

# SHROUDED HEADERS (Straight, Elevated)

## FEATURES

- Triple keying slots assure proper mating
- PLS mates with IDC socket connectors on .100" centers
- PLT mates with most standard sockets, including Crane's ATP Series
- Custom heights available for board stacking
- MATE-RITE TIP prevents scraping of mating socket

## STANDARD PART DIMENSIONS

DIMENSIONS		MPLS Dual Row (Cable Version)	MPLT Dual Row (Connector Version)
<b>P</b>	POST LENGTH	0.240"/6,10mm	0.240"/6,10mm
<b>I</b>	INSULATOR SPACING	Please refer to the chart on the next page for a wide selection of common board spacing options. Call us if the size you need is not listed.	
<b>L</b>	TOTAL HEIGHT		

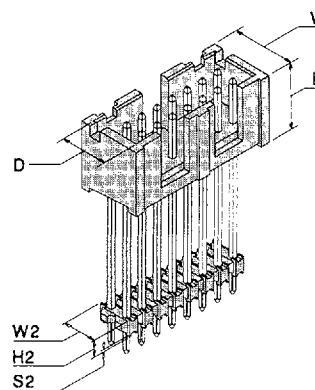
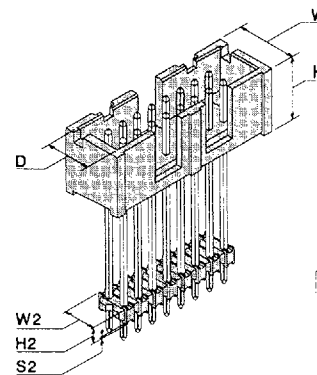
INSULATOR BODY (TOP)		MPLS Dual Row (Cable Version)	MPLT Dual Row (Connector Version)
<b>W</b>	WIDTH	0.360"/9,14mm	0.360"/9,14mm
<b>D</b>	DEPTH	0.260"/6,60mm	0.260"/6,60mm
<b>H</b>	HEIGHT	0.365"/9,27mm	0.365"/9,27mm
<b>I</b>	INSIDE	(#POS./2 x 0.100") + 0.210"	(#POS./2 x 0.100") + 0.110"
<b>O</b>	OVERALL	(#POS./2 x 0.100") + 0.300"	(#POS./2 x 0.100") + 0.200"

INSULATOR BODY (BOTTOM)		MPLS Dual Row (Cable Version)	MPLT Dual Row (Connector Version)
<b>W2</b>	WIDTH	0.198"/5,03mm	0.198"/5,03mm
<b>H2</b>	HEIGHT	0.098"/2,49mm	0.098"/2,49mm
<b>S2</b>	STANDOFF	0.015"/0,38mm	0.015"/0,38mm

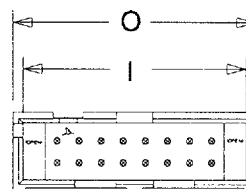
## MATERIALS

INSULATOR BODIES	Glass Filled Polyester (UL94V-O)
POST	Phosphor Bronze

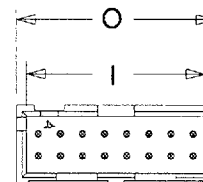
STRAIGHT (10 to 60 positions)



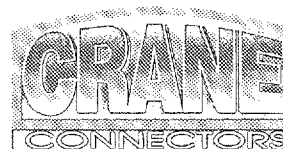
MPLS



MPLT



Specifications and Performance Data: Page 104



4700 Smith Road • Cincinnati, Ohio 45212 • (513) 631-4700 • Fax # (513) 631-5700

1-800-676-7644

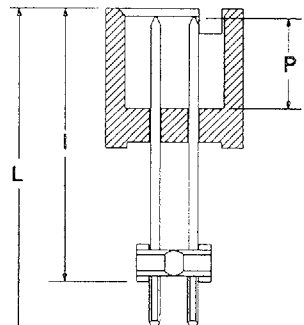
0.100 in. (2,54mm) Centers  
0.025 in. (0,64mm) Sq. Mating Posts

**HOW TO ORDER CRANE'S MPLS/MPLT SERIES**

**STANDARD PART NUMBER**

<b>PRODUCT SERIES</b>	Cable Version	MPLS	↑	-																
	Connector Version	MPLT																		
<b>TOTAL NUMBER OF POSITIONS</b>	DUAL	10 - 60	↑																	
See box below for sizes offered.																				
<b>NUMBER OF ROWS</b>	DUAL	D	↑																	
<b>TYPE OF HEADER</b>	STRAIGHT	S	↑																	
<b>PLATING (See Page 106)</b>	CHOOSE G, T, or M, H, L, F																			
Due to the number of options, not all platings are stocked for all pin lengths. Contact factory for availability.																				
<b>TAIL (0.120"/3,05mm Standard)</b>	COINED	0.028"/0,71mm DIAG																		
	KINKED	0.028"/0,71mm DIAG																		
	SQUARE	0.025"/0,64mm SQ																		

