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ELECTRONICS

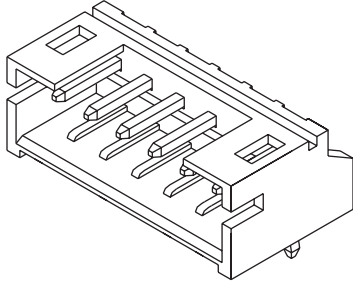
www.Jameco.com ♦ 1-800-831-4242

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Jameco Part Number 1299104

2.00mm (.079") Pitch Wire-to-Board Header

89401 Right Angle



Features and Benefits

- Sizes 2 to 16 circuits
- Latch windows retain positive locks after mating
- Standoffs minimize flux retention
- Coined version for positive pin retention to header

Reference Information

Product Specification: PS-89369
Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980A
Mates With: 87369
Designed In: Millimeters

Electrical

Voltage: 250V
Current: 4.0A
Contact Resistance: 40 milliohms max.
Dielectric Withstanding Voltage: 500V AC/1 min.
Insulation Resistance: 1000 Megohms min.

Physical

Housing: Natural 6/6 nylon, UL 94V-0
Contact: Brass
Plating: Tin
Operating Temperature: -25 to +85°C

Circuits	Order No.	Lead-free
2	89401-021X	Yes
3	89401-031X	
4	89401-041X	
5	89401-051X	
6	89401-061X	
7	89401-071X	
8	89401-081X	
9	89401-091X	

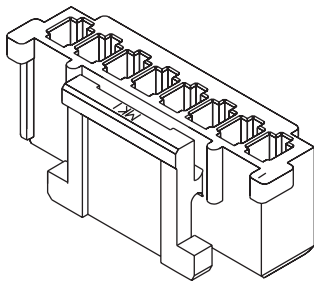
Circuits	Order No.	Lead-free
10	89401-101X	Yes
11	89401-111X	
12	89401-121X	
13	89401-131X	
14	89401-141X	
15	89401-151X	
16	89401-161X	

Replace X with color option (0 to 7)	
0	Natural
2	Red
3	Yellow
4	Blue
6	Green
7	Black

www.molex.com/customer.html?seriesNumber=89401

2.00mm (.079") Pitch Sherlock™ Wire-to-Board Housing

35507



Features and Benefits

- Sizes 2 to 20 circuits
- Positive lock latch provides secure mating retention
- Housing lance ensures good terminal retention
- Compact low-profile design for space savings
- Polarizing end walls prevent mismatching
- Five color choices for circuit identification

Reference Information

Product Specification: PS-35507
Packaging: Bag
UL File No.: E29179
CSA File No.: LR19980
Mates With: 35362 and 35363 headers
Use With: 50212 terminal
Designed In: Millimeters

Electrical

Voltage: 125V
Current: 2.0A max.
Contact Resistance: 20 milliohms max.
Dielectric Withstanding Voltage: 500V
Insulation Resistance: 1000 Megohms min.

Mechanical

Contact Insertion Force: 9.8N (2.2 lb) max.
Contact Retention to Housing: 14.7N (3.3 lb) min.
Mating Force: 5 circuits—58.8N (13.2 lb)
Unmating Force: 5 circuits—3.3N (0.7 lb)
Durability: 30 cycles

Physical

Housing: Polyester, UL 94V-0
Operating Temperature: -40 to +105°C

Circuits	Order No.
2	35507-0200
3	35507-0300
4	35507-0400
5	35507-0500
6	35507-0600
7	35507-0700
8	35507-0800

Circuits	Order No.
9	35507-0900
10	35507-1000
11	35507-1100
12	35507-1200
13	35507-1300
14	35507-1400
15	35507-1500

Circuits	Order No.
16	35507-1600
17	35507-1700
18	35507-1800
19	35507-1900
20	35507-2000



PRODUCT SPECIFICATION



LANGUAGE

KOREA
(ENGLISH)

[1. 적용범위(SCOPE)]

