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Jameco Part Number 1960521



PRODUCT SPECIFICATION

TITLE

1.0 SCOPE

This Product Specification covers the 2.54 mm (.100 inch) centerline (pitch) 0.64 mm (.025) square pin headers when mated with connectors terminated with 22 to 30 AWG wire using crimp technology.

2.0 PRODUCT DESCRIPTION

2.1 PRODUCT NAME AND SERIES NUMBERS

Crimp Terminals: 7879

Crimp Housings: 7880

Other products conforming to this specification are noted on the individual drawings.

2.2 DIMENSIONS, MATERIALS, PLATINGS AND MARKINGS

Terminal Material: Brass or Phos. Bronze (for Max performance use phos bronze material.)

Housing: Nylon, 94V-0, Color: White

Pins: Brass or Phos. Bronze

For more information on dimensions, materials, and plating see the individual drawings.

2.3 SAFETY AGENCY APPROVALS

UL File Number E29179

CSA LR19980

3.0 APPLICABLE DOCUMENTS AND SPECIFICATIONS

None

4.0 RATINGS

4.1 VOLTAGE

250 Volts AC (RMS) {or 176 Volts DC}

4.2 CURRENT AND APPLICABLE WIRES

Current is dependent on wire size, connector size, contact material, plating, ambient temperature, and related factors. Actual current rating is application dependent and should be evaluated for each application.

AWG	Amps (Max)	Outside Insulation Diameter
22	4.00	See Drawings
24	3.75	See Drawings
26	3.50	See Drawings
28	3.00	See Drawings

4.3 TEMPERATURE (ambient + 30° temp rise)

Operating: 0°C to +75°C

Nonoperating: - 40°C to +105°C

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<u>DOCUMENT NUMBER:</u> PS-7879	<u>CREATED / REVISED BY:</u> NDUNNE	<u>CHECKED BY:</u> KSAMIEC	<u>APPROVED BY:</u> COMERCI



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5.0 PERFORMANCE

5.1 ELECTRICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Contact Resistance (Low Level)	Mate connectors: apply a maximum voltage of 20 mV and a current of 15 mA.	10 milliohms MAXIMUM [initial]
Contact Resistance of Wire Termination (Low Level)	Terminate the applicable wire to the terminal and measure wire using a voltage of 20 mV and a current of 15 mA.	2 milliohms MAXIMUM [initial]
Insulation Resistance	Unmate & unmount connectors: apply a voltage of 500 VDC between adjacent terminals and between terminals to ground.	1000 Megohms MINIMUM
Dielectric Withstanding Voltage	Unmate connectors: apply a voltage of {two times the rated voltage plus 1000 volts} VAC for 1 minute between adjacent terminals and between terminals to ground.	No breakdown
Capacitance	Measure between adjacent terminals at 1 MHz.	2 picofarads MAXIMUM
Temperature Rise (via Current Cycling)	Mate connectors: measure the temperature rise at the rated current after: 1) 96 hours (steady state) 2) 240 hours (45 minutes ON and 15 minutes OFF per hour) 3) 96 hours (steady state)	Temperature rise: +30°C MAXIMUM

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5.2 MECHANICAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Connector Mate and Unmate Forces	Per circuit when mated to an .025 Sq. pin. Mate and unmate connector (male to female) at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	4.6 N (1.0 lbf) MAXIMUM insertion force & 0.8 N (0.22 lbf) MINIMUM withdrawal force
Terminal Insertion Force (into Housing)	Apply an axial insertion force on the terminal at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch).	6.67 N (1.5 lbf) MAXIMUM insertion force
Terminal Retention Force (in Housing)	Axial pullout force on the terminal in the housing at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch) per minute.	17.8 N (4.0 lbf) MINIMUM withdrawal force
Durability	Mate connectors up to 25 cycles at a maximum rate of 5 cycles per minute prior to Environmental Tests.	10 milliohms MAXIMUM (change from initial)
Vibration (Random)	Mate connectors and vibrate per EIA 364-28, test condition VII.	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
Shock (Mechanical)	Mate connectors and shock at 50 g's with $\frac{1}{2}$ sine wave (11 milliseconds) shocks in the $\pm X, \pm Y, \pm Z$ axes (18 shocks total).	10 milliohms MAXIMUM (change from initial) & Discontinuity < 1 microsecond
Wire Pullout Force (Axial)	Apply an axial pullout force on the wire at a rate of 25 ± 6 mm ($1 \pm \frac{1}{4}$ inch). (When terminated using Molex Application Tooling.)	24 awg = 35 N (8 lbf) 26 awg = 26 N (6 lbf) 28 awg = 17 N (4 lbf) 30 awg = 13 N (3 lbf)
Normal Force	Apply a perpendicular force.	6.28 N (640 grams) average

