

ARINC 801 Fiber Optic Series



Based on the commercial ARINC 801 specification, this series features a removable alignment sleeve retainer (ASR) for ease of termini end-face cleaning, guide pins for precision alignment, and a scoop proof shell design.

Amphenol Fiber Systems International (AFSI) produces the ARINC 801 cylindrical fiber optic connector suite for aerospace and military applications. It is available in standard D38999 plug and receptacle shells. Inserts are available to support 2 to 32 channels and can support both PC and APC.

Amphenol FSI also offers the companion ARINC 801 terminus, which uses a standard 1.25mm ferrule and sleeve that can be terminated with standard LC termination procedures. The terminus can be inserted and removed from the connector with a standard size 16 contact removal tool. The terminus is available in both multimode and single mode versions. The fiber optic contact provides low insertion loss (0.3dB max, multimode) and back reflection (-55dB, APC). All versions of the termini are available in non-pull proof (for tight structure FO cables) and pull-proof (loose structure FO cable construction) variations.

Amphenol also manufactures a full range of other ARINC 801 related connectors such as ARINC 600, 404, EN 4165 and EN 3545, SJS Luminus series, as well as PROMI for easy splicing applications.

Features & Benefits:

- Qualified to the ARINC 801 Specification
- Precision alignment and components provide excellent optical performances
- Supports APC termini for RF-over-fiber and other applications requiring low back reflection
- Supports standard suite of 38999 backshells and accessories
- Removable ASR facilitates termini cleaning and maintenance
- High-density arrangements up to 32 channels

Amphenol Fiber Systems International, Inc. | 1300 Central Expressway N, Suite 100 Allen, TX 75013

Phone: (214) 547-2400 | Email: sales@fibersystems.com | Website: amphenol-fsi.com

Amphenol Fiber Systems International (AFSI), a division of Amphenol Military & Aerospace Operations (AMAO), is the largest manufacturer of harsh environment fiber optic cable assemblies & connectors in the world. Visit AMAO at amphenolmao.com.

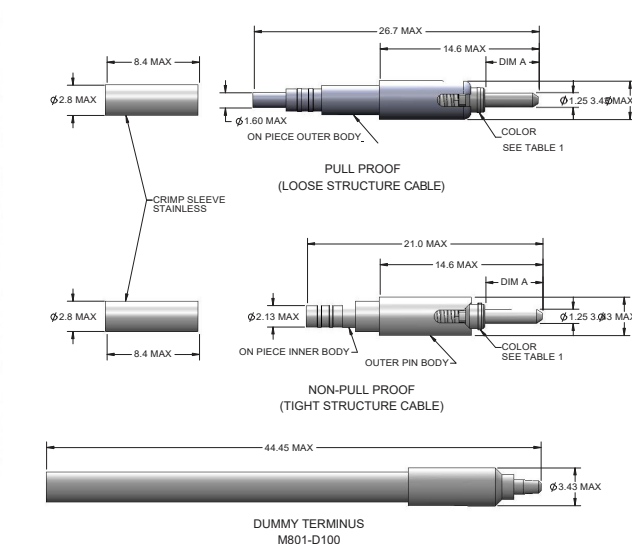
Performance Specifications :

- MM: IL 0.12dB @ 850nm & 1300nm
- SM APC: IL 0.12dB & RL >65dB @ 1310 & 1550nm
- Temp range -55C to +125C
- Temp life 1000hrs @ 100C
- Vibration levels up to 300 Grms
- Durability 500 mating cycles
- Humidity: 100hrs exposure

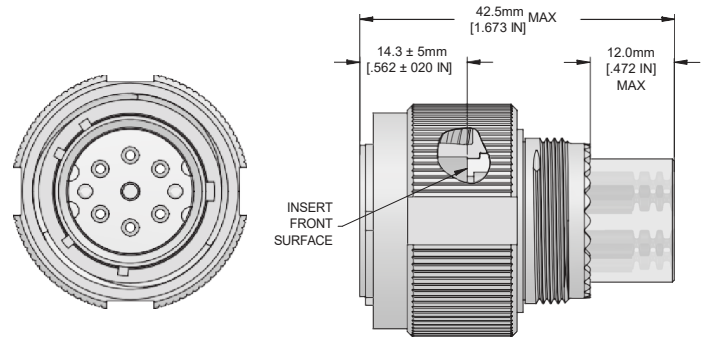
Applications :

- Commercial Airframe
- Avionics
- Military Radar
- SATCOM Systems
- RF over Fiber

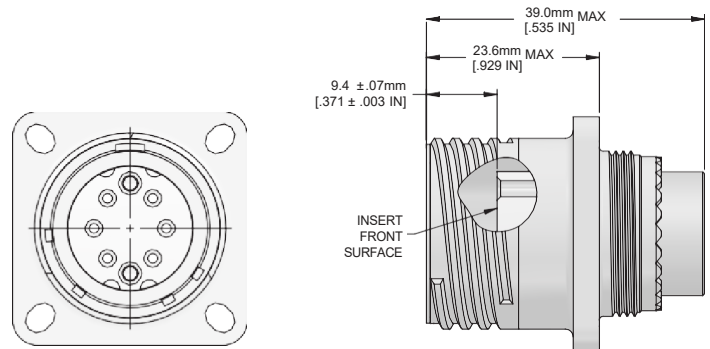
Arinc 801 Fiber Optic Termini :



ARINC 801 Dimensions:



Wall Mount Assembly :



Jam Nut Receptacle Assembly :

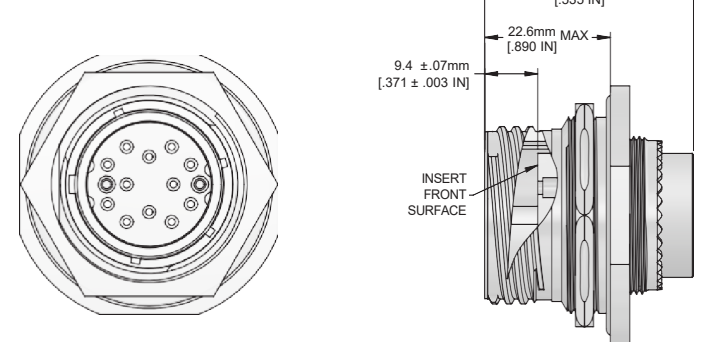


TABLE I

Shell Size	DIM ØA MAX	DIM B SQ ± 0.3	DIM C SQ ± 0.4	DIM ØD MAX	DIM E +.25/-0.00	DIM ØF +.00/-0.25	DIM G MIN	DIM ØH MIN	DIM J +.13	DIM K THREAD
11	24.9mm (0.98")	26.2mm (1.031")	31.8mm (1.250")	35.2mm (1.386")	19.59mm (.771")	20.96mm (0.825")	20.62mm (0.812")	20.22mm (0.796")	3.25mm (.128")	M15 X 1-6g
13	29.2mm (1.150")	28.6mm (1.125")	34.9mm (1.375")	38.4mm (1.512")	24.26mm (0.955")	25.65mm (1.010")	23.01mm (0.906")	23.42mm (0.922")		M18 X 1-6g
15	32.3mm (1.272")	31.0mm (1.220")	38.1mm (1.500")	41.6mm (1.638")	27.56mm (1.085")	28.83mm (1.135")	24.61mm (0.906")	26.59mm (1.047")		M22 X 1-6g
17	35.8mm (1.410")	33.3mm (1.311")	41.3mm (1.625")	44.8mm (1.764")	30.73mm (1.210")	32.01mm (1.260")	26.97mm (1.062")	30.96mm (1.219")		M25 X 1-6g
19	38.6mm (1.520")	36.5mm (1.437")	46.0mm (1.811")	49.5mm (1.950")	33.91mm (1.335")	35.18mm (1.385")	29.36mm (1.156")	32.94mm (1.297")		M28 X 1-6g
21	41.9mm (1.650")	39.7mm (1.563")	49.2mm (1.937")	52.7mm (2.075")	37.08mm (1.460")	38.35mm (1.510")	31.75mm (1.250")	36.12mm (1.422")	3.91mm (0.154")	M31 X 1-6g
23	44.7mm (1.760")	42.9mm (1.689")	52.4mm (2.063")	55.9mm (2.232")	40.26mm (1.585")	41.53mm (1.635")	34.93mm (1.375")	39.29mm (1.547")		M34 X 1-6g
25	48.0mm (1.890")	46.0mm (1.811")	55.6mm (2.189")	59.0mm (2.323")	43.43mm (1.710")	44.70mm (1.760")	38.10mm (1.500")	42.47mm (1.672")		M37 X 1-6g

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Amphenol Fiber Systems International (AFSI) :



Amphenol Fiber Systems International (AFSI) designs, manufactures, markets and supports the broadest portfolio of reliable and innovative fiber optic interconnect solutions to withstand the harsh environments of military, aerospace, heavy industrial, broadcast and medical applications. Since inception in 1993, AFSI continues to advance its position as a global leader in harsh environment fiber optic interconnect.

