

# molex<sup>®</sup> PRODUCT SPECIFICATION

## .070 M-R CONNECTOR -6P

### 1. SCOPE(적용범위)

THIS PRODUCT SPECIFICATION COVERS THE .070 M-R CONNECTOR -6P.  
(이 SPEC.은 .070 M-R CONNECTOR -6P 에 대하여 규정한다.)

### 2 PRODUCT DESCRIPTION(제품구성)

#### 2.1 PRODUCT NAME AND PART NUMBER(제품명 & 제품 번호)

Product Name		Description	Part No.	Remark	
REC' HOUSING-6P		.070 M-R HOUSING -6P	35186-0610	*: MATERIAL & COLOR PER THE FOLLOWING SALES DRAWING	
PLUG HOUSING (FEMALE)	1P	.070 W/W PLUG HSG -1P	35151-0110		
	2P	6.2 PITCH W/W HSG -2P	35151-021*		
	3P	7.3 PITCH W/W HSG -3P	35151-031*		
TPA	1P	.070 TPA -1P	35182-019*		
	2P	6.2 PITCH TPA -2P	35150-029*		
	3P	7.3 PITCH TPA -3P	35150-039*		
	3P	.070 M-R TPA -3P	35187-039*		
MALE TER'L	A TYPE	.070 MALE TER'L(A)	35745-0*10		*:BARREL SIZE  1:SMALL (AWG #22~#20)  2:MEDIUM (AWG #18~#14)  3:LARGE (AWG #18X2)
	B TYPE	.070 MALE TER'L(B)	35747-0*10		
FEMALE TER'L	A TYPE	.070 FEMALE TER'L(A)	35746-0*10		
	B TYPE	.070 FEMALE TER'L(B)	35748-0*10		

#### 2.2 MATERIALS, PLATING & DIMENSION(원재료,도금사양&치수)

SEE THE APPROPRIATE DRAWINGS FOR INFORMATION ON MATERIALS, PLATINGS AND DIMENSIONS.

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### 3. RATINGS(정격)

Item(구분)	Standard(규격)		
Rated Voltage(MAX.) (최대 허용 전압)	300V AC(RMS)/DC [300V AC(실효치 rms)/ DC]		
Rated Current(MAX) and Applicable wires (최대허용전류 적용전선)	AWG	CURRENT	INSULATION DIA
	# 14	15 A	ø3.8 MAX.
	# 16	10 A	ø3.4 MAX.
	# 18	7 A	ø3.0 MAX.
	# 20	5 A	ø2.7 MAX.
# 22	4 A	ø2.5 MAX.	
AMBIENT TEMPERATURE RANGE (PBT MATERIAL) (사용 온도 조건)			-40 °C~+120 °C
AMBIENT TEMPERATURE RANGE (PET/PC MATERIAL) (사용 온도 조건)			-40 °C~+110 °C

### 4. ELECTRICAL PERFORMANCE(전기적 특성)

ITEM(항목)	TEST CONDITION(시험조건)	REQUIREMENT(규격)
1	Insulation Resistance Mate applicable connector and Apply a voltage of 500V DC between adjacent terminals and between terminals to ground	100 megaohms Minimum
	절연저항 Connector를 결합한 상태에서 연결하는 단자와 단자, 단자와 접지간에 DC 500V를 가하고 측정한다	
2	Dielectric Strength Mate connectors, Apply a voltage of 1,500V AC(rms) for 1 minute between adjacent terminals and between terminals to ground.	No breakdown Current leakage<5mA
	내 전 압 Connector를 결합한 상태에서 연결하는 단자와 단자, 단자와 접지간 AC 1,500V를 1분간 가한다	
3	Contact Resistance Mate connectors, measure by dry circuit apply a maximum voltage of 20mV and a current of 10mA	10 milliohms Maximum
	접촉저항 Connector를 결합한 상태에서 개방전압 20mV이하 단락전류 10mA에서 측정한다	
4	Temperature Rise Mate connectors: measure the temperature rise at the rated current.	+30°C Maximum
	온도상승 커넥터를 결합하여, 정격 전류를 인가하여 온도 상승을 측정한다.	