<b>SELECTED OPTIONS</b>	POST LENGTH "P"	BODY HEIGHT "I"	TOTAL HEIGHT "L"	↑ ↑ ↑		
				B	C	B
Many other sizes are available. Please call 1-800-676-7644 and give us your exact requirements.	0.240" = B	0.465" = C	0.565" = B	B	C	B
	0.240" = B	0.500" = F	0.605" = C	B	F	C
	0.240" = B	0.625" = I	0.725" = H	B	I	H
	0.240" = B	0.750" = L	0.860" = M	B	L	M
	0.240" = B	0.850" = O	0.955" = O	B	O	O
	0.240" = B	1.000" = R	1.100" = S	B	R	S
	0.240" = B	1.175" = U	1.280" = U	B	U	U
	0.240" = B	1.300" = X	1.420" = X	B	X	X



<b>SIZES AVAILABLE</b>	2 X 5	2 X 7
		2 X 8
NOTE: Other sizes may be available subject to minimum order levels. Contact factory for information.	2 X 12	2 X 13
	2 X 17	2 X 20
	2 X 25	2 X 30



Sample Hotline: 1-800-676-7644



# Performance Specifications: PIN STRIP HEADERS

PRODUCT SERIES	PEG	TPEG	MPEG	FMPEG	DPEG	GPEG	GMPEG	LPEG	PLS PLT	MPLS MPLT	PGM	MPGM	DPGM	LPGM	PFF PFFH	MPFF MPFH	PLF PLH	MPLF MPLH	
PAGES	8-9 22-23 24-25	10-11	12-13 28-29	14-15	16-17	18-19 30-31	20-21	26-27	32-33	34-35	56-57 62-63 66-67	58-59 64-65	60-61	68-69	76-77 84-85 86-87	78-79 88-89	80-81	82-83 90-91	
INSULATOR MATERIAL	Glass Filled (GF) Polyester									High Temp Thermoplastic	N/A	High Temp Thermoplastic							
TEMPERATURE RANGE	-55C to +125C									N/A	N/A	-65C to +220C							
FLAMMABILITY RATING	All Crane Connector Products Are Rated At UL 94V-0																		
CONTACT MATERIAL	Phosphor Bronze																		
PLATING OPTIONS	G,T, or M,H,L,F									G,T, or H,L,F									G,F or T
INSULATION RESISTANCE	50,000 Megohms									N/A	50,000 Megohms	N/A	5,000 Megohms						
DWV (DIELECTRIC WITHSTANDING)	1500 VAC RMS									N/A	1500 VAC RMS	N/A	650 VAC RMS						
CURRENT RATING	3 AMPS									1 AMP									

## Recommended Plated Thru Hole Sizes - PIN STRIP HEADERS

PIN SIZE	DIA / DIAG	HOLE SIZE	USED ON
0.025" Square	0.034"	0.040" +/- 0.003"	PEG / MPEP / GPEG / TPEG / LPEG / FMPEG
0.025" Coined	0.030"	0.038" +/- 0.003"	PEG / MPEP / GPEG / TPEG / LPEG / FMPEG
0.025" Coined	0.030"	0.032" +/- 0.002"	DPEG
0.025" Fine Line	0.018"	0.023" +/- 0.003"	PEG / MPEP / GPEG / TPEG / LPEG / FMPEG
0.020" Square	0.025"	0.032" +/- 0.003"	PGM / MPGM / DPGM / LPGM
0.020" Rounded	0.020"	0.025" +/- 0.003"	PFF / PFH / MPFF / MPFH
0.018" Square	0.023"	0.030" +/- 0.003"	PFF / PFH / MPFF / MPFH
0.018" Round	0.018"	0.023" +/- 0.003"	PFF / PFH / MPFF / MPFH

## Recommended Plated Thru Hole Sizes - BOARD MOUNT SOCKETS

PIN SIZE	HOLE SIZE	USED ON
0.030" x 0.016"	0.040" +/- 0.003"	ATP / ATL / MATP / MATL / ATS / ATT / GATT
0.028" x 0.009"	0.035" +/- 0.003"	ABS / ABH / BBP
0.031" x 0.011"	0.040" +/- 0.003"	ABT/BBP
0.020" x 0.008"	0.028" +/- 0.003"	ATM
0.025" x 0.025" SQ	0.040" +/- 0.003"	ATP / ATL / MATP / MATL