NEW 2.0 PITCH WIRE TO BOARD CONNECTOR (POSITIVE LOCK)에 대하여 규정한다.
(THIS SPECIFICATION COVERS THE 2.0 PITCH WIRE TO BOARD CONNECTOR(P-LOCK) SERIES)

[2. 제품명 및 제품번호(PRODUCTION NAME AND PART NUMBER)]

제품명 (PRODUCT NAME)	제품번호 (PART NUMBER)
HOUSING	35507-***0*
WAFER ASSY - ST	35362-****
WAFER ASSY - RA	35363-****
TERMINAL	50212-8000

0 *

0: NATURAL
1: BLACK
2: RED
3: YELLOW
4: BLUE
5: GREEN

[3. 정격(RATINGS)]

항목	규격(STANDARD)	
최대허용전압(RATED VOLTAGE(MAX.))	125V	
최대허용전류 및 사용 WIRE(RATED CURRENT(MAX.) AND APPLICABLE WIRES)	AWG#24	2.0A
	AWG#26	1.5A
	AWG#28	1.0A
	AWG#30	0.5A
사용온도범위(AMBIENT TEMP. RANGE)	-40°C ~ +105°C	

[AC(rms)/DC]

☞ INCLUDE TERMINAL TEMPERATURE RISE

[4. 성능(PERFORMANCE)]

4.1 전기적 성능 (ELECTRICAL PERFORMANCE)

항목 (ITEM)	조건 (TEST CONDITION)	규격 (REQUIREMENT)
4.1.1 접촉저항	결합된 CONNECTOR를 개방전압 20mV이하, 단락전류 10mA에서 측정 (JIS C5402 5.4)	20mΩ MAX.
	MATE CONNECTORS MEASURE BY DRY CIRCUIT, 20mV MAX. 10mA (BASED UPON JIS C5402 5.4)	
4.1.2 절연저항	결합된 CONNECTOR를 인접 TERMINAL사이 및 TER'L과 GND간에 DC 500V를 인가하여 측정한다. (JIS C5402 5.2/MIL-STD-202 시험법 302 조건 B)	1,000MΩ MIN.
	MATE CONN. APPLY 500V DC BETWEEN ADJACENT TERMINAL OR GND (BASED UPON JIS C5402 5.2/MIL-STD-202 METHOD CONDITION B)	
4.1.3 내전압	결합된 CONNECTOR를 인접 터미널사이 및 TER'L과GND간에 AC 500V를 1분간 인가한다. (JIS C5402 5.1/MIL-STD-202 시험법 301)	이상 없을것 (NO BREAKDOWN)
	MATE CONNECTORS, .APPLY 500V AC FOR 1 MINUTE BETWEEN ADJACENT TER' L OR GND. (BASED UPON JIS C5402 5.1/MIL-STD-202 METHOD 301)	

REVISE ON PC ONLY

TITLE

NEW 2.0 W/B CONN.(Positive-Lock)
(2~15P, only 20P, 6kinds color version)

F

REVISED
(Attach 20P & color version)

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REV

DESCRIPTION

DOCUMENT NO.

PS-35507-001

FILE NAME

20SPEC-1

SHEET

2

ES-40000-3996 REV. A SHEET 4 95/MAR/10 EC U5-0926 DCBRD03.SAM



PRODUCT SPECIFICATION



LANGUAGE

KOREA
(ENGLISH)

항목 (ITEM)	조건 (TEST CONDITION)	규격 (REQUIREMENT)
4.1.4	압착상태의 접촉저항 TERMINAL을 WIRE 사용하여 압착한 상태에서 개방전압 20mV 이하, 단락전류 10mA에서 측정한다. CRIMP THE APPLICABLE WIRE ON TO TERMINAL, MEASURE BY DRY CIRCUIT, 20mV MAX. 10mA	5mΩ MAX,
RESISTANCE ON CRIMPED PORTION		

4.2 기계적 성능 (MECHANICAL PERFORMANCE)