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## 5. MECHANICAL PERFORMANCE(기계적 특성)

ITEM(항목)		TEST CONDITION(시험조건)	REQUIREMENT(규격)		
5	Connector Insertion And Withdrawal Force	Insert and withdrawal with connector At a rate of 25±6mm per minute.	Applicable Ckt No.	Insertion Force(MAX.)	Withdrawal Force(Min.)
			1	1.6 kgf	0.5 kgf
	커넥터 삽발거력	매분 25 ± 3mm/min의 속도로 삽발거를 한다.	2	2.4 kgf	0.8 kgf
			3	4.2 kgf	1.2 kgf
6	Terminla/Housin Retention Force	Apply axial pull out force at the speed rate of 25 ± 3mm/min. on terminal assembled in the housing	*TPA 미장착(Without TPA) 4.0 Kgf Minimum.		
	Terminal 유지력	하우징과 Terminla을 조립한 상태에서 매분 25 ± 3mm/min의 속도로 축 방향으로 잡아당겨 측정한다.	*TPA 장착(With TPA) 7.0 Kgf Minimum.		
7	Durability	Mate connectors up to 30 cycles at a maximum rate of 10 cycles per minute.	20 milliohms Maximum		
	내구성	커넥터를 최대 10회/1분의 속도로 삽,발거를 30회 실시한다.			
8	Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm	2.5 kgf Maximum		
	단자 삽입력	하우징에 압착된 단자를 25 ± 6 mm/분의 속도로 삽입한다.			
9	VIBRATION	Mate connectors and subject to the following * vibration conditions: Amplitude : 1.5mm P-P Sweep Time : 10-55-10 Hz in 1 minute Duration : 2 Hours in each X.Y.Z axes	Appearance: No Damage  Contact Resistance 20 milliohms Maximum  Discontinuity < 1 microsecond		
	내진동성	커넥터를 결합하여 아래 진동상태를 가한다. 진 폭 : 1.5mm P-P 진동수 : 10-55-10 Hz/분 진동시간 : X.Y.Z축 각 2시간	외관: 이상 없을 것  접촉저항: 20 milliohms Maximum  순간단락: < 1 microsecond		

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## 5. MECHANICAL PERFORMANCE(Continued)

ITEM(항목)		TEST CONDITION(시험조건)	REQUIREMENT(규격)	
10	Wire Pullout Force	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm.	Applicable Wore(AWG)	Pullout Force
			#14	15kgf Min.
			#16	13kgf Min.
			#18	10kgf Min.
			#18+#18	
	전선 압착강도	단자를 압착하여 전선을 25±6 mm/분의 속도로 축 방향으로 당긴다.	#20	6kgf Min.
			#20+#20	
		#22	4kgf Min.	

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## 6. ENVIRONMENTAL PERFORMANCE(환경적 특성)

ITEM(항목)		TEST CONDITION(시험조건)		REQUIREMENT(규격)
11	Shock(Thermal)	Mate connectors and then expose below condition. Cycles: 5 Times		Appearance: No Damage  Contact Resistance 20 milliohms Maximum
		Temperature (°C)	Duration (Minutes)	
	열충격	- 55 +0/-3°C +25 ± 10°C -120 +3/-0°C +25 ± 10°C	30 Minutes 5 Minutes 30 Minutes 5 Minutes	외관: 이상 없을 것  접촉저항: 20 milliohms Maximum
		커넥터를 결합하여 아래 조건과 같이 5회 노출 시킨다..		
		온도 (°C)	시간 (분)	
		-55+0/-3°C +25±10°C -120 +3/-0°C +25±10°C	30분 5분 30분 5분	
12	Thermal Aging	Mate connectors; expose to: 96 hours at 105 ± 2°C		Appearance: No Damage  Contact Resistance 20 milliohms Maximum
	내열성	커넥터를 결합하여 주위온도 105 ± 2°C 에서 96시간 방치 후 꺼내어 측정한다.		외관: 이상 없을 것  접촉저항: 20 milliohms Maximum
13	Humidity (Steady State)	Mate connectors: expose to a temperature of 60 ± 2°C with a relative humidity of 90-95% for 96 hours.  Note: Remove surface moisture and air dry for 1 hour prior to measurements.		Appearance: No Damage  Contact Resistance 20 milliohms Maximum  Insulation Resistance: 100 Megaohms Minimum  Dielectric Withstanding: No breakdown at 1,500 VAC
	내습성	커넥터를 결합하여 상대습도 90-95% , 온도 80 ± 2°C 상태에서 96 시간 방치한다. 측정 전 수분을 제거하고 대기 에서 1시간 건조한다		외관: 이상 없을 것 접촉저항: 20 milliohms Maximum 절연저항: 100 Megaohms Minimum 내전압: 절연파괴 없을것(@1,500VAC)

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## 6. ENVIRONMENTAL PERFORMANCE(Continued)

ITEM(항목)		TEST CONDITION(시험조건)	REQUIREMENT(규격)
14	Salt Spray	Mate connectors: Duration: 48 hours exposure; Atmosphere: salt spray from a 5% solution; Temperature: 35 ±2°C	Appearance: No Damage  Contact Resistance  20 milliohms Maximum
		주위온도 : 35 ±2°C 에서 5% 중량비의 염수를 48시간 분무하고 시험후 상온에서 물로 씻은후 실온에서 건조시킨다.	외관: 이상 없을 것 접촉저항: 20 milliohms Maximum

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