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TEMPLATE FILENAME: PRODUCT_SPEC(SIZE_A)(V.1).DOC			



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5.3 ENVIRONMENTAL REQUIREMENTS

DESCRIPTION	TEST CONDITION	REQUIREMENT
Shock (Thermal)	Mate connectors; expose to 5 cycles of: <u>Temperature °C</u> <u>Duration (Minutes)</u> -40 +0/-3 30 +25 ±10 5 MAXIMUM +105 +3/-0 30 +25 ±10 5 MAXIMUM	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Thermal Aging	Mate connectors; expose to: 96 hours at 105 ± 2°C	10 milliohms MAXIMUM (change from initial) & Visual: No Damage
Humidity (Steady State)	Mate connectors: expose to a temperature of 40 ± 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.	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
Humidity (Cyclic)	Mate connectors: cycle per EIA-364-31: 24 cycles at temperature 25 ± 3°C at 80 ± 5% relative humidity and 65 ± 3°C at 50 ± 5% relative humidity; dwell time of 1.0 hour; ramp time of 0.5 hours. {Note: Remove surface moisture and air dry for 1 hour prior to measurements.}	10 milliohms MAXIMUM (change from initial) & Dielectric Withstanding Voltage: No Breakdown at 500 VAC & Insulation Resistance: 1000 Megohms MINIMUM & Visual: No Damage
Solderability	Per SMES-152	Solder coverage: 95% MINIMUM (per SMES-152)