항목 (ITEM)	조건 (TEST CONDITION)	규격 (REQUIREMENT)	
4.2.1	삽입력 및 발거력 INSERTION & WITHDRAWAL FORCE	제 6항 참조 (REFER TO PARAGRAPH 6)	
4.2.2	단자고착력 CRIMPING PULL OUT FORCE	AWG#24	3.0Kgf/MIN.
		AWG#26	2.0Kgf/MIN.
		AWG#28	1.0Kgf/MIN.
		AWG#30	0.5Kgf/MIN.
4.2.3	터미널삽입력 TERMINAL INSERTION FORCE	1.0 Kgf MAX.	
4.2.4	터미널유지력 TERMINAL/HSG RETENTION FORCE	1.5 Kgf MIN.	
4.2.5	PIN 유지력 PIN RETENTION FORCE	1.0 Kgf MIN.	
4.2.6	CONNECTOR 결합력 LOCK STRENGTH	2~3 CKT.	2 Kgf MIN.
		4~15 & 25 CKT.	3 Kgf MIN.

REVISE ON PC ONLY		TITLE
F	REVISED (Attach 20P & color version)	NEW 2.0 W/B CONN. (Positive-Lock) (2~15P, only 20P, 6kinds color version)
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		SHEET 3
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PRODUCT SPECIFICATION



LANGUAGE
KOREA (ENGLISH)

4-3. ENVIRONMENTAL PERFORMANCE(환경적 성능)

항목 (ITEM)		조건 (CONDITION)	규격 (REQUIRED)	
4.3.1	반복 삽, 발거력	1분간 10회의 속도로 삽, 발거를 30회 반복한다	접촉저항	40mΩ MAX.
	REPEATED INSERTION/WITHDRAWAL	WHEN MATED UP TO 30 CYCLES REPEATEDLY BY THE MATE 10 CYCLES/MINUTE.	CONTACT RESISTANCE	
4.3.2	온도상승	결합된 커넥터의 최대허용전류를 통전하고 커넥터의 온도상승분율 측정한다 (UL 498)	30℃ MAX.	
	TEMPERATURE RISE	CARRYING RATED CURRENT LOAD. (BASED UPON UL 498)		
4.3.3	내진동성	진 폭 : 1.5mm P-P 진동수 : 10-55-10 Hz/분 진동시간 : X,Y,Z축 각 2시간 (MIL-STD-202 METHOD 201A)	외관	이상없을것
			접촉저항	40mΩMAX
	VIBRATION	AMPLITUDE : 1.5 mm P-P SWEEP TIME : 10-55-10 Hz IN 1 MINUTE DURATION : 2 HOURS IN EACH X,Y,Z AXES. (BASED UPON MIL-STD-202 METHOD 201A)	순간단락	1 μS MAX
			APPEARANCE	NO DAMAGE
4.3.4	내충격성	50G의 충격을 각 X,Y,Z축에 3회 가한다. (JIS C0041/MIL-STD-202 시험법 213B 조건A)	CONTACT RESISTANCE	40mΩMAX
			DIS-CONTINUITY	1 μS MAX
	SHOCK	50G, 3 STROKES IN EACH AXES. (BASED UPON JIS C0041/ MIL-STD-202 METHOD 312B CONDITION A)	외관	이상없을것
			접촉저항	40mΩMAX
4.3.5	내열성	결합된 커넥터를 105±2℃에서 96시간 방치 (JIS C0021/MIL-STD-202 시험법 108A 조건A)	순간단락	1 μS MAX
			APPEARANCE	NO DAMAGE
4.3.6	내한성	결합된 커넥터를 -40±3℃에서 96시간 방치 (JIS C0020)	CONTACT RESISTANCE	40mΩMAX
			DIS-CONTINUITY	1 μS MAX
4.3.6	COLD RESISTANCE	-40±5℃, 96HOURS (BASED UPON JIS C0020)	외관	이상없을것
			접촉저항	40mΩMAX
4.3.6	HEAT RESISTANCE	105±5℃, 96HOURS (BASED UPON JIS C0021/ MIL-STD-202 METHOD 108A CONDITION A)	외관	이상없을것
			접촉저항	40mΩMAX
4.3.6	COLD RESISTANCE	-40±5℃, 96HOURS (BASED UPON JIS C0020)	외관	이상없을것
			접촉저항	40mΩMAX

