

YH38999-I,III CONNECTOR MIL-DTL-38999-IV CONNECTOR

MIL-DTL-38999-I,III Style

QPL certification
MIL-DTL-38999-IV





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Overview

MIL-DTL-38999 Series Style Connector can be divided into 3 distinctive classes which have individual characteristics. This connector is primarily used in equipment that require great reliability in electrical, mechanical, and environmental characteristics such as Space and Aviation Equipment, and special communications tools.

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

ELECTRICAL DATA

Service Rating

Altitude	Service Rating M		Service Rating N		Service Rating I		Service Rating II	
	Mated	Unmated	Mated	Unmated	Mated	Unmated	Mated	Unmated
Sea Level	1300	1300	1000	1000	1800	1800	2300	2300
50,000 ft.	800	550	600	400	1000	600	1000	800
70,000 ft.	800	350	600	260	1000	400	1000	500
100,000 ft.	800	200	600	200	1000	200	1000	200

Test voltage, AC(rms)

Materials and Finishes

	Receptacle	Grounded Plug
Shell	Aluminum alloy	Aluminum alloy*
Insulator	High grade plastic	High grade plastic
Contacts	Copper alloy, gold plate	Copper alloy, gold plate
Grommet and Seal	Silicone base elastomer	Silicone base elastomer
Jam Nut	Aluminum alloy	—
Coupling	—	Aluminum alloy*
Grounding Spring	—	Beryllium copper

*Finish as noted in how to order sections.

TECHNICAL DATA

Test Description	Parameters						
Durability	500 cycles of mating and unmating						
Temperature Range	Series	Class (Finish)	Temperature Range				
		I	A	−65 °C to +150 °C			
			B	−65 °C to +175 °C			
	III, IV	F	−65 °C to +200 °C				
		W	−65 °C to +175 °C				
		Vibration	Mated connectors are vibrated with weights to simulate rear accessory loads to the following levels :				
Series	Sine Vibration		Random Vibration		Random Vibration		
	Overall rms		Temperature	Overall rms	Temperature	Overall rms	Temperature
I	30 G		Ambient	43.92 G	Ambient	49.5 G	Ambient
III	60 G		−55 °C to +200 °C	43.92 G	+200°C		
IV	30 G		Ambient	43.92 G	Ambient		
EMI Shielding Effectiveness	Series	Class (Finish)	Leakage	Shell to Shell Conductivity			
	I	B	100 MHz : 90 dB		2.5 mV		
			10 GHz : 50 dB				
	F		100 MHz : 90 dB		1.0 mV		
			10 GHz : 50 dB				
III, IV	F	100 MHz : 90 dB		1.0 mV			
		10 GHz : 65 dB					
	W	100 MHz : 90 dB		2.5 mV			
	10 GHz : 50 dB						
Corrosion Resistant	Class(Finish) A, F : withstand 48 hours salt spray. Class(Finish) B, W : withstand 500 hours salt spray.						
Fluid Immersion	Connectors are fluid resistant to many fuels, solvents, coolants and oils.						
High Impact Shock	Applicable to series I, III and IV only. Wired and mated connectors shall be tested in accordance with MIL–S–901, grade A with the following modifications and additions.						
Altitude	Designed to operate between sea level and 100,000 ft. above sea level.						
Other Environments	Mated connectors shall withstand sand and dust per method 110 of MIL–STD–202 and be ice resistant. Applicable to Series I, III & IV only.						

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

Contact Part Nnumber Cross Reference



CONTACT STYLE	CONTACT SIZE	MILITARY PART NUMBER
PIN	22D	M39029/58-360
	22M	M39029/58-361
	22	M39029/58-362
	20	M39029/58-363
	16	M39029/58-364
	12	M39029/58-365
	10	M39029/58-528
	12 COAX	M39029/28-211*
	8 TWINAX	M39029/90-529**
	8 COAX	M39029/60-367
SOCKET	22D	M39029/56-348
	22M	M39029/56-349
	22	M39029/56-350
	20	M39029/56-351
	16	M39029/56-352
	12	M39029/56-353
	10	M39029/56-527
	12 COAX	M39029/75-416*
	8 TWINAX	M39029/91-530**
	8 COAX***	M39029/59-366



*Recommended use with RG174, RG179 and RG316 cable.

**Recommended use with M17/176-00002 cable.

***For use with RG180B/U and RG195A/U cable.

Seal Plugs



SIZE	MILITARY PART NUMBER	YEONHAB PART NUMBER
22D, 22M, 22	M27488-22	YH27488-22
20	M27488-20	YH27488-20
16	M27488-16	YH27488-16
12	M27488-12	YH27488-12

Wire Size and Diameters

UNITS : mm

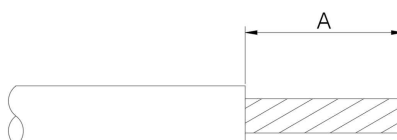
Contact Size	Wire Size (AWG)	Finished wire outside dimensions	
		Minimum	maximum
22D	28, 26, 24, 22	0.762	1.372
22M*	28, 26, 24	0.762	1.270
22*	26, 24, 22	0.864	1.524
20	24, 22, 20	1.016	2.108
16	20, 18, 16	1.651	2.769
12	14, 12	2.464	3.607
12 Coax	RG-174, 179, 316	2.388	2.591
8 Coax	M17/95-RG-180	3.454	3.708
8 Twinax	M17/176-00002	3.150	3.404

*For reference only

Wire Stripping

UNITS : mm

strip insulation from end of wire to be crimped.
(see table for proper stripping dimension.) Do not cut or damage wire strands.



Wire Size	A
22D OR 22M*	3.18
20	4.77
16	4.77
12	4.77

*For reference only

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

TECHNICAL DATA

Characteristic

- Corrosion-resistant shells of aluminium alloy with cadmium over nickel plating withstand a 500 hours salt spray exposure
- Rear release crimp snap-in contacts
- High contact density
- Standard SAE-AS39029 contacts, MIL-I-81969 application tools and MIL-STD-1560 insert arrangements
- Special/custom capabilities
- 100% Scoop-proof – Series I, III and IV
- Operated under severe high temperature vibration testing through 200°C – engineered for high density circuitry – Series III
- Interfacial seal helps prevent electrolytic erosion of contacts – Series III, IV
- Superior EMI shielding provides outstanding protection up to 50dB at 10 GHz. – Series I
- Superior EMI shielding provides outstanding protection up to 65dB at 10 GHz. – Series III, IV

Specification Comparison

Design	Series I	Series III	Series IV
Low profile/Light Weight	no	no	no
Scoop proof	yes	yes	yes
Coupling System	Bayonet	Triple Lead Thread	Breech
Electrolytic Erosion	no	yes	yes
Durability(Cycles)	500	500	500
High Impact Shock	yes	yes	yes
External Bending Moment			
Shell Size 25	650 in/lbs	1000 in/lbs	650 in/lbs
Random Vibration "J"	43.92G, Ambient	43.92G, 200°C	43.92G, Ambient
Sine Vibration	30G, Ambient	60G, -65°C to +200°C	30G, Ambient
Sand, Dust, Ice	yes	yes	yes
Shell Size	9-25	9-25	11-25

ELECTRICAL DATA

Contact Rating

	Contact Size	Test Current DC Test Amperage	Maximum Millivolt Drop*	Crimp Well Data	
				Well Diameter	Well Depth
	22D	5	40	0.876 ±0.025	3.988/3.581
	22M**	3	30	0.711 ±0.025	3.988/3.581
	22**	5	40	0.927 ±0.025	3.988/3.581
	20	7.5	35	1.194 ±0.025	5.817/5.309
	16	13	25	1.702 ±0.025	5.817/5.309
	12	23	25	2.540 ±0.051	5.817/5.309

Dimensions shown in mm

Specifications and dimensions subject to change

*Maximum millivolt drop data is determined by measuring resistance of mated contacts from end to end
**For reference only

Contact Rating and Wire Size Accommodation

Wire Size	Contact Size and Test Amps					
	22D	22M*	22*	20	16	12
28	1.5	1.5	–	–	–	–
26	2.0	2.0	2.0	–	–	–
24	3.0	3.0	3.0	3.0	–	–
22	5.0	–	5.0	5.0	–	–
20	–	–	–	7.5	7.5	–
18	–	–	–	–	10.0	–
16	–	–	–	–	13.0	–
14	–	–	–	–	–	17.0
12	–	–	–	–	–	23.0

