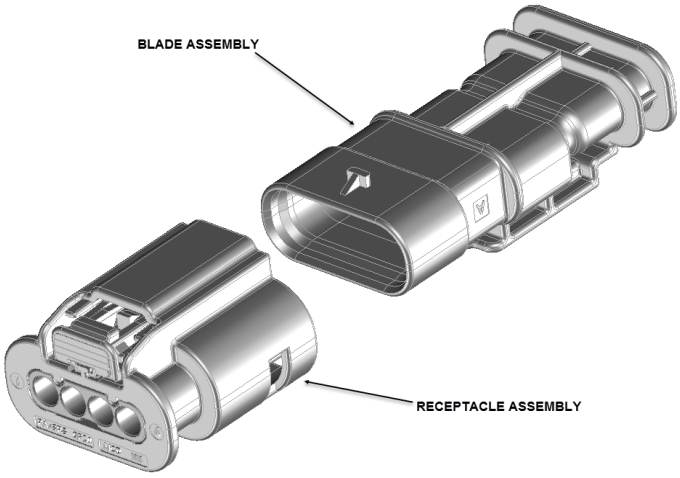
This product specification covers the 4 mm (0.157 inch) centerline (pitch) cable seal single row MXP120 (previously called 1.2mm sealed inline connection system.) The MXP120 connection system uses crimp technology.

2.0 PRODUCT DESCRIPTION

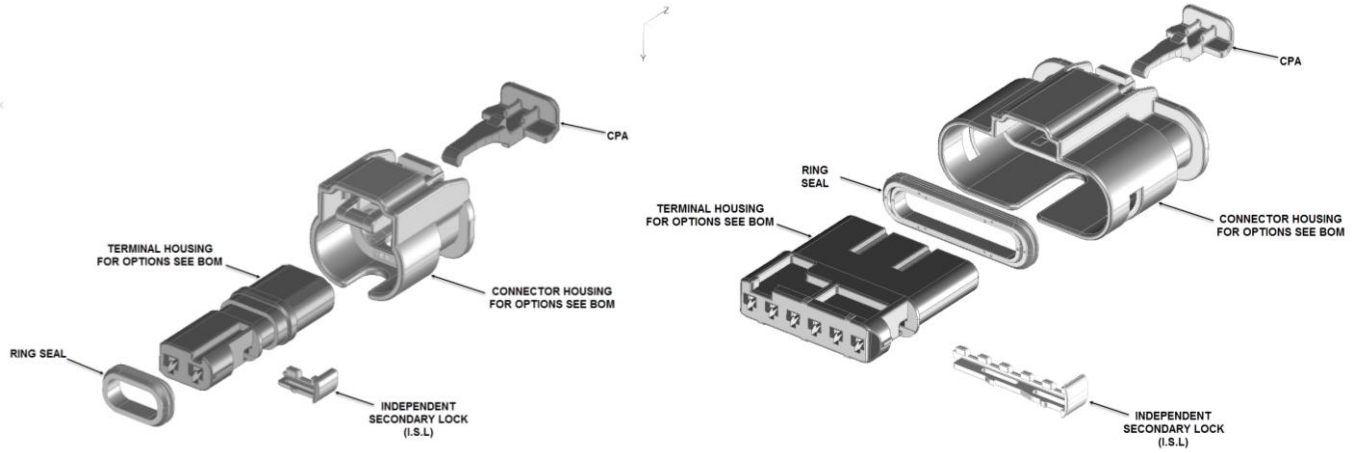
2.1. DIRECT CONNECT (WIRE TO BOARD APPLICATION)



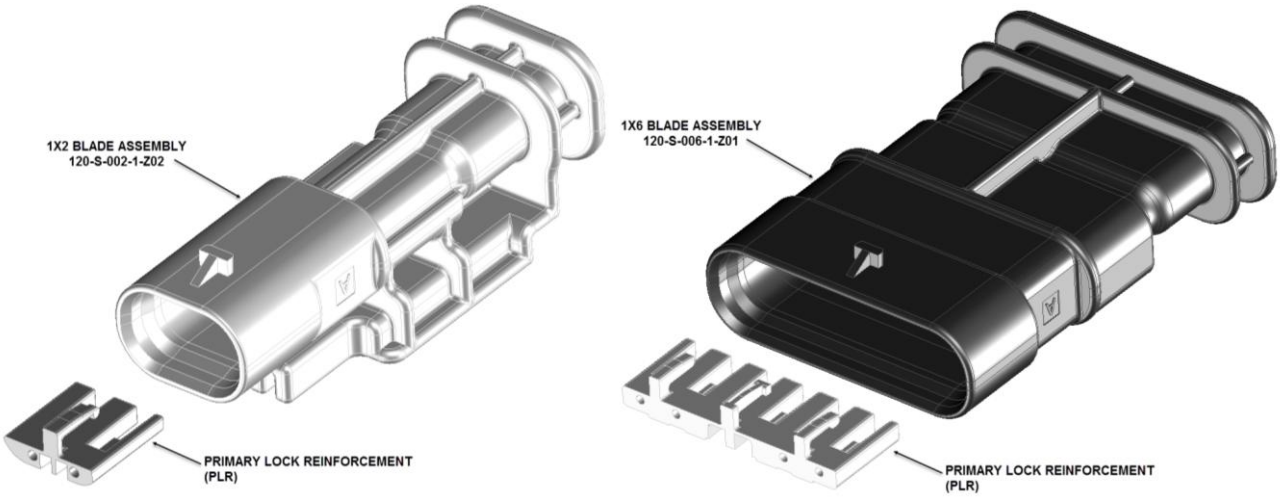
2.2. INLINE APPLICATIONS (WIRE TO WIRE APPLICATION)



