



# PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

(KOREAN)

## 1.0 SCOPE(적용 범위)

This specification covers general requirement for product performance and test method of  
.250 MP-Lock Wire-to-Board Connector Series

(본 사양서는 .250 MP-Lock Wire-to-Board Connector Series 의 성능 및 시험에 대하여 규정한다.)

## 2.0 PRODUCT DESCRIPTION (제품 개요)

### 2.1 PRODUCT NAME AND PART NUMBER(제품명 및 번호)

	PRODUCT NAME	PART NUMBER			REMARK
		1P	2P	3P	
HOUSING	.250 MP-Lock Housing	35196-0110	35959-02*0	35959-03*0	* : 0 (Nylon) 5 (Polyester)
HEADER ASS'Y	.250 W/B Header Ass'y	35960-01*0	35960-02*0	35960-03*0	
				35960-03*2	
TERMINAL	.250 MP-Lock Terminal-S	35072-9702			AWG #22-#18
	.250 MP-Lock Terminal-M	35072-9802			AWG #18-#14
	.250 MP-Lock Terminal-L	35072-9902			AWG #14-#10

### 2.2 DIMENSIONS, MATERIALS AND PLATINGS.(치수, 원자재 및 도금)

{See the appropriate Sales Drawings for information on dimensions, materials and platings}

( 관련도면에 설명된 치수, 원자재 및 도금사항을 참조.)

## 3.0 RATINGS (정격)

### 3.1 VOLTAGE (전압)

300 Volts AC(RMS)/DC

### 3.2 CURRENT AND APPLICABLE WIRES. (전류와 적용전선)

AWG	Amps	Outside Insulation Diameter
#22	3.0A	
#20	5.0A	35072-9702 : 1.5 - 3.1mm
#18	7.0A	
#16	12.0A	35072-9802 : 2.2 - 3.4mm
#14	15.0A	
#12	20.0A	35072-9902 : 3.0 - 5.1mm
#10	25.0A	

### 3.3 TEMPERATURE (사용온도)

35960-0\*0 \* : -40°C to +105°C

35960-0\*50 : -40°C to +120°C

REV	A																				
SHT	1-4																				
REVISE ON PC ONLY										TITLE											
A1										REWRITTEN CB, 03/06/04											
REV										DESCRIPTION											
DESIGN CONTROL					STATUS					WRITTEN BY:		CHECKED BY:		APPROVED BY:		DATE: YR / MO / DAY					
MOLEX-KOREA					M					C.B.CHIN		W.Y.YANG		C.W.LEE		01 / 12 / 22					
DOCUMENT NO.										FILE NAME										SHT NO.	
PS-35960-001										PS35960A.SAM										1 OF 4	
ES-40000-3996 REV. A SHEET 3 95/MAR/10 EC U5-0926 DCBRD03.SAM																					



# PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

(KOREAN)

## 4.0 PERFORMANCE (성능)

### 4.1 ELECTRICAL PERFORMANCE (전기적성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)
<b>Contact Resistance</b> (접촉저항)	Mate Connectors with a maximum voltage of 20mV and a current of 10mA. (커넥터를 결합하고 개방전압 20mV 이하, 단락전류 10mA를 인가한다.)	5 milliohms MAXIMUM
<b>Insulation Resistance</b> (절연저항)	Mate Connectors with a voltage of 500 VDC between adjacent terminals and between terminals and ground. (커넥터를 결합하고 500VDC를 인접한 단자 간에, 단자와 하우징간에 인가한다.)	1000 Megohms MINIMUM
<b>Dielectric Withstanding Voltage</b> (내전압)	Mate Connectors with a voltage of 1000VAC for 1 minute between adjacent terminals and between terminals and ground. (커넥터를 결합하고 1000VAC를 인접한 단자 간에, 단자와 하우징간에 1분간 인가한다.)	No breakdown (이상없을것)