*For reference only

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

Crimping Tools



Contact Size	Pin Contact Series I, III, IV		Socket Contact Series I, III, IV	
	Crimp Tool Part Number	Locator or Turret Part Number	Crimp Tool Part Number	Locator or Turret Part Number
22D or 22M*	M22520/2-01	M22520/2-09	M22520/2-01	M22520/2-07
22*	M22520/2-01	M22520/2-09	M22520/2-01	M22520/2-07
20	M22520/1-01	M22520/1-04 OR TH 187	M22520/1-01	M22520/1-04
16	M22520/1-01	M22520/1-04 OR TH 187	M22520/1-01	M22520/1-04
12	M22520/1-01	M22520/1-04	M22520/1-01	M22520/1-04
8 Coax				
Inner Conductor	Crimp Tool	Crimp Tool Locator	Crimp Tool	Crimp Tool Locator
RG-180	M22520/2-01	995-002-268-268	M22520/2-501	M22520/2-5-39B
RG-174, 179, 310	M22520/2-01	995-002-268-268	M22520/2-501	M22520/2-5-37B
RG-142	M22520/2-01	995-002-268-268	M22520/2-501	M22520/2-5-19B
12 Coax				
Inner Conductor	Crimp Tool	Crimp Tool Locator	Crimp Tool	Crimp Tool Locator
RG-174, 316	M22520/2-01	M22520/2-34	M22520/31-01	M22520/31-02
8 Twinax				
Center Contact	Crimp Tool	Crimp Tool Locator		
	M22520/2-01	M22520/2-37		
Intermediate Contact	M22520/5-01	M22520/5-200		
Outer Contact	M22520/5-01	M22520/5-200		

*For reference only

Insertion Tools



Plastic Tool		
Contact Size	MS Part Number	Color Code
22D, 22M*	M81969/14-01	Green/(White)
22	M81969/14-09	Brown/(White)
20	M81969/14-10	Red/(Orange)
16	M81969/14-03	Blue/(White)
12	M81969/14-04	Yellow/(White)
10 (Power)	M81969/14-05	Gray/White
12 Coax	M81969/14-04	Yellow/(White)
8 Coax	-	-
8 Twinax	-	-



Metal Tool (Angle Type)		
Contact Size	MS Part Number	Color Code
22D, 22M*	M81969/8-01	Black
22	M81969/8-03	Brown
20	M81969/8-05	Red
16	M81969/8-07	Blue
12	M81969/8-09	Yellow
10	M81969/8-11	Green
12 Coax	M81969/8-09	Yellow
8 Coax	-	-
8 Twinax	M81969/46-06	Red

*For reference only

Removal Tools



Plastic Tool		
Contact Size	MS Part Number	Color Code
22D, 22M*	M81969/14-01	(Green)/White
22	M81969/14-09	(Brown)/White
20	M81969/14-10	(Red)/Orange
16	M81969/14-03	(Blue)/White
12	M81969/14-04	(Yellow)/White
10 (Power)	M81969/14-05	(Gray)/White
12 Coax	M81969/14-04	(Yellow)/White
8 Coax	M81969/14-12	Green
8 Twinax	M81969/14-12	Green

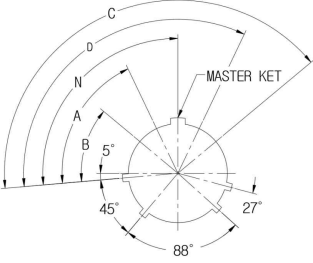


Metal Tool (Angle Type)		
Contact Size	MS Part Number	Color Code
22D, 22M*	M81969/8-02	Green/White
22	M81969/8-04	Yellow/White
20	M81969/8-06	Blue/White
16	M81969/8-08	Red/White
12	M81969/8-10	Brown/White
10 (Power)	M81969/8-12	Green/White
12 Coax	M81969/8-10	Brown/White
8 Coax	-	N/A
8 Twinax	M81969/46-12	N/A

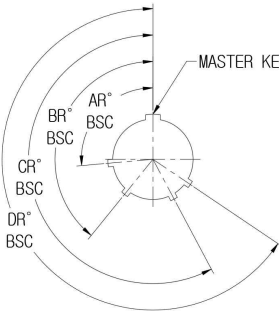
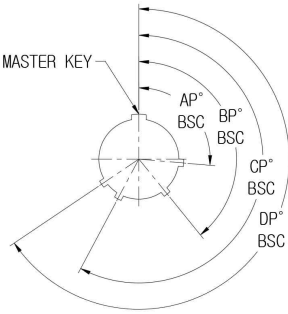
*For reference only

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

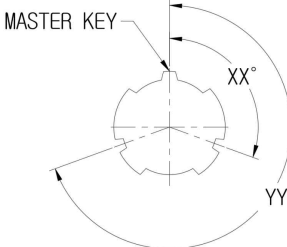
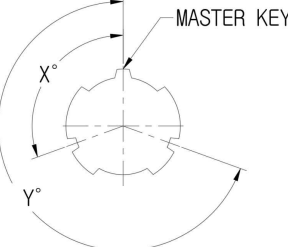
Polarizing Positions

Series I	Angle of Rotation(Degrees)					
	Shell Size	Normal	A	B	C	D
	9	95°	77°	—	—	113°
	11	95°	81°	67°	123°	109°
	13	95°	75°	63°	127°	115°
	15	95°	74°	61°	129°	116°
	17	95°	77°	65°	125°	113°
	19	95°	77°	65°	125°	113°
	21	95°	77°	65°	125°	113°
	23	95°	80°	69°	121°	110°
	25	95°	80°	69°	121°	110°

Front face of receptacle(plug opposite.) Insert arrangement does not rotate with main key—keyway.
The master key is rotated to provide shell polarization ; the minor keys remain fixed.

Series III		Shell Size	Key & Keyway Arrangement identification Letter	Key Locations			
RECEPTACLE (Front face shown)	PLUG (Front face shown)			AR° or AP° BSC	BR° or BP° BSC	CR° or CP° BSC	DR° or DP° BSC
		9	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	95	141	208	236
			A	113	156	182	292
			B	90	145	195	252
			C	53	156	220	255
		17 and 19	D	119	146	176	298
			E	51	141	184	242
			N	80	142	196	293
			A	135	170	200	310
			B	49	169	200	244
		21 23 and 25	C	66	140	200	257
			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

- NOTES**
1. All Angles are BSC
 2. The insert arrangement does not rotate with main key/keyway
 3. All minor keys are rotated to provide shell polarization, the master key remains fixed at twelve o'clock position.
 4. Polarization is different from series I.

Series IV		Shell Size	Key & Keyway Arrangement identification Letter	Key Locations	
RECEPTACLE (Front face shown)	PLUG (Front face shown)			X° or XX°	Y° or YY°
		11	N	110	250
		13	A	100	260
		15	B	90	270
		17	C	80	280
		19	D	70	290
		21	L	120	265
		and	M	120	275
		23	R	120	285
			U	0	0

- NOTES**
1. All Angles are BSC
 2. The insert arrangement does not rotate with main key/keyway
 3. All minor keys are rotated to provide shell polarization, the master key remains fixed at twelve o'clock position.
 4. Polarization is different from series I.

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

Insert Availability and Identification

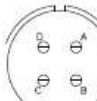
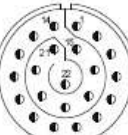
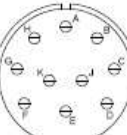
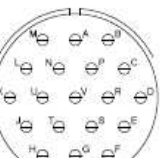
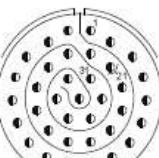
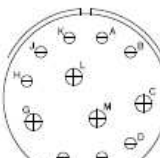
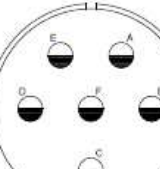
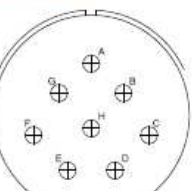
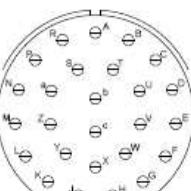
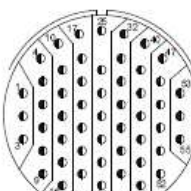
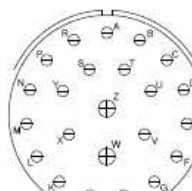
QPL Series IV	Series I, III & IV	Service Rating	Total Contacts	Contact Size						
				22D	22M	22	20	16	12	8
	9-35	M	6	6						
	9-44	M	4			4				
	9-98	I	3				3			
	11-4	I	4				4			
QPL	11-5	I	5				5			
QPL	11-35	M	13	13						
QPL	11-98	I	6				6			
QPL	11-99	I	7				7			
QPL	13-4	I	4					4		
QPL	13-8	I	8				8			
	13-22	M	22		22					
QPL	13-35	M	22	22						
QPL	13-98	I	10				10			
QPL	15-5	II	5					5		
	15-15	I	15				14	1		
QPL	15-18	I	18				18			
QPL	15-19	I	19				19			
QPL	15-35	M	37	37						
QPL	15-97	I	12				8	4		
QPL	17-6	I	6						6	
QPL	17-8	II	8					8		
QPL	17-26	I	26				26			
QPL	17-35	M	55	55						
	17-99	I	23				21	2		
QPL	19-11	II	11					11		
QPL	19-32	I	32				32			
QPL	19-35	M	66	66						
QPL	21-11	I	11						11	
QPL	21-16	II	16					16		
QPL	21-35	M	79	79						
	21-39	I	39				37	2		
QPL	21-41	I	41				41			
	21-75	Twinax	4							4***
	23-21	II	21					21		
QPL	23-35	M	100	100						
	23-53	I	53				53			
QPL	23-55	I	55				55			
QPL	25-4	I	56				48	8		
	25-7	Twinax, M	99	97						
	25-19	I	19						19	
QPL	25-29	I	29					29		
QPL	25-35	M	128	128						
	25-37	II	37				37			
	25-43	I	43				23	20		
	25-46	I, Coax	46				40	4		2***
QPL	25-61	I	61				61			

*Coax for RG-180 cables

**Coax for RG-174, RG-179 or RG-316 cables

***Twinax for M17/176-00002 cables
(check factory for other cable applications)

Insert Arrangement

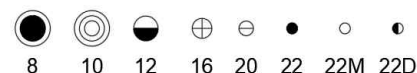
Shell Size 9			Shell Size 11		
					
Insert Arrangement	9-35	9-44	11-4	11-5	11-35
Service Rating	M	M	I	I	M
Number of Contacts	6	4	4	5	13
Contact Size	22D	22	20	20	22D
Shell Size 11			Shell Size 13		
					
Insert Arrangement	11-98	11-99	13-4	13-8	13-22
Service Rating	I	I	I	I	M
Number of Contacts	6	7	4	8	22
Contact Size	20	20	16	20	22M
Shell Size 13			Shell Size 15		
					
Insert Arrangement	13-35	13-98	15-5	15-15	15-18
Service Rating	M	I	II	I	I
Number of Contacts	22	10	5	14 1	18
Contact Size	22D	20	16	20 16	20
Shell Size 15			Shell Size 17		
					
Insert Arrangement	15-19	15-35	15-97	17-6	
Service Rating	I	M	I	I	
Number of Contacts	19	37	8 4	6	
Contact Size	20	22D	20 16	12	
Shell Size 17					
					
Insert Arrangement	17-8	17-26	17-35	17-99	
Service Rating	II	I	M	I	
Number of Contacts	8	26	55	21 2	
Contact Size	16	20	22D	20 16	

1. View looking into front face of pin insert.

2. Please make a direct inquiry for the information not contained in the table.

3. The contact arrangement in the table meets the MIL-STD-1560 standards.

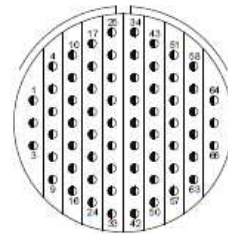
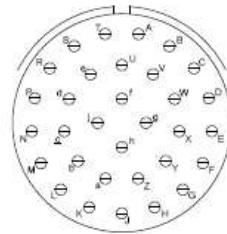
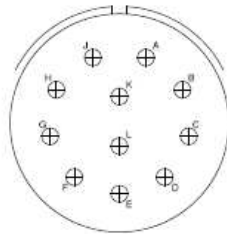
Contact Legend



MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

Insert Arrangement

Shell Size 19



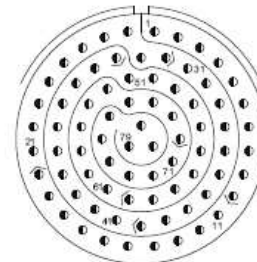
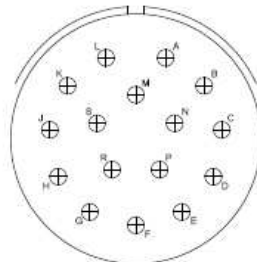
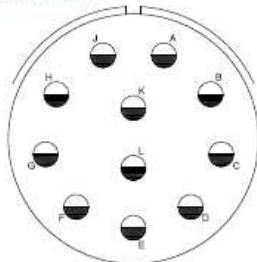
Insert Arrangement
Service Rating
Number of Contacts
Contact Size

19-11
II
11
16

19-32
I
32
20

19-35
M
66
22D

Shell Size 21



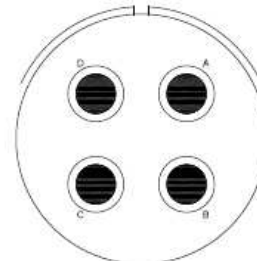
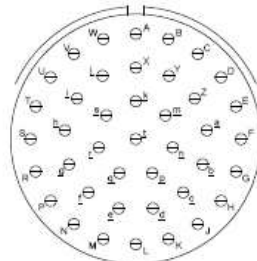
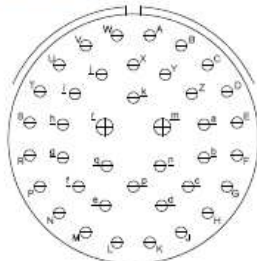
Insert Arrangement
Service Rating
Number of Contacts
Contact Size

21-11
I
11
12

21-16
II
16
16

21-35
M
79
22D

Shell Size 21



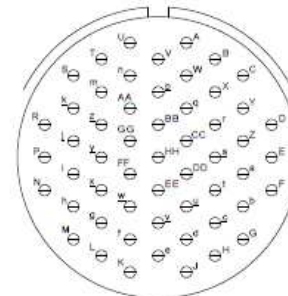
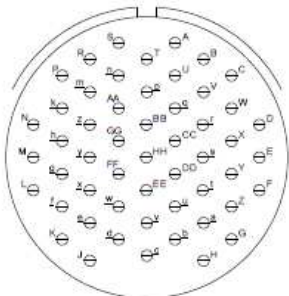
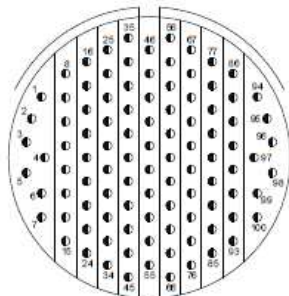
Insert Arrangement
Service Rating
Number of Contacts
Contact Size

21-39
I
37 2
20 16

21-41
I
41
20

21-75
Twinax
4
8 Twinax

Shell Size 23



Insert Arrangement
Service Rating
Number of Contacts
Contact Size

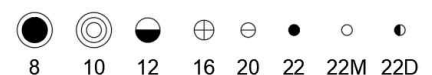
23-35
M
100
22D

23-53
I
53
20

23-55
I
55
20

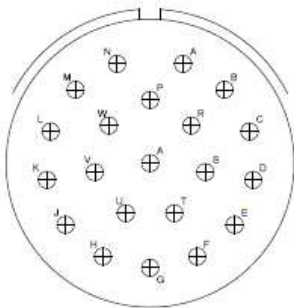
1. View looking into front face of pin insert.
2. Please make a direct inquiry for the information not contained in the table.
3. The contact arrangement in the table meets the MIL-STD-1560 standards.

Contact Legend



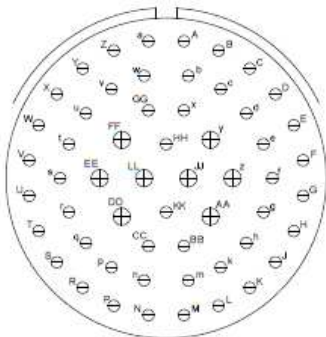
Insert Arrangement

Shell Size 23

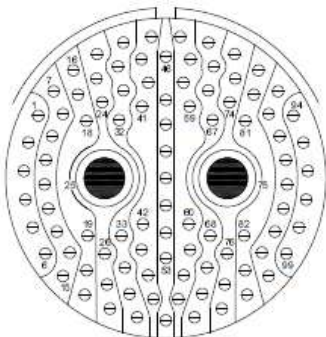


Insert Arrangement	23-21
Service Rating	II
Number of Contacts	21
Contact Size	16

Shell Size 25

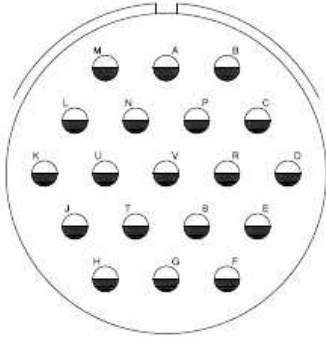


Insert Arrangement	25-4
Service Rating	I
Number of Contacts	48
Contact Size	20 8

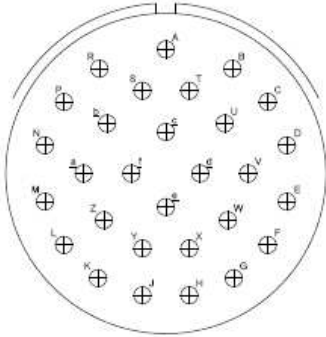


Insert Arrangement	25-7
Service Rating	Twinax, M
Number of Contacts	97
Contact Size	22D 8 Twinax

Shell Size 25



Insert Arrangement	25-19
Service Rating	I
Number of Contacts	19
Contact Size	12



Insert Arrangement	25-29
Service Rating	I
Number of Contacts	29
Contact Size	16

1. View looking into front face of pin insert.
2. Please make a direct inquiry for the information not contained in the table.
3. The contact arrangement in the table meets the MIL-STD-1560 standards.