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PRODUCT SPECIFICATION



LANGUAGE

KOREA
(ENGLISH)

항목 (ITEM)	조건 (CONDITION)	규격 (REQUIREMENT)	
4.3.7	내습성 온도 : $60 \pm 2^{\circ}\text{C}$ 상대습도 : 90 ~ 95% 지속기간 : 96 시간 (JIS C0022/MIL-STD-202 METHOD 103B COND.B)	외관	이상없을것
		접촉저항	40mΩ MAX
		내전압	4.1.3항 만족
		절연저항	100MΩ MAX
HUMIDITY	TEMPERATURE : $60 \pm 2^{\circ}\text{C}$ RELATIVE HUMIDITY : 90 ~ 95% DURATION : 96 HOURS (JIS C0022/MIL-STD-202 METHOD 103B COND.B)	APPEARANCE	NO DAMAGE
		CONTACT RESISTANCE	40mΩ MAX
		DIELECTRIC STRENGTH	MUST MEET 4.1.3
		INSULATION RESISTANCE	NO DAMAGE
4.3.8	온도사이클 5 사이클 ; a) -40°C 30분 b) $+105^{\circ}\text{C}$ 30분 (JIS C0025)	외관	이상없을것
		접촉저항	40mΩ MAX
HEAT CYCLE	5 CYCLE ; a) -40°C 30MINUTE. b) $+105^{\circ}\text{C}$ 30MINUTE. (JIS C0025)	APPEARANCE	NO DAMAGE
		CONTACT RESISTANCE	40mΩ MAX
4.3.9	염수분무 결합된 커넥터를 $35 \pm 2^{\circ}\text{C}$ 에서 $5 \pm 1\%$ 중량비의 염수물 48 ± 1시간 분무하고 시험후 상온에서 물로 씻은후실온에서 건조시킨다 (JIS C5028/MIL-STD-202 METHOD 101D COND.B)	외관	이상없을것
		접촉저항	40mΩ MAX
SALT SPRAY	48 HOURS EXPOSURE TO A SALT SPRAY FROM THE $5 \pm 1\%$ SOLUTION AT $35 \pm 2^{\circ}\text{C}$ (JIS C5028/MIL-STD-202 METHOD 101D COND.B)	APPEARANCE	NO DAMAGE
		CONTACT RESISTANCE	40mΩ MAX
4.3.10	아황산가스 결합된 커넥터를 $40 \pm 2^{\circ}\text{C}$ 의 온도에서 $50 \pm 2\text{PPM}$ 의 아황산가스에 24시간 방치한다.	외관	이상없을것
		접촉저항	40mΩ MAX
SO ₂ GAS	24 HOURS EXPOSURE TO $50 \pm 5\text{PPM}$ SO ₂ GAS AT $40 \pm 2^{\circ}\text{C}$.	APPEARANCE	NO DAMAGE
		CONTACT RESISTANCE	40mΩ MAX
4.3.11	납땜성 납땜시간 : 3 ± 0.5 sec 납땜온도 : $240 \pm 5^{\circ}\text{C}$	침적면적 95% 이상	
		95% OF IMMASED AREA MUST BE NO VOIDS, PIN HOLES.	
SOLDER-ABILITY	SOLDERING TIME : 3 ± 0.5 sec SOLDER TEMPERATURE : $240 \pm 5^{\circ}\text{C}$		
4.3.12	납땜내열성 납땜시간 : 5 ± 0.5 sec 납땜온도 : $260 \pm 5^{\circ}\text{C}$	이상없을것	
		NO DAMAGE	
RESISTANCE TO SOLDER HEAT	SOLDERING TIME : 5 ± 0.5 sec SOLDER TEMPERATURE : $260 \pm 5^{\circ}\text{C}$		

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PRODUCT SPECIFICATION



LANGUAGE

KOREA
(ENGLISH)

[5. 외관, 형상, 치수 및 재질(PRODUCT SHAPE, DIMENSION & MATERIAL)]

