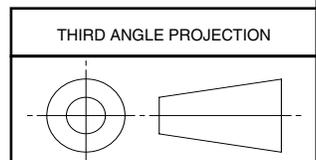


THE REQUIREMENTS FOR ACQUIRING THE CONNECTOR DESCRIBED HEREIN SHALL CONSIST OF THIS SPECIFICATION AND THE LATEST ISSUE OF AS5590.

AS5590/1

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ISSUED 2005-09

CUSTODIAN: SAE AE-8/AE-8C1



AEROSPACE STANDARD

CONNECTOR, FIBER OPTIC,
CIRCULAR, ENVIRONMENT RESISTANT,
REMOVEABLE TERMINI

AS5590/1
SHEET 1 OF 23

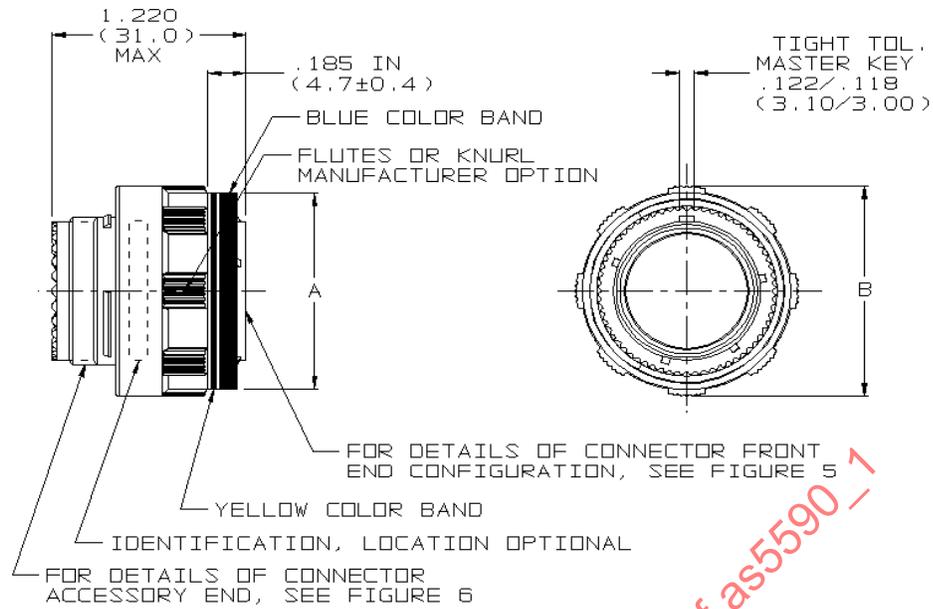


TABLE 1 - PLUG DIMENSIONS

SHELL SIZE	A DIA +.008 -.000 (+.20) (-.00)	B DIA MAX
09	.724 (18.4)	.858 (21.8)
11	.831 (21.1)	.984 (25.0)
13	1.000 (25.4)	1.157 (29.4)
15	1.130 (28.7)	1.280 (32.5)
17	1.268 (32.2)	1.406 (35.7)
19	1.374 (34.9)	1.516 (38.5)
21	1.500 (38.1)	1.642 (41.7)
23	1.618 (41.1)	1.768 (44.9)
25	1.744 (44.3)	1.890 (48.0)

FIGURE 1 - PLUG SHELL - STYLE 06

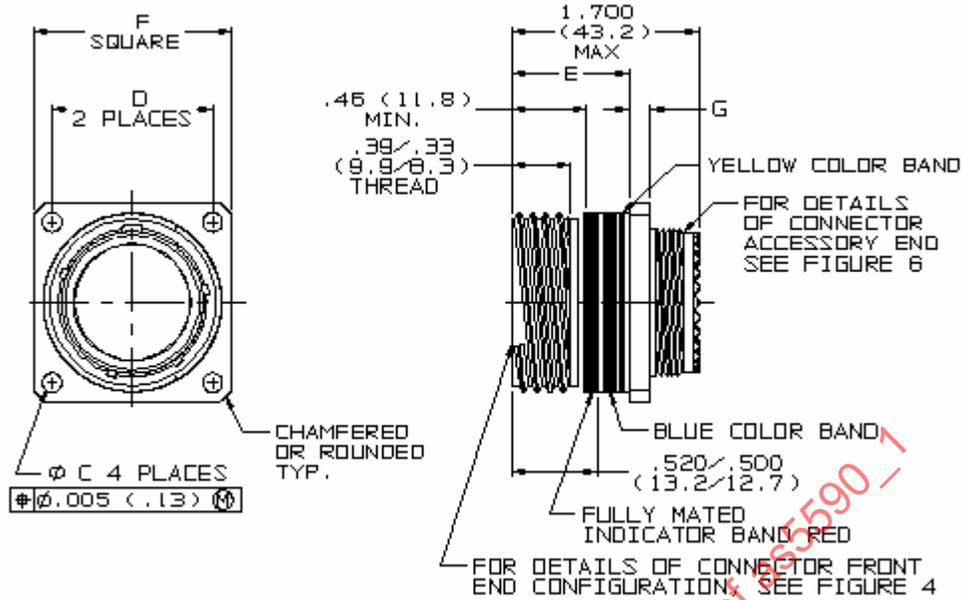


TABLE 2 - WALL MTG RECEPTACLE DIMENSIONS

SHELL SIZE	C DIA	D BSC	E	F SQUARE	G
09	.136 (3.5)	.717 (18.2)	.823 (20.9)	.949 (24.1)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	.925 (23.5)	.083 (2.1)
11	.136 (3.5)	.812 (20.6)	.823 (20.9)	1.043 (26.5)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	1.019 (25.9)	.083 (2.1)
13	.136 (3.5)	.906 (23.0)	.823 (20.9)	1.138 (28.9)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	1.114 (28.3)	.083 (2.1)
15	.136 (3.5)	.969 (24.6)	.823 (20.9)	1.232 (31.3)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	1.208 (30.7)	.083 (2.1)
17	.136 (3.5)	1.062 (27.0)	.823 (20.9)	1.333 (33.6)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	1.299 (33.0)	.083 (2.1)
19	.136 (3.5)	1.156 (29.4)	.823 (20.9)	1.449 (36.8)	.144 (3.7)
	.120 (3.0)		.768 (19.5)	1.425 (36.2)	.083 (2.1)
21	.136 (3.5)	1.250 (31.8)	.823 (20.9)	1.575 (40.0)	.171 (4.3)
	.120 (3.0)		.768 (19.5)	1.551 (39.4)	.083 (2.1)
23	.162 (4.1)	1.375 (34.9)	.791 (20.0)	1.701 (43.2)	.171 (4.3)
	.146 (3.7)		.736 (18.7)	1.677 (42.6)	.083 (2.1)
25	.162 (4.1)	1.500 (38.1)	.791 (20.0)	1.823 (46.3)	.171 (4.3)
	.146 (3.7)		.736 (18.7)	1.799 (45.7)	.083 (2.1)