2.3. RECEPTACLE ASSEMBLY



2.4. BLADE ASSEMBLY



2.5. PRODUCT NAME AND SERIES NUMBER

Refer to listed document number for part availability, dimensions, material, marking information, packaging information, interface definition, and configuration options etc.

Product Name	Document Number	Series
MXP120 1x2 Receptacle Assembly	SD-34900-2001	34900
MXP120 1x3 Receptacle Assembly		
MXP120 1x4 Receptacle Assembly	SD-34900-6001	
MXP120 1x6 Receptacle Assembly		
MXP120 1x2 Blade Assembly	SD-34899-2001	34899
MXP120 1x3 Blade Assembly		
MXP120 1x4 Blade Assembly	SD-34899-6001	
MXP120 1x6 Blade Assembly		

3.0 INTEGRAL COMPONENTS AND ACCESSORIES

Integral components and accessories are sold separately.

3.1 INTEGRAL COMPONENTS

3.1.1. Receptacle Terminals

For crimping information see the Terminal Application Specification listed in section 4.0.

Terminal Information	Manufacturer	Terminal Description	Cable Seal	Document Number	Document Revision
MCON-1.2 LL (Locking-Lance) terminal	TYCO	7-1452665-1, 0.25mm² - 0.35mm²	967067-2	C-1452674	C6
		7-1452665-3, 0.25mm² - 0.35mm²			
		7-1452668-1, 0.50mm² - 0.75mm²	967067-1		
		7-1452668-3, 0.50mm² - 0.75mm²			
		7-1452671-1, 1.0mm² - 1.5mm²			
MLK-1.2mm Single wire seal LL (Locking-Lance) terminal	KOSTAL	3 21 24 73411 0, 0.35mm²	1 08 00 50725 0	DOC00079128	03
		3 21 24 73412 0, 0.50mm² - 0.75mm²			
		3 21 24 73413 0, 0.75mm² - 1.0mm²			

3.1.2. Blade Terminals

For crimping information see the Terminal Application Specification listed in section 4.0.

Terminal Information	Manufacturer	Terminal Description	Cable Seal	Document Number	Document Revision
MCON-1.2 CB (Clean-Body) terminal	TYCO	2141114-3 0.25mm² - 0.35mm²	967067-2	C-1718398	B7
		2141116-3 0.50mm² - 0.75mm²	967067-1		
		2177610-3 1.0mm² - 1.5mm²			

3.1.3. Applicable Wires

3.1.3.1. Wire size

See section 6.0 for temperature range and recommended wire type within this system.

3.1.3.2. ISO Wire

Per the listed wire specifications where the insulation diameter is within 1.20mm to 2.10mm.
- GMW15626 February 2008

3.1.3.3. SAE Wire

Not Applicable

3.1.4. Terminal Service Tool

See the Connector Application Specification listed in section 4.0. Accessories

3.2. ACCESSORIES

3.2.1. Wire Harness Retention Clip - Recommended

For further information contact your sales engineer.

3.2.2. Backshell - Recommended

For further information contact your sales engineer.

3.2.3. Cavity Plugs

- For Molex cavity seal plug, reference drawing SD-34996-1501 for Cavity Plug and SD-34996-1901 for Cavity Plug Seal.
- For Tyco cavity seal plug part number 967056-1, refer to www.te.com for application details.

