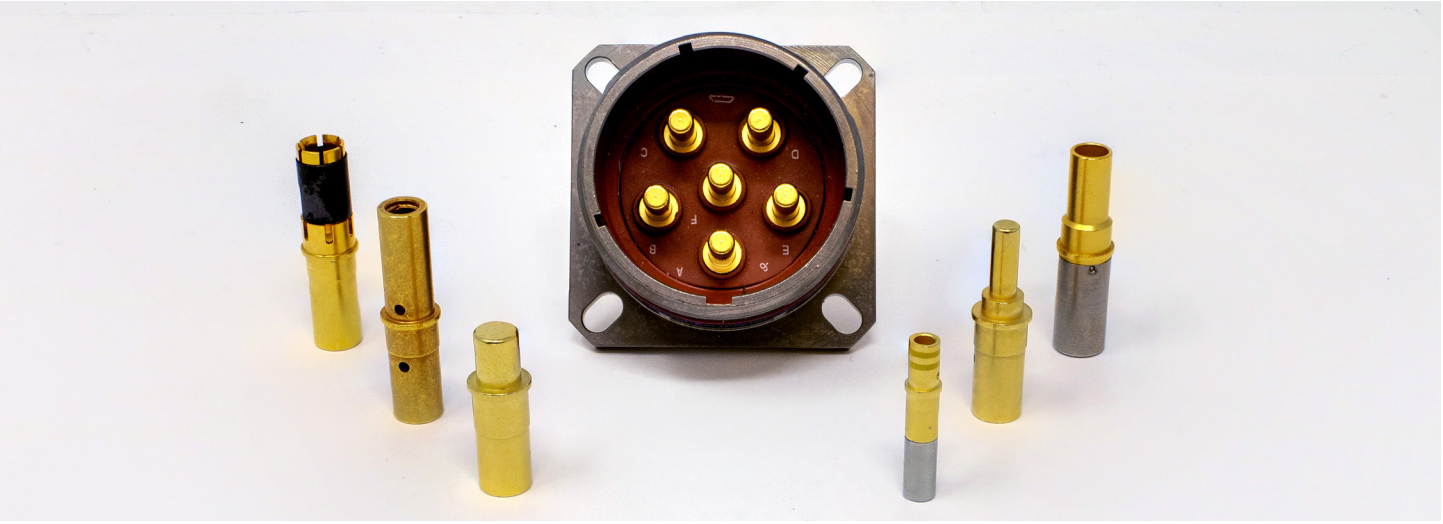
Amphenol
Aerospace

38999 CONNECTORS WITH POWER CONTACTS

PDS - 305

Decrease Resistance & Increase Ampacity with Amphenol Contacts



Temper-Grip, RADSOK, High Current Pins (HCP), and Standard Power

Amphenol has increased its power options for D38999, creating a contact system for every application. Increase ampacity up to 50% when pairing Temper-Grip with HCP pins, helping your connection get as close as possible to the efficiency of uncut wire. EN-style contacts also available ensuring there is an option to intermate with EN-Style connectors which use a .142" diameter pin.

FEATURES & BENEFITS

- Ensure reliability of contact system with Temper-Grip, far beyond the maximum temperature of the connector
- Upgrade ampacity 20-30% by changing your pin contacts to HCP, available in all sizes.
- Reduce mating force with RADSOK
- European-style size 8 pin to mate with RADSOK & other hyperbolic contacts
- Easiest way to substitute twinax & coax contacts for power or signal contacts is by using these modification codes

TEMPER GRIP

RADSOK®

Select Inserts for (PWR), (B65), (RDS), (E65), (B65)						
Pattern	22D	20	16	12	10	8
17-2	38					1
17-22				2		2
17-25	22					2
17-52						2
17-60	8					2
19-AD		16				1
19-18	14					4
19-31	12			1		2
21-75						4
21-79	17					2
23-6						6
23-63	49		4	4		
25-7	97					2
25-8						8
25-17	36					6
25-20		10	13	4		3
25-26		16		5		4
25-41	22	3	11	2		3
25-46		40	4			2
25-90		40	4			2
25-AT	31	12	13	2	2	2

More inserts available, contact Amphenol for Availability

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COMPATABILITY AND PERFORMANCE RATINGS

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Connector Type	Mod Code	Must mate with:	Applies to contact sizes:	Temperature Limit (Celsius)	Current Rating(Amps)	Reverse De-Rating Chart for 175C Rated Connectors (Size 8 contacts)**		
						Lab Ambient (15-25C)	Ambient 70C	Ambient 125C
Pin Connectors	(PWR)	(PWR)	8, 12, 16	200	60	126 A	98 A	70 A
	(B65)	(B65)	8	200+	70	138 A	110 A	80 A
	(RDS)	(RDS)	8	150	70	138 A	110 A	80 A
	(E65)	(E65)	8	200+	70	138 A	110 A	80 A
	(HCP)	(PWR) or Standard*	All	200	65	132 A	102 A	75 A
Socket Connectors	(PWR)	(PWR) or (HCP)	8, 12, 16	200	60	126 A	98 A	70 A
	(B65)	(B65)	8	200+	70	138 A	110 A	80 A
	(RDS)	(RDS)	8	150	70	138 A	110 A	80 A
	(E65)	(E65)	8	200+	70	138 A	110 A	80 A
	(HCP)	NA						

*For patterns with coax or twinax, (HCP) must mate to (PWR). See table on previous page. An example of (HCP) mating with standard is TVP00RF-21-35P (HCP) mating with TVS00RF-21-35S

(HCP)+(PWR) OR STANDARD*				
Contact Size	Current Rating	Reverse Derating Chart for 175C Connectors**		
		Lab Ambient (15-25C)	Ambient 70C	Ambient 125C
22D	8A	18A	15A	10A
20	11A	25A	21A	15A
16	16A	35A	29A	21A
12	25A	69A	58A	40A
8	65A	138A	110A	80A
4	120A	240A	200A	150A

**REVERSE DE-RATING

What Is Reverse Derating? Some applications can accept more heat than the traditional 30 degrees C heat rise. The values in this chart show the maximum amperage you can send through the contact system which will heat it to the maximum operating temperature of the connector. For example, if your system operates in a 70 degrees C environment, it would take 138 amps to heat the contacts up to 175 degrees celcius (the low end of D38999 performance). Amphenol also provides data on the heat rise of uncut wire and standard contacts for comparison. See heat rise charts for details.

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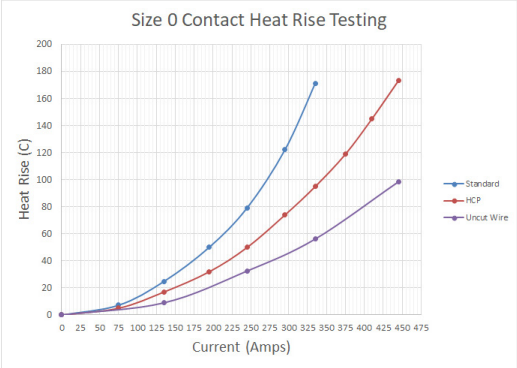
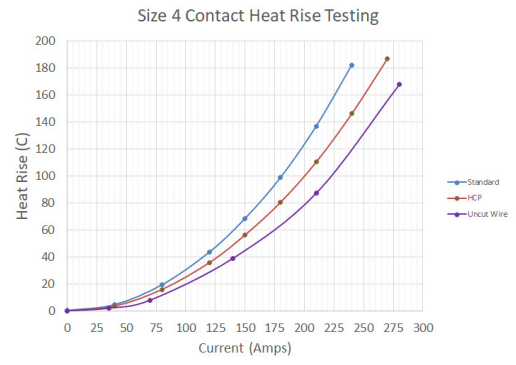
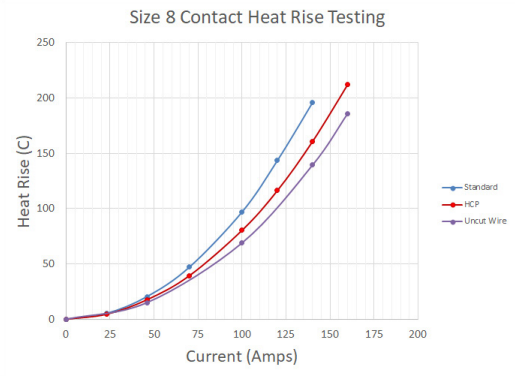
HIGH CURRENT PIN HEAT RISE TESTING DATA

Heat rise data shows performance of HCP (High Current Pins) compared to standard mil-spec contacts and uncutwire as a benchmark. HCP sizes 0, 4, and 8 are mated with Temper-Grip Sockets. HCP sizes 12, 16, 20 & 22D were mated with a standard 39029 socket as that is the more common configuration. Temper-Grip sockets are available in size 12, 16, and 20, contact factory for information on ordering.

