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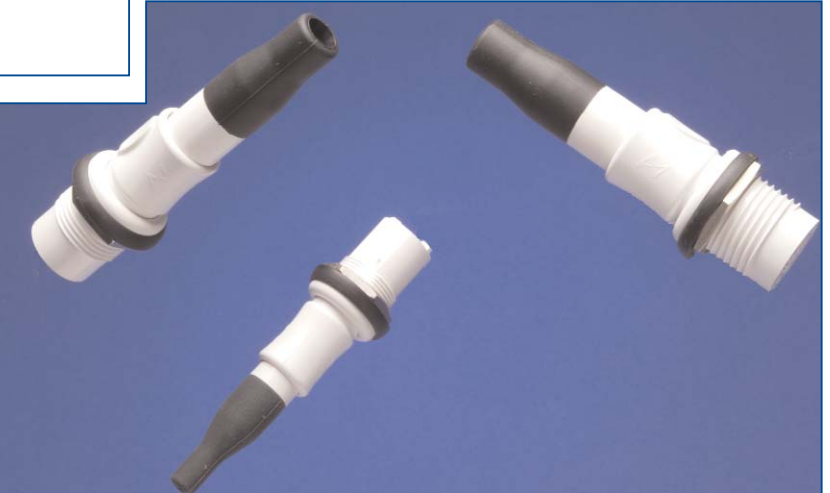
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HYPERGRIP™ SERIES PATENT PENDING

SUPPLEMENT TO HYPERTRONICS 2006 FULL LINE CATALOG

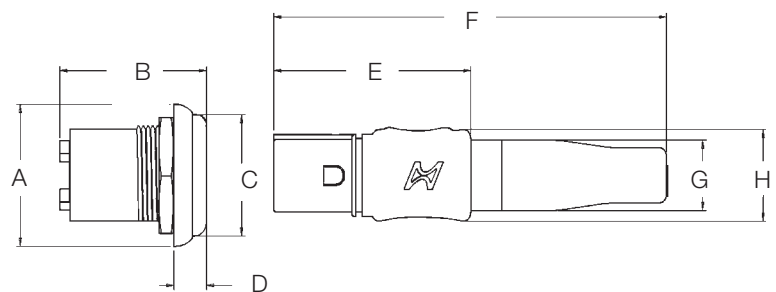
smiths
bringing technology to life



HyperGrip™ - PUSH/PULL PLASTIC CIRCULAR

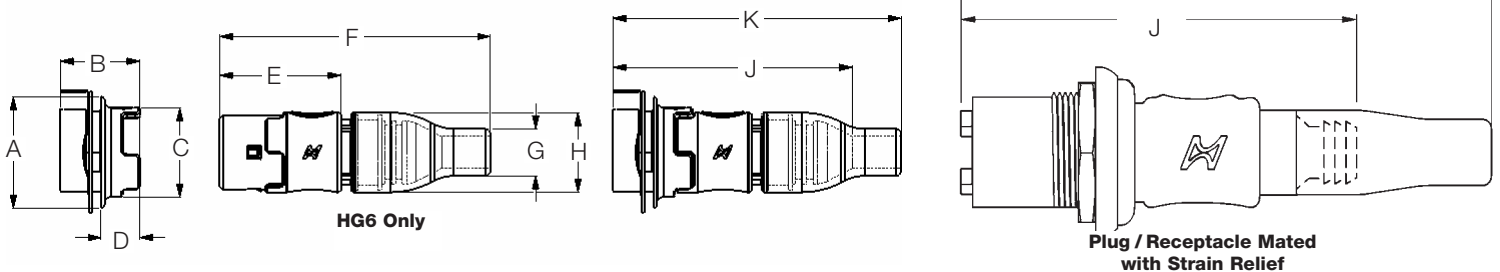
- For medical and other high reliability applications
- Customer-keyable (6 positions)
- 12 (HG2), 20 (HG3), 34 (HG4), or 85 (HG6) contacts
- Other contact configurations on request
- 1 amp per contact
- Color coding (8 different colors)
- Overmoldable plug design
- Front or rear panel mount receptacle design
- High-end engineering plastic components meet medical sterilizing and cleaning requirements
- Crimp and solder cup contact termination available (PC tails available on panel mount receptacle)
- Sealing option: IP67 (temporary immersion) when mated
- Meets fingerproofing requirements of UL544 and IEC60601

	HG2	HG3	HG4	HG6
A	Ø1.014 (25.76)	Ø1.172 (29.77)	Ø1.250 (31.77)	Ø2.026 (51.45)
B	1.220 (30.98)	1.137 (28.87)	1.137 (28.87)	1.452 (36.87)
C	Ø.866 (22.00)	Ø1.007 (25.59)	Ø1.090 (27.80)	Ø1.789 (45.45)
D	.272 (6.91)	.272 (6.91)	.272 (6.91)	.669 (17.00)
E	1.637 (41.59)	1.637 (41.59)	1.637 (41.59)	2.224 (56.50)
F	3.265 (82.93)	3.500 (88.88)	3.500 (88.88)	4.950 (125.72)
G	Ø.502 (12.75)	Ø.650 (16.50)	Ø.710 (18.15)	Ø1.452 (36.88)
H	Ø.656 (16.66)	Ø.800 (20.36)	Ø.880 (22.47)	Ø1.467 (37.00)
J	2.700 (68.56)	2.890 (73.47)	2.890 (73.47)	4.371 (111.02)
K	3.724 (94.60)	3.880 (98.45)	3.880 (98.45)	5.265 (133.72)



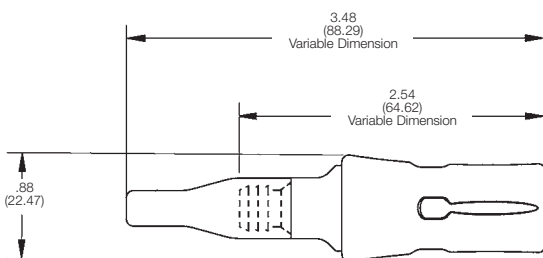
"E" Receptacle

"P" Plug

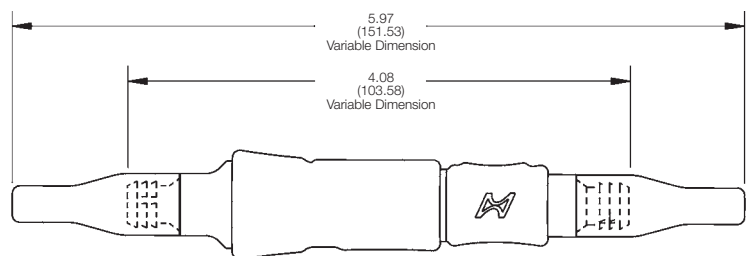


HG6 Only

Plug / Receptacle Mated with Strain Relief



**"C" Cable Receptacle
HG2 Only**



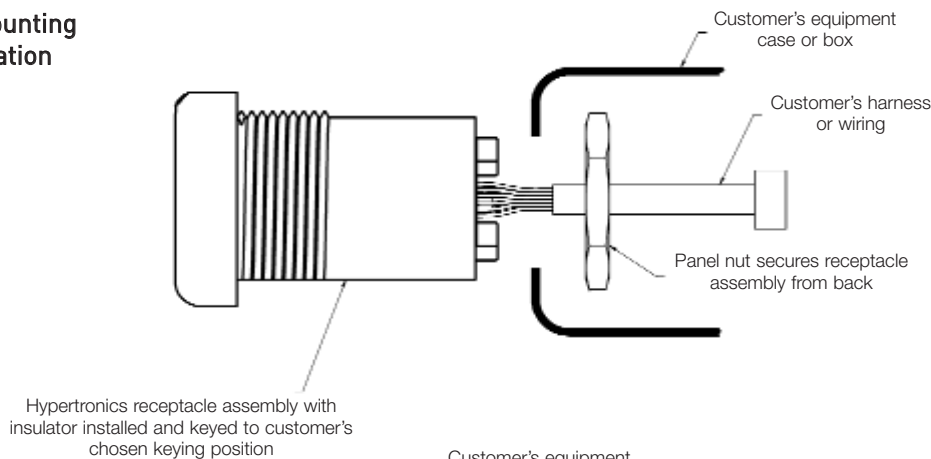
**Plug/Cable Receptacle Mated
HG2 Only**

Notes
Dimensions in inches (mm)

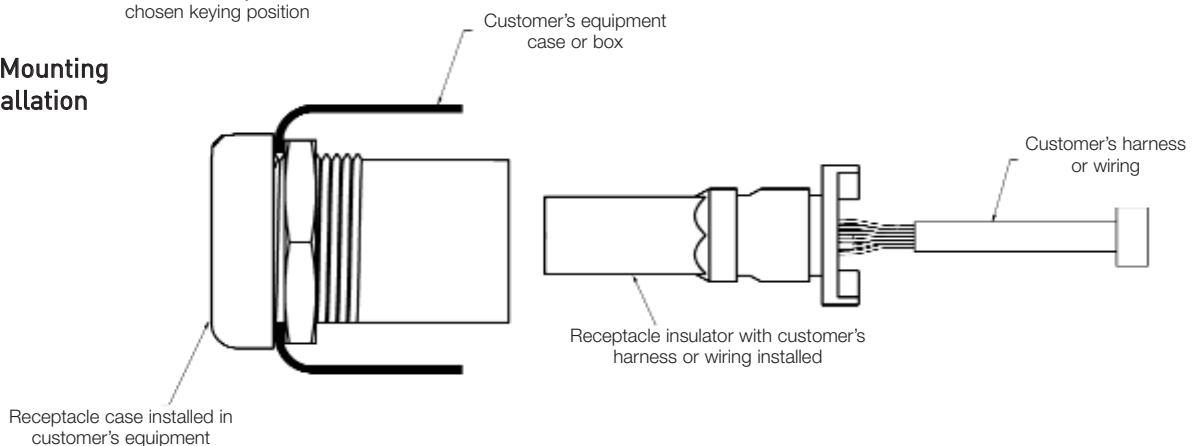
HyperGrip - GENERAL SPECIFICATIONS

Contact diameter in (mm)	.016 (0.4)
Current rating (amps)	1
Contact resistance (milliohms)	< 8
Contact extraction force each (oz.)	.6 to 1.6
Contact life cycles	up to 100,000
Plug cycle life	up to 20,000
Breakdown voltage between contacts	> 1,000V
Dielectric withstanding voltage	> 750V
<i>Contact Material & Plating</i>	Sockets: BeCu wires and brass body components 50 microinches of gold over nickel on wires Gold flash over nickel on all other socket components. Pins: Brass 50 microinches of gold over nickel
Insulation resistance	> 5 x 10 ⁴ megohms @ 500 VDC
<i>Temperature Rating</i> Polyetherimide, LCP, Silicone	-40°C to +125°C up to +185°C processing
Sterilization	Steam autoclave, Gamma, ETO

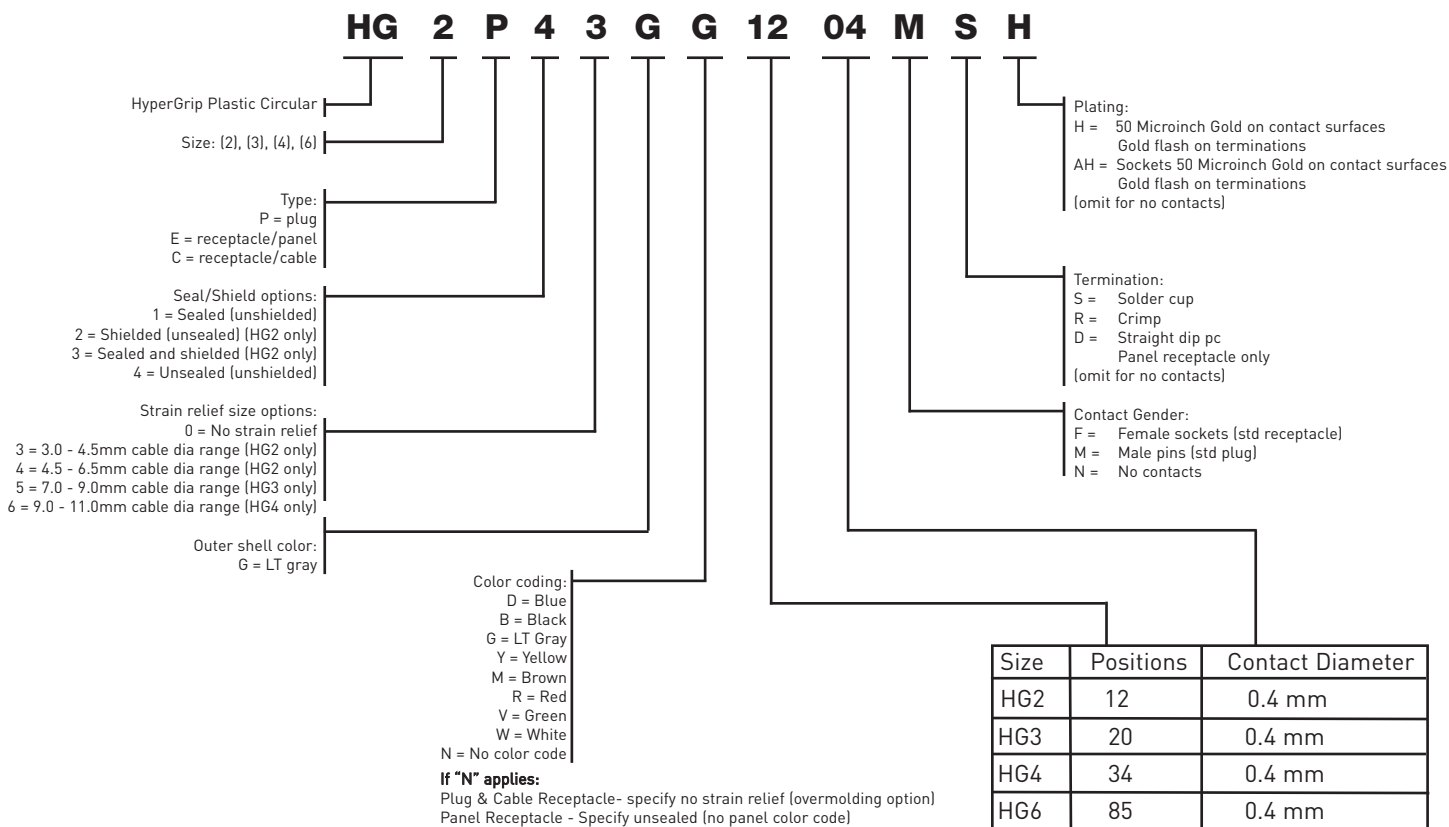
Front Mounting Installation



Rear Mounting Installation



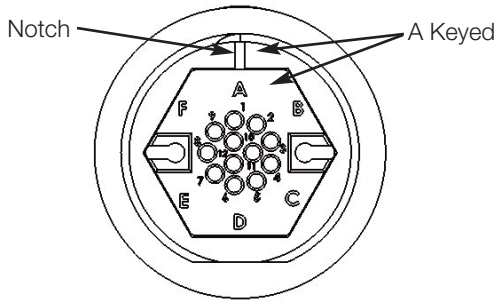
HyperGrip ORDERING INFORMATION



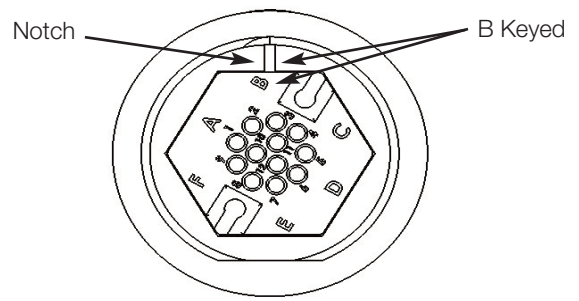
Contact Ordering Information		
Contacts	Part Numbers	Wire Gauge (AWG)
Female Receptacle		
Crimp Socket	YSK004-041AH	26 - 28
Solder Cup Socket	YSK004-039AH	26 MAX
PC Terminal Socket	YSK004-040AH	N/A
Male Plug		
Crimp Pin	YPN004-028H	26 - 28
Solder Cup Pin	YPN004-027H	26 MAX
Male Receptacle		
Crimp Pin	YPN004-029H	26 - 28
Solder Cup Pin	YPN004-026H	26 MAX
PC Terminal Pin	YPN004-030H	N/A
Female Plug		
Crimp Socket	YSK004-037AH	26 - 28
Solder Cup Socket	YSK004-036AH	26 MAX

Tools	Part Numbers
Crimp Tool	AFM8 or M22520/2-01
Positioner	T2030
Insertion Tool	T1916
Receptacle Insulator Extraction Tool	T2057 (HG2) T2085-20 (HG3) T2085-34 (HG4) T2085-85 (HG6)

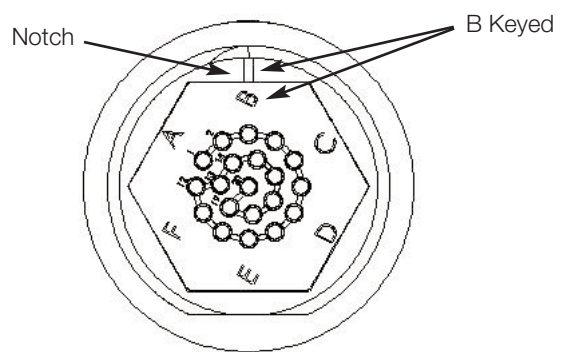
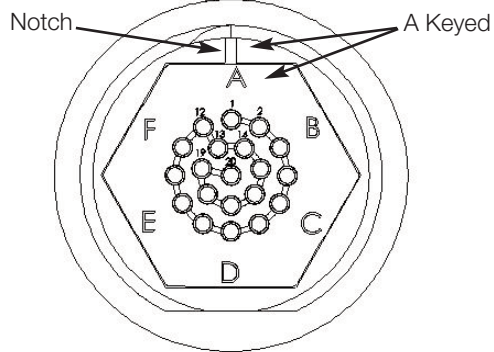
**Keying Position A
(Receptacle Wiring End)**



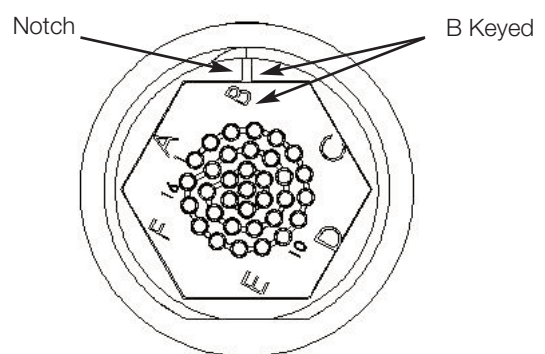
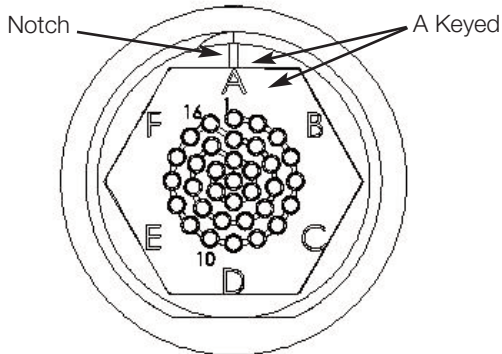
**Keying Position B
(Receptacle Wiring End)**



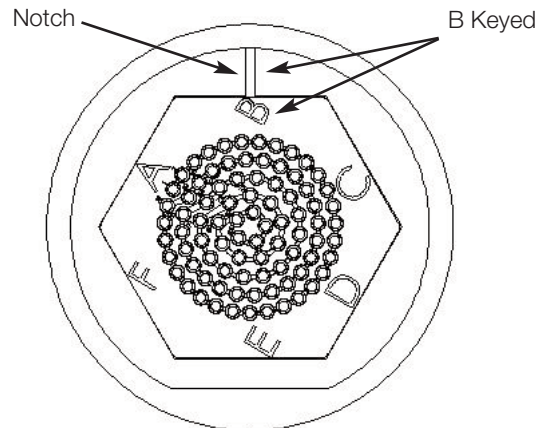
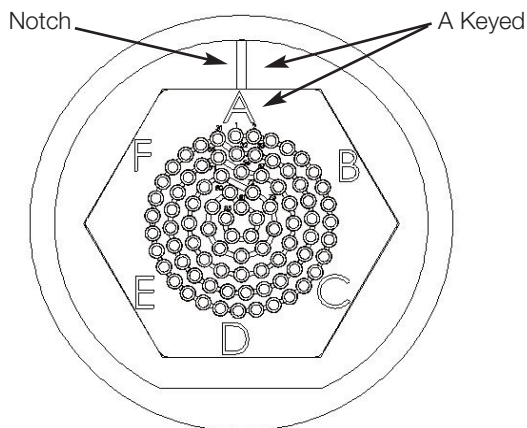
HG2



HG3



HG4

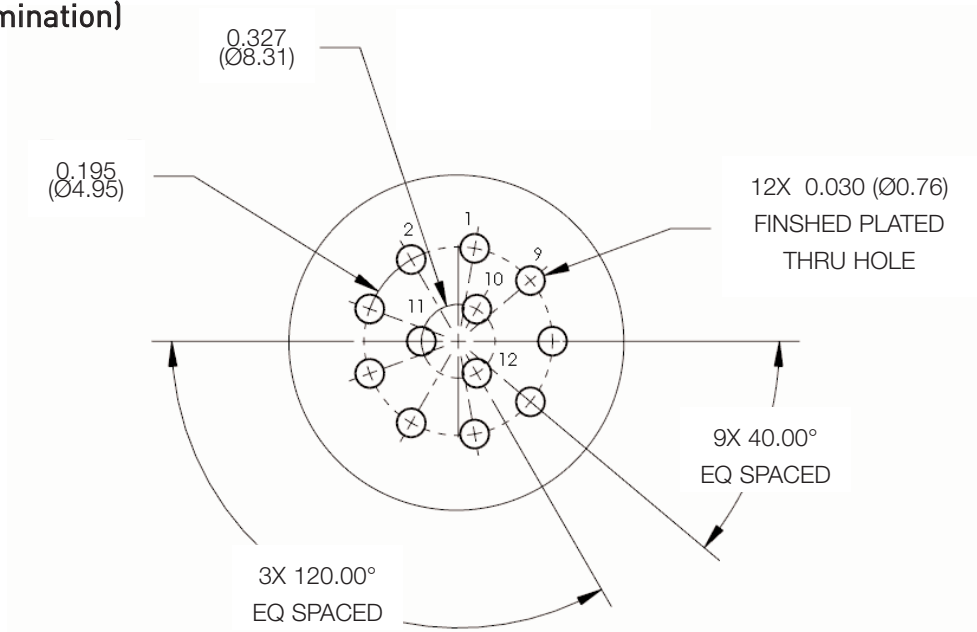


HG6

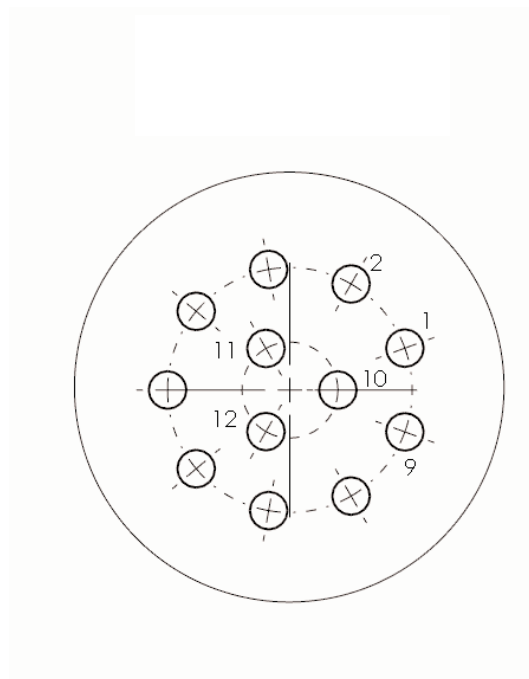
Note: 6 different keying positions possible - A through F

HG2

12 Position PCB Cutout
"A" Key (D Termination)



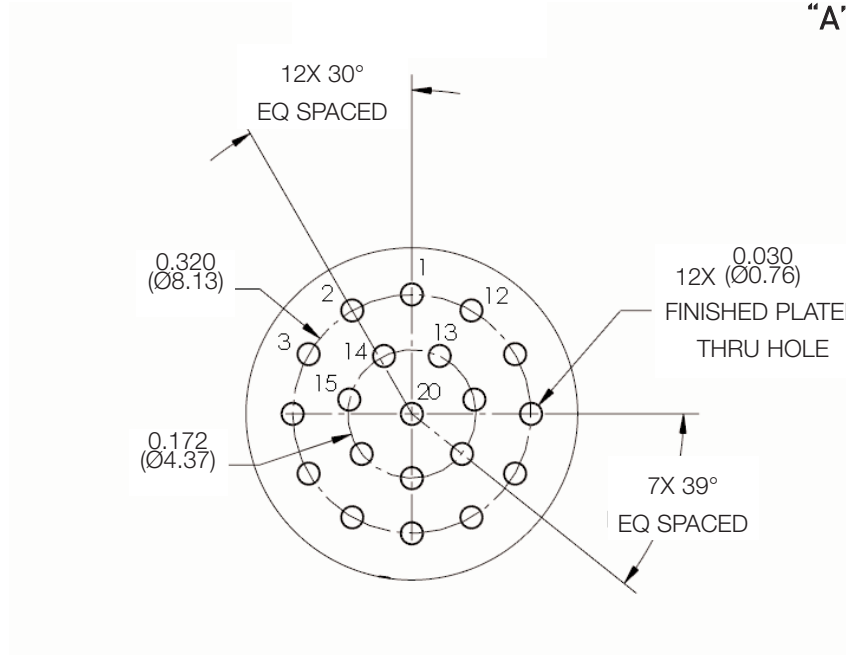
12 Position PCB Cutout
"B" Key (D Termination)



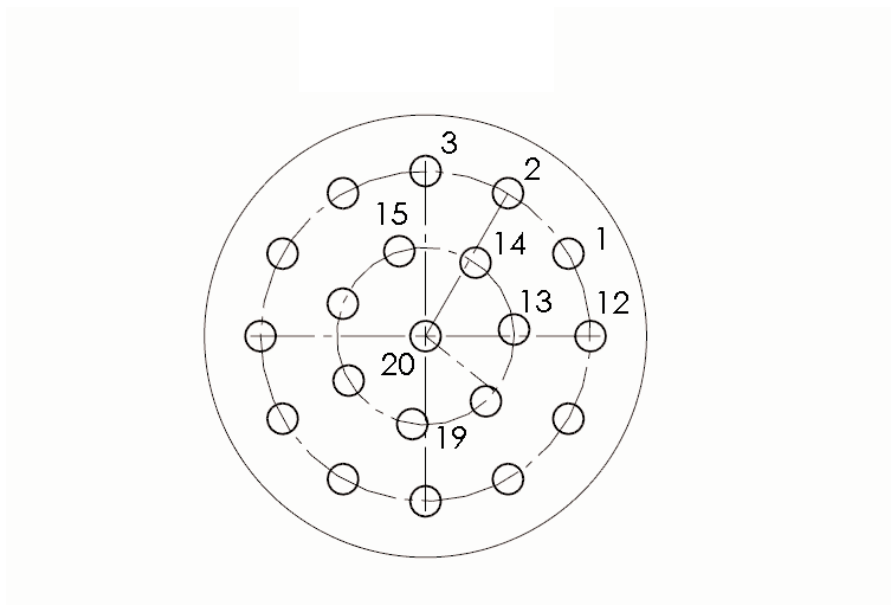
Note: Dimensions in inches (mm)

HG3

**20 Position PCB Cutout
"A" Key (D Termination)**

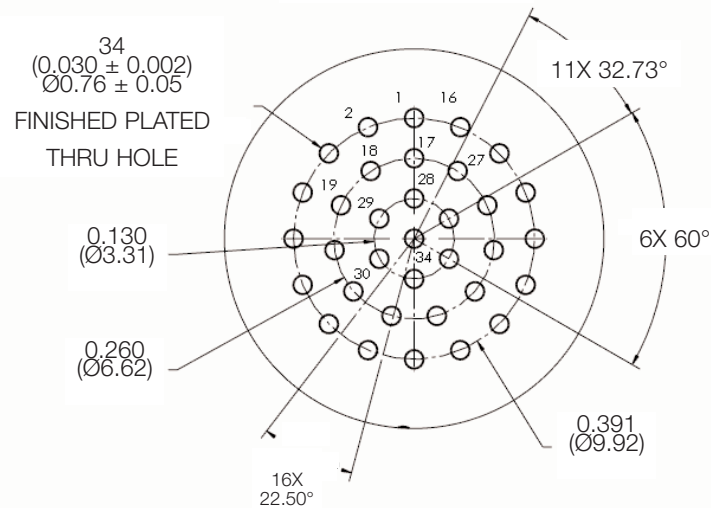


**20 Position PCB Cutout
"B" Key (D Termination)**

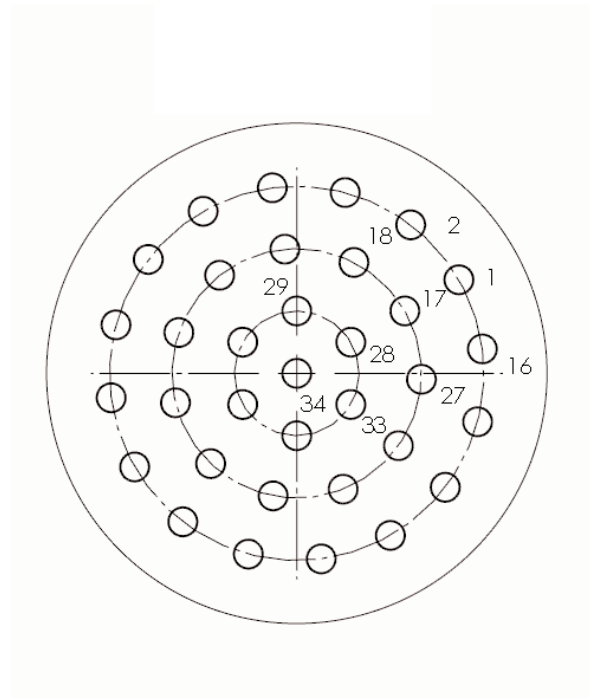


HG4

34 Position PCB Cutout
"A" Key (D Termination)



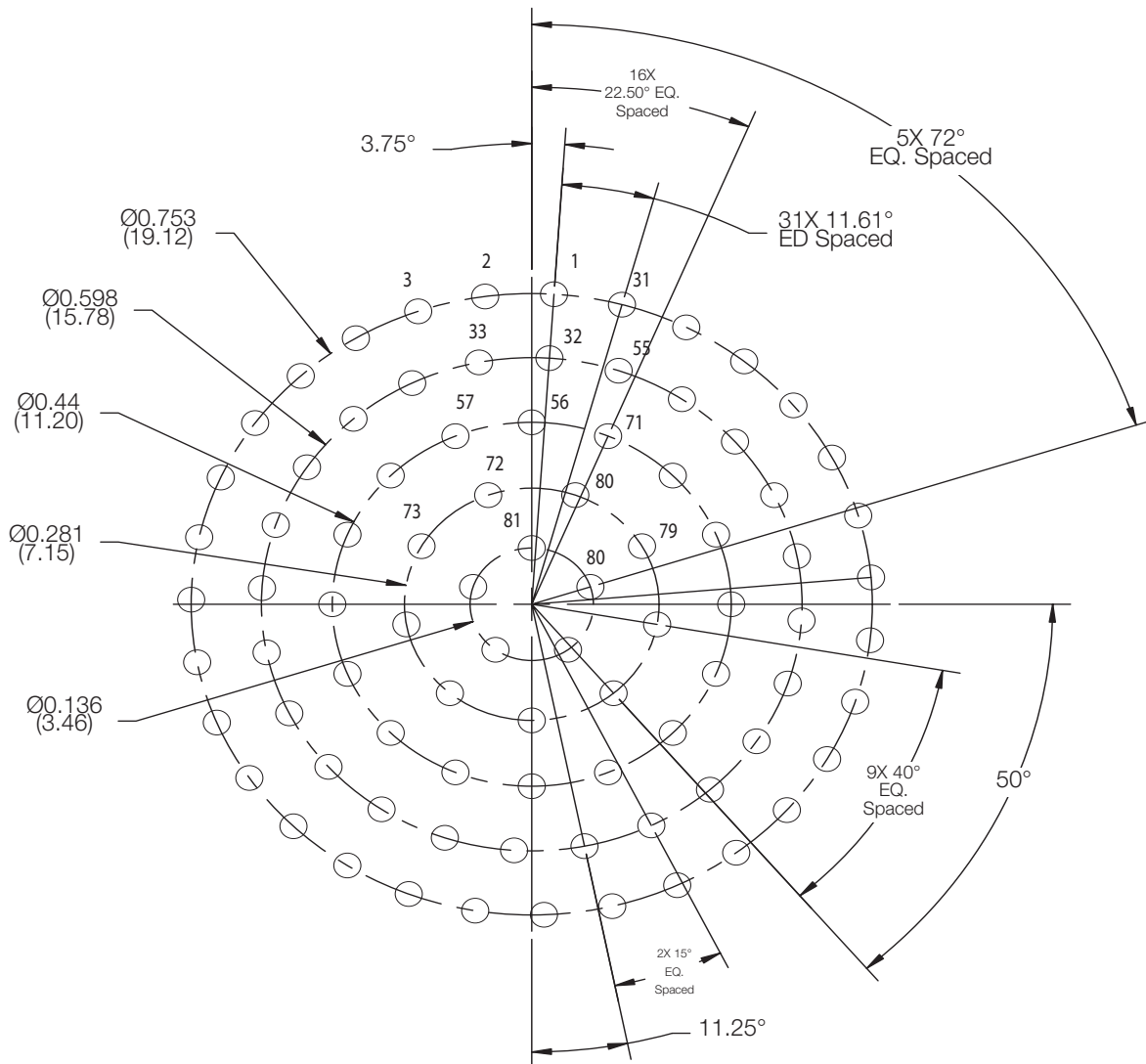
34 Position PCB Cutout
"B" Key (D Termination)



Note: Dimensions in inches (mm)

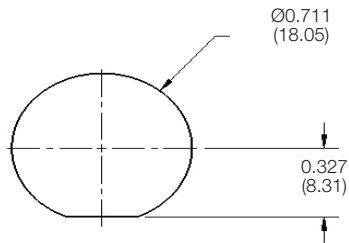
HG6

**85 Position PCB Cutout
"A" Key (D Termination)**

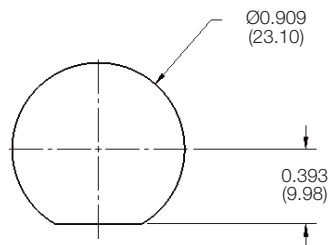


Panel Cutouts

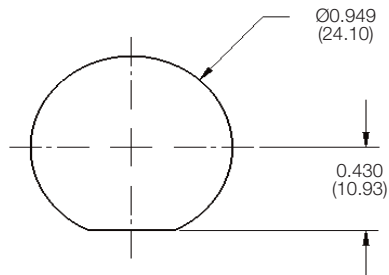
HG2



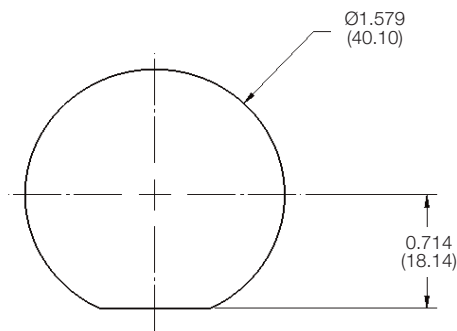
HG3



HG4

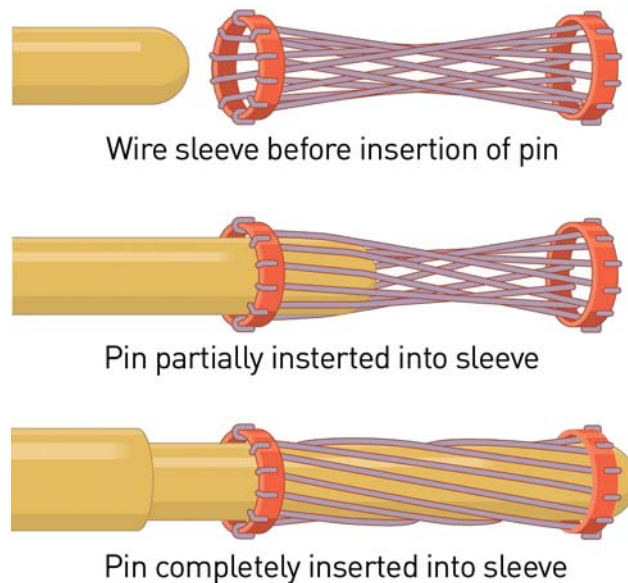


HG6



Note: Dimensions in inches (mm)

Hypertac® High Performance Contact System



Hypertronics connectors are built upon the legendary Hypertac contact technology. These contacts feature a hyperboloid-shaped basket of individual spring wires that is wrapped at an angle to the socket's axis. When the pin is inserted into this wire contact sleeve, the wires stretch around it, providing a number of linear contact paths.

Hypertac is an advanced contact design that satisfies performance requirements previously considered impossible and the superior design of the Hypertac contact systems offers many features and benefits.

Hypertac contacts provide up to 100,000 mating cycles, approximately half the resistance of conventional contact designs, immunity to shock and vibration, extremely low insertion and extraction forces, and 360-degree wiping action.