Contact Legend

8

10

12

16

20

22

22M

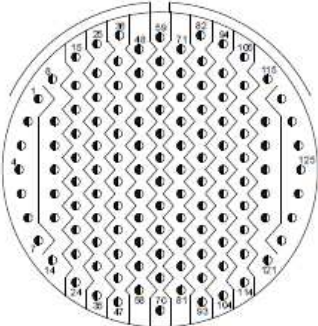
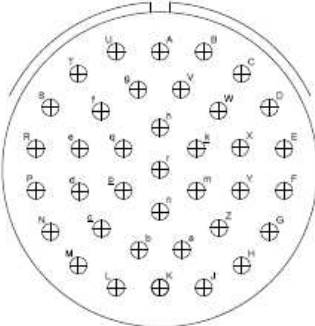
22D

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR

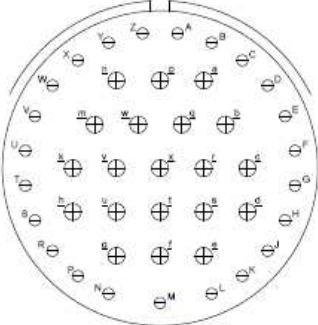
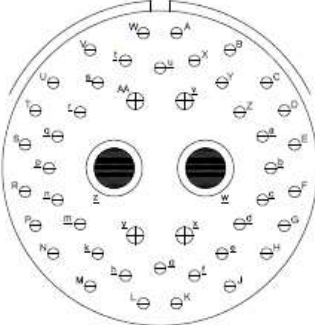
YEONHAB(YH)

Insert Arrangement

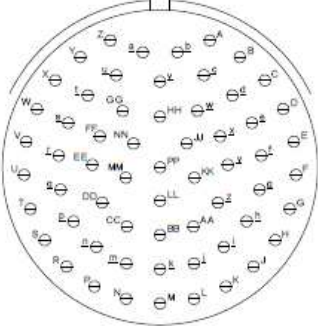
Shell Size 25

		
Insert Arrangement	25-35	25-37
Service Rating	M	II
Number of Contacts	128	37
Contact Size	22D	16

Shell Size 25

		
Insert Arrangement	25-43	25-46
Service Rating	I	I, Coax
Number of Contacts	23 20	40 4 2
Contact Size	20 16	20 16 8 Coax.

Shell Size 25

	
Insert Arrangement	25-61
Service Rating	I
Number of Contacts	61
Contact Size	20

1. View looking into front face of pin insert.
2. Please make a direct inquiry for the information not contained in the table.
3. The contact arrangement in the table meets the MIL-STD-1560 standards.

Contact Legend

 8  10  12  16  20  22  22M  22D

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

Military Standard Cross Reference : MIL-DTL-38999 Series I

Military Nomenclature

MS NUMBER SHELL STYLE

MS27466 – Wall Mounting Receptacle
MS27467 – Grounded Plug, Grounded
MS27468 – Jam Nut Receptacle
MS27656 – Wall Mounting Receptacle
(back panel)(Class E)
MS27501 – Plug Protection Cap
MS27502 – Receptacle Protection Cap

CLASS

E – Inactive for new design.
Superseded by Class T.
T – Environment – resistant with
accessory threads and teeth.

SHELL SIZE

9, 11, 13, 15, 17, 19, 21, 23, and 25

HARDWARE FINISH

A – Silver to light iridescent color cadmium plate over
nickel, –65°C to 150°C(–85°F to +302°F)
B – Olive drab cadmium over electroless nickel plate,
–65°C to +175°C(–85°F to +347°F)
F – Electroless nickel coating, –65°C to +200°C
(–85°F to 392°F)

INSERT ARRANGEMENT

MIL–STD–1560

CONTACT STYLE

P – Pin
S – Socket
A – Less Pin Contact*
B – Less Socket Contact*

*Used only when other than power contacts are to be
installed(i.e., shielded, thermocouple, etc.)

POLARIZING POSITION

A, B, C, and D.(No letters required for normal).

Note : To order MS connectors less standard power
contacts, purchase order must state "Less Contacts".

How To order(Commercial Equivalent : YH-38999-XX/Non-QPL, Series I Style)

YEONHAB Nomenclature

PREFIX

YH – YEONHAB

SHELL STYLE

27466 – Wall Mounting Receptacle
27467 – Grounded Plug, Grounded
27468 – Jam Nut Receptacle
27656 – Wall Mounting Receptacle
(back panel)(Class E)
27501 – Plug Protection Cap
27502 – Receptacle Protection Cap

CLASS

E – Inactive for new design.
Superseded by Class T.
T – Environment – resistant with
accessory threads and teeth.

SHELL SIZE

9, 11, 13, 15, 17, 19, 21, 23, and 25

HARDWARE FINISH

A – Silver to light iridescent color cadmium plate over
nickel, –65°C to 150°C(–85°F to +302°F)
B – Olive drab cadmium over electroless nickel plate,
–65°C to +175°C(–85°F to +347°F)
F – Electroless nickel coating, –65°C to +200°C
(–85°F to 392°F)

INSERT ARRANGEMENT

MIL–STD–1560

CONTACT STYLE

P – Pin
S – Socket
A – Less Pin Contact*
B – Less Socket Contact*

*Used only when other than power contacts are to be
installed(i.e., shielded, thermocouple, etc.)

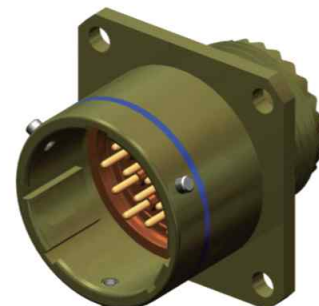
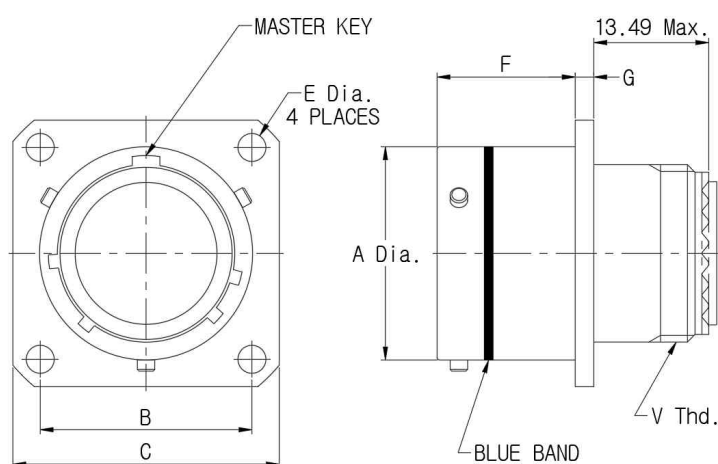
POLARIZING POSITION

A, B, C, and D.(No letters required for normal).

WALL MOUNTING RECEPTACLE(FRONT PANEL)

YH27466

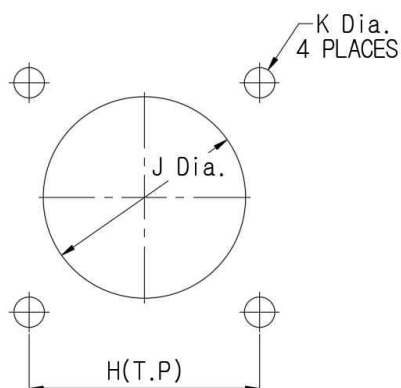
(CLASSES E, T)



UNITS : mm

SHELL SIZE	A Dia. +0.03 -0.13	B BSC	C ±0.51	E Dia. +0.25 -0.13	F +0.00 -0.13	G +0.38 -0.00	V Thd. (CLASS : 2A)
9	14.53	18.26	23.83	3.25	16.05	2.16	7/16-28UNEF
11	17.78	20.62	26.19	3.25	16.05	2.16	9/16-24UNEF
13	21.59	23.01	28.58	3.25	16.05	2.16	11/16-24UNEF
15	24.77	24.61	30.96	3.25	16.05	2.16	13/16-20UNEF
17	27.94	26.98	33.33	3.25	16.05	2.16	15/16-20UNEF
19	30.66	29.36	36.53	3.25	16.05	2.16	1 1/16-18UNEF
21	33.83	31.75	39.66	3.25	15.29	2.92	1 3/16-18UNEF
23	37.01	34.93	42.88	3.73	15.29	2.92	1 5/16-18UNEF
25	40.18	38.10	46.03	3.73	15.29	2.92	1 7/16-18UNEF

Front Panel Mounting Cut-Out



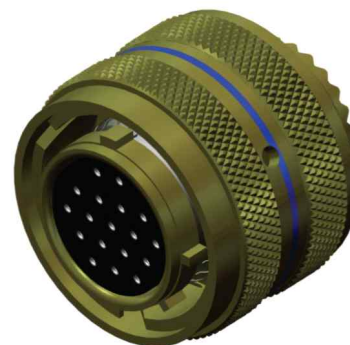
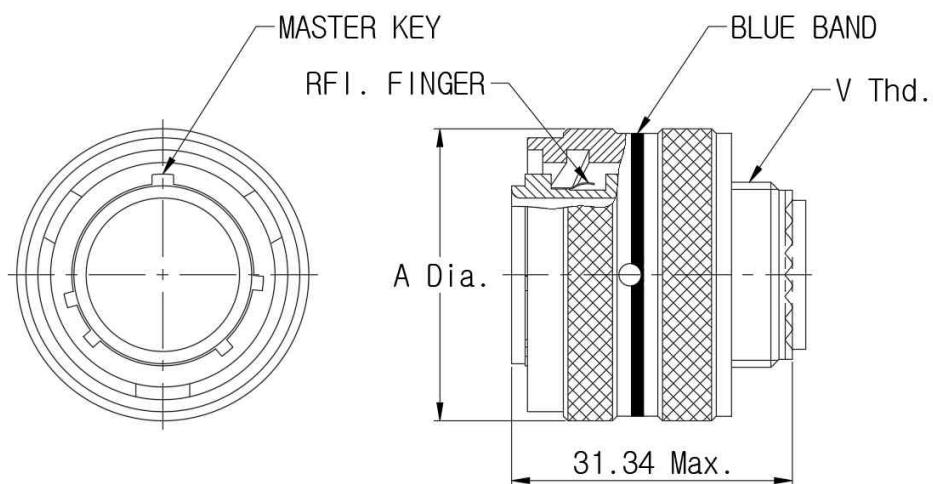
SHELL SIZE	H (T.P)	J Dia. Min.	K Dia. ±0.13
9	18.26	13.11	3.25
11	20.62	15.88	3.25
13	23.01	19.05	3.25
15	24.61	23.01	3.25
17	26.97	25.81	3.25
19	29.36	28.98	3.25
21	31.75	32.16	3.25
23	34.93	34.93	3.91
25	38.10	37.69	3.81

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

STRAIGHT PLUG(EMI)

YH27467

(CLASSES E, T)



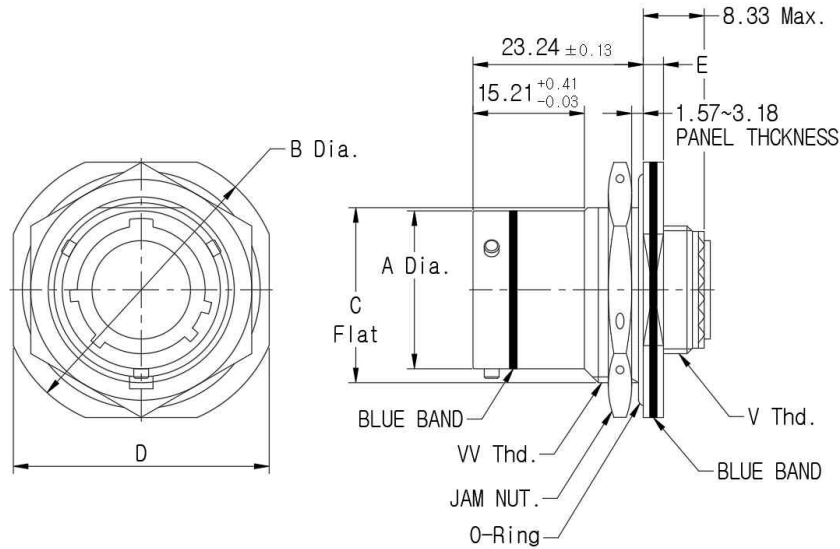
UNITS : mm

SHELL SIZE	A Dia. Max.	V Thd. (CLASS : 2A)
9	21.82	7/16-28UNEF
11	24.99	9/16-24UNEF
13	29.36	11/16-24UNEF
15	32.54	13/16-20UNEF
17	35.71	15/16-20UNEF
19	38.51	1 1/16-18UNEF
21	41.68	1 3/16-18UNEF
23	44.86	1 5/16-18UNEF
25	48.03	1 7/16-18UNEF

JAM NUT RECEPTACLE

YH27468

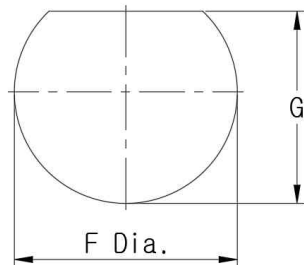
(CLASSES E, T)



UNITS : mm

SHELL SIZE	A Dia. $+0.03$ -0.13	B Dia. ± 0.41	C Flat $+0.00$ -0.25	D ± 0.41	E $+0.28$ -0.25	V Thd. (CLASS : 2A)	VV Thd. (CLASS : 2A)	O-RING AS3578 DASH No.	JAM NUT YH3186 DASH No.
9	14.53	30.18	16.64	26.97	2.77	7/16-28UNEF	11/16-24UNEF	-019	-106
11	17.78	34.93	19.18	31.75	2.77	9/16-24UNEF	13/16-20UNEF	-022	-108
13	21.59	38.10	23.93	34.93	2.77	11/16-24UNEF	1-20UNEF	-024	-111
15	24.77	41.28	27.08	38.10	2.77	13/16-20UNEF	1 1/8-18UNEF	-026	-113
17	27.94	44.45	30.25	41.28	2.77	15/16-20UNEF	1 1/4-18UNEF	-028	-116
19	30.66	49.23	33.43	46.02	3.56	1 1/16-18UNEF	1 3/8-18UNEF	-128	-117
21	33.83	52.38	36.60	49.23	3.56	1 3/16-18UNEF	1 1/2-18UNEF	-130	-120
23	37.01	55.58	39.78	52.37	3.56	1 5/16-18UNEF	1 5/8-18UNEF	-132	-121
25	40.18	58.73	42.95	55.58	3.56	1 7/16-18UNEF	1 3/4-18UNS	-134	-122

Panel Mounting Cut-Out



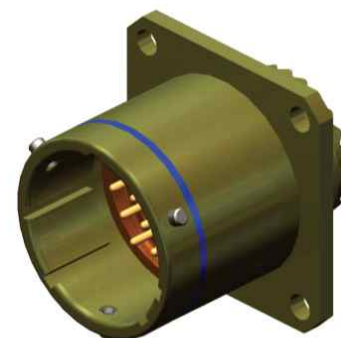
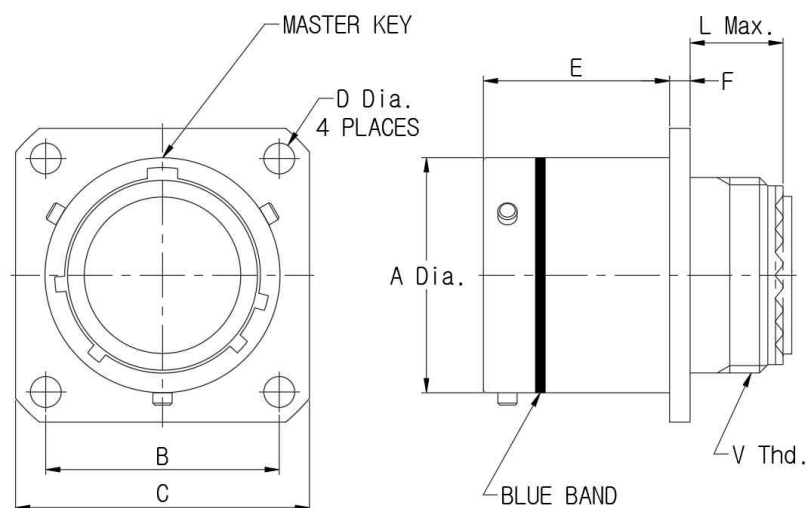
SHELL SIZE	Jam Nut TORQUE INCH-LBS	F Dia. $+0.25$ -0.00	* G $+0.00$ -0.25
9	28/34	17.60	16.70
11	34/40	20.96	19.58
13	55/55	25.65	24.26
15	70/75	28.83	27.56
17	80/85	32.01	30.73
19	80/85	35.18	33.91
21	105/115	38.35	37.08
23	105/115	41.53	40.26
25	110/120	44.70	43.43

* For dimension G, shell size 9 only, tolerance is + 0.10 / -0.06 mm.

WALL MOUNTING RECEPTACLE(BACK PANEL)

YH27656

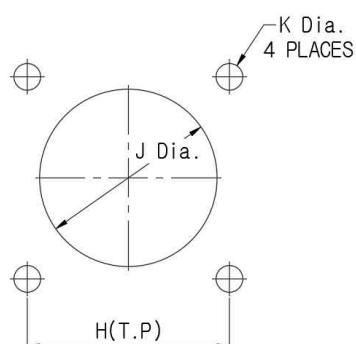
(CLASSES E, T)



UNITS : mm

SHELL SIZE	A Dia. +0.03 -0.13	B BSC	C ±0.51	D Dia. +0.25 -0.13	E +0.00 -0.13	F +0.38 -0.00	L Max.	V Thd. (CLASS : 2A)
9	14.53	18.26	23.83	3.25	20.83	2.16	11.91	7/16-28UNEF
11	17.78	20.62	26.19	3.25	20.83	2.16	11.91	9/16-24UNEF
13	21.59	23.01	28.58	3.25	20.83	2.16	11.91	11/16-24UNEF
15	24.77	24.61	30.96	3.25	20.83	2.16	11.91	13/16-20UNEF
17	27.94	26.98	33.33	3.25	20.83	2.16	11.91	15/16-20UNEF
19	30.66	29.36	36.53	3.25	20.83	2.16	11.91	1 1/16-18UNEF
21	33.83	31.75	39.67	3.25	20.07	2.92	12.70	1 3/16-18UNEF
23	37.01	34.93	42.88	3.73	20.07	2.92	12.70	1 5/16-18UNEF
25	40.18	38.10	46.03	3.73	20.07	2.92	12.70	1 7/16-18UNEF