### 4.2 MECHANICAL PERFORMANCE (기계적성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)		
<b>Connector Mate and Unmate Forces</b> (커넥터 삽입,인발력)	Mate and unmate connector at a rate of 25±6mm per minute (커넥터를 25±6mm/분 의속도로 삽입및 인발한다.)	1P	2P	3P
		3.5 Kgf	7.0 Kgf	10.5 Kgf
		MAXIMUM Insertion Force		
		0.6-3 Kgf	1.2-6 Kgf	1.8-9 Kgf
<b>Strength of Terminal Locking</b> (단자결합력)	Mate the connectors and apply the force by pulling axially the cable. Strength is determined when locking device disengages locking, or is broken by the load. (커넥터를 결합하고, 전선을 잡아당겨 단자의 결합장치가 파손되거나 상대탭과의 결합이 풀릴때의 힘을 측정한다.)	initial : 8.0 Kgf MINIMUM &		
		6 th : 6.0 Kgf MINIMUM 5 cycle, insertion and with -drawal{acting on the housing} (5회간 하우징을 잡고 삽입 및 인발한다.)		
<b>Terminal Retention Force</b> (단자보지력)	Axial pullout force on the terminal in the housing at a rate of 25±6mm per minute. (축방향으로 25±6mm/분 의속도로 하우징 내에서 이탈될때의 힘을 측정한다.)	10.0 Kgf MINIMUM		

REVISE ON PC ONLY		TITLE		
<b>A1</b>	REWRITTEN CB,03/06/04		<b>.250 MP-LOCK WIRE-TO-BOARD CONN.</b>	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
REV	DESCRIPTION			
DOCUMENT NO. PS-35960-001			FILE NAME PS35960A.SAM	SHEET 2
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM				



# PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

(KOREAN)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)																
<b>Vibration</b> (내진동성)	Mate connectors and vibrate: Amplitude: 1.50mm peak-to-peak. Sweep: 10-55-10 Hz in 1 minute. Duration: 2 hours in each X-Y-Z axis (6 hours totals) 커넥터를 결합하고 다음조건으로 진동한다. 진폭: 1.5mm peak-to-peak 진동수: 10-55-10 Hz/분 진동시간: X-Y-Z축 각 2시간.(총6시간)	Contact Resistance: 10 milliohms MAXIMUM & Discontinuity Not greater than 1 micro-second.																
<b>Durability</b> (내구성)	Mate and Unmate connectors up to 30 cycles repeatedly at a rate of 10 cycles/minute. (커넥터를 10회/분의 속도로 결합및이탈을 연속 30회 실시한다.)	Contact Resistance: 10 milliohms MAXIMUM																
<b>Wire Pullout Force</b> (압착부 인장강도)	Apply an axial pullout force on the wire at a rate of 25 ± 6mm per minute. (축방향으로 전선을 25 ± 6mm/분의 속도로 잡아당겨 전선이 빠지거나 파손될때의힘을 측정한다.)	<table border="1"> <thead> <tr> <th>AWG</th> <th>Pullout Force</th> </tr> </thead> <tbody> <tr> <td>#22</td> <td>5.0Kgf MINIMUM</td> </tr> <tr> <td>#20</td> <td>7.0Kgf MINIMUM</td> </tr> <tr> <td>#18</td> <td>12.0Kgf MINIMUM</td> </tr> <tr> <td>#16</td> <td>20.0Kgf MINIMUM</td> </tr> <tr> <td>#14</td> <td>23.0Kgf MINIMUM</td> </tr> <tr> <td>#12</td> <td>25.0Kgf MINIMUM</td> </tr> <tr> <td>#10</td> <td>30.0 KgfMINIMUM</td> </tr> </tbody> </table>	AWG	Pullout Force	#22	5.0Kgf MINIMUM	#20	7.0Kgf MINIMUM	#18	12.0Kgf MINIMUM	#16	20.0Kgf MINIMUM	#14	23.0Kgf MINIMUM	#12	25.0Kgf MINIMUM	#10	30.0 KgfMINIMUM
AWG	Pullout Force																	
#22	5.0Kgf MINIMUM																	
#20	7.0Kgf MINIMUM																	
#18	12.0Kgf MINIMUM																	
#16	20.0Kgf MINIMUM																	
#14	23.0Kgf MINIMUM																	
#12	25.0Kgf MINIMUM																	
#10	30.0 KgfMINIMUM																	

