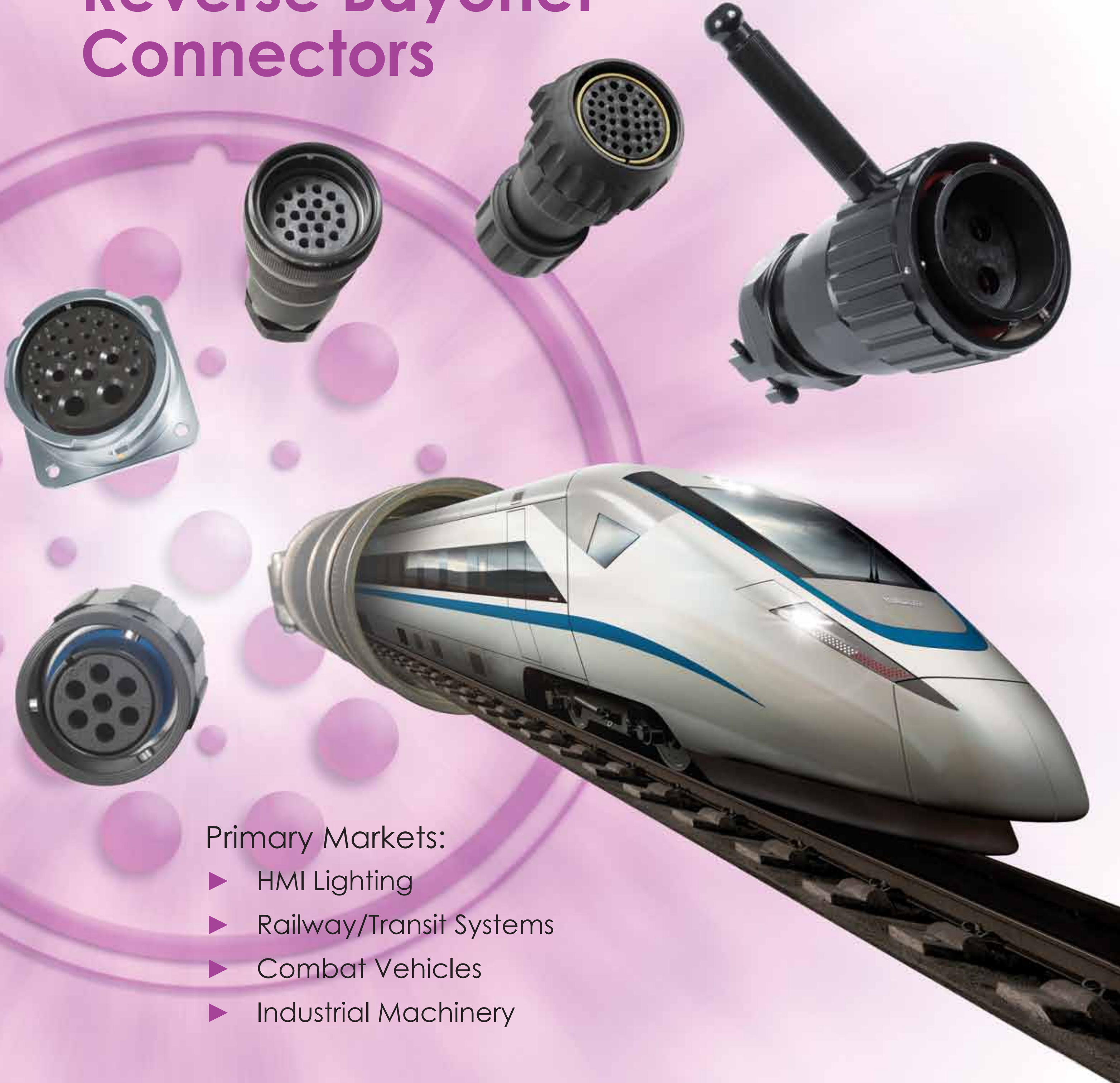
SPACECRAFT COMPONENTS CORP.

Your Connector Consultant Since 1962

Multi-Pin Cylindrical Reverse Bayonet Connectors



Primary Markets:

- HMI Lighting
- Railway/Transit Systems
- Combat Vehicles
- Industrial Machinery

SPACECRAFT COMPONENTS CORP.

CATALOG 302

SECTION 3C
MIL-DTL-5015
SPECIAL FEATURES
TECHNICAL DATA
CONTACTS & TOOLS

SPECIAL FEATURES

Spacecraft can supply connectors with:

1. Plugs with a self-locking coupling nut, which eliminates the need for safety wire. A low-cost coupling mechanism is available for all series.
2. Our connectors can provide superior EMI/RFI shielding by:
   A. Providing full accessory teeth at the rear of the connector shell, thus minimizing “leakage”.
   B. To further enhance performance, plugs can be supplied with grounding fingers around the outside of the barrel.
   C. Receptacles can be supplied with an internal grounding spring.
3. Shells/hardware can be provided in a high impact/strength aluminum as well as carbon steel, 300 series stainless and naval brass.
4. A wide range of finishes are available:
   A. Anodize - both hard and soft.
   B. Cadmium to pass 48, 96, 500 or 1000 hours salt spray.
   C. Electroless nickel.
   D. Zinc Boron.
   E. Black zinc.
5. Standard insert material is neoprene, but can be provided in fuel-resistant Viton or halogen-free neoprene.
6. Various backshell configurations are available for environmental and non-environmental applications together with EMI/RFI protection. See our Catalog 401 for details.

TABLE I
CONTACT ARRANGEMENT SERVICE RATING

MS SERVICE RATING	RECOMMENDED OPERATING VOLTAGE* AT SEA LEVEL		EFFECTIVE CREEPAGE DISTANCE NOM.	MECHANICAL SPACING NOM.
	DC	AC (RMS)		
INST.	250	200	1/16	
A	700	500	1/8	1/16
D	1250	900	3/16	1/8
E	1750	1250	1/4	3/16
B	2450	1750	5/16	1/4
C	4200	3000	1	5/16

* The values listed in Table I represent operating values which include a generous safety factor. It may be necessary for some applications to exceed the operating voltages listed here. If this is necessary, designers will find Table II useful for determining the degree to which the recommended values of Table I can be exceeded.

ELECTRICAL SERVICE DATA

Test current ratings of contacts and allowable voltage drop under test conditions when assembled as in service are shown below. Maximum total current to be carried per connector is the same as the allowable in wire bundles as specified in MIL-W-5088.

ALTITUDE VOLTAGE DERATING** CHART

MS SERVICE RATING	NOMINAL DISTANCE		STANDARD SEA LEVEL CONDITIONS		PRESSURE ALTITUDE† 50,000 FEET		PRESSURE ALTITUDE† 70,000 FEET	
	AIRSPACE	CREEPAGE	MINIMUM FLASHOVER VOLTAGE AC (RMS)	TEST VOLTAGE AC (RMS)	MINIMUM FLASHOVER VOLTAGE AC (RMS)	TEST VOLTAGE AC (RMS)	MINIMUM FLASHOVER VOLTAGE AC (RMS)	TEST VOLTAGE AC (RMS)
INST.	1/32	1/16	1400	1000	550	400	325	260
A	1/16	1/8	2800	2000	800	600	450	360
D	1/8	3/16	3600	2800	900	675	500	400
E	3/16	1/4	4500	3500	1000	750	550	440
B	1/4	5/16	5700	4500	1100	825	600	480
C	5/16	1	8500	7000	1300	975	700	560

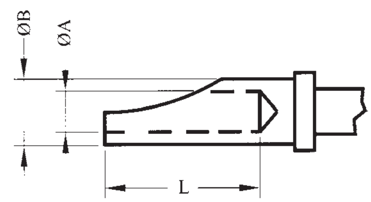
† Not corrected for changes in density due to variations in temperature.
** No attempt has been made to recommend operating voltages. The designer must determine his own operating voltage by the application of a safety factor to the above derating chart to compensate for circuit transients, surges, etc.