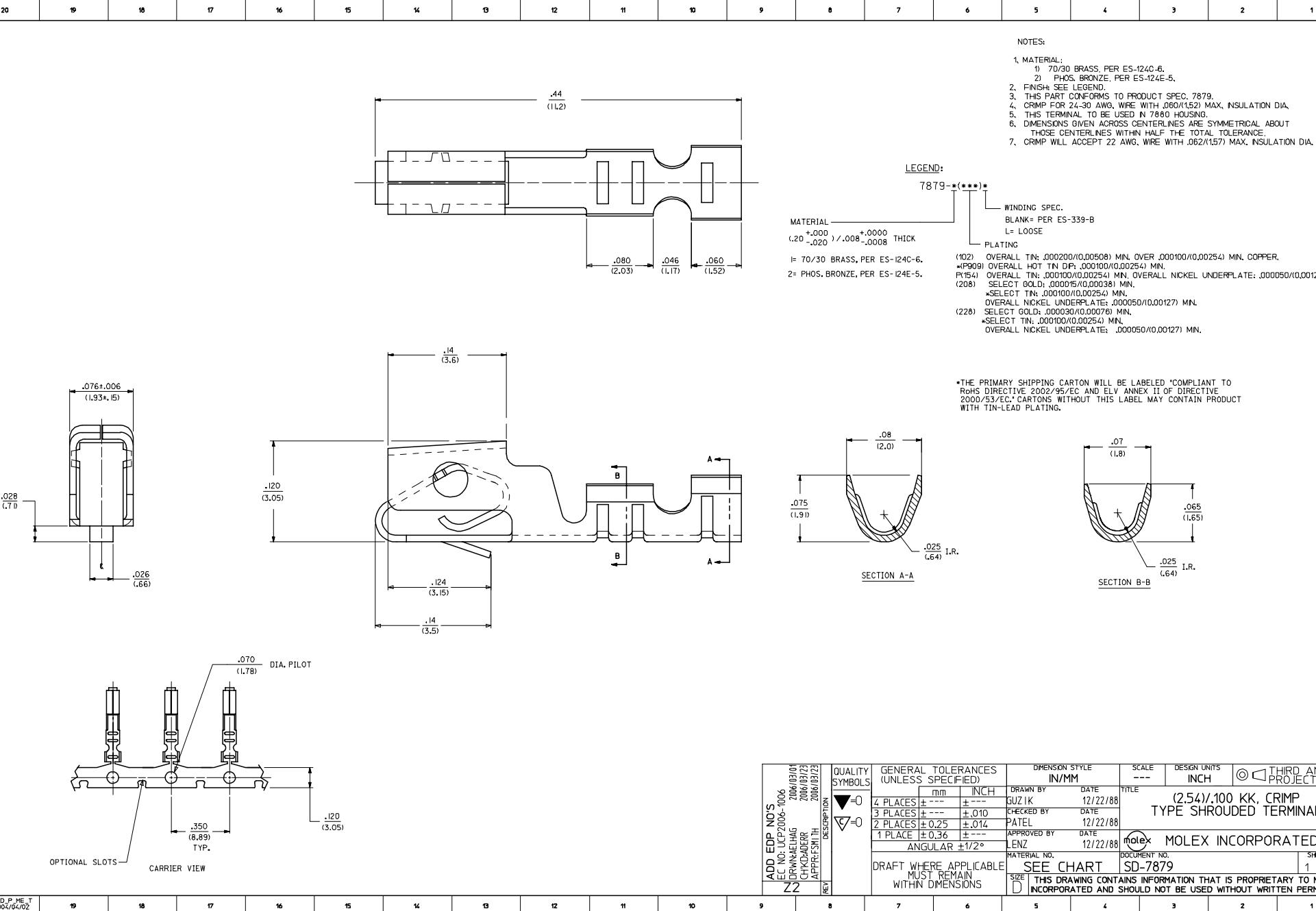
6.0 PACKAGING

Parts shall be packaged to protect against damage during handling, transit and storage.

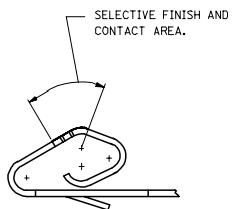
7.0 GAGES AND FIXTURES

8.0 OTHER

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20 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1



7879-1(***)			7879-2(***)					
PART NO.	ENG. NO		PART NO.	ENG. NO		PART NO.	ENG. NO	
S08-55-028	7879-1(KP909)	PER ES-7879	50-29-1744	7879-2(KP228)	PER ES-7879			
S08-55-027	7879-1(KP909)L	PER ES-7879	50-29-1745	7879-2(KP228)L	PER ES-7879			
08-55-024	7879-1(KP208)	PER ES-7879		7879-2(KP208)	PER ES-7879			
08-55-029	7879-1(KP208)L	PER ES-7879		7879-2(KP208)L	PER ES-7879			
08-50-0004	7879-1(KP102)	PER ES-7879						
08-50-0005	7879-1(KP102)L	PER ES-7879						
50-29-1900	7879-1(KP154)	PER ES-7879						

COLUMN NO. 1 CON'T. IN COLUMN NO. SHEET NO. COLUMN NO. 2 CON'T. IN COLUMN NO. SHEET NO. COLUMN NO. 3 CON'T. IN COLUMN NO. SHEET NO.

ADD EDP NO'S EC NO: IF2006-006 DPRNEHAG CHKDADER APP:ESMITH REV: Z2	GENERAL TOLERANCES (UNLESS SPECIFIED) mm INCH	DIMENSION STYLE IN/MM	SCALE ---	DESIGN UNITS INCH	THIRD ANGLE PROJECTION	
					DRAWN BY GUZIK	DATE 12/22/88
	QUALITY SYMBOLS ▼○	4 PLACES \pm ---	CHECKED BY DATE	APPROVED BY DATE	MOLEX MOLEX INCORPORATED	
	QUALITY SYMBOLS ▼○	2 PLACES \pm ---	PATEI	LENZ	DOCUMENT NO. SD-7879	
DRAFT WHERE APPLICABLE MUST REMAIN WITHIN DIMENSIONS		MATERIAL NO. SEE CHART		SHEET NO. 2		
THIS DRAWING CONTAINS INFORMATION THAT IS PROPRIETARY TO MOLEX INCORPORATED AND SHOULD NOT BE USED WITHOUT WRITTEN PERMISSION						

th frame D.P. ME.T
Rev. D 2004/04/02 19 18 17 16 15 14 13 12 11 10 9 8 7 6 5 4 3 2 1