FIGURE 2 - RECEPTACLE, WALL MOUNTING - STYLE 07

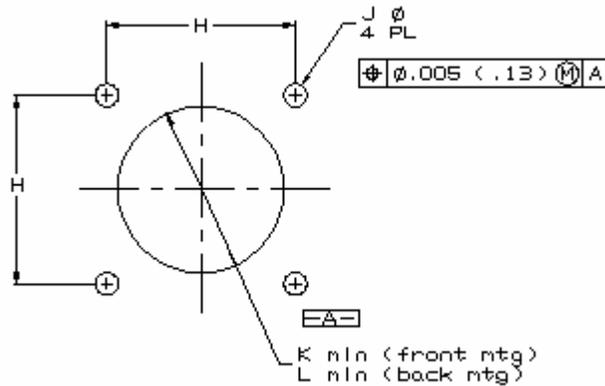


TABLE 3 - WALL MOUNTING DIMENSIONS/PANEL CUTOUT

SHELL SIZE	H BSC	J Ø HOLES	K MIN FRONT MTG	L MIN BACK MTG
09	.717 (18.2)	.133 (3.4) .123 (3.1)	.500 (12.7)	.656 (16.7)
11	.812 (20.6)	.133 (3.4) .123 (3.1)	.625 (15.8)	.781 (19.8)
13	.906 (23.0)	.133 (3.4) .123 (3.1)	.750 (19.0)	.906 (23.0)
15	.969 (24.6)	.133 (3.4) .123 (3.1)	.906 (23.0)	1.031 (26.2)
17	1.062 (27.0)	.133 (3.4) .123 (3.1)	1.016 (25.8)	1.219 (30.2)
19	1.156 (29.4)	.133 (3.4) .123 (3.1)	1.141 (28.9)	1.281 (32.5)
21	1.250 (31.8)	.133 (3.4) .123 (3.1)	1.250 (31.8)	1.406 (35.7)
23	1.375 (34.9)	.155 (3.9) .145 (3.7)	1.375 (34.9)	1.531 (38.9)
25	1.500 (38.1)	.159 (4.0) .149 (3.8)	1.500 (38.1)	1.656 (42.1)

FIGURE 2 - RECEPTACLE, WALL MOUNTING - STYLE 07 - CONTINUED

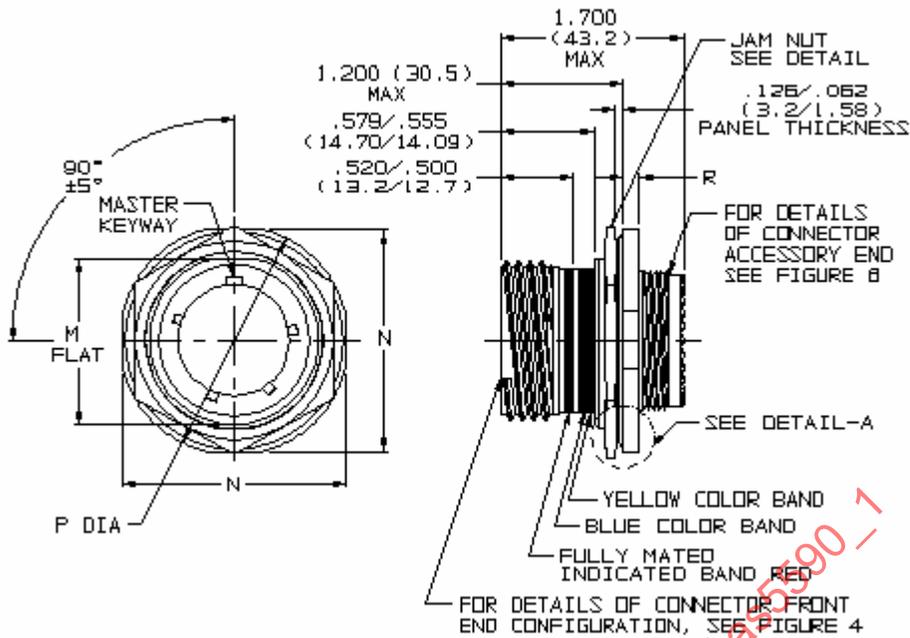


TABLE 4 - JAM NUT RECEPTACLE

SHELL SIZE	M FLAT	N	P DIA	R
09	.655 (16.6)	1.079 (27.4)	1.200 (30.5)	.114 (2.9)
	.645 (16.4)	1.047 (26.6)	1.177 (29.9)	.083 (2.1)
11	.755 (19.2)	1.268 (32.2)	1.386 (35.2)	.114 (2.9)
	.745 (18.9)	1.236 (31.4)	1.362 (34.6)	.083 (2.1)
13	.942 (23.9)	1.390 (35.3)	1.512 (38.4)	.114 (2.9)
	.932 (23.7)	1.358 (34.5)	1.488 (37.8)	.083 (2.1)
15	1.066 (27.1)	1.516 (38.5)	1.638 (41.6)	.114 (2.9)
	1.056 (26.8)	1.485 (37.7)	1.614 (41.0)	.083 (2.1)
17	1.191 (30.3)	1.642 (41.7)	1.764 (44.8)	.114 (2.9)
	1.181 (30.0)	1.610 (40.9)	1.740 (44.2)	.083 (2.1)
19	1.316 (33.4)	1.827 (46.4)	1.949 (49.5)	.145 (3.7)
	1.306 (33.2)	1.795 (45.6)	1.925 (48.9)	.114 (2.9)
21	1.441 (36.6)	1.953 (49.6)	2.075 (52.7)	.145 (3.7)
	1.431 (36.3)	1.921 (48.8)	2.051 (52.1)	.114 (2.9)
23	1.566 (39.7)	2.079 (52.8)	2.201 (55.9)	.145 (3.7)
	1.556 (39.5)	2.047 (52.0)	2.177 (55.3)	.114 (2.9)
25	1.691 (42.9)	2.205 (56.0)	2.323 (59.0)	.145 (3.7)
	1.681 (42.7)	2.173 (54.0)	2.299 (58.4)	.114 (2.9)

FIGURE 3 - JAM NUT RECEPTACLE - STYLE 08

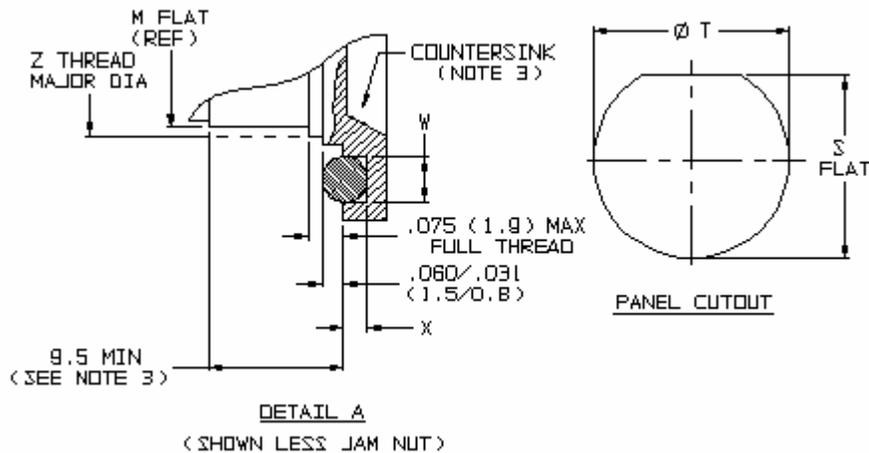


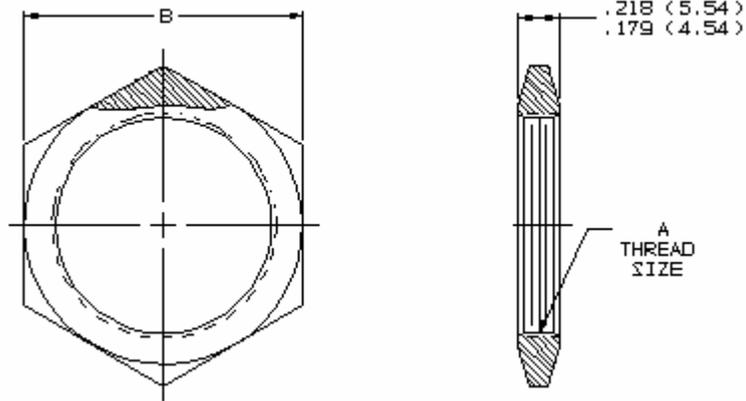
TABLE 5 - JAM NUT RECEPTACLE

SHELL SIZE	S FLAT	T DIA	W	X	Z THREAD	O-RING (SEE NOTE 2)
09	.680 (17.3)	.700 (17.8)	.099 (2.52)	.050 (1.27)	M17 X 1-6g	2-019
	.670 (17.0)	.690 (17.5)	.093 (2.36)	.040 (1.01)		
11	.771 (19.6)	.835 (21.2)	.099 (2.52)	.050 (1.27)	M20 X 1-6g	2-022
	.761 (19.3)	.825 (21.0)	.093 (2.36)	.040 (1.01)		
13	.955 (24.3)	1.020 (25.9)	.099 (2.52)	.050 (1.27)	M25 X 1-6g	2-024
	.945 (24.0)	1.010 (25.7)	.093 (2.36)	.040 (1.01)		
15	1.085 (27.6)	1.145 (29.1)	.099 (2.52)	.050 (1.27)	M28 X 1-6g	2-026
	1.075 (27.3)	1.135 (28.8)	.093 (2.36)	.040 (1.01)		
17	1.210 (30.7)	1.270 (32.3)	.099 (2.52)	.050 (1.27)	M32 X 1-6g ^{1/}	2-028
	1.200 (30.5)	1.260 (32.0)	.093 (2.36)	.040 (1.01)		
19	1.335 (33.9)	1.395 (35.4)	.146 (3.71)	.080 (2.04)	M35 X 1-6g	2-128
	1.325 (33.7)	1.385 (35.2)	.140 (3.55)	.070 (1.78)		
21	1.460 (37.1)	1.520 (38.6)	.146 (3.71)	.080 (2.04)	M38 X 1-6g	2-130
	1.450 (36.8)	1.510 (38.4)	.140 (3.55)	.070 (1.78)		
23	1.585 (40.3)	1.645 (41.8)	.146 (3.71)	.080 (2.04)	M41 X 1-6g	2-132
	1.575 (40.0)	1.635 (41.5)	.140 (3.55)	.070 (1.78)		
25	1.710 (43.4)	1.770 (45.0)	.146 (3.71)	.080 (2.04)	M44 X 1-6g	2-134
	1.700 (43.2)	1.760 (44.7)	.140 (3.55)	.070 (1.78)		

FIGURE 3 - JAM NUT RECEPTACLE - STYLE 08 - CONTINUED

NOTES:

- ^{1/} MODIFIED MAJOR DIAMETER 31.95/31.80.
- O-RING MATERIAL; AS3582 OR AMS3325.
- COUNTERSINK MAY BE INCORPORATED TO ACCEPT ACCESSORY CONFIGURATION IAW AS85049.



JAM NUT DETAIL

TABLE 6- JAM NUT RECEPTACLE

SHELL SIZE	A THREAD	B
09	M17 X 1-6H	.875 (22.23)
		.859 (21.82)
11	M20 X 1-6H	1.000 (25.40)
		.984 (24.99)
13	M25 X 1-6H	1.188 (30.17)
		1.172 (29.76)
15	M28 X 1-6H	1.375 (34.92)
		1.359 (34.52)
17	M32 X 1-6H	1.438 (36.52)
		1.422 (36.12)
19	M35 X 1-6H	1.562 (39.67)
		1.546 (39.27)
21	M38 X 1-6H	1.750 (44.45)
		1.734 (44.04)
23	M41 X 1-6H	1.875 (47.63)
		1.859 (47.22)
25	M44 X 1-6H	2.000 (50.80)
		1.984 (50.39)

FIGURE 3 - JAM NUT RECEPTACLE - STYLE 08 - CONTINUED

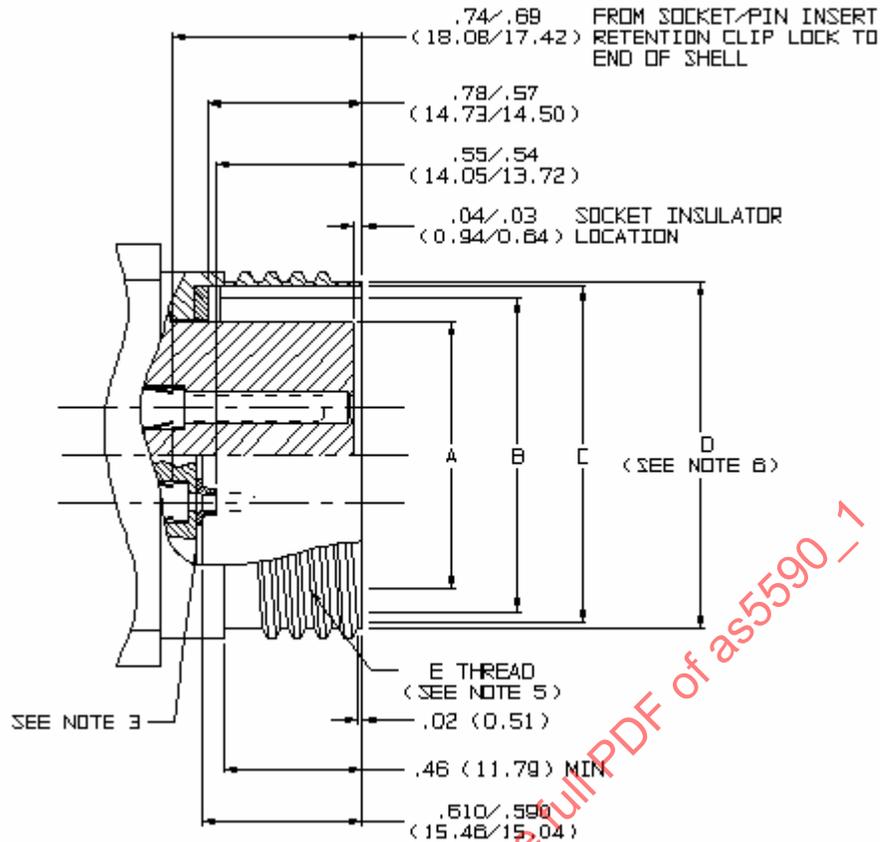


TABLE 7 - RECEPTACLE INTERMATEABILITY DIMENSIONS

SHELL SIZE	A DIA	B DIA MIN	C DIA	D DIA
09	.295 (7.49)	.447 (11.36)	.497 (12.63)	.568 (14.42)
	.280 (7.11)	.441 (11.20)	.486 (12.34)	.557 (14.14)
11	.415 (10.54)	.575 (14.61)	.625 (15.88)	.693 (17.60)
	.400 (10.16)	.569 (14.45)	.614 (15.60)	.682 (17.32)
13	.535 (13.59)	.687 (17.45)	.774 (19.66)	.818 (20.77)
	.520 (13.21)	.681 (17.30)	.763 (19.38)	.807 (20.49)
15	.655 (16.64)	.812 (20.63)	.899 (22.84)	.943 (23.95)
	.640 (16.26)	.805 (20.44)	.888 (22.56)	.932 (23.67)
17	.785 (19.94)	.937 (23.80)	1.024 (26.01)	1.114 (28.30)
	.770 (19.56)	.931 (23.64)	1.013 (25.73)	1.101 (27.97)
19	.875 (22.23)	1.042 (26.47)	1.127 (28.63)	1.177 (29.89)
	.860 (21.84)	1.036 (26.31)	1.118 (28.40)	1.164 (29.56)
21	.995 (25.27)	1.167 (29.64)	1.254 (31.85)	1.302 (33.07)
	.980 (24.89)	1.161 (29.49)	1.243 (31.57)	1.289 (32.74)
23	1.125 (28.58)	1.292 (32.82)	1.379 (35.03)	1.427 (36.24)
	1.110 (28.19)	1.286 (32.66)	1.368 (34.75)	1.414 (35.91)
25	1.245 (31.62)	1.417 (35.99)	1.504 (38.20)	1.552 (39.42)
	1.230 (31.24)	1.411 (35.84)	1.493 (37.92)	1.536 (39.02)

FIGURE 4 - RECEPTACLE DETAIL

TABLE 8 - RECEPTACLE THREAD

AS5590/1

SHELL SIZE	E THREAD				EXTERNAL THREAD - LIMITS OF SIZE - CLASS 2A								
	THREAD SIZE	PITCH	LEAD	ALLOW- ANCE 2/	MAJOR DIAMETER		TOLER- ANCE	PITCH DIAMETER		TOLER- ANCE	MINOR DIAMETER		
					LIMITS			LIMITS			LIMITS		
					MAX	MIN		MAX	MIN		MAX	MIN	
09	.6250	.1	.3	.0015	.6235	.6155	.0080	.5975	.5895	.0080	.5675	.5535	
11	.7500				.7485	.7405		.7225	.7145		.6925	.6785	
13	.8750				.8735	.8655		.8475	.8395		.8175	.8035	
15	1.0000				.9985	.9905		.9725	.9645		.9425	.9285	
17	1.1875				1.1855	1.1735		1.1515	1.1415		1.1135	1.0955	
19	1.2500			.0020		1.2480	1.2360	.0120	1.2140	1.2040	.0100	1.1760	1.1580
21	1.3750					1.3730	1.3610		1.3390	1.3290		1.3010	1.2830
23	1.5000					1.4980	1.4860		1.4640	1.4540		1.4260	1.4080
25	1.6250					1.6230	1.6110		1.5890	1.5790		1.5510	1.5330

NOTES:

1. DIMENSIONS ARE IN INCHES, MILLIMETER EQUIVALENTS ARE IN PARENTHESIS AND ARE BASED ON 1 INCH = 25.4 MM.
2. FIGURE 8 AND 11 APPLY.
3. INSERT FRONT SURFACE SHALL BE FLAT WITHIN .005 (0.13) TIR.
4. DIAMETERS A AND B SHALL BE CONCENTRIC WITHIN .005 (0.13) TIR. AT MMC.
5. RECEPTACLE COUPLING THREADS MAY HAVE MODIFIED MINOR DIAMETERS.
6. WITNESS MARKS AS RESULT OF THREADING PERMISSIBLE ON 'D' DIAMETER.
7. THREADS ARE MODIFIED 60° STUB CONFIGURATION.
8. GAUGES FOR PLATED THREADS: MAXIMUM GAUGING LIMITS OF CLASS 2A THREADS WHICH ARE PLATED, ARE INCREASED BY THE ALLOWANCE. UNPLATED THREADS, FOR EXAMPLE CLASS K, MAY BE CHECKED WITH STANDARD AFTER PLATE GAUGES.

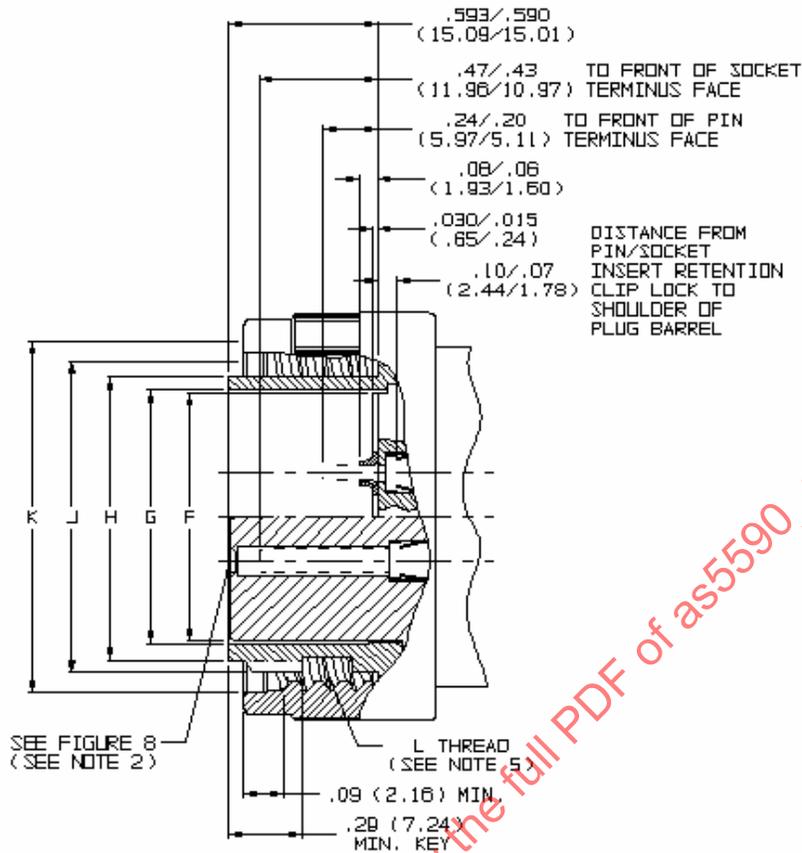


TABLE 9 - PLUG INTERMATEABILITY DIMENSIONS

SHELL SIZE	F DIA	G DIA MIN	H DIA	J DIA	K
09	.290 (7.37)	.312 (7.92)	.438 (11.13)	.483 (12.27)	.659 (16.74)
	.275 (6.99)		.432 (10.97)	.472 (11.99)	.649 (16.48)
11	.418 (10.62)	.430 (10.92)	.566 (14.38)	.611 (15.52)	.789 (20.04)
	.403 (10.24)		.560 (14.22)	.600 (15.24)	.779 (19.79)
13	.532 (13.52)	.544 (13.81)	.678 (17.22)	.760 (19.31)	.909 (23.09)
	.517 (13.14)		.672 (17.07)	.749 (19.02)	.899 (22.83)
15	.657 (16.69)	.669 (16.99)	.803 (20.40)	.885 (22.48)	1.039 (26.39)
	.642 (16.31)		.797 (20.24)	.874 (22.20)	1.029 (26.14)
17	.782 (19.87)	.794 (20.16)	.928 (23.57)	1.010 (25.66)	1.229 (31.22)
	.767 (19.49)		.922 (23.42)	.999 (25.37)	1.219 (30.96)
19	.871 (22.13)	.883 (22.42)	1.033 (26.24)	1.115 (28.32)	1.289 (32.74)
	.856 (21.75)		1.027 (26.09)	1.104 (28.04)	1.279 (32.49)
21	.996 (25.30)	1.008 (25.60)	1.158 (29.42)	1.240 (31.50)	1.409 (35.79)
	.981 (24.92)		1.152 (29.26)	1.229 (31.22)	1.399 (35.53)
23	1.121 (28.48)	1.133 (28.77)	1.283 (32.59)	1.365 (34.67)	1.539 (39.09)
	1.106 (28.10)		1.277 (32.44)	1.354 (34.39)	1.529 (38.84)
25	1.246 (31.65)	1.257 (31.92)	1.408 (35.77)	1.490 (37.85)	1.659 (42.14)
	1.231 (31.27)		1.402 (35.61)	1.479 (37.57)	1.649 (41.88)

FIGURE 5 - PLUG DETAIL

TABLE 10 - PLUG THREAD

SHELL SIZE	L THREAD			INTERNAL THREAD - LIMITS OF SIZE - CLASS 2B							
	THREAD SIZE	PITCH	LEAD	MINOR DIAMETER			PITCH DIAMETER			MAJOR DIAMETER	
				LIMITS		TOLERANCE	LIMITS		TOLERANCE	LIMITS	
				MAX	MIN		MAX	MIN		MAX	MIN
09	.6250	.1	.3	.5292	.5892	.0100	.5990	.6090	.0100	.6290	.6450
11	.7500			.7042	.7142		.7240	.7340		.7540	.7700
13	.8750			.8292	.8392		.8490	.8590		.8790	.8950
15	1.0000			.9542	.9642		.9740	.9840		1.0040	1.0200
17	1.1875			1.1274	1.1394		1.1535	1.1655		1.1915	1.2115
19	1.2500			1.1900	1.2020	1.2160	1.2280	1.2540	1.2740		
21	1.3750			1.3150	1.3270	1.3410	1.3530	1.3790	1.3990		
23	1.5000			1.4400	1.4520	1.4660	1.4780	1.5040	1.5240		
25	1.6250			1.5650	1.5770	1.5910	1.6030	1.6290	1.6490		

NOTES:

- DIMENSIONS ARE IN INCHES, MILLIMETER EQUIVALENTS ARE IN PARENTHESIS AND ARE BASED ON 1 INCH = 25.4 MM.
- FIGURE 8 AND 9 APPLY.
- INITIAL CONTACT WITH STATIC SEAL.
- DIAMETERS 'H' WITH RESPECT TO DIAMETER 'J' SHALL BE CONCENTRIC AT MMC.
- THREAD APPROACH MODIFIED TO ELIMINATE CROSS-THREADING.
- THREADS ARE MODIFIED 60° STUB CONFIGURATION.
- GAUGES FOR PLATED THREADS: MAXIMUM GAUGING LIMITS OF CLASS 2A THREADS WHICH ARE PLATED, ARE INCREASED BY THE ALLOWANCE. UNPLATED THREADS, FOR EXAMPLE CLASS K, MAY BE CHECKED WITH STANDARD AFTER PLATE GAUGES.

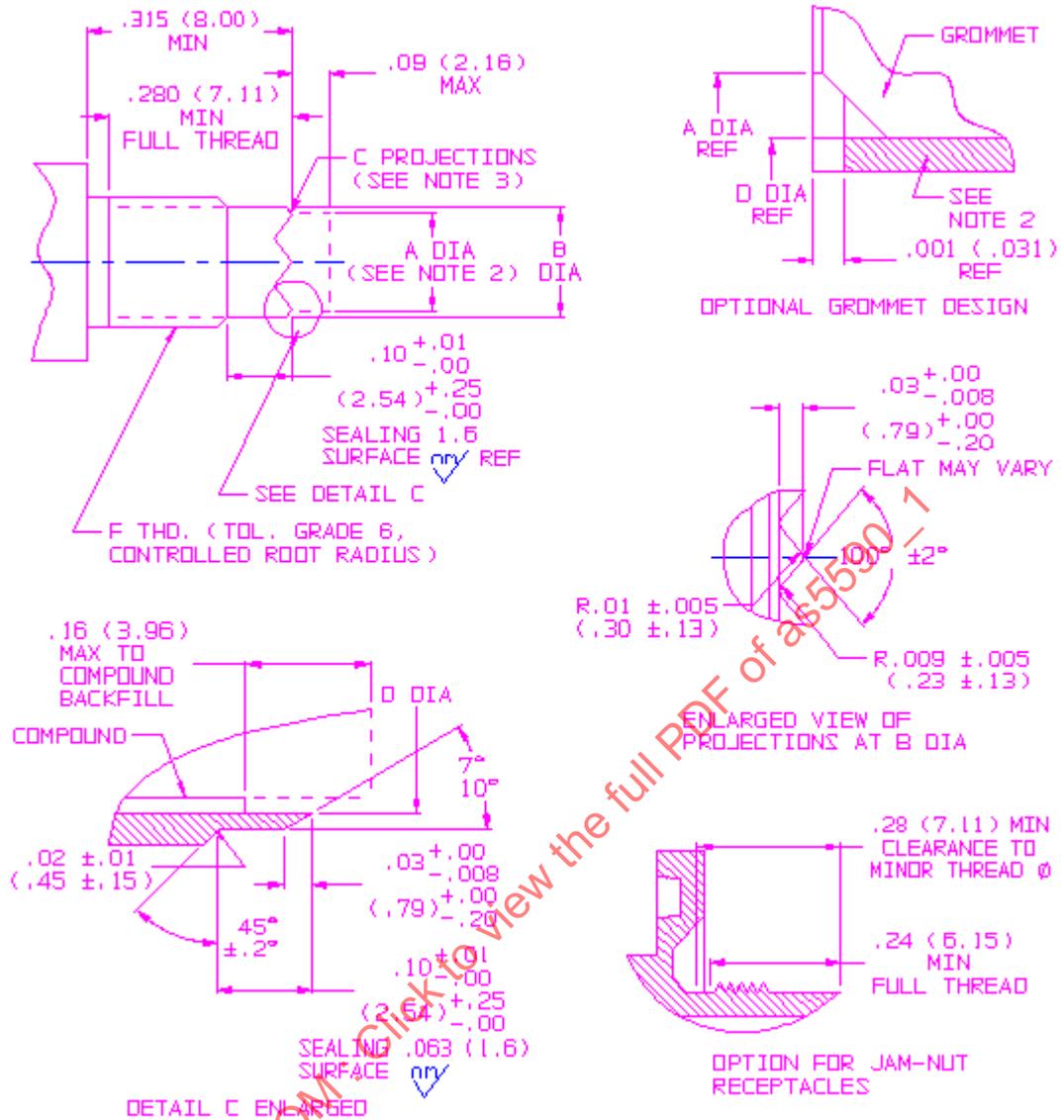


FIGURE 6 - CONNECTOR ACCESSORY INTERFACE

TABLE 11 - CONNECTOR ACCESSORY INTERFACE DIMENSIONS

SHELL SIZE	A MAX	B		C	D MAX	E THREAD
		+0.00 (+.00)	-.006 (-.15)			
09	.299 (7.59)	.416 (10.57)		12	.346 (8.80)	M12 X 1.0-6g 0.100R
11	.427 (10.85)	.534 (13.56)		16	.475 (12.07)	M15 X 1.0-6g 0.100R
13	.541 (13.74)	.653 (16.58)		20	.589 (14.96)	M18 X 1.0-6g 0.100R
15	.666 (16.92)	.810 (20.57)		24	.714 (18.14)	M22 X 1.0-6g 0.100R
17	.791 (20.09)	.928 (23.57)		28	.839 (21.31)	M25 X 1.0-6g 0.100R
19	.897 (22.78)	1.046 (26.57)		32	.945 (24.00)	M28 X 1.0-6g 0.100R
21	1.022 (25.96)	1.164 (29.57)		36	1.070 (27.18)	M31 X 1.0-6g 0.100R
23	1.147 (29.13)	1.282 (32.56)		40	1.194 (30.35)	M34 X 1.0-6g 0.100R
25	1.272 (32.31)	1.400 (35.56)		44	1.320 (33.53)	M37 X 1.0-6g 0.100R

NOTES:

1. DIMENSIONS ARE IN INCHES, MILLIMETER EQUIVALENTS ARE IN PARENTHESIS AND ARE BASED ON 1 INCH = 25.4 MM.
2. GROMMET MAY TAPER TO SHELL INNER DIAMETER.
3. THE CENTERLINE OF INDICATED PROJECTION MUST BE LOCATED ON VERTICAL CENTERLINE WITH 2° OF DATUM -G- (SEE KEY/KEYWAY POLARIZATION DETAIL OF FIGURE 7).

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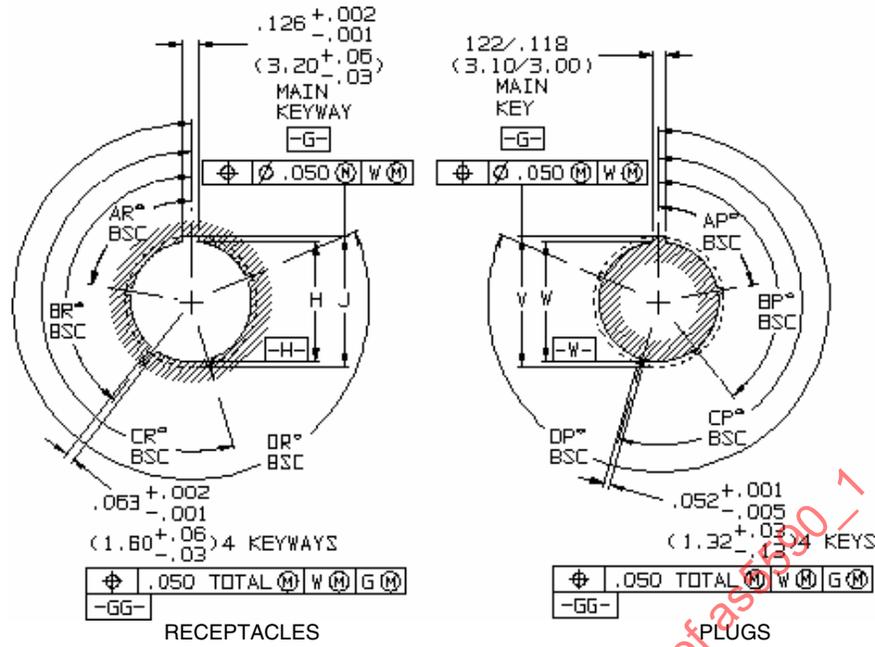


TABLE 12 - MAIN KEY/KEYWAY POSITIONS

SHELL SIZE	KEY & KEYWAY ARRANGEMENT IDENTIFICATION LETTER	AR° OR AP° BSC	BR° OR BP° BSC	CR° OR CP° BSC	DR° OR DP° BSC
09	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
	D	64	155	234	304
11 13 AND 15	E	91	131	197	240
	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
	C	35	140	205	275
17 AND 19	D	64	155	234	304
	E	91	131	197	240
	N	105	140	215	265
	A	102	132	248	320
	B	80	118	230	312
21 23 AND 25	C	35	140	205	275
	D	64	155	234	304
	E	91	131	197	240
	N	105	140	215	265
	A	102	132	248	320

FIGURE 7 - MAIN KEY/KEYWAY POLARIZATION

NOTES:

1. THE INSERT ARRANGEMENT DOES NOT ROTATE WITH MAIN KEY/KEYWAY.

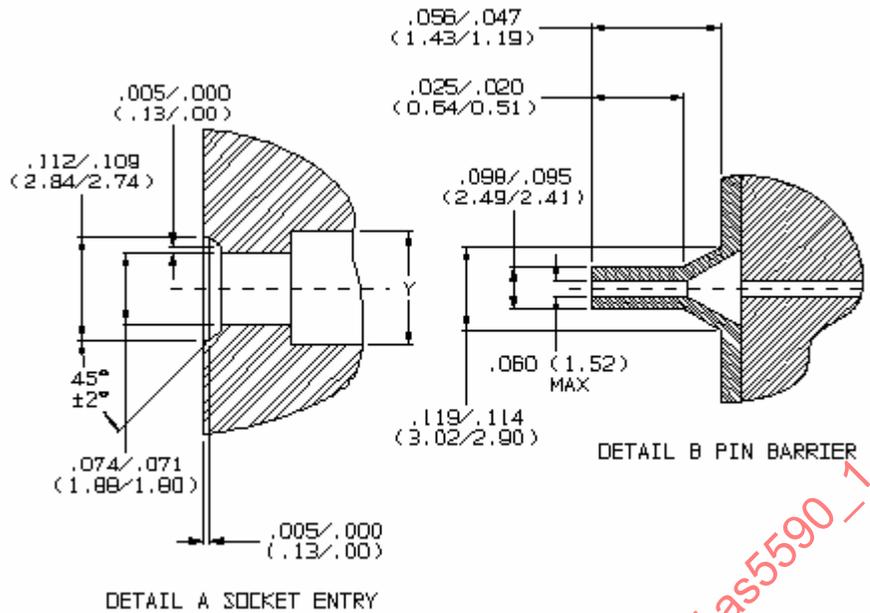
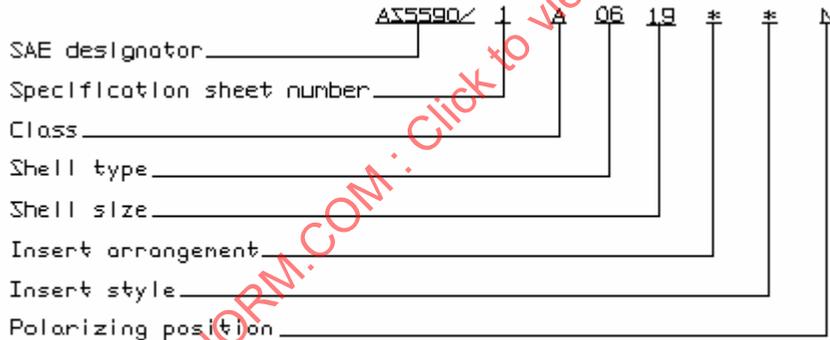