CONTACT RATINGS

CONTACT SIZE	WIRE SIZE	RATED CURRENT	POTENTIAL DROP	MAX CURRENT
20	20	7.5A	83 mV	7.5A
18	18	7.5	83 mV	10A
16 & 16S	16 AWG	13 A	49 mV	22A
12	12 AWG	23 A	42 mV	41A
8	8 AWG	46 A	26 mV	73A
4	4 AWG	80 A	23 mV	135A
0	0 AWG	150 A	21 mV	245A
4/0	4/0	225A	53 mV	350A

SOLDER CONTACT CURRENT RATINGS*

MATING END SIZE	WIRE BARREL SIZE	ALLOWABLE WIRE SIZE	TEST CURRENT** AMPS
16/16S	16	16 18 20 22	13 10 7.5 5
12	12	12 14	23 17
8	8	8 10	46 33
4	4	4 6	80 60
0	0	0 1 2	150 125 100



SOLDER CUP DIMENSIONS

CONTACT SIZE	A MIN	B	L
16	.069 [1.75]	.096/.116 [2.43/2.94]	.250/.313 [6.35/7.95]
12	.112 [2.84]	.130/.150 [3.30/3.81]	.375/.438 [9.52/11.12]
8	.205 [5.20]	.243/.259 [6.17/6.57]	.500/.563 [12.70/14.30]
4	.328 (8.33]	.370/.397 [9.39/10.08]	.625/.688 [15.87/17.47]
0	.464 [11.78]	.510/.550 [12.95/13.97]	.625/.688 [15.87/17.47]

Dimensions in brackets [ ] are in millimeters.

TABLE II. WIRE RANGE ACCOMMODATIONS

CONTACT SIZE	WIRE SIZE	OD OF FINISHED WIRE (INCH)					
		SOLDER CONTACT CONNECTORS		CRIMP CONTACT CONNECTORS			
				FRONT RELEASE		REAR RELEASE	
		MIN	MAX	MIN	MAX	MIN	MAX
16-16	20 18 16	.064 [1.63]	.130 [3.30]	0.66 [1.68]	.130 [3.30]	.053 [1.35]	.103 [2.62]
12-12	14 12	.114 [2.90]	.170 [4.32]	.097 [2.46]	.170 [4.32]	.085 [2.16]	.158 [4.01]
8-8	10 8	.164 [4.17]	.255 [6.48]	.132 [3.35]	.255 [6.48]	.132 [3.35]	.255 [6.48]
4-4	6 4	.272 [6.91]	.370 [9.40]	.237 [6.02]	.370 [9.40]	.237 [6.02]	.370 [9.40]
0-0	2 0	.415 [10.54]	.550 [13.97]	.360 [9.14]	.550 [13.97]	.360 [9.14]	.550 [13.97]

* Solder Wells Filled

** Contact ratings as stated are test ratings only. The connector could not withstand full rated current through all contacts continuously. Please note that the electrical data given is not an establishment of electrical safety factors. This is left entirely in the designer's hands as he can best determine which peak voltage, switching surges, transients, etc, can be expected in a particular circuit.

MIL-DTL-5015 SERIES I - SOLDER CONTACTS

SIZE	PIN	PIN FILLED SOLDER CUP (Note 1)	SOCKET (Note 1)	SOCKET FILLED SOLDER CUP (Note 1)	MATERIAL	FINISH	COLOR CODE
16S	P12-5100-310	P12-5100-315	S12-5100-610	S12-5100-615	Note 2	Silver	–
16S	P12-5100-000	–	S12-5100-000	–	Alumel	None	Green
16S	P12-5100-010	–	S12-5100-010	–	Chromel	None	White
16S	P12-5100-020	–	S12-5100-020	–	Constantan	None	Black
16S	P12-5100-040	–	S12-5100-040	–	Iron	Cadmium	Yellow
16	P12-3800-310	P12-3800-315	S12-3800-610	S12-3800-615	Note 2	Silver	–
16	P12-3800-000	–	S12-3800-000	–	Alumel	None	Green
16	P12-3800-010	–	S12-3800-010	–	Chomel	None	White
16	P12-3800-020	–	S12-3800-020	–	Constantan	None	Black
16	P12-3800-040	–	S12-3800-040	–	Iron	Cadmium	Yellow
12	P12-6500-310	P12-6500-315	S12-6500-610	S12-6500-615	Note 2	Silver	–
12	P12-6500-000	–	S12-6500-000	–	Alumel	None	Green
12	P12-6500-010	–	S12-6500-010	–	Chromel	None	White
12	P12-6500-020	–	S12-6500-020	–	Constantan	None	Black
12	P12-6500-040	–	S12-6500-040	–	Iron	Cadmium	Yellow
8	P12-7900-310	P12-7900-315	S12-7900-510	S12-7900-515	Note 2	Silver	–
4	P12-8500-310	P12-8500-315	S12-8500-510	S12-8500-515	Note 2	Silver	–
1/0	P12-9200-310	P12-9200-315	S12-9200-510	S12-9200-515	Note 2	Silver	–

Note 1: Only MS3100 thru MS3108 and MS25183 connectors are supplied with solder filled cups
Note 2: Pins are brass; Sockets are copper.

MIL-DTL-5015

PIN **F80** CRIMP CONTACTS

ORDERING INFORMATION

R12 - 36 15 - 140 __

SERIES PREFIX
R12 MIL-DTL-5015 crimp F80 pin contact.

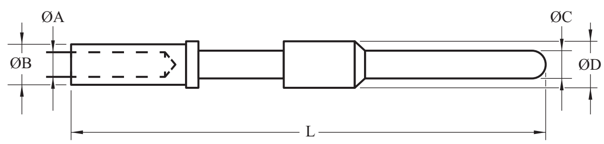
CONTACT SIZE

CODE	**25**	**36**	**49**	**64**	**79**	**85**	**92**	**97**
SIZE	18	16	16S	12	8	4	1/0	4/0

WIRE RANGE
See Table below.

MODIFICATION
Consult Sales Department.

MATERIAL/FINISH
000 Alumel/none.
010 Chromel/none.
020 Constantan/none.
040 Iron/cadmium.
110 Copper/silver.
140 Copper/gold.
142 Copper/gold 0.000030.



PART NUMBER	SIZE	MATERIAL	FINISH	FOR WIRE SIZE		A	B	C	D	L
				AWG	MM ²					
R12-2500-110	18	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.055 [1.46]	0.95 [2.40]	1.165 [29.61]
R12-3632-110	16	Copper	Silver	28-32	–	.018 [0.45]	.077 [1.95]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3608-110	16	Copper	Silver	24-26	0.20-0.15	.034 [.085]	.061 [1.55]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3613-110	16	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3612-110	16	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3615-110	16	Copper	Silver	18-20	1.0	.060 [1.50]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3600-110	16	Copper	Silver	16-18	1.5-1.0	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3600-000	16	Alumel	None	16	1.5-1.0	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3600-010	16	Chromel	None	16	1.5-1.0	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3600-020	16	Constantan	None	16	1.5-1.0	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3600-040	16	Iron	Cadmium	16	1.5-1.0	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.250 [31.75)
R12-3620-110	16	Copper	Silver	14	2.0	.078 [2.00]	.115 [2.90]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-3626-110	16	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.062 [1.58]	.126 [3.20]	1.250 [31.75]
R12-4913-110	16S	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4912-110	16S	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4915-110	16S	Copper	Silver	18	1.0	.060 [1.50]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4900-110	16S	Copper	Silver	16-18	1.5	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4900-000	16S	Alumel	None	16	1.5	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4900-010	16S	Chromel	None	16	1.5	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4900-020	16S	Constantan	None	16	1.5	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4900-040	16S	Iron	Cadmium	16	1.5	.067 [1.70]	.102 [2.60]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4920-110	16S	Copper	Silver	14	2.0	.078 [2.00]	.115 [2.90]	.062 [1.58]	.126 [3.20]	1.050 [26.65]
R12-4926-110	16S	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.062 [1.58]	.126 [3.20]	1.050 [26.65]