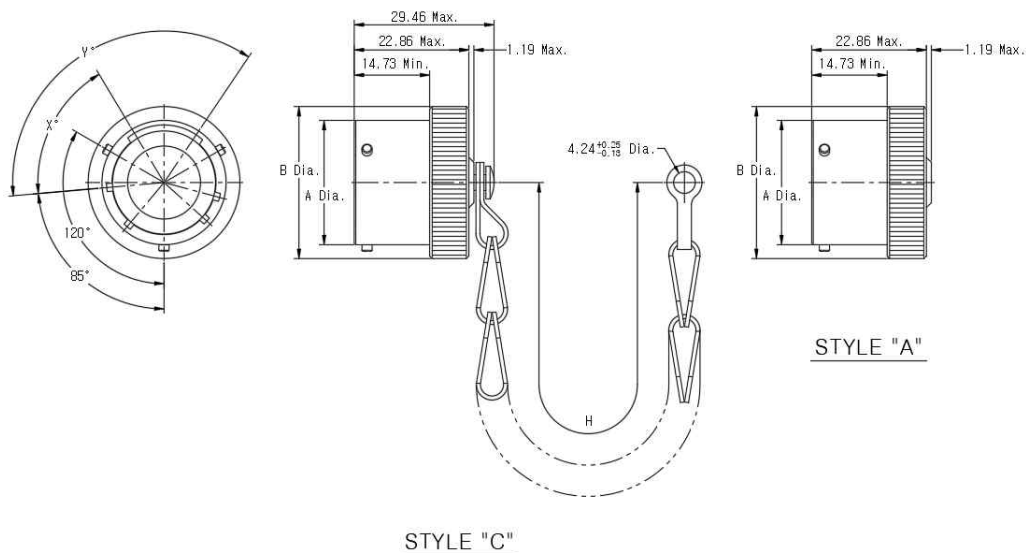
Back Panel Mounting Cut-Out



SHELL SIZE	H (T.P)	J Dia. Min.	K Dia. ±0.13
9	18.26	16.66	3.25
11	20.62	20.22	3.25
13	23.01	23.42	3.25
15	24.61	26.59	3.25
17	26.97	30.96	3.25
19	29.36	32.94	3.25
21	31.75	36.12	3.25
23	34.93	39.29	3.91
25	38.10	42.47	3.81

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

PLUG PROTECTION CAP YH27501



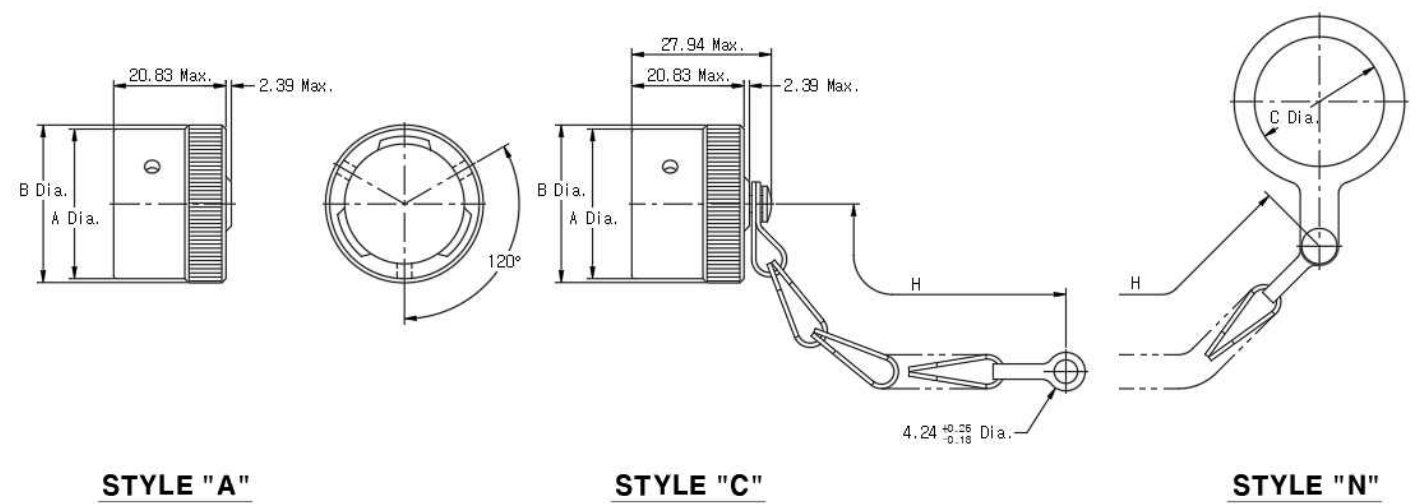
UNITS : mm

SHELL SIZE	A Dia. +0.03 -0.13	ØB MAX.	H +12.7 -6.35 Standard chain length	X°	Y°	FINSH	
9	14.53	20.83	76.2	77	113	A	Cadmium plated nickel base
11	17.78	23.88		67	123	B	Olive drab, cadmium, nickel base
13	21.59	27.18		63	127	C	Anodic coating
15	24.76	30.23	88.9	61	129	F	Electroless nickel
17	27.94	33.53		65	125		
19	30.66	36.58		65	125		
21	33.83	39.88	101.6	65	125		
23	37.01	42.93		69	121		
25	40.18	46.23		69	121		

Military Standard Cross Reference	How To order
MS27501 B 11 C L MS number _____ FINSH _____ SHELL SIZE _____ STYLE _____ A – Without Chain C – Chain LENGTH _____ (Omit for style A or style C with standard chain length) (Tolerance : +12.7, -6.35) L – 5 inch chain in lieu of standard length M – 6 inch chain in lieu of standard length N – 7 inch chain in lieu of standard length	YH27501 B 11 C L YH number _____ FINSH _____ SHELL SIZE _____ STYLE _____ A – Without Chain C – Chain LENGTH _____ (Omit for style A or style C with standard chain length) (Tolerance : +12.7, -6.35) L – 5 inch chain in lieu of standard length M – 6 inch chain in lieu of standard length N – 7 inch chain in lieu of standard length

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

RECEPTACLE PROTECTION CAP YH27502



UNITS : mm

SHELL SIZE	A Dia. Max.	B Dia. Max.	C Dia. Min.	H +12.7 -6.35 Standard chain length	FINSH
9	20.83	20.84	17.78	76.2	A Cadmium plated nickel base
11	23.88	23.89	21.34		B Olive drab, cadmium, nickel base
13	27.94	29.46	25.65	88.9	C Anodic coating
15	30.99	32.51	28.96		F Electroless nickel
17	34.04	35.81	32.00		
19	37.08	38.61	35.31	101.6	
21	40.13	41.91	38.35		
23	43.18	44.96	41.66		
25	46.48	48.01	44.70		

Military Standard Cross Reference	How To order
MS number <u>MS27502</u> B 11 C L FINSH _____ SHELL SIZE _____ STYLE _____ A – Without Chain C – Chain N – With Chain and Ring LENGTH _____ (Omit for style A or style C and N with standard chain length) L – 5 inch chain in lieu of standard length	YH number <u>YH27502</u> B 11 C L FINSH _____ SHELL SIZE _____ STYLE _____ A – Without Chain C – Chain N – With Chain and Ring LENGTH _____ (Omit for style A or style C and N with standard chain length) L – 5 inch chain in lieu of standard length

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR

YEONHAB(YH)

Military Standard Cross Reference : MIL-DTL-38999 Series III

Military Nomenclature

D38999/20 F C 35 P N

CONNECTOR TYPE

SHELL STYLE

SERVICE CLASS
(HARDWARE FINISH)

SHELL SIZE

INSERT ARRANGEMENT

CONTACT STYLE

POLARIZING POSITION

CONNECTOR TYPE

D38999/ - MIL-DTL-38999 Series III

INSERT ARRANGEMENT

MIL-STD-1560

SHELL STYLE

D38999/20 - Wall mount receptacle
D38999/24 - Jam nut receptacle
D38999/26 - Straight Plug, Grounded
D38999/32 - Plug Protection Cap
D38999/33 - Receptacle Protection Cap

CONTACT STYLE

P - Pin
S - Socket
A - Less Pin Contact*
B - Less Socket Contact*

SERVICE CLASS (HARDWARE FINISH)

F - Electroless nickel plating, -65℃ to +200℃
(-85°F to 392°F)
W - Olive drab cadmium over electroless nickel plating, -65℃ to +175℃(-85°F to +347°F)

POLARIZING POSITION

N(normal), A, B, C, D, E.

* Used only when other than power contacts are to be installed(i.e., shielded, thermocouple, etc.)

Note : To order MS connectors less standard power contacts, purchase order must state "Less Contacts".

SHELL SIZE

A	B	C	D	E	F	G	H	J	Shell Size Code
9	11	13	15	17	19	21	23	25	Shell Size

How To order(Commercial Equivalent : YH-38999-XX/Non-QPL, Series III Style)

YEONHAB Nomenclature

YH 38999/20 F C 35 P N

PREFIX

CONNECTOR TYPE

SHELL STYLE

SERVICE CLASS
(HARDWARE FINISH)

SHELL SIZE

INSERT ARRANGEMENT

CONTACT STYLE

POLARIZING POSITION

PREFIX

YH - YEONHAB

CONNECTOR TYPE

YH38999/ - MIL-DTL-38999 Series III

INSERT ARRANGEMENT

MIL-STD-1560

SHELL STYLE

38999/20 - Wall mount receptacle
38999/24 - Jam nut receptacle
38999/26 - Straight Plug, Grounded
38999/32 - Plug Protection Cap
38999/33 - Receptacle Protection Cap

CONTACT STYLE

P - Pin
S - Socket
A - Less Pin Contact*
B - Less Socket Contact*

SERVICE CLASS (HARDWARE FINISH)

F - Electroless nickel plating, -65℃ to +200℃
(-85°F to 392°F)
W - Olive drab cadmium over electroless nickel plating, -65℃ to +175℃(-85°F to +347°F)

POLARIZING POSITION

N(normal), A, B, C, D, E.

* Used only when other than power contacts are to be installed(i.e., shielded, thermocouple, etc.)

SHELL SIZE

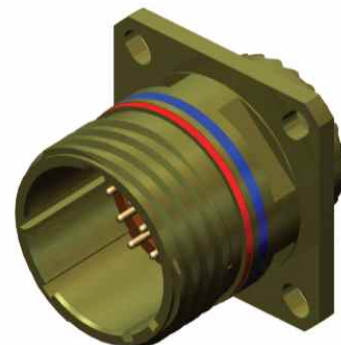
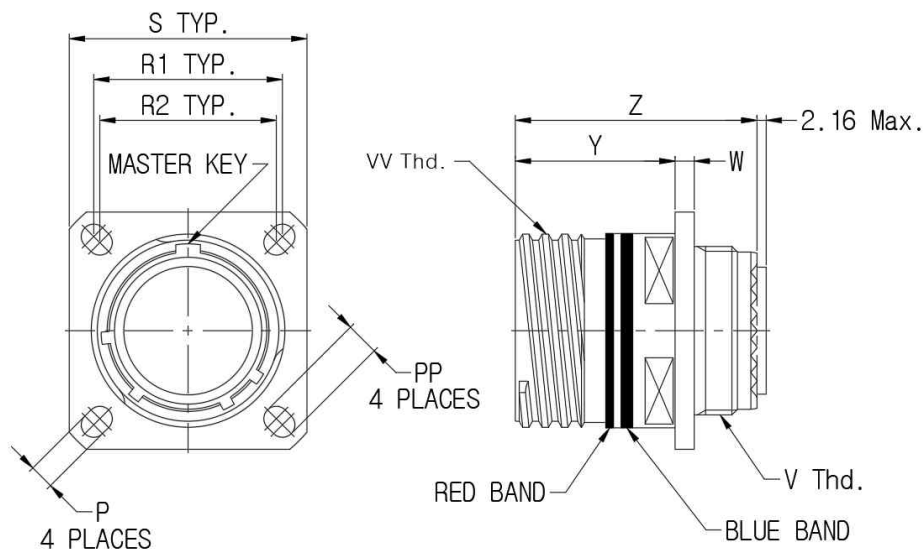
A	B	C	D	E	F	G	H	J	Shell Size Code
9	11	13	15	17	19	21	23	25	Shell Size

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

WALL MOUNTING RECEPTACLE

YH38999/20

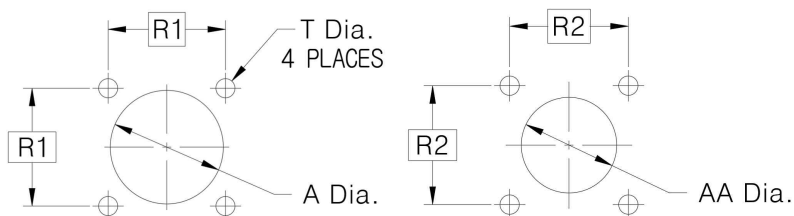
(CLASSES F, W)



UNITS : mm

SHELL SIZE	SHELL SIZE CODE	P ±0.20	PP ±0.20	R1	R2	S ±0.3	Y +0.00 -1.25	W Max./Min.	Z MAX.	V Thd.	VV Thd. (CLASS : 2A)
9	A	3.25	5.49	18.26	15.09	23.8	20.83	2.5/2.1	31.5	M12x1.0-6g 0.1R	.6250-0.1P-0.3L-TS
11	B	3.25	4.93	20.62	18.26	26.2	20.83	2.5/2.1	31.5	M15x1.0-6g 0.1R	.7500-0.1P-0.3L-TS
13	C	3.25	4.93	23.01	20.62	28.6	20.83	2.5/2.1	31.5	M18x1.0-6g 0.1R	.8750-0.1P-0.3L-TS
15	D	3.25	4.93	24.61	23.01	31.0	20.83	2.5/2.1	31.5	M22x1.0-6g 0.1R	1.0000-0.1P-0.3L-TS
17	E	3.25	4.93	26.97	24.61	33.3	20.83	2.5/2.1	31.5	M25x1.0-6g 0.1R	1.1875-0.1P-0.3L-TS
19	F	3.25	4.93	29.36	26.97	36.5	20.83	2.5/2.1	31.5	M28x1.0-6g 0.1R	1.2500-0.1P-0.3L-TS
21	G	3.25	4.93	31.75	29.36	39.7	20.07	3.2/2.1	31.5	M31x1.0-6g 0.1R	1.3750-0.1P-0.3L-TS
23	H	3.91	6.15	34.93	31.75	42.9	20.07	3.2/2.1	31.5	M34x1.0-6g 0.1R	1.5000-0.1P-0.3L-TS
25	J	3.91	6.15	38.10	34.93	46.0	20.07	3.2/2.1	31.5	M37x1.0-6g 0.1R	1.6250-0.1P-0.3L-TS

Panel Mounting Cut-Out



Back Panel Mounting

Max (R1) distance between mounting screws

Front Panel Mounting

Max (R2) distance between mounting screws

SHELL SIZE	A Dia. Min.	AA Dia. Min.	R1	R2	T Dia. ±0.13
9(A)	16.66	13.11	18.26	15.09	3.25
11(B)	20.22	15.88	20.62	18.26	3.25
13(C)	23.42	19.05	23.01	20.62	3.25
15(D)	26.59	23.01	24.61	23.01	3.25
17(E)	30.96	25.81	26.97	24.61	3.25
19(F)	32.94	28.98	29.36	26.97	3.25
21(G)	36.12	32.16	31.75	29.36	3.25
23(H)	39.29	34.93	34.93	31.75	3.91
25(J)	42.47	37.69	38.10	34.93	3.81

Note : Dimensions are in millimeters. Inch equivalents are in parentheses (given for general information only.)

R2 dimension may be substituted for mounting screw locations (R1) or front mount cutouts

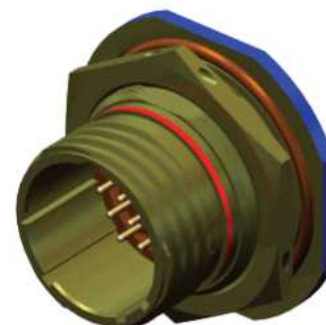
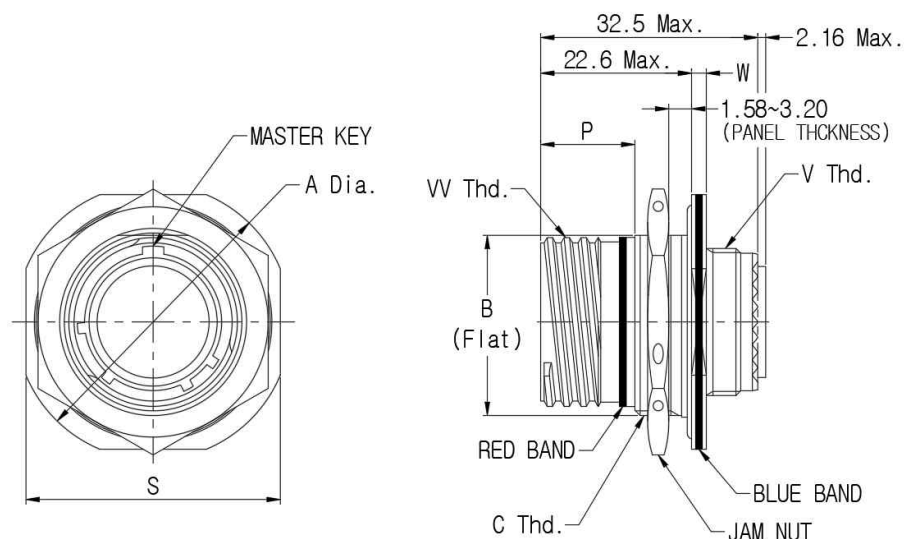
MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR

YEONHAB(YH)

