HiPer-D® Standard and High-Density Connectors

280-018P pin connectors with standard M24308 type mounting flange, crimp termination



HiPer-D® pin connectors feature crimp, rear-releaseable size #20 or #22 contacts. Intermateable with standard M24308-type D-Subminiature connectors, the HiPer-D® features a rugged machined aluminum shell, waterproof sealing and optional ground springs for improved resistance to electromagnetic interference. Gold-plated size #20 contacts conform to M39029/64-369 and accept #20 to #24 AWG wire. Gold-plated size #22 contacts conform to M39029/58-360 and accept #22 to #28 AWG wire. Contacts are packaged with connector. Terminate contacts with crimp tools purchased separately. Glass-reinforced thermoset epoxy insulators, copper alloy retention clips. Fluorosilicone face seal and rear grommet meet IP67 immersion requirement. 1000 VAC, 5 Amps (#22) or 7.5 Amps (#20).

Ordering Information

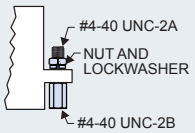
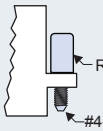
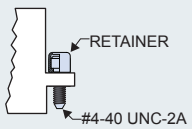
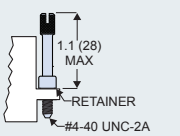
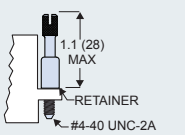
Sample Part Number	280-018P	3S25	ME	G	P

Basic Part Number	**280-018P**	
Shell Size-Contact Arrangement	See Shell Size - Contact Arrangements Table	
Shell Finish	**ME** = Electroless Nickel **JF** = Cadmium with Yellow Chromate **Z1** = Passivated Stainless Steel	**MT** = Nickel-PTFE **Z2** = Gold
Ground Spring	**G** = Supplied with EMI Ground Spring	**N** = No Ground Spring
Mating Hardware	**N** = No Hardware (Through-Hole) **L** = Jackscrew, Hex Head, Low Profile **S** = Screwlock, Male, Hex Head, Low Profile	**P** = #4-40 Female Jackpost **K** = Jackscrew, Slot Head, Extended Length **T** = Screwlock, Male, Slot Head, Extended Length

Shell Size - Contact Arrangements

Shell Size-Contact Arr.	Contact Size and Qty	
	#20	#22
Standard Density		
1S9	9	
2S15	15	
3S25	25	
4S37	37	
5S50	50	
High Density		
1H15		15
2H26		26
3H44		44
4H62		62
5H78		78
6H104		104

Mating Hardware

N Thru-Hole No Hardware	**P** Female Jackpost
	
S Captive Screwlock, Hex Head	**L** Captive Jackscrew, Hex Head
	
K Slot-Head Extended Jackscrew	**T** Slot-Head Extended Captive Screwlock
	

Materials and Finishes

Shell	Aluminum alloy
Contacts	Copper alloy, 50 microin. gold plated
Insulators	Thermoset epoxy
Retention Clips	Copper alloy
Grommet and Seal	Fluorosilicone rubber
EMI Spring	Copper alloy, nickel plated
Hardware	300 series stainless steel

Specifications

Current Rating	#22 5 AMPS, #20 7.5 AMPS
Test Voltage	1000 VAC RMS
Insulation Resistance	5000 megohms minimum
Operating Temperature	-65° C. to +200° C.
Ingress Protection	IP 67
Shock	300 g.
Vibration, Random	43.92 g.

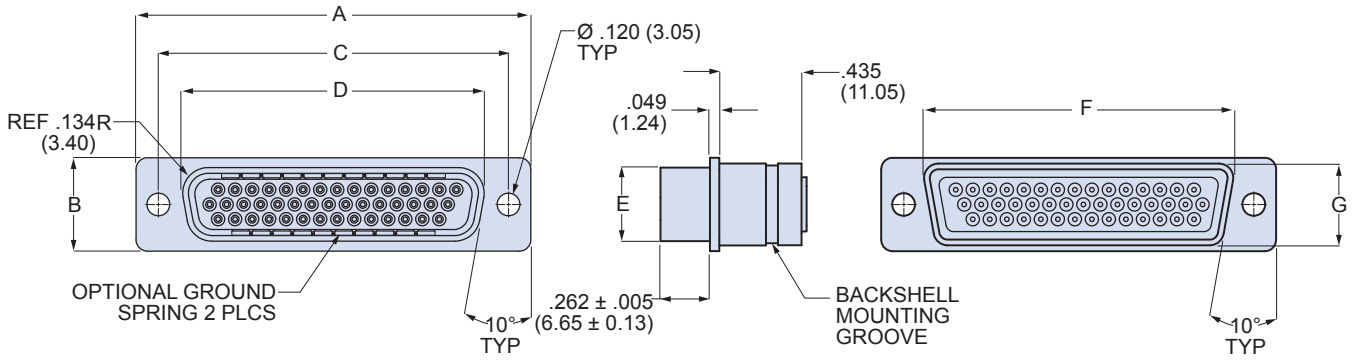
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280-018P DIMENSIONS



Shell Size	A		B		C Basic		D		E		F Max.		G Max.	
	in ± .015	mm ± 0.38	in ± .015	mm ± 0.38	in.	mm	in ± .005	mm ± 0.13	in ± .005	mm ± 0.13	in.	mm	in.	mm
1	1.213	30.81	.494	12.55	.984	24.99	.726	18.44	.389	9.88	.769	19.53	.432	10.97
2	1.541	39.14	.494	12.55	1.312	33.32	1.054	26.77	.389	9.88	1.093	27.76	.432	10.97
3	2.088	53.04	.494	12.55	1.852	47.04	1.594	40.49	.389	9.88	1.635	41.53	.432	10.97
4	2.729	69.32	.494	12.55	2.500	63.50	2.242	56.95	.389	9.88	2.282	57.96	.432	10.97
5	2.635	66.93	.605	15.37	2.406	61.11	2.139	54.33	.501	12.73	2.188	55.58	.544	13.82
6	2.729	69.32	.668	16.97	2.500	63.50	2.272	57.71	.563	14.30	2.312	58.72	.606	15.39

