



PRODUCT SPECIFICATION



LANGUAGE
ENGLISH
(KOREAN)

1.0 SCOPE(적용범위)

This specification covers general requirement for product performance and test method of .090 Wire To Wire Connector series.

(본 사양서는 .090 Wire To Wire Connector series 의 성능 및 시험에 대하여 규정한다.)

2.0 PRODUCT DESCRIPTION (제품개요)

2.1 PRODUCT NAME AND PART NUMBER(제품명 및 번호)

2.1.1 HOUSING ASS'Y

Male Connector				Female Connector			
Ckts (극수)	Product Name (제품명칭)	Part No. (제품번호)	Color (색상)	Ckts (극수)	Product Name (제품명칭)	Part No. (제품번호)	Color (색상)
6	Male Housing Ass'y-6P	35282-0610	White	6	Female Housing Ass'y-6P	35284-0610	White
8	Male Housing Ass'y-8P	35282-0810	White	8	Female Housing Ass'y-8P	35284-0810	White
10	Male Housing Ass'y-10P	35282-1010	White	10	Female Housing Ass'y-10P	35284-1010	White
		35282-1013	Yellow			35284-1013	Yellow
12	Male Housing-Ass'y-12P	35282-1210	White	12	Female Housing Ass'y-12P	35284-1210	White
		35282-1215	Gray			35284-1215	Gray
16	Male Housing-Ass'y-16P	35282-1610	White	16	Female Housing Ass'y-16P	35284-1610	White
		35282-1615	Gray			35284-1615	Gray
		35282-1617	Brown			35284-1617	Brown

2.1.2 TERMINAL

Male Terminal			Female Terminal		
Product Name (제품명칭)	Part No. (제품번호)	Wire Range (전선범위)	Product Name (제품명칭)	Part No. (제품번호)	Wire Range (전선범위)
Uniconn Male Terminal	35420-9702	0.3-0.5 mm ²	Uniconn Female Terminal	35421-6702	0.3-0.5 mm ²
	35420-9802	0.5-1.25 mm ²		35421-6802	0.5-1.25 mm ²
	35420-9902	2.0 mm ²		35421-6902	2.0 mm ²

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

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

REV	B																						
SHT	1-6																						
REVISE ON PC ONLY										TITLE													
REVISED EC# KOR2001-0034 C.B, 01/04/18										.090 WIRE TO WIRE CONNECTOR SERIES													
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REV	DESCRIPTION																						
DESIGN CONTROL MOLEX-KOREA					STATUS M					WRITTEN BY: W.Y.YANG				CHECKED BY: B.K.CHOI				APPROVED BY: C.W.LEE				DATE: YR / MO / DAY 99 / 02 / 23	
DOCUMENT NO. PS-35282-001										FILE NAME PS35282A										SHT NO. 1 OF 6			
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3.0 RATINGS (정격)

3.1 CURRENT RATING (허용전류)

$I = I_m \times K_d$

I : Rated current (정격전류)
 I_m : Max. current (최대전류)
 K_d : Reducing coefficient (감소계수)

Connector Ckts (커넥터 극수)	Kd (Reducing Coefficient) (감소계수)
6P,8P	0.55
10P,12P,16P	0.5

Wire Size (전선)	I _m (최대전류)
0.3 mm ²	6 A
0.5 mm ²	8 A
0.85 mm ²	10 A
1.25 mm ²	14 A
2.0 mm ²	18 A

3.2 TEMPERATURE (사용온도)

-40°C to +80°C

4.0 PERFORMANCE (성능)

4.1 ELECTRICAL PERFORMANCE (전기적성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)	
Voltage Drop (전압강하)	Mate Connectors :		
	Method	Voltage	Current
	①	20 mV MAX.	10 mA
	②	13 +1/-0 V	1 A
	③	13 +1/-0 V	Rated Current
		3 mV/A MAXIMUM.	
Insulation Resistance (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.)	100 Megohms MINIMUM	
Dielectric Withstanding Voltage (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)	