→ 도면참조 (REFER TO THE DRAWING)

[6. 삽입력 및 발거력(INSERTION/WITHDRAWAL FORCE)]

[UNIT ; Kgf]

1) 2P ~ 15P Version

극수 (CKT SIZE)	삽입력(최대)(INSERTION(MAX.))			발거력(최소)(WITHDRAWAL(MIN.))		
	1회 (INITIAL)	6회 (6TH)	30회 (30TH)	1회 (INITIAL)	6회 (6TH)	30회 (30TH)
2	3.6	3.4	3.4	0.12	0.07	0.07
3	4.4	4.1	4.1	0.19	0.15	0.15
4	5.2	4.8	4.8	0.26	0.2	0.2
5	6	5.5	5.5	0.34	0.25	0.25
6	6.6	6	6	0.41	0.3	0.3
7	7.2	6.5	6.5	0.48	0.4	0.4
8	7.8	7	7	0.55	0.45	0.45
9	8.4	7.5	7.5	0.63	0.5	0.5
10	9	8	8	0.7	0.6	0.6
11	9.6	8.5	8.5	0.77	0.7	0.7
12	10.2	9	9	0.84	0.75	0.75
13	10.8	9.5	9.5	0.92	0.85	0.85
14	11.4	10	10	0.99	0.9	0.9
15	12	10.5	10.5	1.06	1	1

2) ONLY 20P Version

극수 (CKT SIZE)	삽입력(최대)(INSERTION(MAX.))			발거력(최소)(WITHDRAWAL(MIN.))		
	1회 (INITIAL)	6회 (6TH)	30회 (30TH)	1회 (INITIAL)	6회 (6TH)	30회 (30TH)
20	15	13.5	13.5	1.5	1.2	1.2

REVISE ON PC ONLY		TITLE NEW 2.0 W/B CONN.(Positive-Lock) (2~15P, only 20P, 6kinds color version)	
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DO NOT SCALE DRAWING DIMENSION IN METRIC

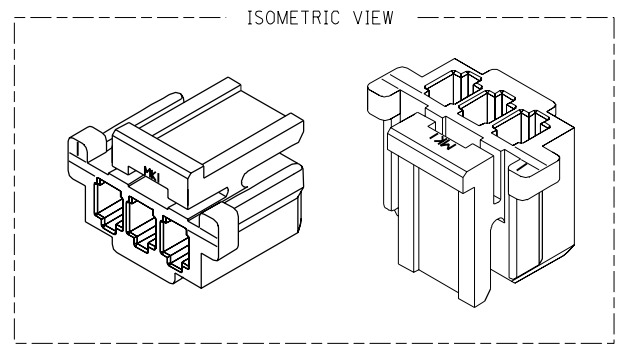
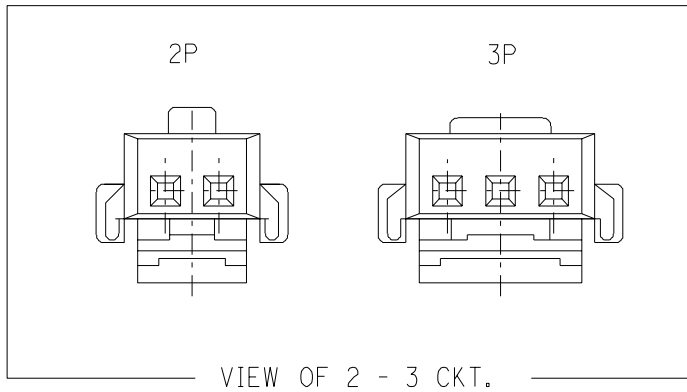
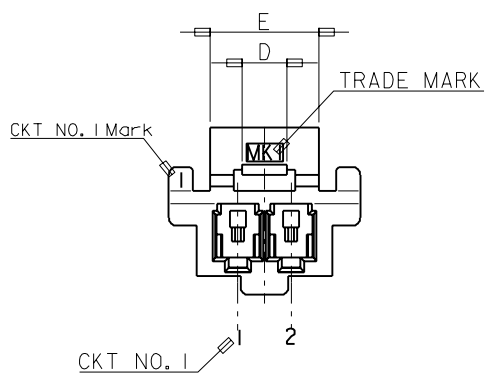
DWG. NO. SD-35507-001