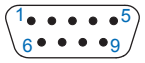
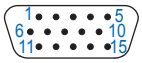
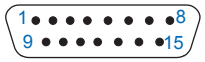
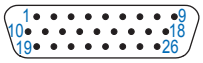
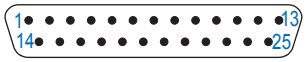
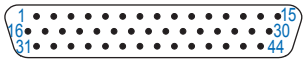
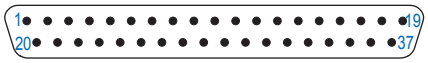
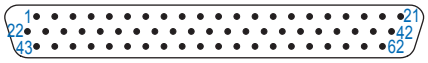
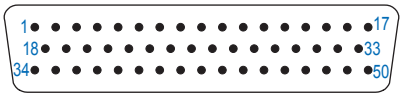
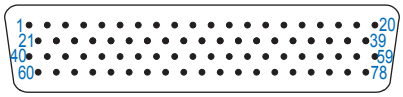
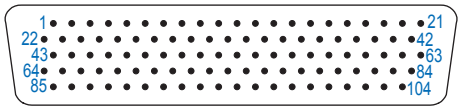
NOTES

1. HiPer-D® connectors are available with a wide variety of materials and finishes. See ***About Series 28 HiPer-D® Shell Plating Options*** for additional choices . Glenair offers the industry's widest selection of plating and material choices with no setup charge, no minimum order quantity and no schedule impact.
2. For panel cutout dimensions, refer to ***Panel Cutouts and Printed Circuit Board Footprints***.
3. Connectors are supplied with crimp contacts per M39029. Contacts are not installed. Refer to ***HiPer-D® Contacts and Crimp Tools*** for contact part numbers, specifications, crimp tool information, and insertion/extraction tools.
4. HiPer-D® connectors meet the requirements of MIL-DTL-24308 and are intermateable with standard M24308-type D-Subminiature connectors with corresponding contact arrangements and type.
5. Additional electrical, mechanical and environmental specifications are listed in ***HiPer-D® Product Specification***.

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STANDARD AND HIGH DENSITY CONTACT ARRANGEMENTS *(face view of pin connector)*

		
Arrangement	**1S9**	**1H15**
Shell Size	1	1
Contacts	9 #20	
		
Arrangement	**2s15**	**2H26**
Shell Size	2	2
Contacts	15 #20	26 #22
		
Arrangement	**3S25**	**3H44**
Shell Size	3	3
Contacts	25 #20	44 #22
		
Arrangement	**4S37**	**4H62**
Shell Size	4	4
Contacts	37 #20	62 #22
		
Arrangement	**5S50**	**5H78**
Shell Size	5	5
Contacts	50 #20	78 #22
		
Arrangement	**6H104**	
Shell Size	6	
Contacts	104 #22	

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Description	Requirement	Procedure
Voltage Rating (DWV)	1000 VAC Sea Level	EIA-364-20
Operating Temperature	-65º C. to +200º C.	
Insulation Resistance	5000 megohms minimum	EIA-364-21
Current Rating	Size #20 7.5A, #22 5A	
Contact Resistance	**Wire Size** / **Test Current** / **Millivolt Drop** 20 / 7.5 / 55 22 / 5 / 73 24 / 3 / 45	EIA-364-06
Low Level Contact Resistance	**Wire Size** / **Max Milliohms** 20 / 9 22 / 15 24 / 20	EIA-364-23
Shell-to-Shell Resistance	2.5 milliohm max (ground spring required)	EIA-364-83
Shielding Effectiveness	**Freq. GHz** / **Min Attenuation (dB)** 0.1 / 100 0.4 / 90 0.8 / 85 1.0 / 80 3.0 / 55 6.0 / 40 10.0 / 30	EIA-364-66 Electroless nickel plated shells with ground spring installed
Water Immersion, mated	1 hour immersion at a depth of 1 meter	MIL-STD-810F Method 512.4
Ingress Protection Rating	IP67, mated connectors	IEC-60529
Vibration, Sine	20 g's	EIA-364-28
Vibration, Random	43 g's	EIA-364-28
Mechanical Shock	300 g's	EIA-364-27
Thermal Shock	-65º C. to +200º C.	EIA-364-32
Humidity	10 cycles, 10 days, 25ºC to 65ºC	EIA-364-31
Altitude Immersion	75,000 feet	EIA-364-03
Fluid Immersion	No damage from solvents, oils, and fuels	EIA-364-10
Magnetic Permeability	2 µ maximum	EIA-364-54
Mechanical Durability	500 Mating Cycles	EIA-364-09

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Description	Material	Finish
Contacts	Copper Alloy	Gold (50 microin.) over nickel
Socket Contact Hood (Size 20, 22)	Stainless steel	Passivated
Shell	Aluminum Alloy or stainless steel	See ordering information
Insulators	Thermoset epoxy resin per ASTM D-5948	None
Interfacial Seal	Fluorosilicone	None
Grommet	Fluorosilicone	None
EMI Spring	Copper alloy	Electroless nickel
Contact retention clips	Copper alloy	None
Insert retention clip	Copper alloy	None
Sealant	RTV silicone	None
Hardware	Stainless steel (300 series)	Passivated
O-ring	Fluorosilicone	None

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