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4.2 MECHANICAL PERFORMANCE (기계적성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)		
		ckt (극)	Insertion Force (Kgf)	Withdrawal force (Kgf)
Connector Mate and Unmate Forces (커넥터 삽입,인발력)	Mate and unmate connector at a rate of 25±6mm per minute (커넥터를 25±6mm/분 의속도로 삽입및 인발한다.)			
		6P	4.8 MAX.	1.5 MIN.
		8P	6.4 MAX.	2.0 MIN.
		10P	8.0 MAX.	2.5 MIN.
		12P	9.6 MAX.	3.0 MIN.
16P	12.8 MAX.	4.0 MIN.		
Connector Lock strength (Lock 강도)	Mate connectors without terminals and fix the one side of the housing and then pull the other housing at a rate of 25 ±6mm per minute. To measure the load when release of the locking mechanism or destruction of it. (단자없이 커넥터를 결합하고 하우징을 고정, 다른 하우징을 25±6mm/분의 속도로 잡아당겨 결합장치가 해체되거나, 파손될때의 힘을 측정한다.)	10.0 Kgf MINIMUM		
Terminal Retention Force (in Housing) (단자 유지력)	Axial pullout force on the terminal in the housing (with TPA)at a rate of 25±6mm per minute. (축방향으로 25±6mm/분의속도로 하우징(TPA 장착) 내에서 단자가이탈될때의 힘을측정한다.)	10.0 Kgf MINIMUM		
Vibration (내진동성)	Mate connectors mount on a vibrating base and vibrate: 6.8G, 10-50Hz (sweep 8 minutes) Duration: Vertical 4hours, Fore and Aft 2hours, Left and Right 2hours (8 hours totals). Open voltage 13V Current : The first half time (4 hours) : 100 μA The latter half time : rated current 커넥터를 결합, 진동판에 고정하고 다음조건으로 진동한다. 6.8G, 10-50Hz (귀인8분) 진동시간: 상하 4시간, 전후, 좌우 각2시간(총8시간) 개방전압 13V, 전방4시간100 μA 및 후방은 정격전류	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Discontinuity Not greater than 1 micro-second.		
Durability (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.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM		
Wire Pullout Force (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 전선이빠지거나 파손될때의힘을 측정한다.)	<u>WIRE</u>	<u>Pullout Force</u>	
		0.3mm ²	6 Kgf MINIMUM	
		0.5mm ²	9 Kgf MINIMUM	
		0.85mm ²	13 Kgf MINIMUM	
		1.25mm ²	17 Kgf MINIMUM	
		2.0mm ²	20 Kgf MINIMUM	

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4.3 ENVIRONMENTAL PERFORMANCE (환경적성능)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)																				
Thermal Shock (열충격)	Mate connectors; expose 100 cycles of: <table border="1"> <tr> <th>Temperature °C</th> <th>Duration (Minutes)</th> </tr> <tr> <td>-40 +0/-3</td> <td>60</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> <tr> <td>+80 +3/-0</td> <td>60</td> </tr> <tr> <td>+25 ±10</td> <td>5 MAXIMUM</td> </tr> </table> (커넥터를 결합하여 다음의 조건에서 100회 방치) <table border="1"> <tr> <th>온도 °C</th> <th>시간 (분)</th> </tr> <tr> <td>-40 +0/-3</td> <td>60</td> </tr> <tr> <td>+25 ±10</td> <td>5 이하</td> </tr> <tr> <td>+80 +3/-0</td> <td>60</td> </tr> <tr> <td>+25 ±10</td> <td>5 이하</td> </tr> </table>	Temperature °C	Duration (Minutes)	-40 +0/-3	60	+25 ±10	5 MAXIMUM	+80 +3/-0	60	+25 ±10	5 MAXIMUM	온도 °C	시간 (분)	-40 +0/-3	60	+25 ±10	5 이하	+80 +3/-0	60	+25 ±10	5 이하	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Appearance: No Damage
Temperature °C	Duration (Minutes)																					
-40 +0/-3	60																					
+25 ±10	5 MAXIMUM																					
+80 +3/-0	60																					
+25 ±10	5 MAXIMUM																					
온도 °C	시간 (분)																					
-40 +0/-3	60																					
+25 ±10	5 이하																					
+80 +3/-0	60																					
+25 ±10	5 이하																					
Thermal Aging (내열성)	Mate connectors; expose to a temperature of 120 ± 2 °C for 120 hours. (커넥터를 결합하여 온도 120 ± 2 °C에서 120 시간 방치)	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Appearance: No Damage																				
Temperature Rise (온도상승)	Mate connectors; measure the temperature rise at the rated current after 96 hours. (커넥터를 결합하고 정격전류를 인가하여 96시간후에 온도상승을 측정한다.)	Temperature Rise: +30 °C MAXIMUM																				
Salt Spray (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.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Appearance: No Damage																				
Humidity (내습성)	Mate connectors; expose to a temperature of 85 ± 2 °C 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 °C, 상대습도 90-95% 에서 96 시간 방치한다. 측정전에 커넥터의 습기를 제거하고 1 시간동안 대기 중에서 건조한다.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Dielectric Withstanding: Voltage No breakdown at 1000VAC & Insulation Resistance: 100 Megohms MINIMUM & Appearance: No Damage																				

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ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)
Current Cycling (내전류 싸이클)	Mate connectors; measure the temperature rise at the rated current, 13 +1/-0V, 60 °C temperature after 1000 hours (45 minutes ON and 15 minutes OFF per hour.) (커넥터를 결합하여, 주위온도60°C에서 정격전류 전압 13 +1/-0V를 인가하여 45분간 통전 15분간 불통전하여 1000시간후 온도상승을 측정한다.)	Temperature Rise: +30 °C MAXIMUM
Rush Current (과전류 통전)	Mate connectors: expose for 1000 cycles at 60 °C temperature and below test condition. Condition ①: - Current : twice as many rated current - 1 Cycle : 1 minute ON and 9 minutes OFF Condition ② : - Current : five times as many rated current - 1 Cycle : 10 seconds ON and 590 seconds OFF (커넥터를 결합하여 주위온도60°C, 아래의 조건으로 1000회 실시한다. 조건① : 정격전류의 2배, 1분간 통전, 9분간 불통전을 1회로 한다. 조건② : 정격전류의 5배, 10초간 통전, 590분간 불통전을 1회로 한다.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Temperature Rise: +40 °C MAXIMUM
Cold Resistance (내한성)	Mate connectors; Duration: 120 hours Temperature: -40 +0/-10 °C (커넥터를 결합하여 온도 -40 +0/-10 °C에서 120 시간동안 방치.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM & Appearance: No Damage
Dust Resistance (내진성)	In an airtight tank of which the size is not less than 1000mm in depth,width and height. Suspend the connector at least 150mm apart from the tank wall, and spread about 1.5Kg of portland cement powder uniformly at every 15 minutes by a 10 seconds combined operation of fan compressed air injection for 1 hour. after that, repeat insertion and extraction 3 times. (커넥터를 결합한 상태에서 중형높이가 1000mm의 밀폐용기속에 벽으로부터 150mm 떨어뜨려, Portland 시멘트 약1.5Kg을 15분을 주기로 10초간 공기를불어 넣어 확산시키고, 이를 1시간 실시한후, 꺼내어 3회 삽입/어탈을 실시한다.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM
corrosive atmosphere: sulfur dioxide gas (부식환경: 아황산가스)	Mate connectors; Duration: 24 hours exposure Atmosphere: 50 parts per million (ppm) SO2 gas. Humidity : 90-95% , Temperature: 40 ± 3°C (커넥터를 결합하여 온도 40 ± 3°C, 습도 90-95% 농도 50ppm의 아황산가스속에 24시간 방치.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM

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ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)
Oil & Fluid Resistance (내유,내액성)	Mate connectors and sock into the below condition . Ⓐ Engine oil at 50± 2℃ for 2 hours. Ⓑ Gasoline at the room temperature for 10 minutes. Ⓒ Break fluid at the room temperature for 1 hour. Ⓓ Cold water, nonfreezing solution(5%) at the room temperature for 1 hour. Ⓔ Cold water, nonfreezing solution(50%) at the room temperature for 1 hour. Ⓕ Washer fluid at the room temperature for 1 hour. (커넥터를 결합하여 아래의 조건으로 침적한다.) Ⓐ 50± 2℃의 엔진유에 2시간. Ⓑ 상온의 가솔린에서 10분. Ⓒ 상온의 브레이크액에서 1시간. Ⓓ 상온의 냉각수, 동결방지액(5%)에서 1시간. Ⓔ 상온의 냉각수, 동결방지액(50%)에서 1시간. Ⓕ 상온의 워셔액에서 1시간.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM
Ozone Resistance (내오존성)	Mate connectors ; Duration: 8 hours exposure Atmosphere: 50 ±5 parts per hundred million (pphm) ozone . Temperature: 40 ± 2℃ (커넥터를 결합하여 온도 40 ± 2℃, 50 ±5 pphm의 오존에 8시간 방치.)	Voltage Drop (Method ②) 10 mV/A MAXIMUM
Combined Environment (복합환경)	Fix mated connectors on vibrator fixture and perform test according to the following conditions Temperature : 80± 3℃, -30± 3℃ with 80-95 RH humidity. Vibration : 4.5G, 20-200Hz (sweep 3 minutes) Duration : 360 hours, Current : rated current. <div style="text-align: center;"> <p>80°C 80-95% RH</p> <p>16 hours 2h -30°C 4h 2h</p> <p>24 hours</p> <p>1 cycle</p> </div> (커넥터를 진동판에 고정후, 상기 그래프의 온도 변화 (80± 3℃, -30± 3℃)와 습도상태에서 4.5G, 20-200Hz (3분)로 360시간, 정격전류 상태에서 진동한다.)	Appearance: No Damage & Wire Pullout Force: 17 Kgf MINIMUM(1.25mm ²) & Voltage Drop (Method ②) 10 mV/A MAXIMUM & Temperature Rise: +40 °C MAXIMUM & Discontinuity Not greater than 1 micro-second.

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