FIGURE 8 - INTERFACE DESIGN

NOTES:

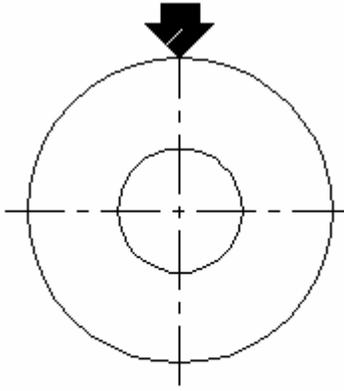
- DIMENSIONS ARE IN INCHES, MILLIMETER EQUIVALENTS ARE IN PARENTHESIS AND ARE BASED ON 1 INCH = 25.4 MM.

Part or Identifying Number (PIN) example:



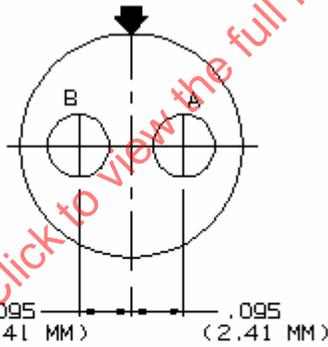
N, A, B, C, D, E

N is required for normal position.



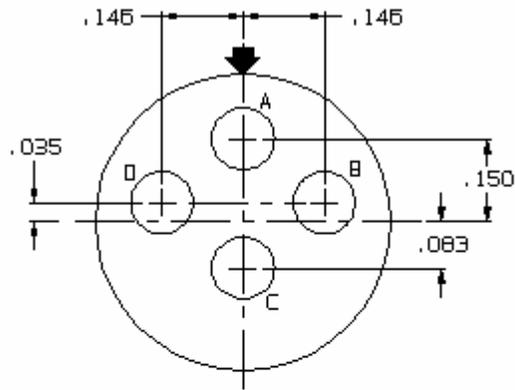
SHELL SIZE	ARRANGEMENT NO.	NUMBER OF TERMINI	TERMINI SIZE
9	-1	1	16

FIGURE 9 - INSERT ARRANGEMENT



SHELL SIZE	ARRANGEMENT NO.	NUMBER OF TERMINI	TERMINI SIZE
11	-2	2	16

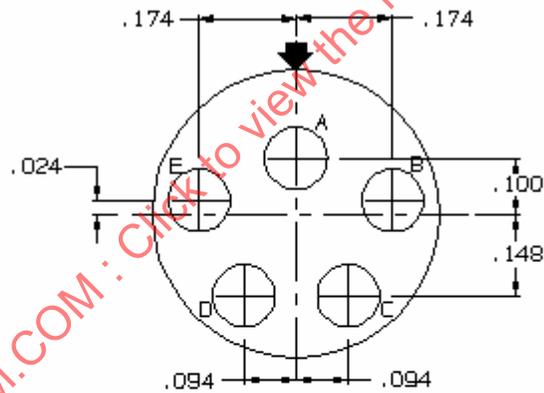
FIGURE 9 - INSERT ARRANGEMENT - CONTINUED



INCHES	MM
.035	.89
.083	2.11
.146	3.71
.150	3.81

SHELL SIZE	ARRANGEMENT NO.	NUMBER OF TERMINI	TERMINI SIZE
13	-4	4	16

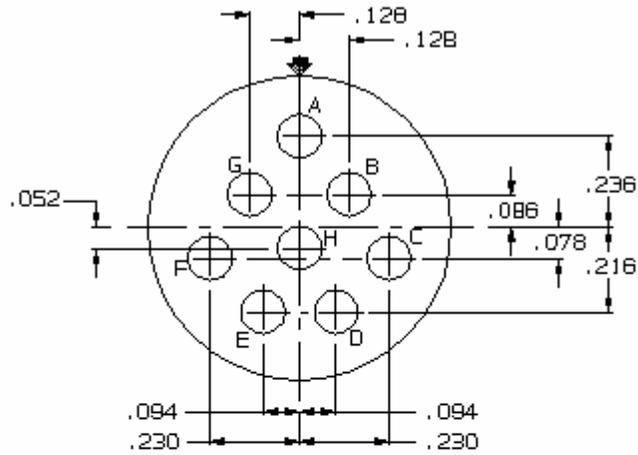
FIGURE 9 - INSERT ARRANGEMENT - CONTINUED



INCHES	MM
.024	.61
.094	2.39
.100	2.54
.148	3.75
.174	4.42

SHELL SIZE	ARRANGEMENT NO.	NUMBER OF TERMINI	TERMINI SIZE
15	-5	5	16

FIGURE 9 - INSERT ARRANGEMENT - CONTINUED



INCHES	MM
.052	1.32
.078	1.98
.086	2.18
.094	2.39
.128	3.25
.216	5.49
.230	5.84
.236	5.99

SHELL SIZE	ARRANGEMENT NO.	NUMBER OF TERMINI	TERMINI SIZE
17	-6	6	16

FIGURE 9 - INSERT ARRANGEMENT - CONTINUED