## 4.3 ENVIRONMENTAL PERFORMANCE (환경적 성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)
<b>Humidity</b> (내습성)	Mate connectors;expose to a temperature of 85 ±2℃ with a relative humidity of 90-95% for 96 hours. Note: Remove surface moisture and air dry for 1hour prior to measurements. (커넥터를 결합하고 온도 85 ±2℃, 상대습도 90-95% 에서 96 시간 방치한다. 측정전에 커넥터의 습기를 제거하고 1 시간동안 대기 중에서 건조한다.)	Contact Resistance: 10 milliohms MAXIMUM & Dielectric Withstanding: Voltage No breakdown at 1000VAC & Insulation Resistance: 1000 Megohms MINIMUM & Appearance: No Damage

REVISE ON PC ONLY		TITLE		
A1	REWRITTEN CB,03/06/04		<b>.250 MP-LOCK WIRE-TO-BOARD CONN.</b>	
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION		
DOCUMENT NO. PS-35960-001			FILE NAME PS35960A.SAM	SHEET 3
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM				



# PRODUCT SPECIFICATION



LANGUAGE

ENGLISH

(KOREAN)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)																				
<b>Thermal Shock</b> (열충격)	Mate connectors; expose 5 cycles of: <table border="1"> <thead> <tr> <th>Temperature °C</th> <th>Duration (Minutes)</th> </tr> </thead> <tbody> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> </tbody> </table> (커넥터를 결합하여 다음의 조건에서 5회 방치) <table border="1"> <thead> <tr> <th>온도 °C</th> <th>시간 (분)</th> </tr> </thead> <tbody> <tr> <td>-40 +0/-3</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 이하</td> </tr> <tr> <td>+105 +3/-0</td> <td>30</td> </tr> <tr> <td>+25 ±10</td> <td>5 이하</td> </tr> </tbody> </table>	Temperature °C	Duration (Minutes)	-40 +0/-3	30	+25 ±10	5 MAXIMUM	+105 +3/-0	30	+25 ±10	5 MAXIMUM	온도 °C	시간 (분)	-40 +0/-3	30	+25 ±10	5 이하	+105 +3/-0	30	+25 ±10	5 이하	Contact Resistance: 10 milliohms MAXIMUM & Appearance: No Damage
Temperature °C	Duration (Minutes)																					
-40 +0/-3	30																					
+25 ±10	5 MAXIMUM																					
+105 +3/-0	30																					
+25 ±10	5 MAXIMUM																					
온도 °C	시간 (분)																					
-40 +0/-3	30																					
+25 ±10	5 이하																					
+105 +3/-0	30																					
+25 ±10	5 이하																					
<b>Thermal Aging</b> (내열성)	Mate connectors; expose to a temperature of 105 ± 2 °C for 96 hours. (커넥터를 결합하여 온도 105 ± 2 °C에서 96 시간 방치)	Contact Resistance: 10 milliohms MAXIMUM & Appearance: No Damage																				
<b>Temperature Rise</b> (온도상승)	Mate connectors; measure the temperature rise at the rated current after 96 hours. (커넥터를 결합하고 정격전류를 인가하여 96시간 후에 온도상승을 측정한다.)	Temperature Rise: +30 °C MAXIMUM																				
<b>Salt Spray</b> (염수분무)	Mate connectors: Duration: 48 hours exposure Atmosphere: salt spray from a 5% solution. Temperature: 35 +1/-2°C (커넥터를 결합하여, 35 +1/-2°C 온도상태에서 5%의 염수를 48시간동안 분무한다.)	Contact Resistance: 10 milliohms MAXIMUM & Appearance: No Damage																				
<b>Solderability</b> (납땜성)	Soldering time : 3 +/-0.5 sec Solder Temperature : 230 +/-5 °C	Min. 3/4 of immersed area must show no voids, pin holes (침적면적 3/4 이상)																				
<b>Resistance to Soldering Heat</b> (납땜내열성)	Soldering time : 3 +/-0.5 sec Solder Temperature : 260 +/-5 °C	No Damage																				

REVISE ON PC ONLY		TITLE
<b>A1</b>	REWRITTEN CB,03/06/04	<b>.250 MP-LOCK WIRE-TO-BOARD CONN.</b>
REV	DESCRIPTION	THIS DOCUMENT CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INC. AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION
DOCUMENT NO. PS-35960-001		FILE NAME PS35960A.SAM
		SHEET 4
ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM		