

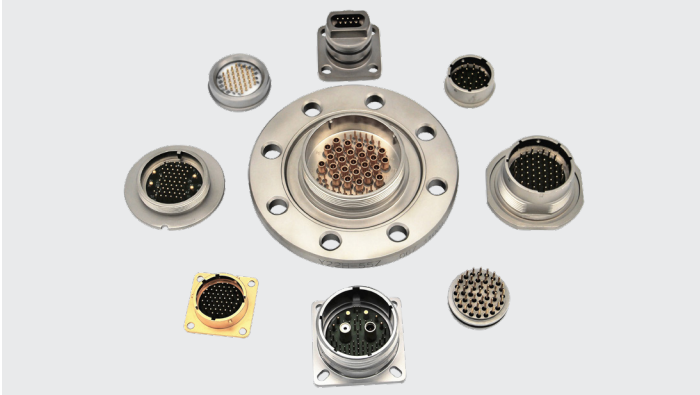
HIC Series
Hermetic Industrial Connector



HIC Series™

Amphenol Industrial Operations offers a high performance hermetic connector product range, developed for industrial applications where there are requirements of high vacuum and high pressure environments.

Following the standards on which this technology was developed, we also support customers' specific needs, from shell or contact modifications to more complex and innovative solutions.



Markets & Applications

- Process Control
- Sensors
- Air Compressors
- Transportation
- Test & Measurement
- Medical Equipment
- Smart Gas Meters
- Full Cell Electrical Vehicle

Standards



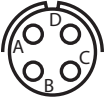


- MIL – DTL 38999 Series III
- MIL – DTL 26482 Series I, II
- MIL – DTL 5015 Series
- M12

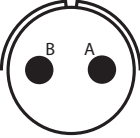
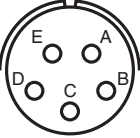
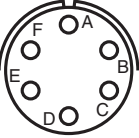
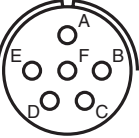
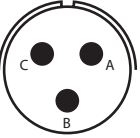
* Are available for custom design, for example, through bulkhead design, rectangular connectors, special flanges, with high speed contacts...

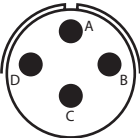
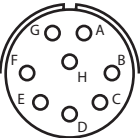
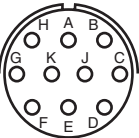
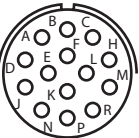
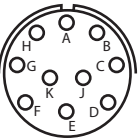
Features


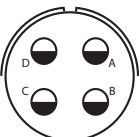
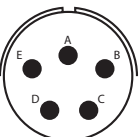
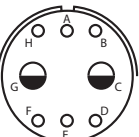
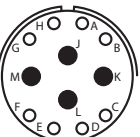
- Less than 1.0×10^{-7} cc of He/sec at 1 bar of pressure leak rate
- Glass to metal seal technology
- Multiple shell material and plating options
- Operating Temp Range -55° ~ 125° ° (stainless steel shell up to 220° C)
- Up to 15,000 PSI/ 100 Mpa
- Wide range of standards
- Multiple contacts options
- RoHS Compliant

PT Series Hermetic Insert Arrangements

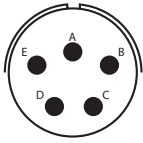
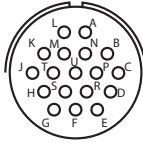
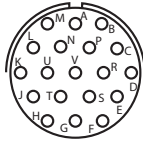
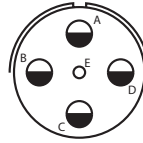
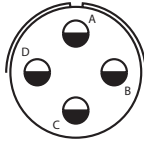
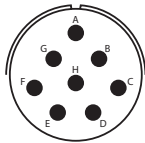

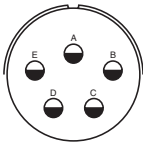
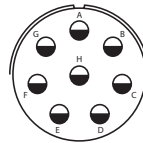
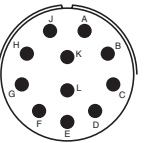
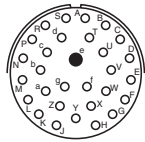
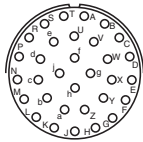
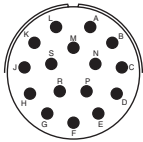
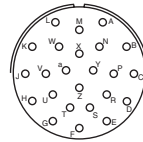
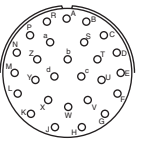
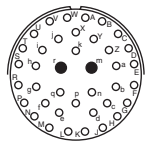
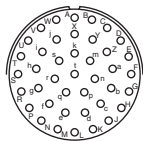
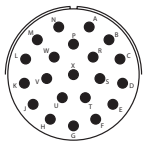
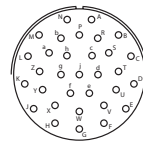
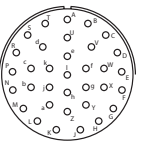
Insert Arrangement	8-2	8-3	8-4	8-33	8-98
					
Service Rating	I	I	I	I	I
Number of Contacts	2	2	4	3	3
Contact Size	20	20	20	20	20

Insert Arrangement	10-2	10-5	10-6	10-98	12-3
					
Service Rating	I	I	I	I	II
Number of Contacts	2	5	6	6	3
Contact Size	16	20	20	20	16

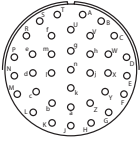
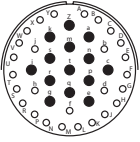
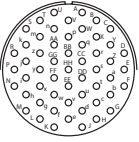
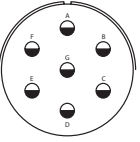
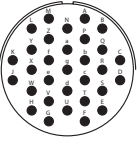
Insert Arrangement	12-4	12-8	12-10	12-14	12-98
					
Service Rating	I	I	I	I	I
Number of Contacts	4	8	10	14	10
Contact Size	16	20	20	20	20

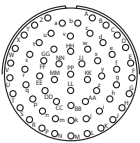
Insert Arrangement	14-2	14-4	14-5	14-8	14-12
					
Service Rating	II	I	II	I	I
Number of Contacts	2	4	5	6 2	8 4
Contact Size	12	12	16	20 12	20 16

PT Series Hermetic Insert Arrangements

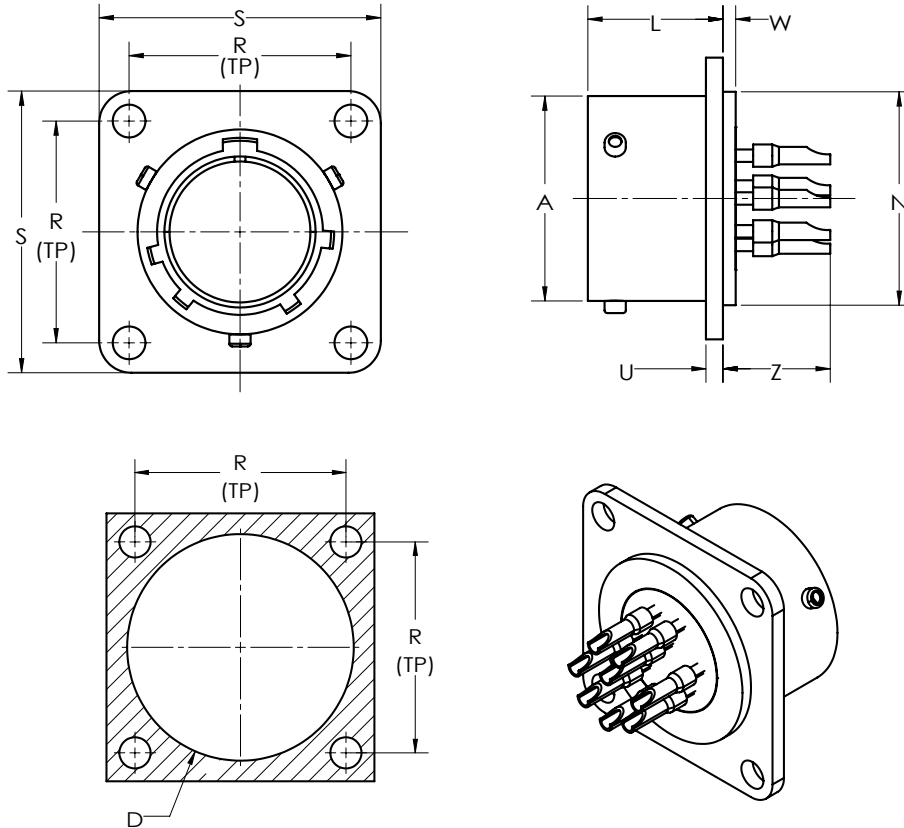
Insert Arrangement	14-15		14-18		14-19		14-22		14-AA	
										
Service Rating	I		I		I		I		I	
Number of Contacts	14	1	18		19		1	4	4	
Contact Size	20	16	20		20		20	12	12	
Insert Arrangement	16-8		16-99		18-5		18-8		18-11	
										
Service Rating	II		I		II		I		II	
Number of Contacts	8		21	2	5		8		11	
Contact Size	16		20	16	12		12		16	
Insert Arrangement	18-30		18-32		20-16		20-24		20-27	
										
Service Rating	I		I		II		I		I	
Number of Contacts	29	1	32		16		24		27	
Contact Size	20	16	20		16		20		20	
Insert Arrangement	20-39		20-41		22-21		22-32		22-34	
										
Service Rating	I		I		II		I		I	
Number of Contacts	37	2	41		21		32		34	
Contact Size	20	16	20		16		20		20	

PT Series Hermetic Insert Arrangements

Insert Arrangement	22-36	22-41		22-55	22-96	24-31
						
Service Rating	I	I		I	II	I
Number of Contacts	36	27	14	55	7	31
Contact Size	20	20	16	20	12 for #10 wire	16

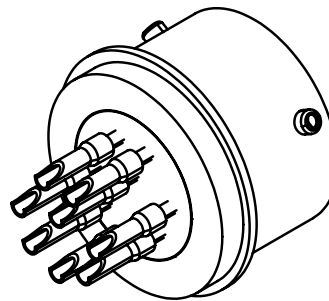
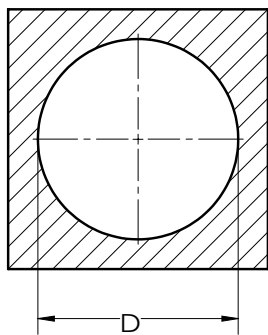
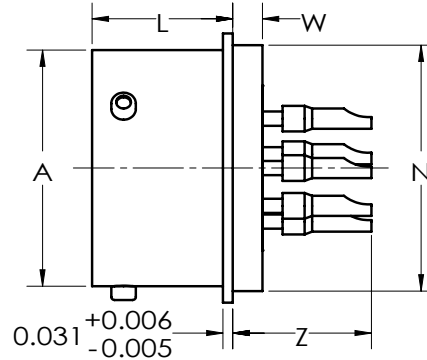
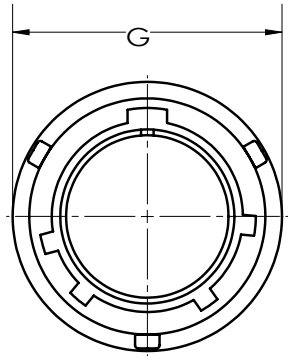
Insert Arrangement	24-61
	
Service Rating	I
Number of Contacts	61
Contact Size	20

PT Series Hermetic Box Mount Receptacle (Shell Code: 02H)



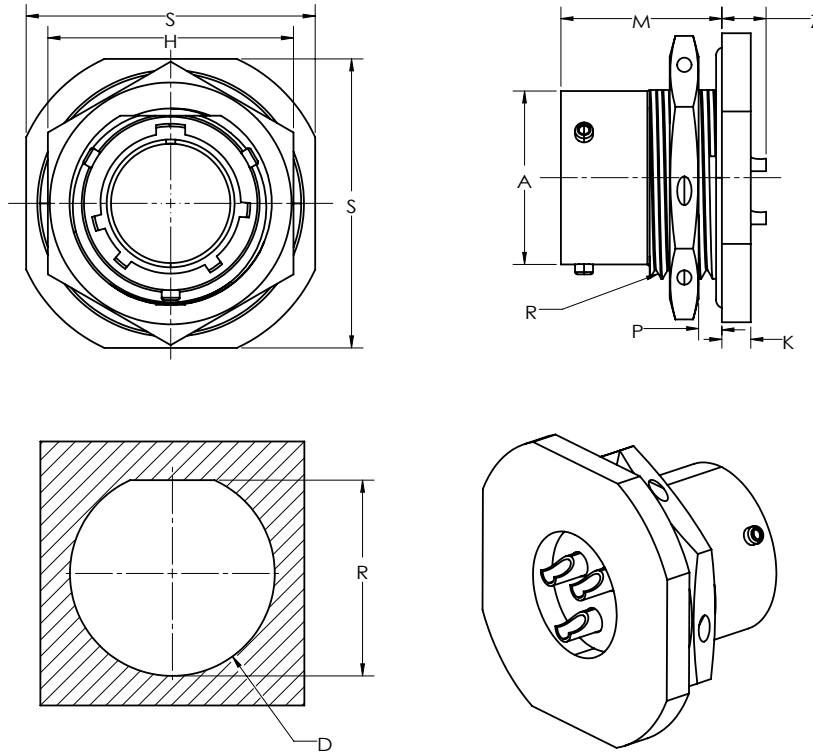
Shell Size	Receptacle Front View		Receptacle Side View						Cut Out
	R (TP)	S ±.4	A Dia. +.025 -.127	K ±.381	L +.635 -.381	N Dia. +.025 -.127	U +.279 -.254	Z MAX	D Dia.
6	11.913	17.475	8.839	1.194	12.548	11.125	1.575	8.738	8.204
8	15.088	20.625	12.014	1.194	12.548	14.275	1.575	8.738	11.405
10	18.263	23.825	14.986	1.194	12.548	17.069	1.575	8.738	14.554
12	20.625	26.187	19.050	1.194	12.548	19.837	1.575	8.738	17.755
14	23.012	28.575	22.225	1.194	12.548	23.012	1.575	8.738	20.904
16	24.613	30.963	25.400	1.194	12.548	26.187	1.575	8.738	24.105
18	26.975	33.325	28.575	1.194	12.548	29.362	1.575	8.738	27.254
20	29.362	36.525	31.750	1.194	14.122	31.750	1.575	8.738	30.455
22	31.750	39.675	34.925	2.007	14.122	34.925	1.575	8.738	33.604
24	34.925	42.875	38.100	2.007	14.935	38.100	1.575	8.738	36.805

PT Series Hermetic Solder Mounting Receptacle (Shell Code: IH)



Shell Size	Receptacle Front View	Receptacle Side View					Cut Out
	G Dia. Max.	A Dia. +.025 -.127	L +.635 -.381	N Dia. +.025 -.127	W +.279 -.254	Z MAX	D Dia.
6	12.979	8.839	11.354	11.125	2.388	9.804	8.204
8	16.154	12.014	11.354	14.275	2.388	9.804	11.405
10	19.329	14.986	11.354	17.069	2.388	9.804	14.554
12	21.717	19.050	11.354	19.837	2.388	9.804	17.755
14	24.892	22.225	11.354	23.012	2.388	9.804	20.904
16	28.067	25.400	11.354	26.187	2.388	9.804	24.105
18	31.217	28.575	11.354	29.362	2.388	9.804	27.254
20	33.604	31.750	12.929	31.750	2.388	9.804	30.455
22	36.805	34.925	12.929	34.925	3.175	10.617	33.604
24	39.980	38.100	13.767	38.100	3.175	10.617	36.805

PT Series Hermetic Jam Nut Receptacle (Shell Code: 7H)



Shell Size	Receptacle Front View		Receptacle Side View						Cut Out		
	S ±.4	H Hex +0.432 -.0400	A Dia. +.025 -.127	K ±.381	M +.787 -.000	P Panel Thickness		R Thread Class 2A	Z MAX	R +.000 -.254	D Dia.
						Max.	Min.				
6	20.625	15.875	8.839	2.388	17.678	3.175	1.575	.4375-28 UNEF	5.232	10.668	11.354
8	23.825	19.050	12.014	2.388	17.678	3.175	1.575	.5625-24 NEF	5.232	13.767	14.529
10	26.975	22.225	14.986	2.388	17.678	3.175	1.575	.6875-24 NEF	5.232	16.993	17.704
12	31.750	26.975	19.050	2.388	17.678	3.175	1.575	.8750-20 UNEF	5.232	21.082	22.454
14	34.925	30.175	22.225	2.388	17.678	3.175	1.575	1.0000-20 UNEF	5.232	24.257	25.578
16	38.100	33.325	25.400	2.388	17.678	3.175	1.575	1.1250-18 NEF	5.232	27.534	28.804
18	41.275	36.525	28.575	2.388	17.678	3.175	1.575	1.2500-18 NEF	5.232	30.683	31.979
20	46.025	39.675	31.750	2.388	22.454	6.350	1.575	1.3750-18 NEF	2.057	33.858	35.154
22	49.225	42.875	34.925	3.175	22.454	6.350	1.575	1.5000-18 NEF	2.057	37.059	38.278
24	52.375	46.025	38.100	3.175	22.454	6.350	1.575	1.6250-18 NEF	1.219	40.005	41.504





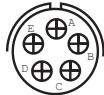
PT Series Hermetic How to Order




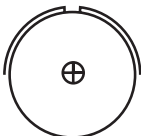
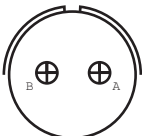
HPT		02H		20	41	P		W					
Connector Type		Shell Style		Shell Size	Insert Arrangement	Contact Type		Insert Rotation	Shell Material and Shell Plating		Contact Plating		
HPT	PT - MIL-DTL-26482 Series I	IH	Solder Mounting Receptacle	08	See Pages 3-5	P	Pin - Solder	N Normal / None	Omit for Carbon Steel	Standard - Matte Tin	Omit	Standard - Matte Tin	
		02H	Box Mount Receptacle	10		X	Pin contacts with eyelet	W	SPS	Stainless Steel - Passivated	A31	Gold Plating-15U"	
		07H	Jam Nut Receptacle	12		C	Pin - PC Tail	X	023	Stainless Steel - Nickel	B30	Gold Plating-30U"	
				14				Y			<i>Consult Amphenol Industrial Operations for more options</i>		
				16				Z					
				18									
				20									
				22									

Example: HPT 02H 20-41 PW

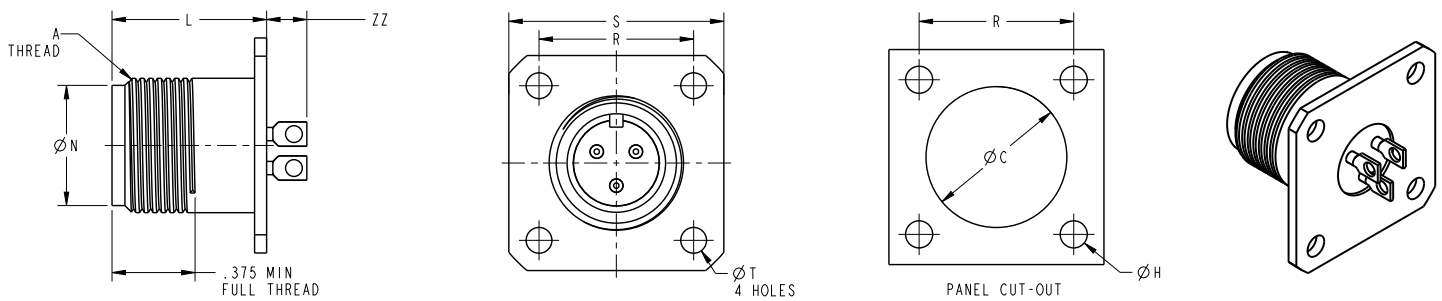
Box mount receptacle, shell size and insert arrangement 20-41, solder pin contacts, W insert rotation, carbon steel shell with matte tin plating and matte tin plated contacts.

5015 Series Hermetic Insert Arrangements

Insert Arrangement	10SL-3	10SL-4	12-5	14S-2	14S-5
	 Front of Socket Ins	 Front of Socket Ins			
Service Rating	A	A	D	Inst.	Inst.
Number of Contacts	3	2	1	4	5
Contact Size	16	16	12	16	16

Insert Arrangement	14S-6	14-3	16S-1	16S-3	16S-4
					
Service Rating	Inst.	A	A	B	D
Number of Contacts	6	1	7	1	2
Contact Size	16	8	16	16	16

5015 Hermetic Box Mount Receptacle (Shell Code: 02H)



Shell Size	S ±.010	R ±.005	Ø T +.004 -.002	A Thread Class 2A	Ø N +.007 -.000	L +.008 -.000	ZZ MAX	Ø C ±.004	Ø H ±.004
10SL	25.4	18.26	3.05	.6250-24 UNEF	14.20	18.26	5.56	16.64	3.2
12S	27.79	20.62	3.05	.7500-20 UNEF	17.07	18.26	5.56	19.81	3.2
14S	30.18	23.01	3.05	.8750-20 UNEF	20.24	18.26	5.56	22.99	3.2
16S	32.54	24.61	3.05	1.0000-20 UNEF	23.42	18.26	5.56	26.16	3.2

5015 Series Hermetic How to Order

ACS	N		02H		10SL	4	P		W				
Connector Type	Shell Material and Plating		Shell Style		Shell Size	Insert Arrangement	Contact Type		Insert Rotation	Contact Plating		Other Suffix	
	Omit for Carbon Steel	Standard - Carbon Steel, Matte Tin	02H	Box Mount Receptacle	10SL	See page 10	P	Pin - Solder	N Normal / None	Omit	Standard - Matte Tin	023	Stainless Steel Shell (N) with Nickel Plating
	N	Stainless Steel - Passivated			12		X	Pin contacts w/ eyelet	W	A31	Gold Plating-15U"	Consult Amphenol Industrial Operations for more options	
					14S		C	Pin - PC Tail	X				
					16S				Y				
									Z				

Example: ACS N 02H 10SL 4 PW

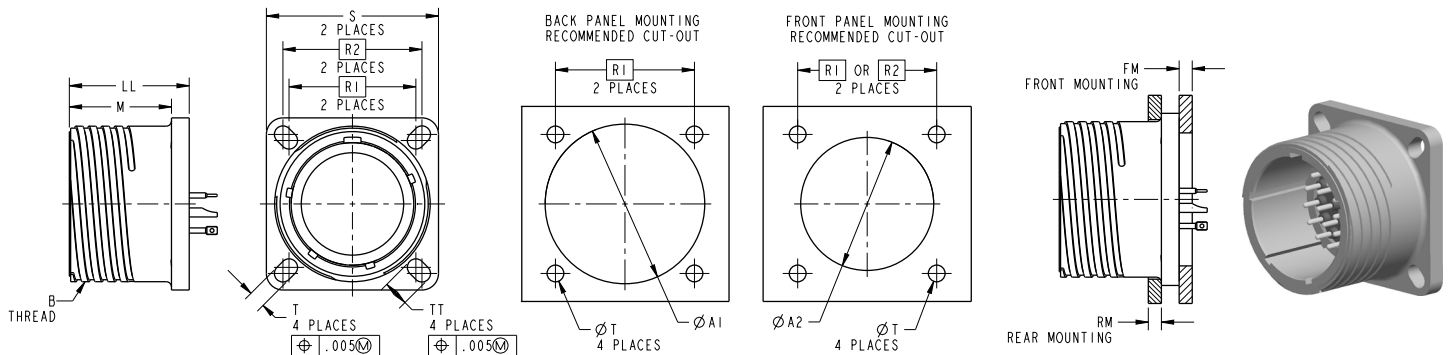
Box mount receptacle, shell is stainless steel with passivated plating, insert arrangement 10SL-4, solder pin contacts, W insert rotation, matte tin contact plating.

Amphe-Lite Series Hermetic Insert Arrangements

Insert Arrangement	9-98	11-35	13-4	13-35	15-AC	
Service Rating	I	M	I	M	M	
Number of Contacts	3	13	4	22	24	2
Contact Size	20	22D	16	22D	22D	16

Insert Arrangement	17-35	21-11	21-41	25-4	
Service Rating	M	I	I	I	
Number of Contacts	55	11	41	48	8
Contact Size	22D	12	20	20	16

Amphe-Lite Hermetic Wall Mount Receptacle (Shell Code: 00H)



Shell Size	Ø A1 MIN	Ø A2 MIN	B Thread Class 2A	M	R1	R2	S MAX	T	LL	TT	FM MAX	RM MAX
9	16.66	13.11	15.88	19.69	18.26	15.09	24.08	3.25	23.19	5.49	3.20	5.94
11	20.22	15.88	19.05	19.69	20.62	18.26	26.49	3.25	23.19	4.93	3.20	5.94
13	23.42	19.05	22.23	19.69	23.01	20.62	28.88	3.25	23.19	4.93	3.20	5.94
15	26.59	23.01	25.40	19.69	24.61	23.01	31.29	3.25	23.19	4.93	3.20	5.94
17	30.96	25.81	30.16	19.69	26.97	24.61	33.60	3.25	23.19	4.93	3.20	5.94
19	32.94	28.98	31.75	19.69	29.36	26.97	36.80	3.25	23.19	4.93	3.20	5.94
21	36.12	32.16	34.93	18.92	31.75	29.36	40.01	3.25	23.14	4.93	3.20	5.18
23	39.29	34.93	38.10	18.92	34.93	31.75	43.21	3.91	23.14	6.15	3.20	5.18
25	42.47	37.69	41.28	18.92	38.10	34.93	46.30	3.91	23.14	6.15	3.20	5.18

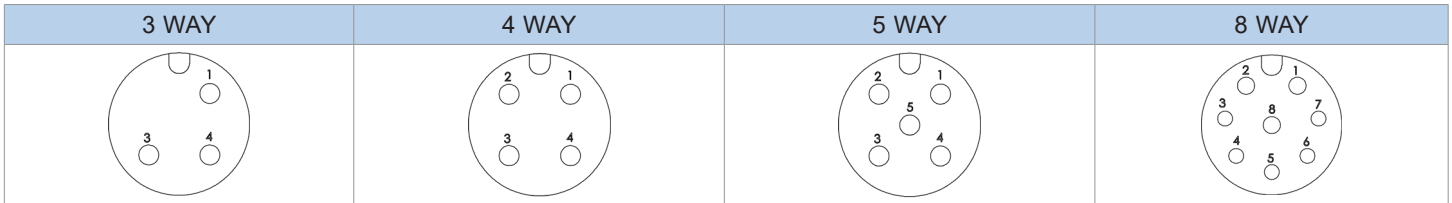
Amphe-Lite Series Hermetic How to Order

AL		N		00H		11	35	P		B		
Connector Type		Shell Material and Plating		Shell Style		Shell Size	Insert Arrangement	Contact Type		Insert Rotation	Contact Plating	
AL	Amphe-Lite (MIL-DTL-38999 III) Hermetic	N	Stainless Steel - Nickel	00H	Wall Mount Receptacle	09	See page 12	P	Pin - Solder	N Normal / None	Omit	Standard - Gold Plating - 50U"
		Y	Stainless Steel - Passivated			11		X	Pin contacts w/ eyelet	A	CMT	Matte Tin Plating
		13	C			Pin - PC Tail		B	<i>Consult Amphenol Industrial Operations for more options</i>			
		15	C									
		17	D									
		21	E									
		25										