PART NUMBER	SIZE	MATERIAL	FINISH	FOR WIRE SIZE		A	B	C	D	L
				AWG	MM ²					
R12-6412-110	12	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6415-110	12	Copper	Silver	18	1.0	.060 [1.50]	.134 [3.40]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6420-110	12	Copper	Silver	14-18	2.0-1.0	.078 [2.00]	1.50 [3.80]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6422-110	12	Copper	Silver	–	2.5	.087 [2.20]	.150 [3.80]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6400-110	12	Copper	Silver	12	3.0	.099 [2.50]	.154 [3.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6400-000	12	Alumel	None	12	3.0	.099 [2.50]	.154 [3.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6400-010	12	Chromel	None	12	3.0	.099 [2.50]	.154 [3.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6400-020	12	Constantan	None	12	3.0	.099 [2.50]	.154 [3.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6400-040	12	Iron	Cadmium	12	3.0	.099 [2.50]	.154 [3.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6430-110	12	Copper	Silver	–	4.0	.118 [3.00]	.176 [4.80]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6431-110	12	Copper	Silver	–	4.0	.130 [3.30]	.166 [4.20]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6438-110	12	Copper	Silver	10	6.0	.142 [3.60]	.176 [4.80]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-6408-110	12	Copper	Silver	8	9.0	.177 [4.50]	.272 [6.90]	.093 [2.38]	.189 [4.80]	1.480 [37.65]
R12-7915-110	8	Copper	Silver	18	1.0	0.60 [1.50]	.134 [3.40]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7918-110	8	Copper	Silver	14-18	2.0-1.0	0.71 [1.80]	.150 [3.80]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7926-110	8	Copper	Silver	12	3.0	.099 [2.50]	.154 [3.90]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7930-110	8	Copper	Silver	–	4.0	.118 [3.00]	.176 [4.80]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7900-110	8	Copper	Silver	8	9.0	.177 [4.50]	.272 [6.90]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7950-110	8	Copper	Silver	–	10.0	.201 [5.00]	.272 [6.90]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-7958-110	8	Copper	Silver	6	13.2	.229 [5.80]	.307 [7.80]	.141 [3.59]	.307 [7.80]	1.603 [40.70]
R12-8522-110	4	Copper	Silver	–	2.5	.087 [2.20]	.150 [3.80]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8526-110	4	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8530-110	4	Copper	Silver	–	4.0	.118 [3.00]	.189 [4.80]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8550-110	4	Copper	Silver	–	10.0	.201 [5.00]	.275 [7.00]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8562-110	4	Copper	Silver	–	16.0	.244 [6.20]	.374 [9.50]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8500-110	4	Copper	Silver	4	22.0	.281 [7.10]	.375 [9.53]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8525-110	4	Copper	Silver	–	25.0	.307 [7.80]	.374 [9.50]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-8535-110	4	Copper	Silver	–	35.0	.354 [9.00]	.565 [14.35]	.225 [5.70]	.433 [11.00]	1.625 [41.25]
R12-9245-110	1/0	Copper	Silver	8	9.0	.177 [4.55]	.268 [6.80]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9250-110	1/0	Copper	Silver	–	10.0	.201 [5.00]	.275 [7.00]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9246-110	1/0	Copper	Silver	4	22.0	.281 [7.15]	.375 [9.53]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9225-110	1/0	Copper	Silver	–	25.0	.307 [7.80]	.374 [9.50]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9235-110	1/0	Copper	Silver	–	35.0	.354 [9.00]	.565 [14.35]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9275-110	1/0	Copper	Silver	–	50.0	.421 [10.70]	.565 [14.35]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9200-110	1/0	Copper	Silver	1/0	53.0	.453 [11.50]	.565 [14.35]	.356 [9.05]	.595 [15.11]	1.803 [46.50]
R12-9790-110	4/0	Copper	Silver	2	33.5	.354 [9.0]	.565 [14.35]	.500 [12.69]	.787 [20.0]	2.35 [59.7]
R12-97115-110	4/0	Copper	Silver	1/0	53.0	.453 [11.5]	.565 [14.35]	.500 [12.69]	.787 [20.0]	2.33 [59.2]
R12-97135-110	4/0	Copper	Silver	2/0	67.4	.532 [13.5]	.650 [16.5]	.500 [12.69]	.787 [20.0]	2.40 [60.9]
R12-9700-110	4/0	Copper	Silver	4/0	107.0	.650 [16.5]	.787 [20.0]	.500 [12.69]	.787 [20.0]	2.60 [65.9]

3C

MIL-DTL-5015

SOCKET **F80** CRIMP CONTACTS

ORDERING INFORMATION

T12 - 36 15 - 540 ___

SERIES PREFIX
T12 MIL-DTL-5015 crimp F80 socket contact.

CONTACT SIZE

CODE	25	36	49	64	79	80	85	86	92	93	97
SIZE	18	16	16S	12	8	8*	4	4*	1/0	1/0*	4/0*

* Indicates closed entry socket.

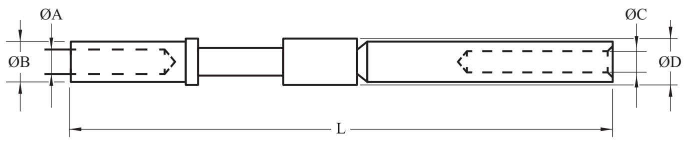
WIRE RANGE
See Table below.

MODIFICATION
Consult Sales Department.

MATERIAL/FINISH

- **000** Alumel/none.
- **010** Chromel/none.
- **020** Constantan/none.
- **040** Iron/cadmium.
- **110** Copper/silver.
- **140** Copper/gold.
- **142** Copper/gold 0.000030.
- **510*** Copper/silver.
- **540*** Copper/gold.
- **542*** Copper/gold 0.000030.

* Applies only to socket contacts sizes 8, 4, 1/0 and 4/0.



PART NUMBER	SIZE	MATERIAL	FINISH	FOR WIRE SIZE		A	B	C	D	L
				AWG	MM ²					
T12-2500-110	18	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.056 [1.46]	.095 [2.40]	1.197 [34.4]
T12-3632-110	16	Copper	Silver	28-32	–	.018 [0.45]	.077 [1.95]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3608-110	16	Copper	Silver	24-26	0.20-0.15	.034 [0.85]	.061 [1.55]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3613-110	16	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3612-110	16	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3615-110	16	Copper	Silver	18-20	1.0	.060 [1.50]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3600-110	16	Copper	Silver	16-18	1.5-1.0	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3600-000	16	Alumel	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3600-010	16	Chromel	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3600-020	16	Constantan	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3600-040	16	Iron	Cadmium	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3620-110	16	Copper	Silver	14	2.0	.078 [2.00]	.115 [2.90]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-3626-110	16	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.065 [1.65]	.126 [3.20]	1.440 [36.50]
T12-4913-110	16S	Copper	Silver	20-26	0.60-0.15	.052 [1.30]	.076 [1.93]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4912-110	16S	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4915-110	16S	Copper	Silver	18	1.0	.060 [1.50]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4900-110	16S	Copper	Silver	16-18	1.5-1.0	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4900-000	16S	Alumel	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4900-010	16S	Chromel	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4900-020	16S	Constantan	None	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4900-040	16S	Iron	Cadmium	16	1.5	.067 [1.70]	.102 [2.60]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4920-110	16S	Copper	Silver	14	2.0	.078 [2.00]	.115 [2.90]	.065 [1.65]	.126 [3.20]	1.050 [26.65]
T12-4926-110	16S	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.065 [1.65]	.126 [3.20]	1.050 [26.65]