# PERFORMANCE / TEST SPECIFICATIONS

QUALITY		CONTACTS	
Quality Program Requirements	ISO 9001	<b>Material Specifications</b>	
Military Specifications - Connectors	MIL-C-55302D	Phosphor Bronze	QQ-B-750/ASTM B159
Sampling Procedures and Tables for Inspection	MIL-STD-105	Copper and Copper Alloy 770	ASTM B122
Quality Assurance Terms and Conditions	MIL-STD-109	<b>General Specifications</b>	
Calibration Systems Requirements	MIL-STD-45662A	General Specifications for Contacts	MIL-C-39029D
Inspection System Requirements	MIL-I-45208A	<b>POSTS</b>	
<b>INSULATOR</b>		Wire, Phosphor Bronze	QQ-B-750/ASTM B159
<b>Plastic Material Specification</b>		<b>PLATING</b>	
Molding Plastics, Polyester, Thermoplastic	MIL-M-24519	<b>Outer Plating Specifications</b>	
Tests For Flammability	UL94V-O	Gold - Type II, Grade C	MIL-G-45204
UL Temperature Index	UL746B	Tin/Lead	MIL-P-81728A
Limiting Oxygen Index	ASTM D2863	<b>Under Plating Specifications</b>	
<b>Plastic Material Applied Tests</b>		Nickel	QQ-N-290
Dielectric Strength, Short Term	ASTM D149	Copper	MIL-C-14550
Dielectric, Constant	ASTM D150	Palladium Nickel	MIL-P-45209
Izod Impact Strength	ASTM D256	<b>Plating Applied Tests</b>	
DC Resistance (Volume Resistivity)	ASTM D257	Coating Thickness (X-Ray Fluorescence)	ASTM-A-754-79
Arc Resistance	ASTM D495	<b>ASSEMBLY</b>	
Water Absorption	ASTM D570	<b>Testing Specifications</b>	
Test for Tensile Strength	ASTM D638	Test Methods for Electrical Connectors	MIL-STD-1344A
Heat Deflection Temperature	ASTM D648	Test Methods for Electrical and Electronic Components	MIL-STD-202
Compressive Strength	ASTM D695	Connections, Electrical, Solderless, Wrapped	MIL-STD-1130B
Coefficient of Linear Thermal Expansion	ASTM D696	Environmental Test Methods	MIL-STD-810
Shear Strength of Plastics	ASTM D732	<b>Packaging Specifications</b>	
Rockwell Hardness R-scale	ASTM D785	Connector, Preparations For Delivery Of	MIL-C-55330
Flexural Strength of Plastics	ASTM D790	Marking of Electronic Parts	MIL-STD-1285B
Specific Gravity and Density of Plastics	ASTM D792	Marking for Shipment and Storage	MIL-STD-129
Mold Shrinkage Flow	ASTM D995	Identification Marking of US Military Property	MIL-STD-130
Outgassing Test	ASTM E-595-84	Bar Coding Symbology	MIL-STD-11898

Crane uses the above test methods in full or in part to determine compliance of its parts and materials to internal and customer supplied specifications.

PLATING SPECIFICATIONS	CONTACT AREA Inches (Millimeters)	PC TAIL Inches (Millimeters)	UNDERPLATE Inches (Millimeters)
<b>G</b> Selective	15μ*(0,00038) gold	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.
<b>T</b> Tin/Lead	100μ*(0,00254) tin/lead	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.
<b>M</b> Selective	50μ*(0,00127) gold	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.
<b>H</b> Selective	30μ*(0,00076) gold	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.
<b>L</b> Selective	10μ*(0,00025) gold	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.
<b>F</b> Selective	3μ*(0,00008) gold	100μ*(0,00254) tin/lead - min.	50μ*(0,00127) nickel - min.

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**Crane Electronics®**  
**Crane Connectors™**  
**Mate-Rite Tip™**



STANDARD TAIL OPTIONS ON .100" PIN STRIP HEADERS			
R	K	F	Q
COINED	KINKED	FINE LINE	SQUARE
The standard "R" option provides a coined tail improving solder action while making insertion easier.	The "K" option provides a kinked tail, reducing unwanted movement on the PC Board.	The "F" option combines an 0.018" rounded tail with an 0.025" square post. The fine line feature allows more traces between holes.	The "Q" option provides a 0.025" square tail for use in wire wrap applications.

STANDARDS	
<p>UL File No. E120111 (N)</p> <p>Recognized to U.S. and Canadian requirements under the Component Recognition Program of Underwriters Laboratories Inc.</p>	<p>ISO 9001</p> <p>Crane Connectors File No. A-3620</p> <p>Registered by UL to ISO9001 under UL's accreditation by Raad voor de Certificatie (RvC), the Dutch Council for Certification.</p>