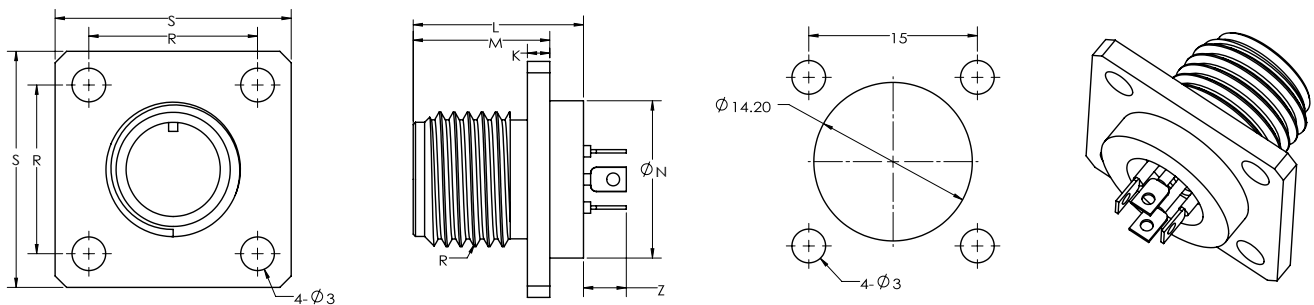
Example: AL N 00H 11 35 PB

Wall Mount Receptacle, stainless steel shell with Nickel plating, insert arrangement is 11-35, solder pin contacts plated with 50U" gold, B insert rotation.

M12 Hermetic Insert Arrangements

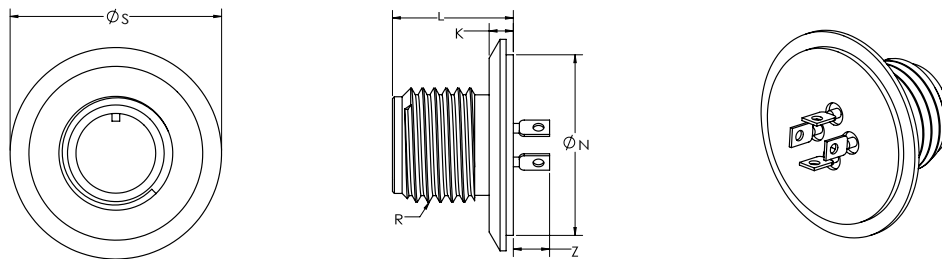


M12 Hermetic Box Mount Receptacle (Shell Code: 02H)



Shell Size	Receptacle Front View		Receptacle Side View					
	S ±.25	R (TP)	L +.50 -.25	M +.50 -.25	K ±.10	N ±.10	R Thread Class 2A	Z Max.
6	21	15	16	13	2	14	M12X1	5.5

M12 Hermetic Round Flange Receptacle (Shell Code: 00H)



Shell Size	Receptacle Front View		Receptacle Side View			
	S ±.25	L +.50 -.25	K ±.25	N ±.20	R Thread Class 2A	Z Max.
6	22.3	12.70	2.54	18.97	M12X1	5.5

M12 How to Order

M12		N		02H		3A	P					
Connector Type		Shell Material and Plating		Shell Style		Insert Arrangement	Contact Type		Contact Plating		Other Suffix	
M12	M12-Hermetic Connector	Omit	Standard - Carbon Steel, Matte Tin	00H	Round Flange Receptacle	3A	P	Pin - Solder	Omit	Standard - Gold Plating - 5U"	023	Stainless Steel Shell (N) with Nickel Plating
		N	Stainless Steel - Passivated	02H	Box Mount Receptacle	4A	X	Pin contacts w/ eyelet	CMT	Matte Tin Plating	<i>Consult Amphenol Industrial Operations for more options</i>	
				07H	Jam Nut Receptacle	5A	C	Pin - PC Tail				
						8A						

Example: M12 N 02H 3A P

Box mount receptacle, carbon steel shell with matte tin plating, A code 3 way insert arrangement, solder pin with 5U" of gold plating.



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