PART NUMBER	SIZE	MATERIAL	FINISH	FOR WIRE SIZE		A	B	C	D	L
				AWG	MM ²					
T12-6412-110	12	Copper	Silver	20	0.60	.048 [1.20]	.102 [2.60]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6415-110	12	Copper	Silver	18	1.0	.060 [1.50]	.134 [3.40]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6420-110	12	Copper	Silver	14-18	2.0-1.0	.078 [2.00]	.150 [3.80]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6422-110	12	Copper	Silver	–	2.5	.087 [2.20]	.150 [3.80]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6400-000	12	Alumel	None	12	3.0	.099 [2.50]	.154 [3.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6400-010	12	Chromel	None	12	3.0	.099 [2.50]	.154 [3.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6400-020	12	Constantan	None	12	3.0	.099 [2.50]	.154 [3.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6400-040	12	Iron	Cadmium	12	3.0	.099 [2.50]	.154 [3.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6400-110	12	Copper	Silver	12	3.0	.099 [2.50]	.154 [3.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6430-110	12	Copper	Silver	–	4.0	.118 [3.00]	.189 [4.80]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6431-110	12	Copper	Silver	–	4.0	.130 [3.30]	.166 [4.20]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6438-110	12	Copper	Silver	10	6.0	.142 [3.60]	.189 [4.80]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-6408-110	12	Copper	Silver	8	9.0	.177 [4.50]	.272 [6.90]	.098 [2.48]	.189 [4.80]	1.480 [37.65]
T12-7915-510	8	Copper	Silver	18	1.0	.060 [1.50]	.134 [3.40]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7918-510	8	Copper	Silver	14-18	2.0-1.0	.071 [1.80]	.150 [3.80]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7926-510	8	Copper	Silver	12	3.0	.099 [2.50]	.154 [3.90]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7930-510	8	Copper	Silver	–	4.0	.118 [8.00]	.176 [4.80]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7900-510	8	Copper	Silver	8	9.0	.177 [4.50]	.272 [6.90]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7950-510	8	Copper	Silver	–	10.0	.201 [5.00]	.272 [6.90]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-7958-510	8	Copper	Silver	6	13.2	.229 [5.80]	.307 [7.80]	.147 [3.73]	.307 [7.80]	1.595 [40.50]
T12-8522-510	4	Copper	Silver	–	2.5	.087 [2.20]	.150 [3.80]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8526-510	4	Copper	Silver	12	3.0	.099 [2.50]	.150 [3.80]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8530-510	4	Copper	Silver	–	4.0	.118 [3.00]	.189 [4.80]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8550-510	4	Copper	Silver	–	10.0	.201 [5.00]	.275 [7.00]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8562-510	4	Copper	Silver	–	16.0	.244 [6.20]	.374 [9.50]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8500-510	4	Copper	Silver	4	22.0	.281 [7.15]	.375 [9.50]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8525-510	4	Copper	Silver	–	25.0	.307 [7.80]	.374 [9.50]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-8535-510	4	Copper	Silver	–	35.0	.354 [9.00]	.565 [14.35]	.230 [5.84]	.433 [11.00]	1.625 [41.25]
T12-9245-510	1/0	Copper	Silver	8	9.0	.177 [4.55]	.268 [6.80]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9250-510	1/0	Copper	Silver	–	10.0	.201 [5.00]	.275 [7.00]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9246-510	1/0	Copper	Silver	4	22.0	.281 [7.15]	.375 [9.53]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9225-510	1/0	Copper	Silver	–	25.0	.307 [7.80]	.374 [9.50]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9235-510	1/0	Copper	Silver	–	35.0	.354 [9.00]	.565 [14.35]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9275-510	1/0	Copper	Silver	–	50.0	.421 [10.70]	.565 [14.35]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9200-510	1/0	Copper	Silver	1/0	53.0	.453 [11.50]	.565 [14.35]	.365 [9.20]	.595 [15.11]	1.830 [46.50]
T12-9790-510	4/0	Copper	Silver	2	33.5	.354 [9.0]	.565 [14.35]	.506 [12.85]	.787 [20.0]	2.29 [58.2]
T12-97115-510	4/0	Copper	Silver	1/0	53.0	.453 [11.5]	.565 14.35]	.506 [12.85]	.787 [20.0]	2.22 [56.3]
T12-97135-510	4/0	Copper	Silver	2/0	67.4	.532 [13.5]	.650 [16.5]	.506 [12.85]	.787 [20.0]	2.28 [58.0]
T12-9700-510	4/0	Copper	Silver	4/0	107.0	.650 [16.5]	.787 [20.0]	.506 [12.85]	.787 [20.0]	2.49 [63.0]

3C

907-2*** SERIES

CRIMP ADAPTER FOR WIRE SIZE SMALLER/LARGER THAN CONTACT

907 - 2 XXX - XXX

SERIES PREFIX

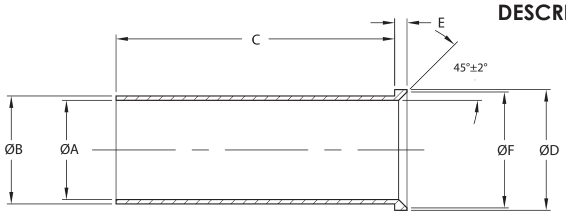
WIRE SIZE
- **1** For Wire Size Larger Than Contact
- **2** For Wire Size Smaller Than Contact

DESCRIPTIVE NUMBER

MATERIAL/FINISH

CODE	MATERIAL	FINISH
-000*	360 Brass	Silver over nickel
-011*	360 Brass	Silver over nickel
-100	353 Brass	Unplated
-110	353 Brass	Silver over nickel
-140	353 Brass	Light gold over nickel
-142	353 Brass	Heavy gold over nickel

* Material/finish codes -000 & -011are obsolete. Both replaced by -110



PART NUMBER	CRIMP CONTACT WIRE BARREL SIZE AWG	WIRE SIZE AWG	WIRE SIZE MM	A +.002 -.003	B +.002 -.003	C +/-.015	D +/-.010	E +/-.010	F +/-.005
907-1050-***	22	20		See page 3C-10					
907-2005-***	20	26	0.15						
907-2011-***	20	26		#.023	.042	.120	.069	.015	.050
907-2010-***	20	24-30		.027	.042	.120	.069	.015	.050
907-1040-***	20	16		See page 3C-10					
907-1030-***	20	12							
907-2012-***	16		0.12		.063			.015	.068
907-2013-***	16	26			.063			.015	.068
907-2016-***	16	24			.063			.015	.068
907-2020-***	16	22-24		.035	.063	.230	.100	.015	.068
907-2021-***	16	22		#.035	.063	.230	.100	.015	.068
907-2022-***	16	22		.035	.063	.190	.100	.015	.068
907-2025-***	16	22		.043	.059	.149	.100	.015	.068
907-2030-***	16	20	0.60	.045	.063	.230	.100	.015	.068
907-1020-***	16	12		See page 3C-10					
907-2037-***	14	22		.043	.070	.230	.100	.015	.068
907-2039-***	12	18			.094		.140	.015	
907-2038-***	12	20		.046	.094	.221	.140	.015	
907-2040-***	12	16	1.50	.069	.094	.230	.140	.015	.092
907-1010-***	12	10		See page 3C-10					
907-2043-***	6.0 MM		1.50					.015	
907-2045-***	6.0 MM		2.50					.015	
907-2049-***	8	18	1.0		.173		.250	.031	.188
907-2050-***	8	16	1.5	.069	.173	.380	.250	.031	.188
907-2053-***	8		2.5		.173		.250	.031	.188
907-2055-***	8	14		.086	.173	.422	.250	.031	.188
907-2056-***	8		4.0		.173		.250	.031	.188
907-2060-***	8	12	3.0	.098	.173	.380	.250	.031	.188
907-2061-***	8	12		@.101	.173	.380	.250	.031	.188
907-2062-***	8	12		@.101	.173	.380	.250	.031	.188
907-2068-***	8	10			.173		.250	.031	.188
907-2070-***	8	10		.136	.173	.380	.250	.031	.188
907-2071-***	8		6.0				.250	.031	.188
907-2077-***	10 MM	12	3.0				.250	.031	.188
907-2080-***	6	10		.136	.225	.700	.297	.031	.188
907-2090-***	6	9		.155	.225	.700	.297	.031	.219
907-2100-***	6	8	9.0		.225		.297	.031	
907-2102-***	16 MM		2.5					.031	
907-2103-***	16 MM		4.0					.031	
907-2105-***	16 MM		6.0					.031	
907-2107-***	16 MM		10.0	@.197				.031	