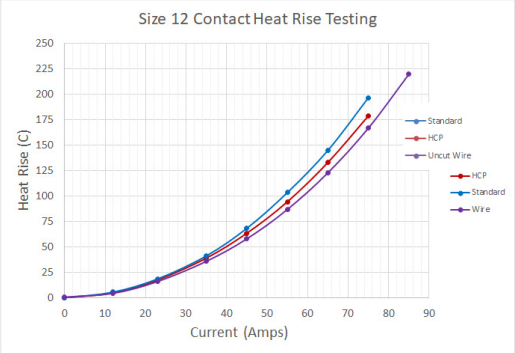
HCP with Temper-Grip

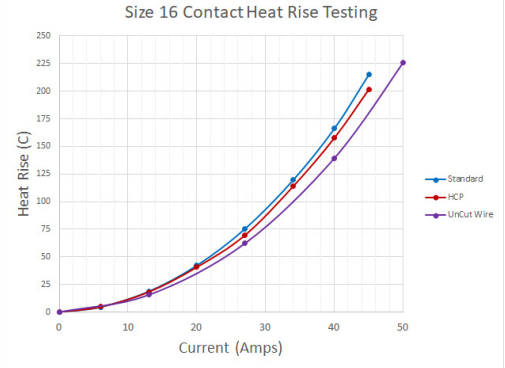


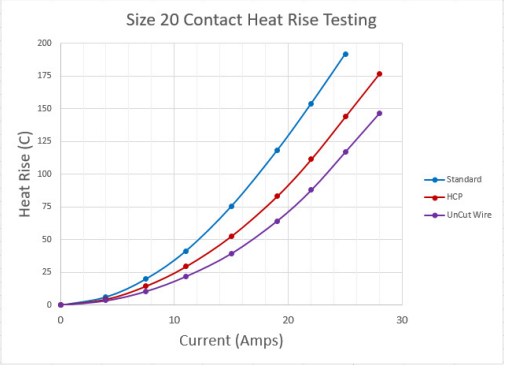


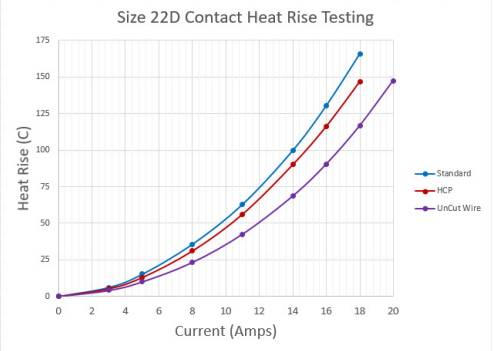


HCP with Standard 39029 Sockets









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BUILD A PART NUMBER EXAMPLE: TV06DT-21-75P (PWR)

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Complete steps 1-7 to create your part number

1.	2.	3.	4.	5.	6.	7.
Connector Type	Shell Style	Service Class	Shell Size - Insert Arrangement	Contact Type	Alternate Positions	Modification
TV	06	DT	21-75	P		(PWR)

1. Connector Type

TV	Tri-Start
CTV	Composite, Tri-Start

2. Shell Style

00	Wall Mount Receptacle
01	Line Receptacle
02	Box Mount Receptacle
06	Straight Plug
07	Jam Nut Receptacle
96	Plug with Integral Banding Platform (Not available in Composite)
97	Reduced Flange Jam Nut Receptacle (Not available in Composite)

3. Service Class

RF	Electroless nickel plated aluminum EMI shielding effectiveness - 65dB @ 10GHz specification min., 48 hour salt spray, 200°C	RoHS
RW	Corrosion resistant olive drab cadmium plated aluminum, 500 hour extended salt spray , EMI -50dB @ 10GHz specification min., 175°C	
DT	Durmalon plated, alternative to cadmium. Corrosion resistant, 500 hour extended salt spray, EMI -50dB @10GHz specification min. without CR6	RoHS
DZ	Black Zinc-Nickel alternative to cadmium. Corrosion resistant, 500 hour salt spray, conductive, -65°C to +175°C	RoHS
DS	AP-93 Tri-Nickel Alloy, Aluminum, 1000 Hr., 200°C, -65dB@100Hz*	RoHS
DW	Corrosion resistant olive drab cadmium plated aluminum, 1,000 hour extended salt spray ,EMI -50dB @ 10GHz specification min., 175°C	
RB	Marine Bronze - 500 hour salt spray	RoHS
RK	Corrosion resistant stainless steel, firewall capability, plus 500 hour salt spray resistance, EMI -45dB @ 10GHz specification min., 200°C	RoHS
RKN	Corrosion resistant stainless steel, Nonfirewall capability, plus 500 hour salt spray resistance	RoHS
RL	Corrosion resistant steel, electro deposited nickel, 500 hour salt spray, 200°C, non firewall, EMI shielding -65dB @ 10GHz specification min.	RoHS
RS	Nickel plated, corrosion resistant steel, firewall capability, 500 hour salt spray, 200°C, EMI shielding -65dB @ 10GHz specification min.	RoHS
RX	Special Platings (See Amphenol for options)	

*** Size 12, 16, 20 also available in Temper-Grip, contact factory for kit part number

**For combinations of HCP & Standard pin, contact factory for kit part number

See contact chart for intermatability guide on page 2

4. Shell Size - Insert Arrangement

See page one of PDS-305 and 38999 insert chart for (HCP)

5. Contact Type

P	Pin
S	Socket

6. Alternate Positions

	Blank for normal rotation
A	A rotation
B	B rotation
C	C rotation
D	D rotation
E	E rotation

7. Modifications

(PWR)	Power contacts in place of coax/twinax
(B65)	Temper-Grip sockets in place of size 8 contacts only *** Other sizes receive standard power contacts
(RDS)	Radsok sockets & mating pin contact in place of size 8 contacts only. Other sizes received standard power sockets.
(HCP)	High Current Pin (All sizes)**
(E65)	EN-Style Temper-Grip in place of size 8 contacts only. Other sizes received standard power sockets.

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