SIMILAR ITEM

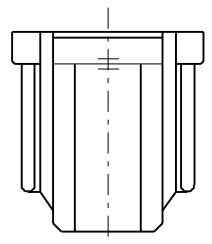
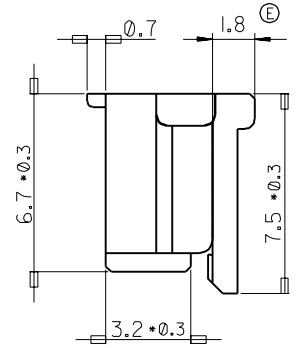
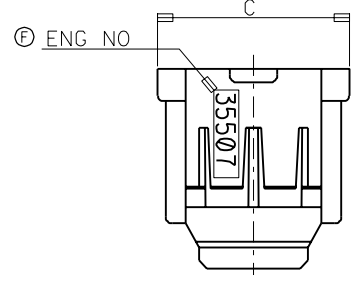
PROJECT NO.

B

REVISED

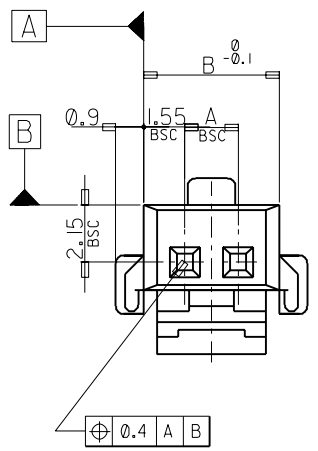


FOR 2 & 3 CKTS.



LEGEND

CKT NO.	**0*	COLOR	0 : NATURAL
			1 : BLACK
			2 : RED
			3 : YELLOW
			4 : BLUE
			5 : GREEN



NOTES

1. MATERIAL : POLYESTER, UL94V-0
2. FINISH : VARIABLE COLOR (SEE LEGEND)
3. PRODUCT SPECIFICATION NO : PS-35507-001
4. APPLICABLE TERMINAL : 50212-8000
5. MATES WITH : 35362-**, 35363-**

2.5	9.2	7.1	4	-030*	3
1.7	7.2	5.1	2	35507-020*	2
D	C	B	A	ENG NO.	CKT

30 over	+0.3
10 over 30 under	±0.25
10 under	±0.2
ANGLE	±3°
GENERAL TOLERANCE	

REVISED	EC NO. KOR 2002-0043
	DRWN: YSOOKIM (200011123)
	CHK: YSikKim
	APPR: CWLEE
DESCRIPTION	
REV	F

QUALITY SYMBOLS	MAJOR	CRITICAL
	▲	▽

GENERAL TOLERANCES: (UNLESS SPECIFIED)	
mm	INCH
4 PLACES	±0.1
3 PLACES	±0.1
2 PLACES	±0.1
1 PLACE	±0.1
ANGULAR: ± 0.1°	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS	

SCALE 1:1	DESIGN UNITS
<input checked="" type="checkbox"/> mm	<input type="checkbox"/> INCH
DRAWN BY & DATE	
Y.S.Kim 960911	
CHECKED BY & DATE	
Y.Sik.Kim	
APPROVED BY & DATE	
C.W.Lee	
CAD FILENAME	
SD35507.S02	

THIRD ANGLE PROJECTION		DIMENSIONS:		SHT	REV
<input type="checkbox"/> mm	<input type="checkbox"/> INCH	<input checked="" type="checkbox"/> mm	<input type="checkbox"/> ONLY		REVISE ON CAD ONLY
TITLE: NEW 2.0 W/B CONN HOUSING (2 & 3 CKTS Only)					
MOLEX INCORPORATED KOREA					
MATERIAL NO.	DRAWING NO.	SHEET NO.			
	SD-35507-001	2/3			
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION.					
					SIZE B