= ± .001
@ = ± .002

CRIMP ADAPTER FOR WIRE SIZE SMALLER/LARGER THAN CONTACT

PART NUMBER	CRIMP CONTACT WIRE BARREL SIZE AWG	WIRE SIZE AWG	WIRE SIZE MM	A +.002 -.003	B +.002 -.003	C +/-.015	D +/-.010	E +/-.010	F +/-.005
907-2108-***	4	10		.136	.272	.373	.344	.031	.219
907-2109-***	4		6.0		.272	.380	.344	.031	
907-2110-***	4	8	9.0	.185	.272	.380	.344	.031	.250
907-2111-***	4	8		.185	.272	.700	.344	.031	.250
907-2112-***	4		10.0	@.197	.272	.380	.344	.031	.250
907-2113-***	4		15.0		.272	.380	.344	.031	.250
907-2114-***	4		10.0	@.244	.272	.380	.344	.031	.250
907-2117-***	4	6	13.2		.272	.380	.344	.031	
907-2118-***	4	12			.272	.380	.344	.031	
907-2119-***	4		2.5		.272	.380	.344	.031	
907-2120-***	4	6	13.2	.225	.272	.380	.344	.031	.292
907-2130-***	4	6	13.2	.225	.272	.700	.344	.031	.292
907-2140-***	4	5		.250	.272	.380	.344	.031	.292
907-2150-***	4	5		.244	.272	.380	.344	.031	.292
907-2152-***	4		15.0		.272	.380	.344	.031	
907-2153-***	4		16.0		.272	.380	.344	.031	
907-2155-***	25 MM		6.0						
907-2156-***	25 MM		16.0						
907-2158-***	2	4							
907-2160-***	1	6	13.2	.225	.396	.700	.516	.031	.422
907-2170-***	1	2		.359	.396	.700	.516	.031	.422
907-2171-***	50 MM		25.0					.031	
907-2172-***	1/0	10		.136	.444	.644		.031	
907-2173-***	1/0	8	9.0	.185	.444	.644		.031	
907-2174-***	1/0		10.0		.444			.031	
907-2175-***	1/0	6	13.2		.444			.031	
907-2176-***	1/0		16.0		.444			.031	
907-2178-***	1/0		20.0		.444			.031	
907-2179-***	1/0		25.0		.444			.031	
907-2180-***	1/0	4		.299	.444	.536	.462	.031	.462
907-2181-***	1/0		10.0	@.197	.444	.500	.516	.031	.462
907-2182-***	1/0	2	16.0	@.244	.444	.500	.516	.031	.462
907-2183-***	1/0		25.0	@.307	.444	.500	.516	.031	.462
907-2184-***	1/0		35.0	@.354	.444	.500	.516	.031	.462
907-2185-***	1/0		50.0	@.421	.444	.500	.516	.031	.462
907-2190-***	1/0	2		.359	.444	.536	.516	.031	.462
907-2210-***	1/0	2		.417	.444	.536	.462	.031	.462
907-2200-***	1/0	1		.390	.444	.536	.462	.031	.462
907-2201-***	1/0		35.0		.444			.031	
907-2202-***	1/0		50.0		.444			.031	
907-2203-***	2/0	2		.359	.491	.528		.031	
907-2204-***	2/0		25.0		.491			.031	
907-2205-***	2/0		70.0		.491			.031	
907-2206-***	2/0		50.0		.491			.031	
907-2210-***	70 MM		25.0					.031	
907-2211-***	70 MM		50.0					.031	
907-2207-***	95 MM		70.0					.031	
907-2219-***	4/0	2	67.4		.629	.700	.719	.031	.462
907-2220-***	4/0	2/0	67.4	.500	.629	.700	.719	.031	.562
907-2221-***	4/0	3/0	67.4		.629	.700	.719	.031	.562
907-2230-***	150 MM		70.0	.500	.629	.700	.719	.031	.562
907-2240-***	190 MM	4/0	107.0					.031	
907-2250-***	DIN500		16.0					.031	
907-2253-***	DIN500		35.0					.031	

= ± .001
@ = ± .002

3C

907-10*** SERIES

CRIMP ADAPTER FOR WIRE SIZE LARGER THAN CONTACT

907 - 1 XXX - XXX

SERIES PREFIX

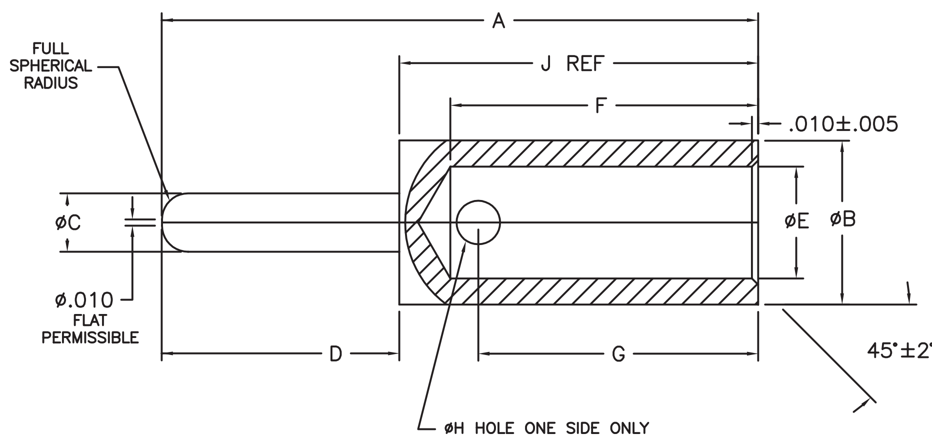
WIRE SIZE
- **1** For Wire Size Larger Than Contact
- **2** For Wire Size Smaller Than Contact

DESCRIPTIVE NUMBER

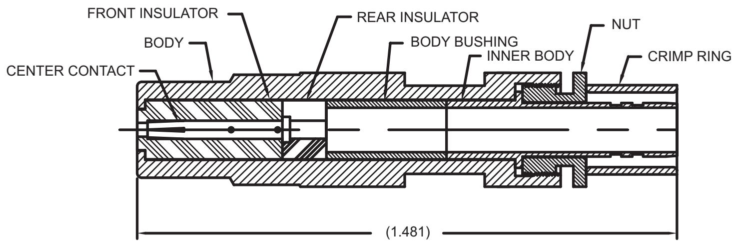
MATERIAL/FINISH

CODE	MATERIAL	FINISH
-000*	360 Brass	Silver over nickel
-011*	360 Brass	Silver over nickel
-100	353 Brass	Unplated
-110	353 Brass	Silver over nickel
-140	353 Brass	Light gold over nickel
-142	353 Brass	Heavy gold over nickel

* Material/finish codes -000 & -011are obsolete. Both replaced by -110

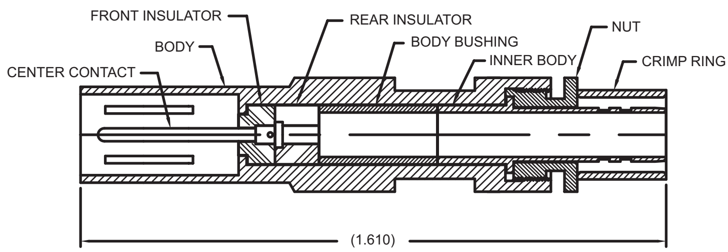


PART NUMBER	CRIMP CONTACT WIRE BARREL SIZE AWG	WIRE RANGE	A +/-.010	B +/-.002	C +/-.002	D +/-.005	E +/-.002	F +/-.010	G +/-.005	H +/-.002	J REF
907-1010-***	12	8-10	.807	.264	.094	.230	.181	.495	.450	.070	.577
907-1020-***	16	12-14	.549	.149	.062	.230	.100	.260	.220	.039	.319
907-1021-***	16	12-14	.617	.156	.062	.200	.100	.200	.160	.039	.400
907-1030-***	20	12-14	.509	.149	.038	.190	.100	260	.220	.039	.319
907-1040-***	20	16-18	.499	.102	.038	.190	.067	.260	.220	.039	.309
907-1050-***	22	20-22	.363	.069	.029	.120	.047	.199	.190	.029	.243



TYPICAL PIN CONSTRUCTION

A12-4XXX-853



TYPICAL SOCKET COSTRUCTION

D12-4XXX-853

CABLE RG	PIN	SOCKET	CRIMP TOOL DIE *	DIE CLOSURE
RG-58	A12-4000-853	D12-4000-853	M22520/5-41	B
RG-141	A12-4020-853	D12-4020-853	M22520/5-41	B
RG-59	A12-4100-853	D12-4100-853	M22520/5-19	A
RG-62A; 62B	A12-4110-853	D12-4110-853	M22520/5-45	B
RG-174	A12-4200-853	D12-4200-853	M22520/5-35	B
RG-179B; 316	A12-4210-853	D12-4210-853	M22520/5-35	B
RG-180B	A12-4300-853	D12-4300-853	M22520/5-19	B