AFSI has delivered millions of fiber optic solutions in more than 30 countries. Whenever there is a need for superior, cost-effective fiber optic systems to withstand the harshest of operating environments, you can rely on AFSI for engineering know-how, top-quality products and expert technical support.

Visit www.fibersystems.com for more information.

How to Order:

For more information on how to order or to obtain a price quote on our Arinc 801 products, call toll free (U.S. only) at 800.472.4225, international calls please use 1.214.547.2400 or e-mail info@fibersystems.com.

Build an ARINC 801 Connector:

1.	2.	3.	4.	5.	6.	7.
Base Part Number	Shell Size	Shell Type	Hole Layout	Insert Material	Shell Material & Finish	Key
FS801						

1. Base Part Number		5. Insert Material	
FS801		A	Aluminum
2. Shell Size		4. Hole Layout	
11		2	
13		4	
15		6	
17		8	
19		12	
21		16	
23		24	
25		32	
3. Shell Type		6. Shell Material & Finish	
P	Straight Plug	B	Black Anodized Alum
R	Wall Mount Receptacle	C	CAD Olive Drab Alum
J	Jam Nut Receptacle	S	Passivated Stainless Steel
		K	Nickel Plated Alum
		Z	Black Zinc Nickel
		M	Marine Bronze
		P	Ni Plated Composite
		J	CAD OD Composite
		7. Key	
		N	
		A	
		B	
		C	
		D	
		E	

M801 Terminus:

1.	2.	3.	4.	5.
Base Part Number	Mode	Polish	Fiber Size	Cable Structure
M801				
1. Base Part Number	3. Polish		4. Fiber Size	
M801	S	Super Polish	1	MM (50/125 & 62.5/125)
	U	Ultra Polish	2	SM (9/125)
	A	Angle Polish	3	MM (100/140)
			4	MM (50/125)
			8	MM (200/230)
5. Cable Structure				
P	Pull Proof (loose structure)			
N	Non Pull Proof (tight structure)			

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4

3

2

1

NOTES: UNLESS OTHERWISE SPECIFIED

1. TERMINI INSTALLATION TOOL- M81969/8-07

2. TERMINI EXTRACTION TOOL- M81969/8

3. SEE SHEET 2 FOR PANEL CUTOUT DIMENSION & KEYING POSITIONS

4. SEE SHEET 3 FOR SHELL SIZES AND TERMINI PATTERNS

REVISION HISTORY - ALL SHEETS ARE THE SAME REVISION

REV	DESCRIPTION	DATE	APPROVED
G	ECN 180320-0920, XLT	2018/03/20	CJ
H	ECN 180917-1517, XLT	2018/09/18	CJ
J	ECN 210512-1320 JC	2021/05/12	JW

FS801- XX X XX X X X

SHELL SIZE DESIGNATION
(COLUMN A)

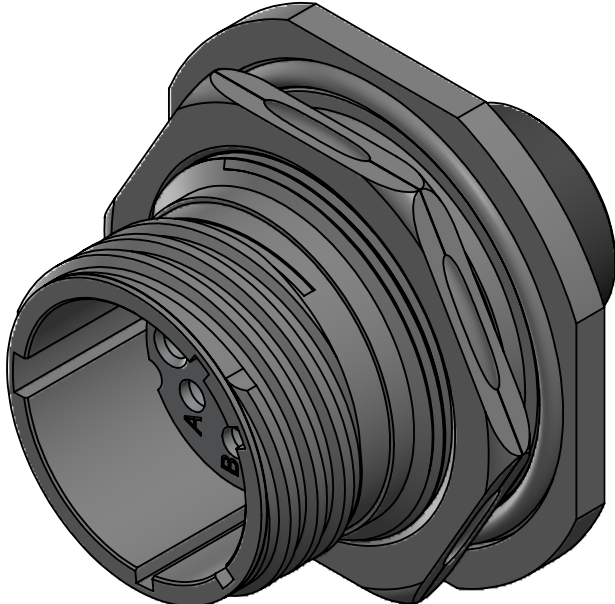
SHELL TYPE DESIGNATION
(COLUMN B)

HOLE LAYOUT
(COLUMN C)

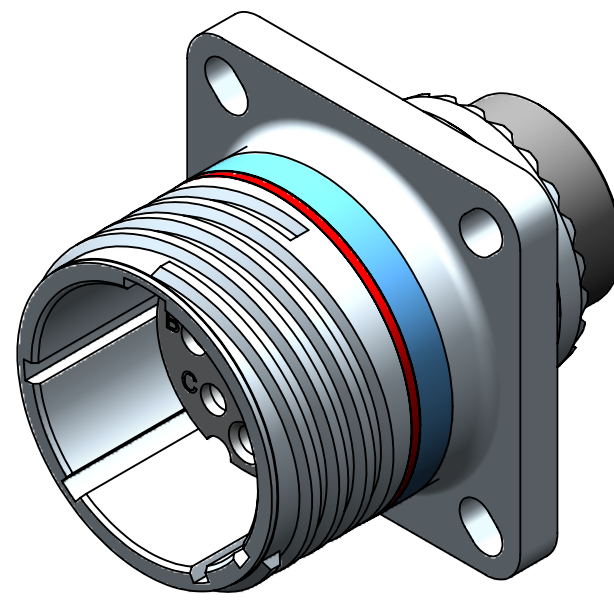
KEYING POSITION DESIGNATION
(COLUMN F)

SHELL MATERIAL & FINISH
(COLUMN E)

INSERT MATERIAL
(COLUMN D)



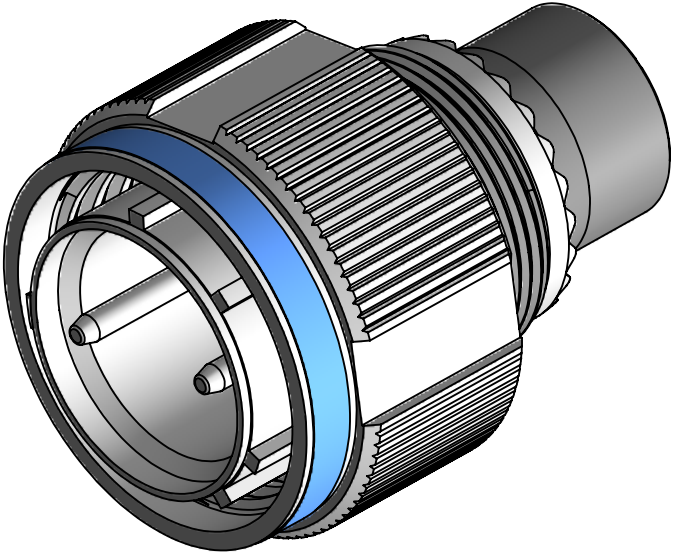
JAM NUT RECEPTACLE ASSEMBLY



WALL MOUNT RECEPTACLEASSEMBLY

ARINC CONNECTOR PRODUCT INFORMATION

PART NUMBER	A	B	C	D	E	F
	SHELL SIZE	SHELL TYPE	HOLE LAYOUT	INSERT MATERIAL	SHELL MATERIAL & FINISH	KEY
FS801- XX X XX X X X	11	P = STRAIGHT PLUG R = WALL MOUNT RECEPTACLE J = JAM NUT RECEPTACLE	02	A= ALUMINUM	B = BLACK ANODIZED ALUM C = CAD OLIVE DRAB ALUM S = PASSIVATED STAINLESS STEEL K = NICKEL PLATED ALUM Z = BLACK ZINC NICKEL M = MARINE BRONZE P = Ni PLATED COMPOSITE J = CAD OD COMPOSITE V = BLACK TIN ZINC ALUM	N, A B, C, D & E
	13		04			
	15		06			
	17		08			
	19		12			
	21		16			
	23		24			
	25		32			