4.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

Document Title	Document Number
UL File Number	Not Applicable
CSA File Number	Not Applicable
TUV License number	Not Applicable
IMDS Report	Available upon request
Environmental Compliance	Available on molex.com
Connector Application Specification	AS-34900-0001
Connector Test Summary	TS-34900-0002

5.0 RATINGS

5.1. VOLTAGE - OPERATING
Operating Voltage: 14 Volts DC Maximum

5.2. VOLTAGE - ISOLATION RESISTANCE
100MΩ Minimum when 500 Volts DC between adjacent terminals and terminals to ground.

5.3. CURRENT RATING
See the Terminal Product Specification listed in section 4.0.

5.4. TEMPERATURE

Non-operating: - 40 Cº to + 125 Cº
Operating: - 40 Cº to + 125 Cº

5.5. FLAMMABILITY
The burn rate of the plastic material when tested to ISO 3795 shall not exceed 100 mm/min.

6.0 PERFORMANCE
For a list of completed tests reference the test summary document listed in section 4.0.

6.1 This Product Conforms To GMW3191 Dec 2007 with the Following Conditions

6.1.1. Vibration Performance

Circuit Size	Operating Conditions	Wire Range	Designed to Mate with	Connectors Used	Terminal Used	Recommended Wire Type*	Recommended Terminal Plating Type
1X2	Temperature Class 3 Vibration Class 2	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X	Ag
1X3							
1X4		1.20mm – 1.90mm		Molex Blade Assembly	Tyco CB Blade		
1X6							
1X2	Temperature Class 3 Vibration Class 1	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X	Sn
1X3							
1X4				Tyco Blade Assembly	Tyco LL Blade		
1X6							
1X2	Temperature Class 4 Vibration Class 4	1.40mm – 1.60mm	Inline	Molex Receptacle Assembly	Kostal LL Recpt.	FLR91X	Ag
1X3				Kostal Blade Assembly	Kostal LL Blade		

*Must be compliant to the wire specifications listed in section 3.1.3

6.1.2. Electrical Performance

Circuit Size	Operating Conditions	Wire Range	Designed to Mate with	Connectors Used	Terminal Used	Recommended Wire Type*	Recommended Terminal Plating Type
1X2	Temperature Class 3	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X	Ag
1X3							
1X4		1.20mm – 1.90mm		Molex Blade Assembly	Tyco CB Blade		
1X6							
1X2	Temperature Class 3	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X	Sn
1X3							
1X4							
1X6				Tyco Blade Assembly	Tyco LL Blade		
1X2	Temperature Class 4	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Kostal LL Recpt.	FLR91X	Ag
1X3				Kostal Blade Assembly	Kostal LL Blade		

*Must be compliant to the wire specifications listed in section 3.1.3

6.1.3. Mechanical Performance

- 1X2,1X3,1x4, 1x6 Blade Assy: Terminal to Connector Extraction Force (Post Moisture Conditioning) shall be 47N Min
- 1X2,1X3 Recpt ISL Extraction Force, Removal from Pre-Lock shall be 7N Min
- 1X2,1X3 Recpt ISL Disengage Force, Final-Lock to Pre-Lock (with terminals) shall be 5N Min
- 1X4,1X6 Recpt ISL Disengage Force, Final-Lock to Pre-Lock (with terminals) shall be 14N Min
- 1X2,1X3 Blade PLR Extraction Force, Removal from Pre-Lock shall be 9N Min
- 1X2,1X3 Blade PLR Disengage Force, Final-Lock to Pre-Lock (with terminals) shall be 4N Min
- 1X4,1X6 Blade PLR Disengage Force, Final-Lock to Pre-Lock (with terminals) shall be 11N Min
- CPA Disengage Force, Final-Lock to Pre-Lock (Mated Connector) shall be 9N Min.
- CPA Engage Force, Pre-Lock to Final-Lock (Mated Connector) shall be 32N Max.

6.1.4. Sealing Performance

Circuit Size	Operating Conditions	Wire Range	Designed to Mate with	Connectors Used	Terminal Used	Recommended Wire Type*
1X2	Temperature Class 3 Sealing Class 3	1.20mm – 2.10mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X
1X3				Molex Blade Assembly	Tyco CB Blade	
1X4	Temperature Class 3 Sealing Class 2	1.20mm – 1.90mm	Inline	Molex Receptacle Assembly	Tyco LL Recpt.	FLR2X
1x6				Molex Blade Assembly	Tyco CB Recpt.	
1X2	Temperature Class 4 Sealing Class 3	1.40mm – 2.10mm	Inline	Molex Receptacle Assembly	Kostal LL Recpt.	FLR91X
1X3				Kostal Blade Assembly	Kostal LL Blade	

*Must be compliant to the wire specifications listed in section 3.1.3

7.0 PACKAGING

- Molex packaging drawing numbers are located on the Assembly Drawing listed in section 2.5
- Parts should be packaged to protect against damage during handling, transit and storage.

8.0 GAGES AND FIXTURES

All applicable gages and fixtures are referenced in the appropriate control plans.

9.0 OTHER INFORMATION

Not Applicable