* USE CRIMP TOOL M22520/5-01

TOOLING

INSERTION, REMOVAL AND CRIMP TOOLS FOR **F80** CRIMP CONTACTS

CONTACT		WIRE SIZE (AWG)	INSERTION TOOL	REMOVAL TOOL KIT	GUIDE PINS	MANUAL CRIMP TOOL FRAME		PICO TOOLS MODEL 300		PICO TOOLS MODEL 400-BHD		PICO TOOLS MODEL 500-D	
						MS3191A	M22520/1-01	DIE PART NO. (Note 2)	LOCATOR PART NO.	DIE PART NO. (Note 2)	LOCATOR PART NO.	DIE PART NO. (Note 2)	LOCATOR PART NO.
P/N	SIZE					LOCATOR	LOCATOR						
R12-2500-★	18 Pin	20-26	T117346	T118249	–	–	–	–	–	414DA-20N	9632	514DA-20N	10627
T12-2500-★	18 Skt	20-26	T117346	T118249	T125000	–	–	–	–	414DA-20N	9641	514DA-20N	10640
R12-3600-★	16 Pin	16-18	T117345	T118250	–	600091†	TH378★	314DA-16	C17P	414DA-16N	9633	514DA-16N	10628
T12-3600-★	16 Skt	16-18	T117345	T118250	T125001	600092M†	TH378★	314DA-16	C17S	414DA-16N	9642	514DA-16N	10641
R12-3608-★	16 Pin	24-26	T117346	T118250	–	–	–	–	–	414DA-22N	9633	–	–
T12-3608-★	16 Skt	24-26	T117346	T118250	T125001	–	–	–	–	414DA-22N	9642	–	–
R12-3612-★	16 Pin	20	T117345	T118250	–	–	–	–	–	414DA-16N	9633	514DA-16N	10628
T12-3612-★	16 Skt	20	T117345	T118250	T125001	–	–	–	–	414DA-16N	9642	514DA-16N	10641
R12-3613-★	16 Pin	20-26	T117346	T118250	–	–	TH378★	314DA-20	C17P	414DA-16N	9633	514DA-16N	10628
T12-3613-★	16 Skt	20-26	T117346	T118250	T125001	–	TH378★	314DA-20	C17S	414DA-16N	9642	514DA-16N	10641
R12-3615-★	16 Pin	18	T117345	T118250	–	–	TH378★	314DA-20	C17P	414DA-16N	9633	514DA-16N	10628
T12-3615-★	16 Skt	18	T117345	T118250	T125001	–	TH378★	314DA-20	C17S	414DA-16N	9642	514DA-16N	10641
R12-3620-★	16 Pin	14	T117345	T118250	–	–	TH378★	314DA-16	C17P	414DA-16N	9633	514DA-16N	10628
T12-3620-★	16 Skt	14	T117345	T118250	T125001	–	TH378★	314DA-16	C17S	414DA-16N	9642	514DA-16N	10641
R12-3626-★	16 Pin	12	T117082	T118250	–	–	TH378★	314DA-12	C17P	414DA-12N	9633	514DA-12N	10628
T12-3626-★	16 Skt	12	T117082	T118250	T125001	–	TH378★	314DA-12	C17S	414DA-12N	9642	514DA-12N	10641
R12-3632-★	16 Pin	28-32	T117345	T118250	–	–	–	–	–	414DA-16N048	9633	514DA-16N048	10628
T12-3632-★	16 Skt	28-32	T117345	T118250	T125001	–	–	–	–	414DA-16N048	9642	514DA-16N048	10641
R12-4900-★	16S Pin	16-18	T117345	T118250	–	600093†	TH379★	314DA-16	C16P	414DA-16N	9634	514DA-16N	10629
T12-4900-★	16S Skt	16-18	T117345	T118250	T125001	600245†	TH379★	314DA-16	C16S	414DA-16N	9634	514DA-16N	10629
R12-4912-★	16S Pin	20	T117345	T118250	–	–	TH379★	314DA-20	C16P	414DA-16N	9634	514DA-16N	10629
T12-4912-★	16S Skt	20	T117345	T118250	T125001	–	TH379★	314DA-20	C16S	414DA-16N	9634	514DA-16N	10629
R12-4913-★	16S Pin	20-26	T117346	T118250	–	–	–	–	–	414DA-20N	9634	514DA-20N	10629
T12-4913-★	16S Skt	20-26	T117346	T118250	T125001	–	–	–	–	414DA-20N	9634	514DA-20N	10629
R12-4915-★	16S Pin	18	T177345	T118250	–	–	–	–	–	414DA-16N	9634	514DA-16N	10629
T12-4915-★	16S Skt	18	T117345	T118250	T125001	–	–	–	–	414DA-16N	9634	514DA-16N	10629
R12-4920-★	16S Pin	14	T117345	T118250	–	–	TH379★	314DA-16	C16P	414DA-16N	9634	514DA-16N	10629
T12-4920-★	16S Skt	14	T117345	T118250	T125001	–	TH379★	314DA-16	C16S	414DA-16N	9634	514DA-16N	10629
R12-4926-★	16S Pin	12	T117082	T118250	–	–	–	–	–	414DA-18N	9634	514DA-18N	10629
T12-4926-★	16S Skt	12	T117082	T118250	T125001	–	–	–	–	414DA-18N	9634	514DA-18N	10629
R12-6400-★	12 Pin	12	T117082	T118250	–	600216†	TH378★	–	–	414DA-12N	9635	514DA-12N	10630
T12-6400-★	12 Skt	12	T117082	T118250	T125002	600216†	TH378★	–	–	414DA-12N	9635	514DA-12N	10630
R12-6408-★	12 Pin	8	T117082	T118250	–	–	–	–	–	414DA-6N155	9635	514DA-6N155	10630
T12-6408-★	12 Skt	8	T117082	T118250	T125002	–	–	–	–	414DA-6N155	9635	514DA-6N155	10630
R12-6412-★	12 Pin	20	T117345	T118250	–	–	–	–	–	414DA-16N	9635	514DA-16N	10630
T12-6412-★	12 Skt	20	T117345	T118250	T125002	–	–	–	–	414DA-16N	9635	514DA-16N	10630
R12-6415-★	12 Pin	18	T117082	T118250	–	600216†	TH378★	–	–	414DA-16N	9635	514DA-16N	10630
T12-6415-★	12 Skt	18	T117082	T118250	T125002	600216†	TH378★	–	–	414DA-16N	9635	514DA-16N	10630
R12-6420-★	12 Pin	14-18	T117082	T118250	–	–	–	–	–	414DA-10N096	9635	514DA-10N096	10630
T12-6420-★	12 Skt	14-18	T117082	T118250	T125002	–	–	–	–	414DA-10N096	9635	514DA-10N096	10630
R12-6422-★	12 Pin	2.5mm^2	T117082	T118250	–	620216†	–	–	–	414DA-8N142	9635	514DA-8N142	10630
T12-6422-★	12 Skt	2.5mm^2	T117082	T118250	T125002	620216†	–	–	–	414DA-8N142	9635	514DA-8N142	10630
R12-6430-★	12 Pin	4.0mm^2	T117082	T118250	–	7100659†	–	–	–	414DA-10N096	9635	514DA-10N096	10630
T12-6430-★	12 Skt	4.0mm^2	T117082	T118250	T125002	7100659†	–	–	–	414DA-10N	9635	514DA-10N	10630
R12-6431-★	12 Pin	4.0mm^2	T117082	M118250	–		–	–	–	414DA-10N	9635	514DA-10N	10630
T12-6431-★	12 Skt	4.0mm^2	T117082	M118250	T125002	–	–	–	–	414DA-18N	9635	514DA-18N	10630
R12-6438-★	12 Pin	6.0mm^2	T117082	M118250	–	–	–	–	–	414DA-10N	9635	514DA-10N	10630
T12-6438-★	12 Skt	6.0mm^2	T117082	M118250	T125002	–	–	–	–	414DA-10N	9635	514DA-10N	10630

★ Indicates additional alpha-numerics are required to complete part number.
† Locators provided by Astro Tool.
Note 1. Consult Sales Department
Note 2. Pico Tools Die part numbers ending in letter N are for an 8 indent crimp. For a Hex crimp, change letter N to HEX.

CONTINUED ON NEXT PAGE

CONTINUED FROM PREVIOUS PAGE

CONTACT		WIRE SIZE (AWG)	INSERTION TOOL	REMOVAL TOOL KIT	GUIDE PINS	MANUAL CRIMP TOOL FRAME		PICO TOOLS MODEL 300		PICO TOOLS MODEL 400B HD		PICO TOOLS MODEL 500D	
P/N	SIZE					MS3191A LOCATOR	M22520/1-01 LOCATOR	DIE PART NO. (Note 2)	LOCATOR PART NO.	DIE PART NO. (Note 2)	LOCATOR PART NO.	DIE PART NO. (Note 2)	LOCATOR PART NO.
R12-7900-★	8 Pin	8	T117344	T118260		–	–	–	–	414DA-6N155	9636	514DA-6N155	10631
T12-7900-★	8 Skt	8	T117344	T118260		–	–	–	–	414DA-6N155	9636	514DA-6N155	10631
R12-7915-★	8 Pin	18	T117082	T118260		–	–	–	–	414DA-12N077	9636	514DA-12N077	10631
T12-7915-★	8 Skt	18	T117082	T118260		–	–	–	–	414DA-12N077	9636	514DA-12N077	10631
R12-7918-★	8 Pin	14-18	T117082	T118260		–	–	–	–	414DA-18N	9636	514DA-18N	10631
T12-7918-★	8 Skt	14-18	T117082	T118260		–	–	–	–	414DA-18N	9636	514DA-18N	10631
R12-7926-★	8 Pin	12	T117082	T118260	Not Required	–	–	–	–	414DA-18N	9636	514DA-18N	10631
T12-7926-★	8 Skt	12	T117082	T118260		–	–	–	–	414DA-18N	9636	514DA-18N	10631
R12-7930-★	8 Pin	4.0mm^2	T117082	T118260		–	–	–	–	414DA-10N096	9636	514DA-10N096	10631
T12-7930-★	8 Skt	4.0mm^2	T117082	T118260		–	–	–	–	414DA-10N096	9636	514DA-10N096	10631
R12-7950-★	8 Pin	10.0mm^2	T117344	T118260		–	–	–	–	414DA-8N142	9636	514DA-8N142	10631
T12-7950-★	8 Skt	10.0mm^2	T117344	T118260		–	–	–	–	414DA-8N142	9636	514DA-8N142	10631
R12-7958-★	8 Pin	6	Note 1	T118260		–	–	–	–	414DA-6N170	9636	514DA-6N170	10631
T12-7958-★	8 Skt	6	Note 1	T118260		–	–	–	–	414DA-6N170	9636	514DA-6N170	10631
R12-8500-★	4 Pin	4	T117347	T118270		–	–	–	–	414DA-4N215	9637	514DA-4N215	10632
T12-8500-★	4 Skt	4	T117347	T118270		–	–	–	–	414DA-4N215	9637	514DA-4N215	10632
R12-8522-★	4 Pin	2.5mm^2	T117082	T118270		–	–	–	–	414DA-18N	9637	514DA-18N	10632
T12-8522-★	4 Skt	2.5mm^2	T117082	T118270		–	–	–	–	414DA-18N	9637	514DA-18N	10632
R12-8525-★	4 Pin	25.0mm^2	T117347	T118270		–	–	–	–	414DA-4N	9637	514DA-4N	10632
T12-8525-★	4 Skt	25.0mm^2	T117347	T118270		–	–	–	–	414DA-4N	9637	514DA-4N	10632
R12-8526-★	4 Pin	12	T117082	T118270		–	–	–	–	414DA-10N	9637	514DA-10N	10632
T12-8526-★	4 Skt	12	T117082	T118270	Not Required	–	–	–	–	414DA-10N	9637	514DA-10N	10632
R12-8530-★	4 Pin	4.0mm^2	T117082	T118270		–	–	–	–	414DA-10N105	9637	514DA-10N105	10632
T12-8530-★	4 Skt	4.0mm^2	T117082	T118270		–	–	–	–	414DA-10N105	9637	514DA-10N105	10632
R12-8535-★	4 Pin	35.0mm^2	T117348	T118270		–	–	–	–	414DA-0N315	9637	514DA-0N315	10632
T12-8535-★	4 Skt	35.0mm^2	T117348	T118270		–	–	–	–	414DA-0N315	9637	514DA-0N315	10632
R12-8550-★	4 Pin	10.0mm^2	T117344	T118270		–	–	–	–	414DA-8N142	9637	514DA-8N142	10632
T12-8550-★	4 Skt	10.0mm^2	T117344	T118270		–	–	–	–	414DA-8N142	9637	514DA-8N142	10632
R12-8562-★	4 Pin	16.0mm^2	T117347	T118270		–	–	–	–	414DA-4N	9637	514DA-4N	10632
T12-8562-★	4 Skt	16.0mm^2	T117347	T118270		–	–	–	–	414DA-4N	9637	514DA-4N	10632
R12-9200-★	1/0 Pin	1/0	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
T12-9200-★	1/0 Skt	1/0	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
R12-9225-★	1/0 Pin	25.0mm^2	T117347	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
T12-9225-★	1/0 Skt	25.0mm^2	T117347	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
R12-9235-★	1/0 Pin	35.0mm^2	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
T12-9235-★	1/0 Skt	35.0mm^2	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
R12-9245-★	1/0 Pin	8	T117344	T118280	Not Required	–	–	–	–	414DA-6N155	9638	514DA-6N155	10633
T12-9245-★	1/0 Skt	8	T117344	T118280		–	–	–	–	414DA-6N155	9638	514DA-6N155	10633
R12-9246-★	1/0 Pin	4	Note 1	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
T12-9246-★	1/0 Skt	4	Note 1	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
R12-9250-★	1/0 Pin	10.0mm^2	T117344	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
T12-9250-★	1/0 Skt	10.0mm^2	T117344	T118280		–	–	–	–	414DA-4N	9638	514DA-4N	10633
R12-9275-★	1/0 Pin	50.0mm^2	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
T12-9275-★	1/0 Skt	50.0mm^2	T117348	T118280		–	–	–	–	414DA-0N	9638	514DA-0N	10633
R12-9700-★	4/0 Pin	4/0	Note 1	Note 1		–	–	–	–	–	–	514DA-N470	10636
T12-9700-★	4/0 Skt	4/0	Note 1	Note 1		–	–	–	–	–	–	514DA-N470	10639
R12-9790-★	4/0 Pin	2	Note 1	Note 1		–	–	–	–	414DA-0N	9639	514DA-0N	10634
T12-9790-★	4/0 Skt	2	Note 1	Note 1	Not Required	–	–	–	–	414DA-0N	9640	514DA-0N	10637
R12-97115-★	4/0 Pin	1/0	Note 1	Note 1		–	–	–	–	414DA-0N	9639	514DA-0N	10634
T12-97115-★	4/0 Skt	1/0	Note 1	Note 1		–	–	–	–	414DA-0N	9640	514DA-0N	10637
R12-97135-★	4/0 Pin	2/0	Note 1	Note 1		–	–	–	–	–	–	514DA-N345	10635
T12-97135-★	4/0 Skt	2/0	Note 1	Note 1		–	–	–	–	–	–	514DA-N345	10638

Note 1. Consult sales department.
Note 2. Pico Tools Die part numbers ending in letter N are for an 8 indent crimp. For Hex crimp, change letter N to HEX.
★ Indicates additional alpha-numerics are required to complete part number.
† Locators provided by Astro Tool.

3C

TOOLING

INSERTION AND REMOVAL TOOLS FOR **F80** CRIMP CONTACTS

ALTERNATE INSERTION TOOLS

CONTACT SIZE	SPACECRAFT	ASTRO TOOL	BENDIX	ITT CANNON	COMMITAL	DANIELS	VEAM
18	T117346	–	–	–	M.117346	–	T98143
16	T117345	ATBX1-7345	11-7345	CIT-F80-16	M.117345	DAK168-16	11-7345
12	T117082	ATBX1-7082	11-7082	CIT-F80-12	M.117082	DAK168-12	46736
8	T117344	ATBX1-8220	11-8220	CIT-8	M117344	DAK159	A46151-8T50
4	T117347	ATC1377	11-7365-4*	CIT-4	M.117347	–	A46151-4T50
1/0	T117348	–	11-7365-5*	CIT-0	M.117348	–	A46151-0T50

* Requires 11-7364 Arbor Press

ALTERNATE REMOVAL TOOLS

CONTACT SIZE	SPACECRAFT	ASTRO TOOL	BENDIX	ITT CANNON	COMMITAL	DANIELS	VEAM
18	T118249	–	–	–	M.118249	–	11-7576-37
16	T118250	ATBX2-8250	11-8250(Kit)	CET-F80-16	M.118250	DRK59	A43240
12	T118250	ATBX2-8250	11-8250(Kit)	CET-F80-12	M.118250	DRK59	A43240
8	T118260	ATBX2-8250	11-8250(Kit)	CET-8	M.118260	DRK59	A43240-8
4	T118270	ATC2234	P=11-7370-4* S=11-7674-2*	CET-4	M.118270	–	46150-4
1/0	T118280	–	P=11-7370-5* S=11-7674-3*	CET-0	M.118280	–	46150-0

* Requires 11-7364 Arbor Press

ALTERNATE GUIDE PINS

CONTACT SIZE	SPACECRAFT	BENDIX	ITT CANNON	COMMITAL	VEAM
18	T125000	–	–	M.125000	27977-20T50
16	T125001	Unknown	226-1017-000	M.125001	27977-16T50
12	T125002	Unknown	226-1018-000	M.125002	27977-16T50
8	T125003	Unknown	Not Required	M.125003	Not Required
4	Not Required	Not Required	Not Required	Not Required	Not Required
1/0	Not Required	Not Required	Not Required	Not Required	Not Required

A thermocouple is essentially a pair of wires of dissimilar metals connected at both ends. When the two junctions are subjected to different temperatures, an electrical potential is set up between them, almost directly proportional to the temperature difference. A voltage measuring instrument in the circuit can thus measure temperature. Because thermocouple junctions can withstand higher temperatures than the connectors used in conjunction with them, care must be taken to isolate the connectors. While contacts can withstand temperatures shown in the following table, standard insert materials can withstand only 257°F continuous operation. However, special dielectrics and shell finishes can extend the usable connector range above 500°F.