PLUG ASSEMBLY

PRODUCT DRAWING

DFT RAH 2011/09/13

ENG CJ 2011/09/21

CHK CJ 2011/10/18

APP CJ 2011/10/27

DO NOT SCALE DRAWING
UNLESS OTHERWISE SPECIFIED
DIM ARE IN INCHES
TOL ON ANGLES ±3
1 PL ±.1 2 PL ±.02 3 PL ±.010
INTERPRET DIM AND TOL PER
ASME Y14.5-2009

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TITLE

PLUG AND JAM NUT/ WALL MOUNT
RECEPTACLE ASSEMBLIES, ARINC

SIZE C

CAGE CODE ØYPM2

DWG NO FS801

REV J

SCALE 2:1

SHEET 1 OF 6

TOP ASSY: 152 SERIES

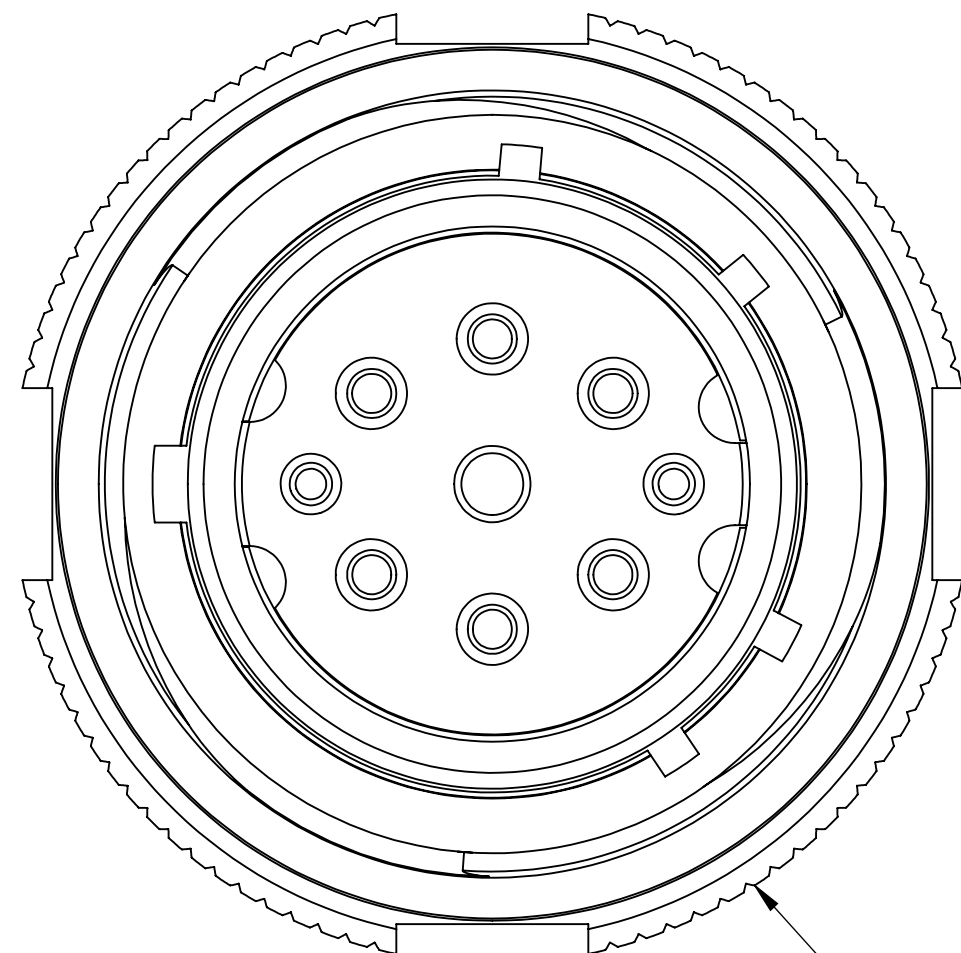
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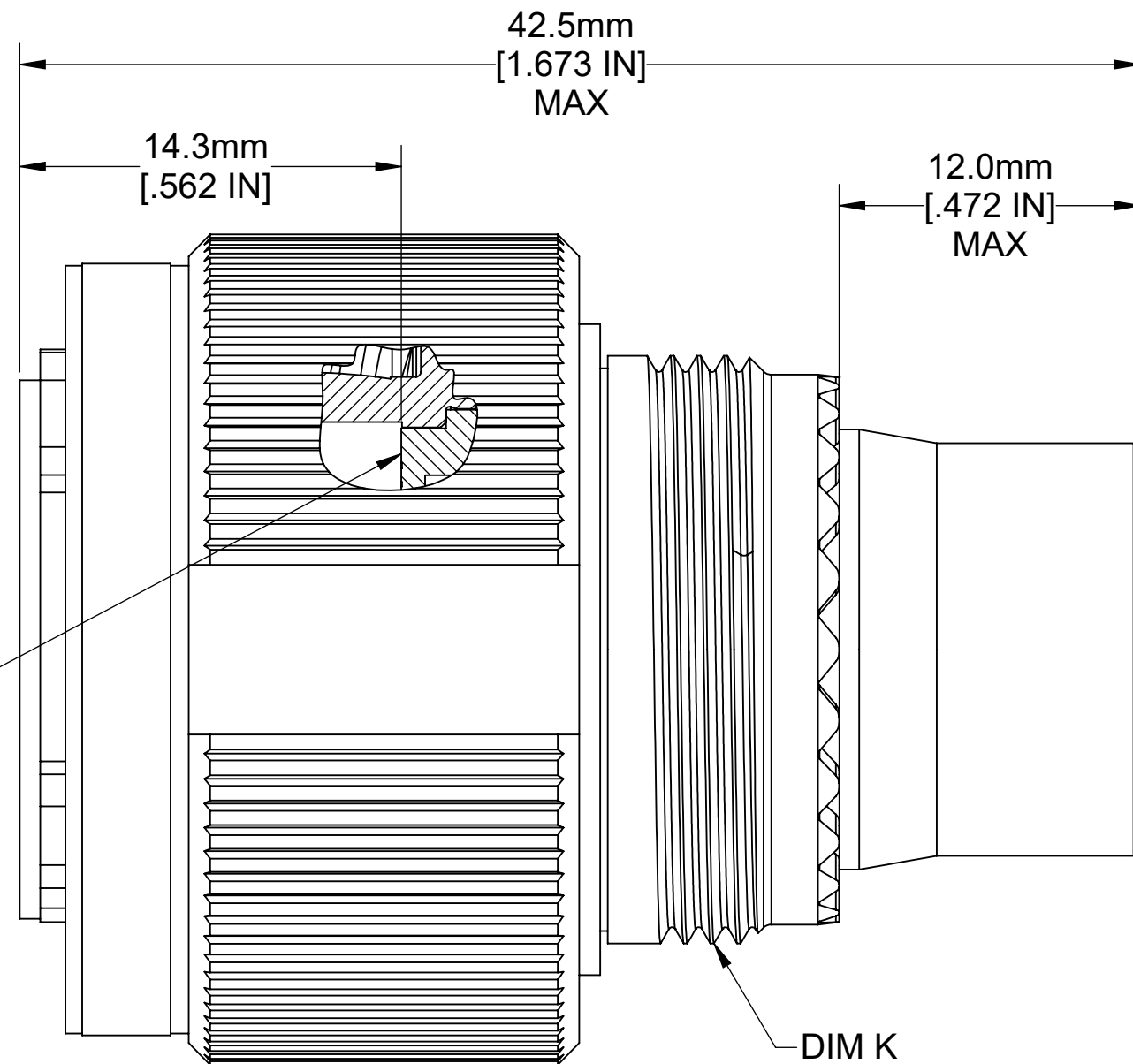
2

1



DIM ØA

INSERT
FRONT
SURFACE



DIM K

PLUG ASSEMBLY

TABLE II

SHELL SIZE	DIM ØA MAX	DIM B SQ ±0.3	DIM C SQ ±0.4	DIM ØD MAX	DIM E +.25/-0.00	DIM ØF +.00/-0.25	DIM G MIN	DIM ØH MIN	DIM ØJ ±.13	DIM K THREAD
11	24.9mm (0.98")	26.2mm (1.031")	31.8mm (1.250")	35.2mm (1.386")	19.59mm (.771")	20.96mm (0.825")	20.62mm (0.812")	20.22mm (0.796")	3.25mm (.128")	M15 X 1-6g
13	29.2mm (1.150")	28.6mm (1.125")	34.9mm (1.375")	38.4mm (1.512")	24.26mm (0.955")	25.65mm (1.010")	23.01mm (0.906")	23.42mm (0.922")		M18 X 1-6g
15	32.3mm (1.272")	31.0mm (1.220")	38.1mm (1.500")	41.6mm (1.638")	27.56mm (1.085")	28.83mm (1.135")	24.61mm (0.969")	26.59mm (1.047")		M22 X 1-6g
17	35.8mm (1.410")	33.3mm (1.311")	41.3mm (1.625")	44.8mm (1.764")	30.73mm (1.210")	32.01mm (1.260")	26.97mm (1.062")	30.96mm (1.219")		M25 X 1-6g
19	38.6mm (1.520")	36.5mm (1.437")	46.0mm (1.811")	49.5mm (1.950")	33.91mm (1.335")	35.18mm (1.385")	29.36mm (1.156")	32.94mm (1.297")		M28 X 1-6g
21	41.9mm (1.650")	39.7mm (1.563")	49.2mm (1.937")	52.7mm (2.075")	37.08mm (1.460")	38.35mm (1.510")	37.75mm (1.250")	36.12mm (1.422")	3.91mm (0.154")	M31 X 1-6g
23	44.7mm (1.760")	42.9mm (1.689")	52.4mm (2.063")	55.9mm (2.200")	40.26mm (1.585")	41.53mm (1.635")	34.93mm (1.375")	39.29mm (1.547")	3.91mm (0.154")	M34 X 1-6g
25	48.0mm (1.890")	46.0mm (1.811")	55.6mm (2.189")	59.0mm (2.323")	43.43mm (1.710")	44.70mm (1.760")	38.10mm (1.500")	42.47mm (1.672")	3.81mm (0.150")	M37 X 1-6g

TABLE III

SHELL SIZE	KEYING POSITION DESIGNATOR	A°	B°	C°	D°
11 13 & 15	N	95°	141°	208°	236°
	A	113°	156°	182°	292°
	B	90°	145°	195°	252°
	C	53°	156°	220°	255°
	D	119°	146°	176°	298°
17 & 19	E	51°	141°	184°	242°
	N	80°	142°	196°	293°
	A	135°	170°	200°	310°
	B	49°	169°	200°	244°
	C	66°	140°	200°	257°
21 23 & 25	D	62°	145°	180°	280°
	E	79°	153°	197°	272°
	N	80°	142°	196°	293°
	A	135°	170°	200°	310°
	B	49°	169°	200°	244°
	C	66°	140°	200°	257°
	D	62°	145°	180°	280°
	E	79°	153°	197°	272°

SIZE	CAGE CODE	DWG NO	REV
C	ØYPM2	FS801	J
SCALE	4:1	SHEET	2 OF 6

4

3

2

1

4

3

2

1

D

D

C

C

B

B

A

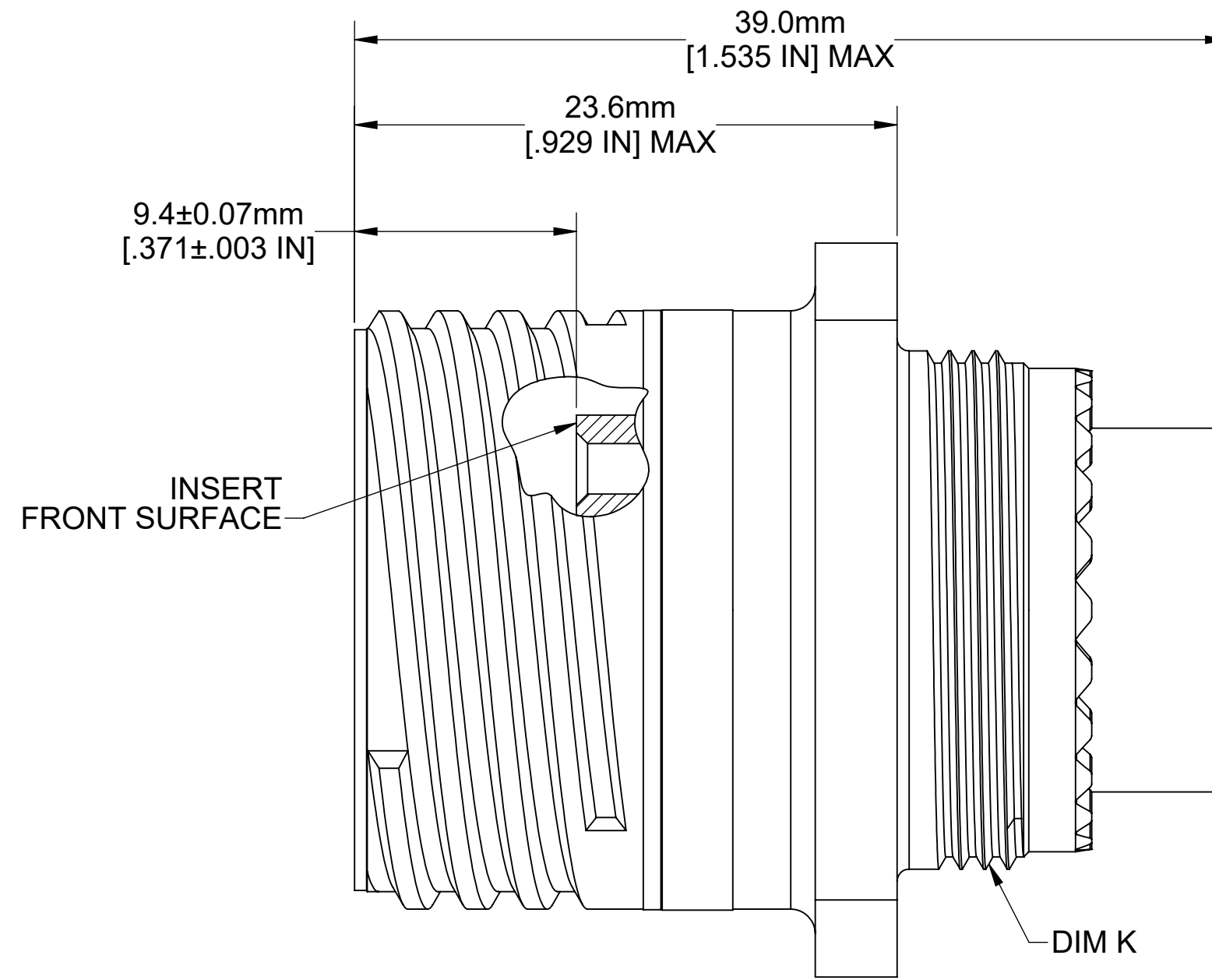
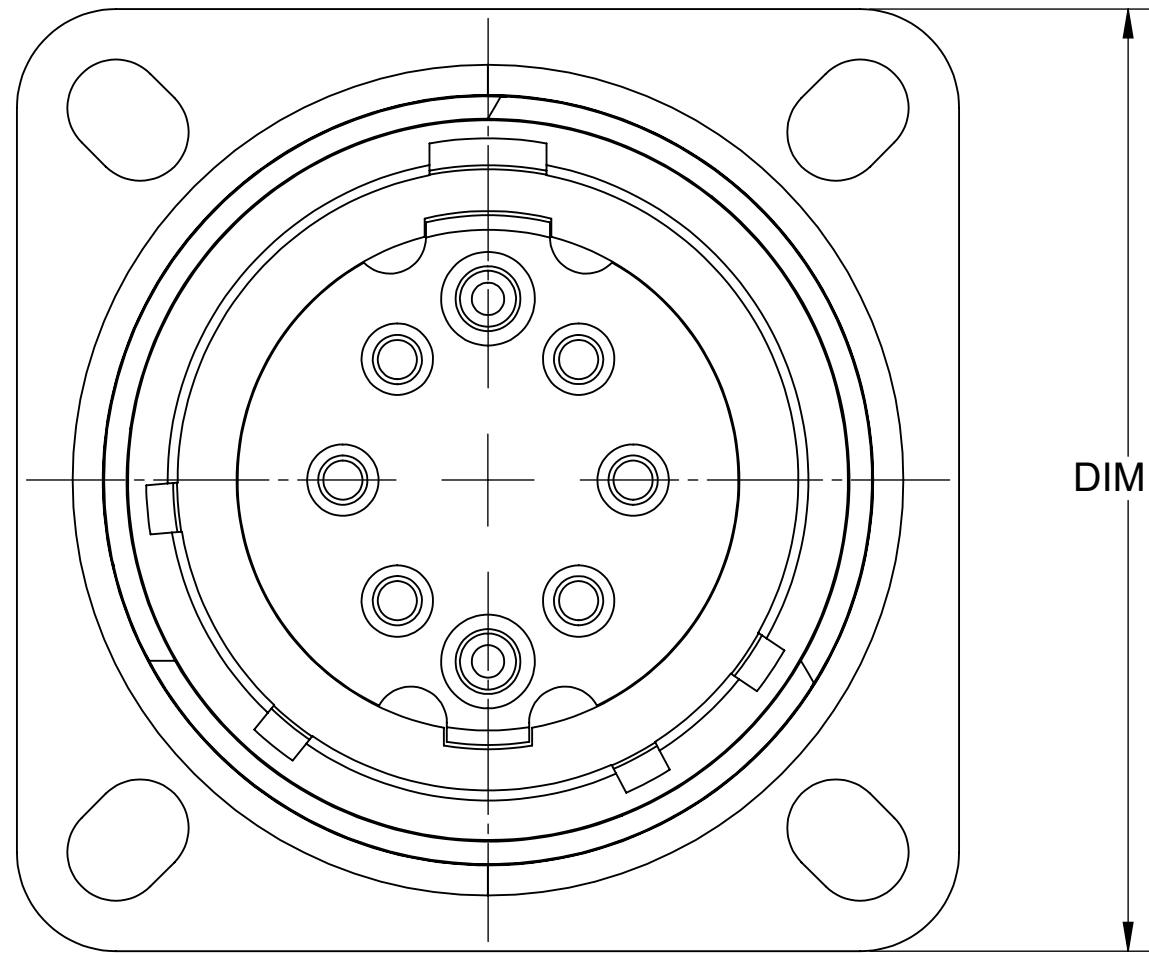
A

4

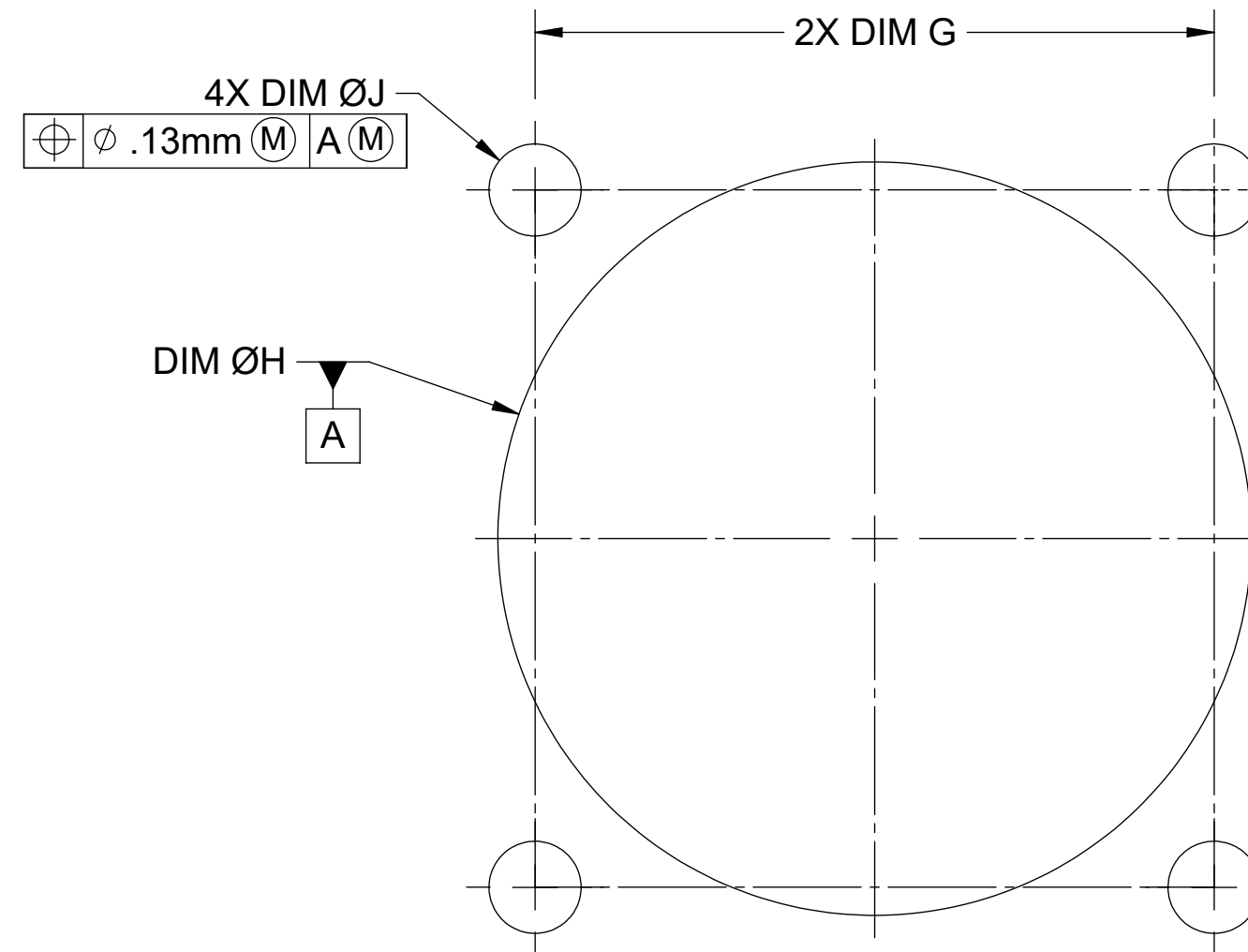
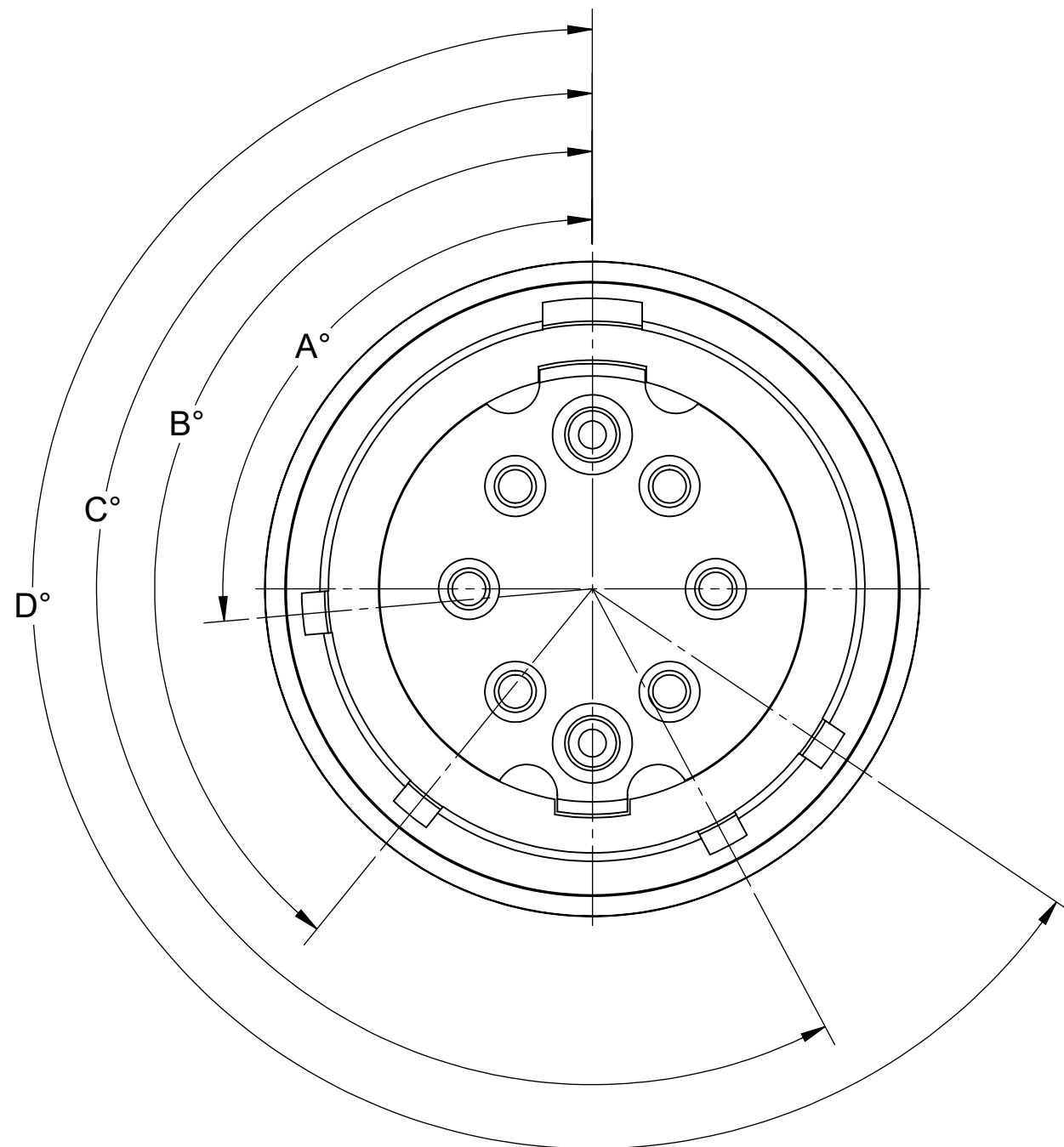
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2

1

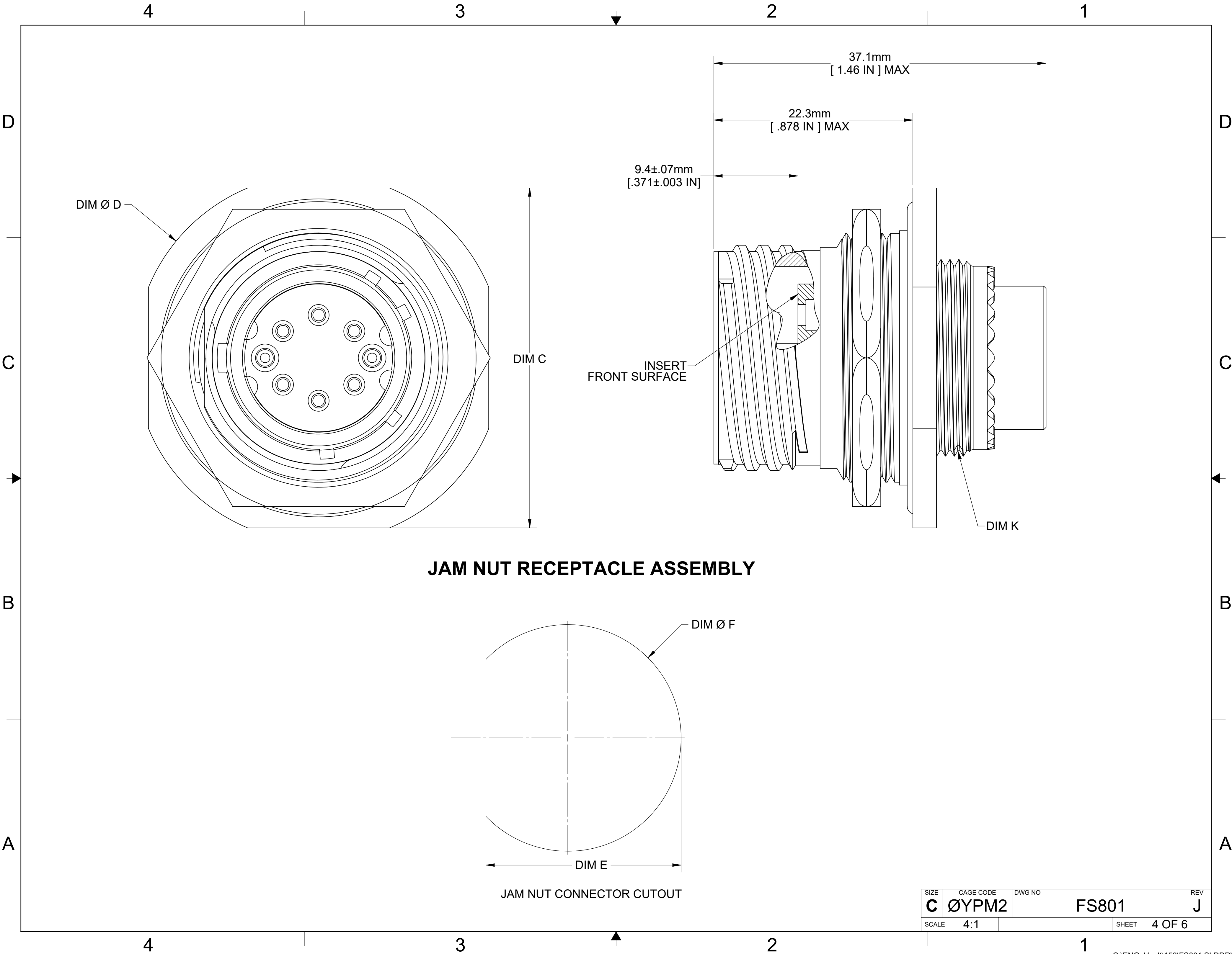


WALL MOUNT ASSEMBLY



WALL MOUNT CONNECTOR CUTOUT

SIZE	CAGE CODE	DWG NO	REV
C	ØYPM2	FS801	J
SCALE	4:1	SHEET	3 OF 6



SIZE	CAGE CODE	DWG NO	REV
C	ØYPM2	FS801	J
SCALE	4:1	SHEET	4 OF 6

4

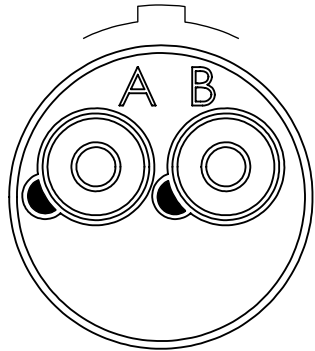
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2

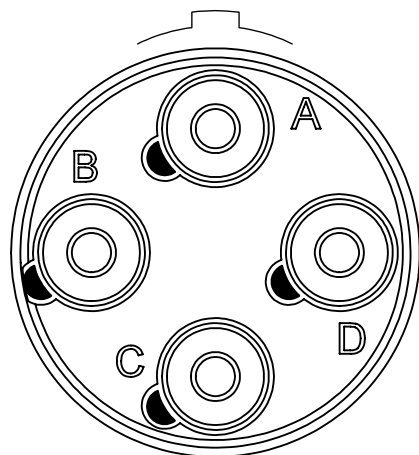
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D

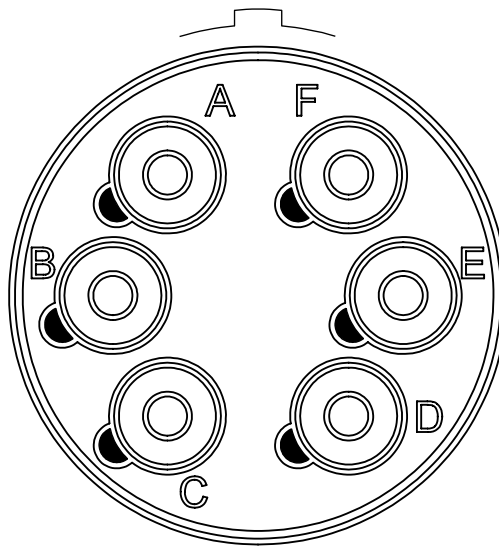
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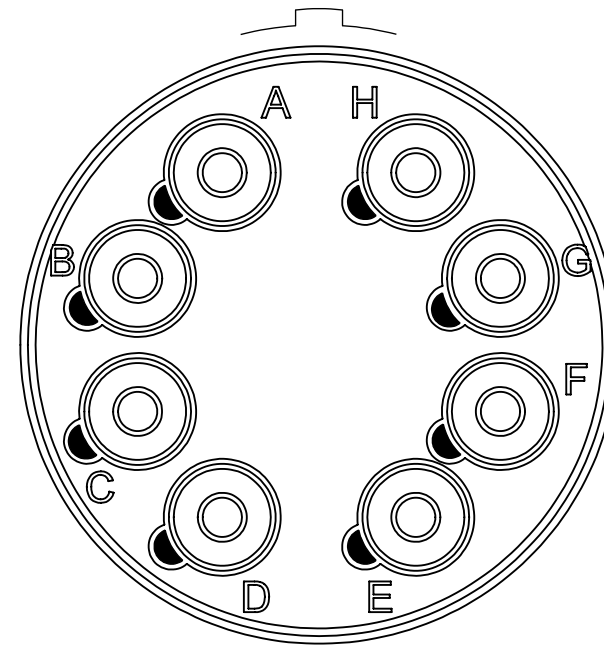
SHELL SIZE 11



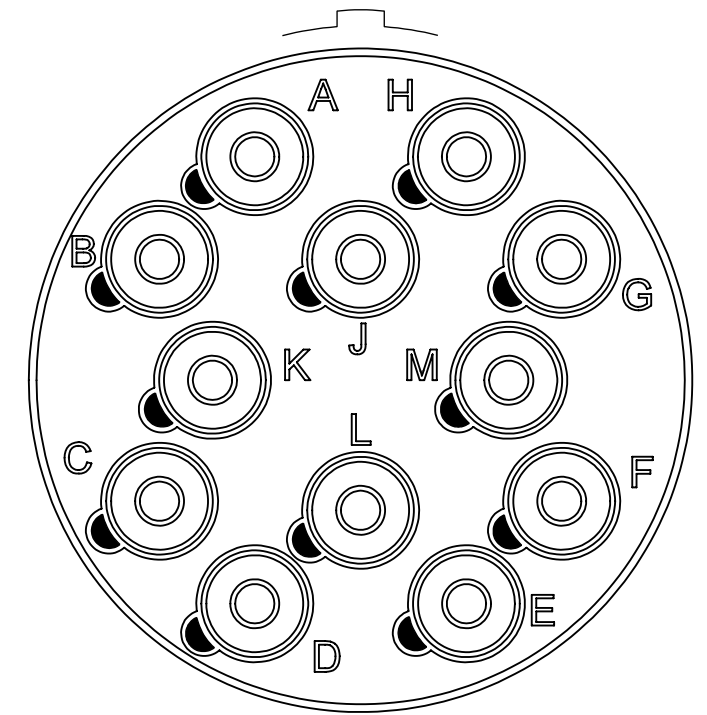
SHELL SIZE 13



SHELL SIZE 15



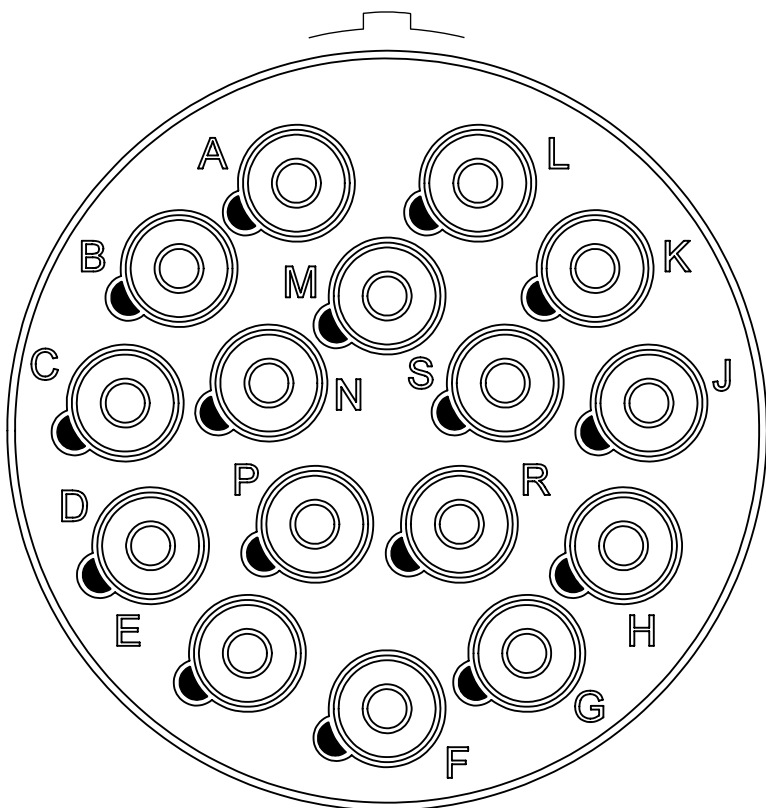
SHELL SIZE 17



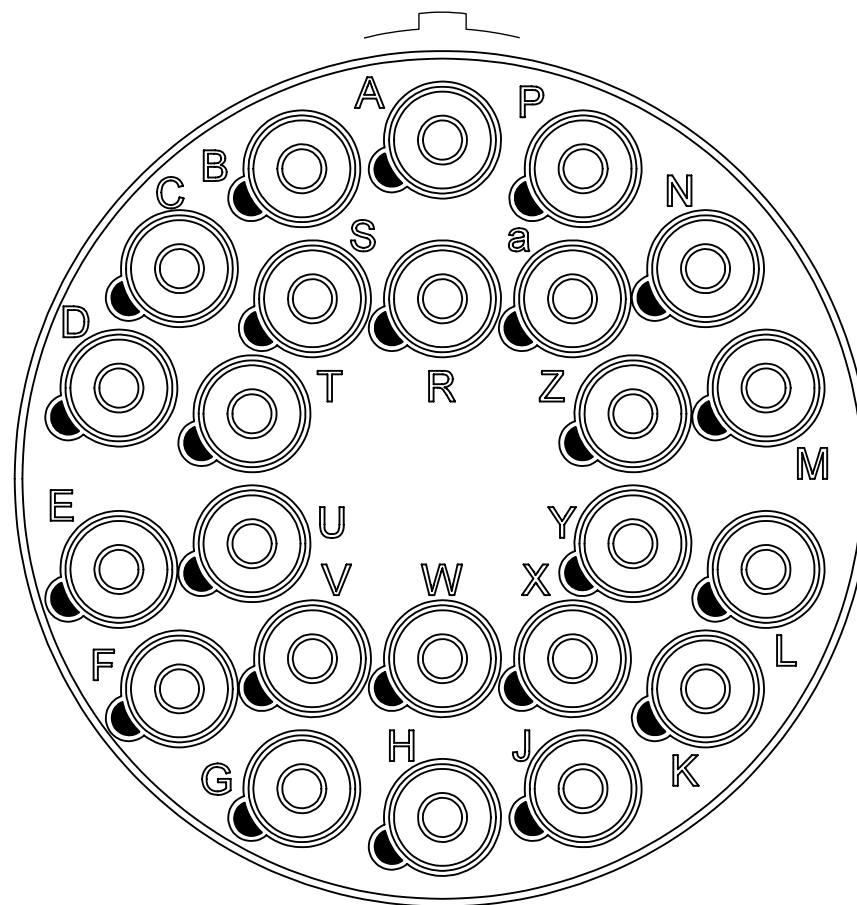
SHELL SIZE 19

C

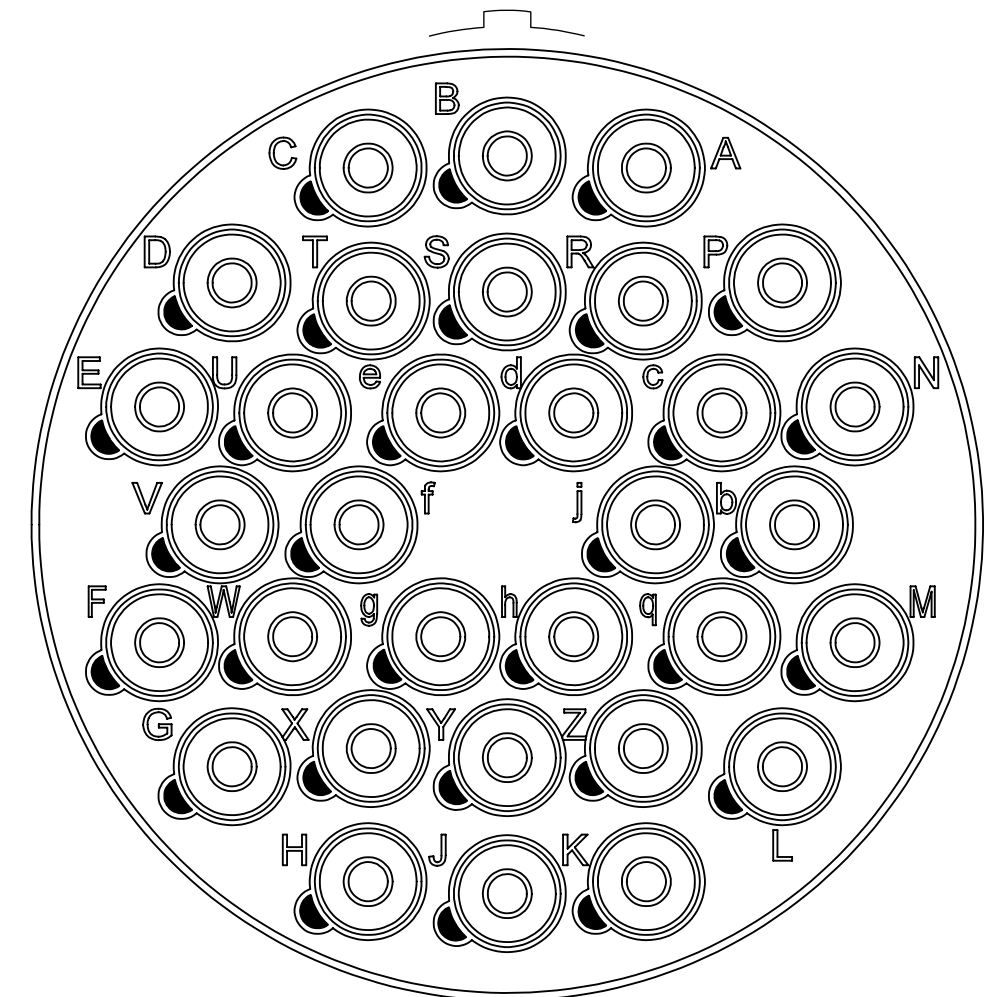
C



SHELL SIZE 21



SHELL SIZE 23



SHELL SIZE 25

B

B

A

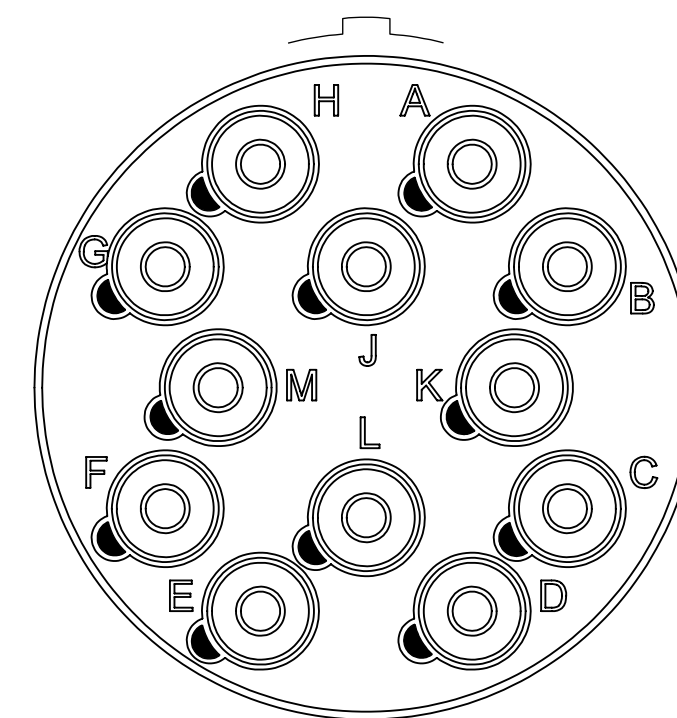
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PLUG GROMMET FACE

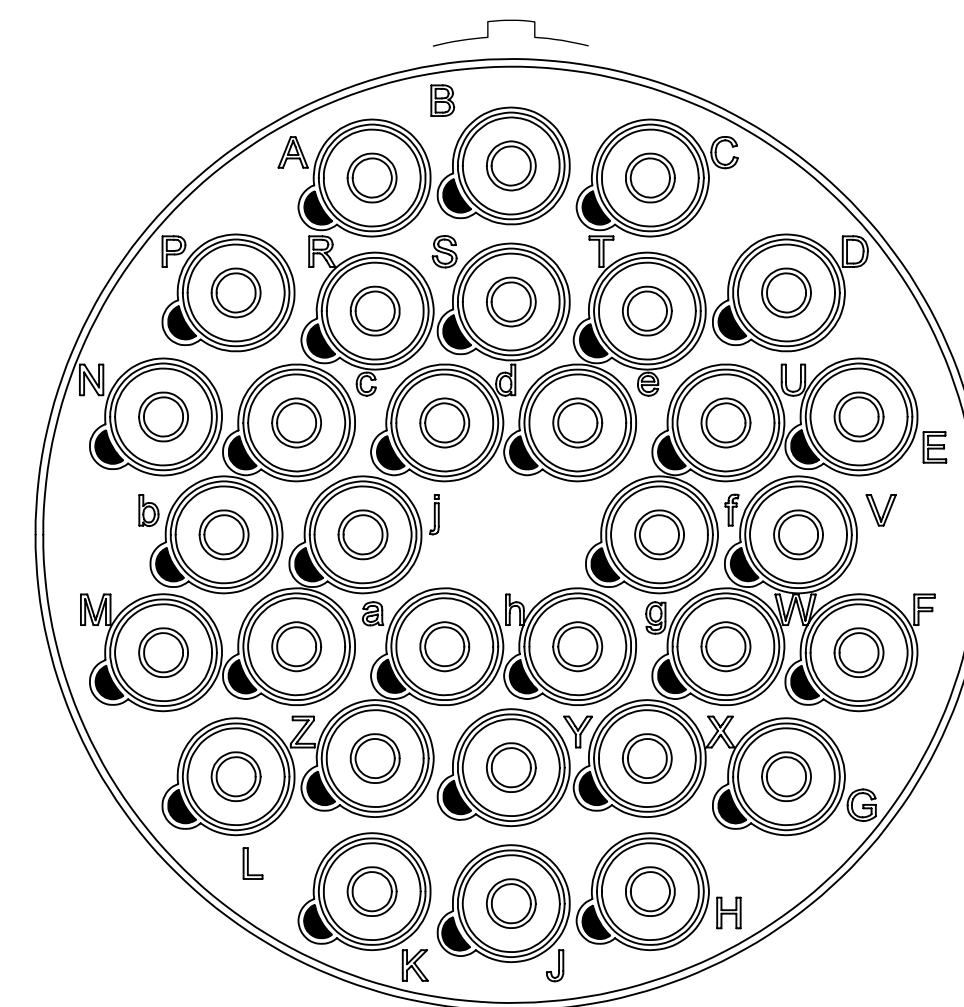
SIZE	CAGE CODE	DWG NO	REV
C	ØYPM2	FS801	J
SCALE	4:1	SHEET	5 OF 6

1

A



SHELL SIZE 19



SHELL SIZE 25

RECEPTACLE GROMMET FACE

SIZE C	CAGE CODE ØYPM2	DWG NO FS801	REV J
SCALE 4:1			SHEET 6 OF 6

C:\ENG_Vault\152\FS801.SLDDRW