THERMOCOUPLE LIMITS

COMBINATION	CONDITIONS	TEMPERATURE RANGE
Copper-Constantan (Note 1)	Material has good resistance to corrosion with long life and stable calibration.	Thermocouple Junction: Below 500°F Connector Contacts: 400°F
Iron-Constantan (Note 1)	Material can be used in either oxidizing or reducing atmospheres. It is not recommended for low temperatures and in the presence of moisture due to the rusting of the iron.	Thermocouple Junction: 500°F to 1200°F Connector Contacts: *600°F
Chromel-Alumel (Note 1)	Material is good for high temperature work and is more stable than iron and constantan combinations.	Thermocouple Junction: High Temperature Connector Contacts: *400°F

* These contacts can withstand higher temperatures but have not been tested because the general line of connectors will not withstand such temperatures in continuous operation.
(Note 1) - These are registered Trade names of the Hoskins Corporation.

THERMOCOUPLE MATERIALS

CONTACT DESIGNATION	MATERIAL	ASTM-E230 SPECIFICATIONS	Polarity	MAGNETISM
Alumel (Al) (Note 1)	94% Nickel; 2.5% Manganese; 2% Aluminum; 1% Silicone; ½% Iron	Type KN	Negative	Magnetic
Constantan (Co) (Note 1)	45% to 60% Copper; 40% to 55% Nickel; 0 to 1.4% Manganese; 0.1% Iron	Type JN	Negative	Non-Magnetic
Copper (Cu) (Note 1)	87.5 to 90% Copper; 1.8 to 2.2% Lead; .1% Iron; 5% Nickel; .5% normal impurities and balance zinc	Type T	Positive	Non-Magnetic
Iron (Ir) (Note 1)	84.4% Iron; 2% Carbon; 3% manganese; 6% Phosphorus; 2% Sulphur; 4% Silicone; 8.1% Copper; 9% Tin (Cadmium plated for corrosion resistance)	Type JP	Positive	Magnetic
Chromel P (Ch) (Note 1)	90% Nickel; 10% Chromium	Type KP	Positive	Non-Magnetic

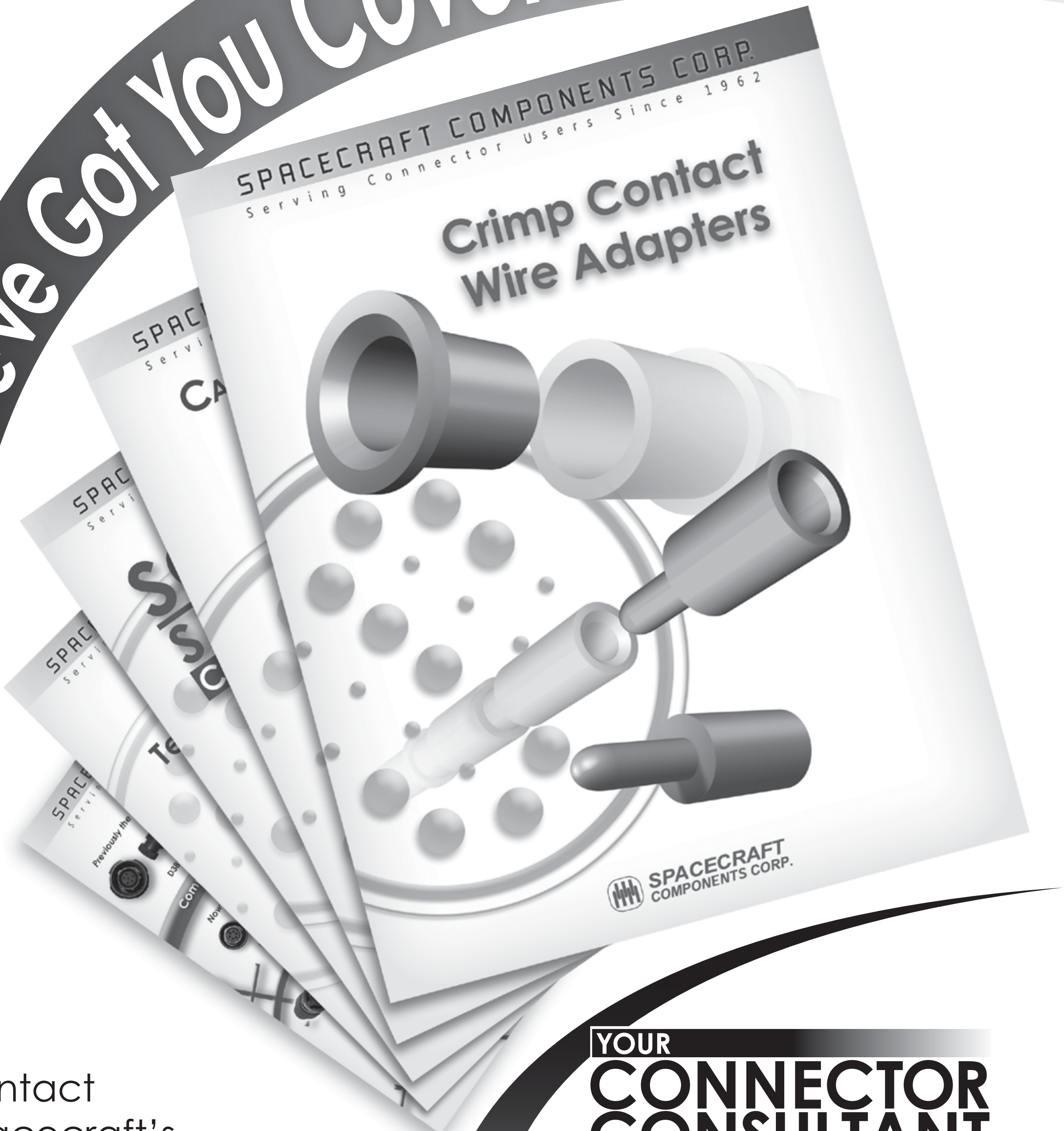
(Note 1) - These are registered Trade names of the Hoskins Corporation.

CONTACT COLOR CODING

CONTACT MATERIAL	COLOR
Alumel	Green
Chromel	White
Copper	–
Constantan	Yellow
Iron	Black

For solder thermocouple contacts, see page 11A-3.
For crimp thermocouple contacts, see pages 11A-4 thru 11A-7.

We've Got You Covered



Contact
Spacecraft's
Consultative Sales Team
for Ordering Information

YOUR
CONNECTOR
CONSULTANT
SINCE 1962

SPACECRAFT®
COMPONENTS CORP.

Quality
Manufacturing
in AMERICA

SPACECRAFT COMPONENTS CORP.

Your Connector Consultant Since 1962

SCP 5015 STYLE CONNECTORS
(CATALOG 102)

SCPT 26482 STYLE
SC1 38999 SERIES I
SC2 38999 SERIES II
SC39 38999 SERIES III
(CATALOG 202)

SCPB SERIES
(CATALOG 302)

CONNECTOR ACCESSORIES
(CATALOG 402)

Try our other connector products.

CONNECTORS WITH INTEGRATED BACKSHELLS
(CATALOG 601)

COMING SOON...
All Plastic Connectors
CATALOG 701

JUN.2013

SPACECRAFT COMPONENTS CORP.

Distributed by Easternconnector Specialty Corp
566 Danbury Rd
New Milford, CT 06776
Phone: 860-355-8100
Fax: 860-350-5411
Email: sales@easternconnector.com
Web: www.easternconnector.com