JAM NUT RECEPTACLE

YH38999/24

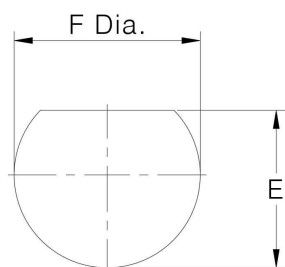
(CLASSES F, W)



UNITS : mm

SHELL SIZE	SHELL SIZE CODE	A Dia. ± 0.3	B flat $+0.10 -0.15$	C Thd.	P $+0.6 -0.0$	S ± 0.4	W $+0.9 -0.1$	V Thd.	VV (CLASS : 2A) Thd.	O-RING YH3582 DASH No.	JAM NUT YH38999/28 DASH No.
9	A	30.2	16.53	M17x1.0-6g 0.1R	14.1	27.0	2.2	M12x1.0-6g 0.1R	.6250-0.1P-0.3L-TS	019	-1
11	B	34.9	19.07	M20x1.0-6g 0.1R	14.1	31.8	2.2	M15x1.0-6g 0.1R	.7500-0.1P-0.3L-TS	022	-2
13	C	38.1	23.82	M25x1.0-6g 0.1R	14.1	34.9	2.2	M18x1.0-6g 0.1R	.8750-0.1P-0.3L-TS	024	-3
15	D	41.3	26.97	M28x1.0-6g 0.1R	14.1	38.1	2.2	M22x1.0-6g 0.1R	1.0000-0.1P-0.3L-TS	026	-4
17	E	44.5	30.15	M32x1.0-6g 0.1R	14.1	41.3	2.2	M25x1.0-6g 0.1R	1.1875-0.1P-0.3L-TS	028	-6
19	F	49.2	33.32	M35x1.0-6g 0.1R	14.1	46.0	3.0	M28x1.0-6g 0.1R	1.2500-0.1P-0.3L-TS	128	-8
21	G	52.4	36.50	M38x1.0-6g 0.1R	14.1	49.2	3.0	M31x1.0-6g 0.1R	1.3750-0.1P-0.3L-TS	130	-9
23	H	55.6	39.67	M41x1.0-6g 0.1R	14.1	52.4	3.0	M34x1.0-6g 0.1R	1.5000-0.1P-0.3L-TS	132	-10
25	J	58.7	42.85	M44x1.0-6g 0.1R	14.1	55.6	3.0	M37x1.0-6g 0.1R	1.6250-0.1P-0.3L-TS	134	-11

Panel Mounting Cut-Out



Panel thickness
1.58~3.20 mm

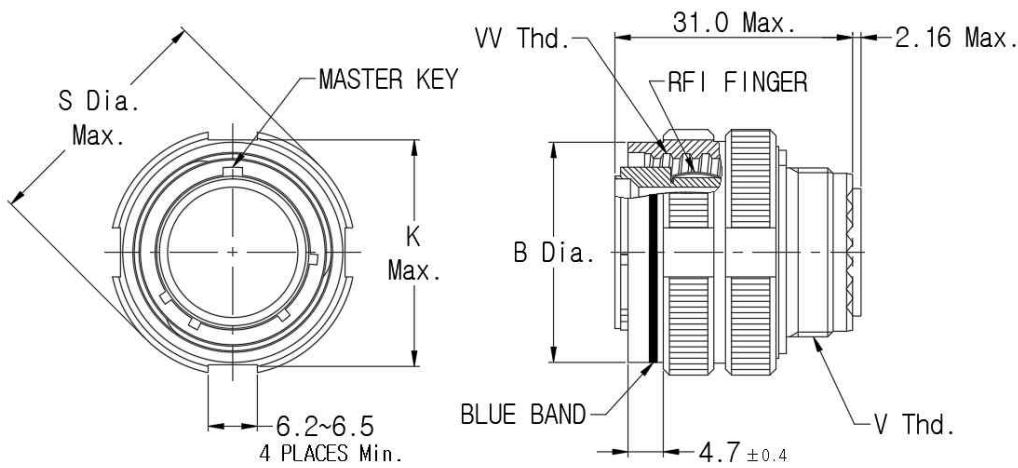
SHELL SIZE	Jam Nut TORQUE INCH-LBS	E $+0.00 -0.25$	F Dia. $+0.25 -0.00$
9(A)	30/36	16.70	17.60
11(B)	40/46	19.59	20.96
13(C)	55/60	24.26	25.65
15(D)	70/75	27.56	28.83
17(E)	80/85	30.73	32.01
19(F)	90/95	33.91	35.18
21(G)	100/110	37.08	38.35
23(H)	110/120	40.26	41.53
25(J)	120/130	43.43	44.70

* For dimension E, shell size 9 only, tolerance is + 0.10 / -0.06 mm.

STRAIGHT PLUG(EMI)

YH38999/26

(CLASSES F, W)



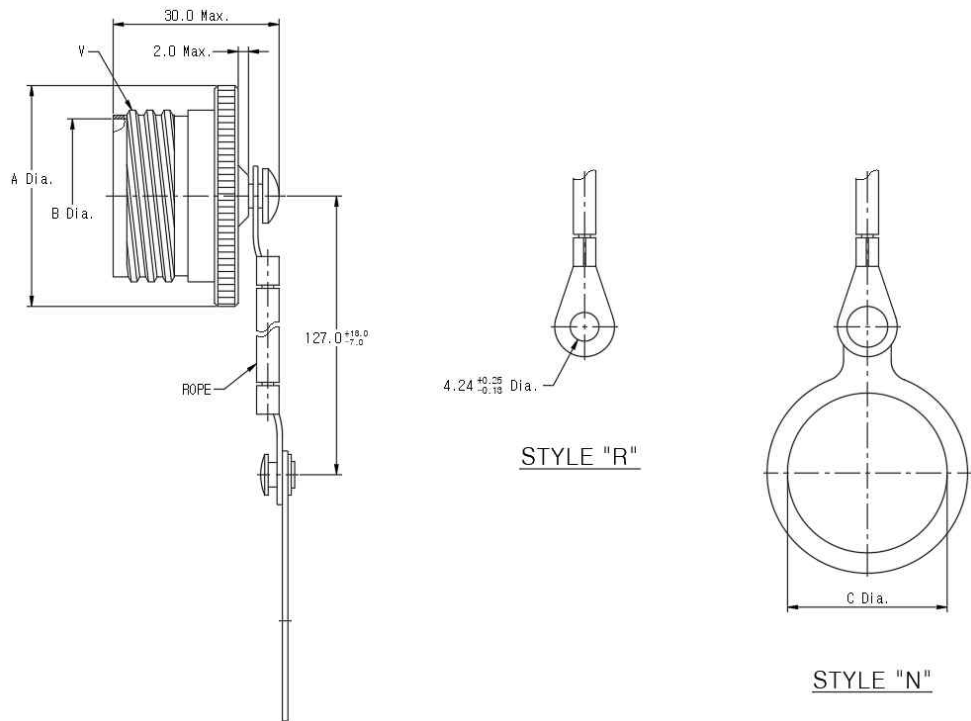
UNITS : mm

SHELL SIZE	SHELL SIZE CODE	B Dia. +0.2 -0.0	K Max.	S Dia. Max.	V Thd.	VV Thd. (CLASS : 2B)
9	A	18.4	19.0	21.8	M12x1.0-6g 0.1R	.6250-0.1P-0.3L-TS
11	B	21.1	21.9	25.0	M15x1.0-6g 0.1R	.7500-0.1P-0.3L-TS
13	C	25.4	26.1	29.4	M18x1.0-6g 0.1R	.8750-0.1P-0.3L-TS
15	D	28.7	29.3	32.5	M22x1.0-6g 0.1R	1.0000-0.1P-0.3L-TS
17	E	32.2	32.8	35.7	M25x1.0-6g 0.1R	1.1875-0.1P-0.3L-TS
19	F	34.9	35.5	38.5	M28x1.0-6g 0.1R	1.2500-0.1P-0.3L-TS
21	G	38.1	38.7	41.7	M31x1.0-6g 0.1R	1.3750-0.1P-0.3L-TS
23	H	41.1	41.7	44.9	M34x1.0-6g 0.1R	1.5000-0.1P-0.3L-TS
25	J	44.3	44.9	48.0	M37x1.0-6g 0.1R	1.6250-0.1P-0.3L-TS

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

PLUG PROTECTION CAP

YH38999/32



UNITS : mm

SHELL SIZE	A Dia. Max.	B Dia. +0.00 -0.15	C Dia. Min.	V (CLASS : 2A) Thd.
9	23.0	12.50	13.0	.6250-0.1P-0.3L-TS
11	26.0	15.75	18.0	.7500-0.1P-0.3L-TS
13	31.0	19.53	20.0	.8750-0.1P-0.3L-TS
15	33.0	22.71	23.0	1.0000-0.1P-0.3L-TS
17	37.0	25.88	26.0	1.1875-0.1P-0.3L-TS
19	40.0	28.55	29.0	1.2500-0.1P-0.3L-TS
21	44.0	31.72	32.0	1.3750-0.1P-0.3L-TS
23	46.0	34.90	34.0	1.5000-0.1P-0.3L-TS
25	50.0	38.07	39.0	1.6250-0.1P-0.3L-TS

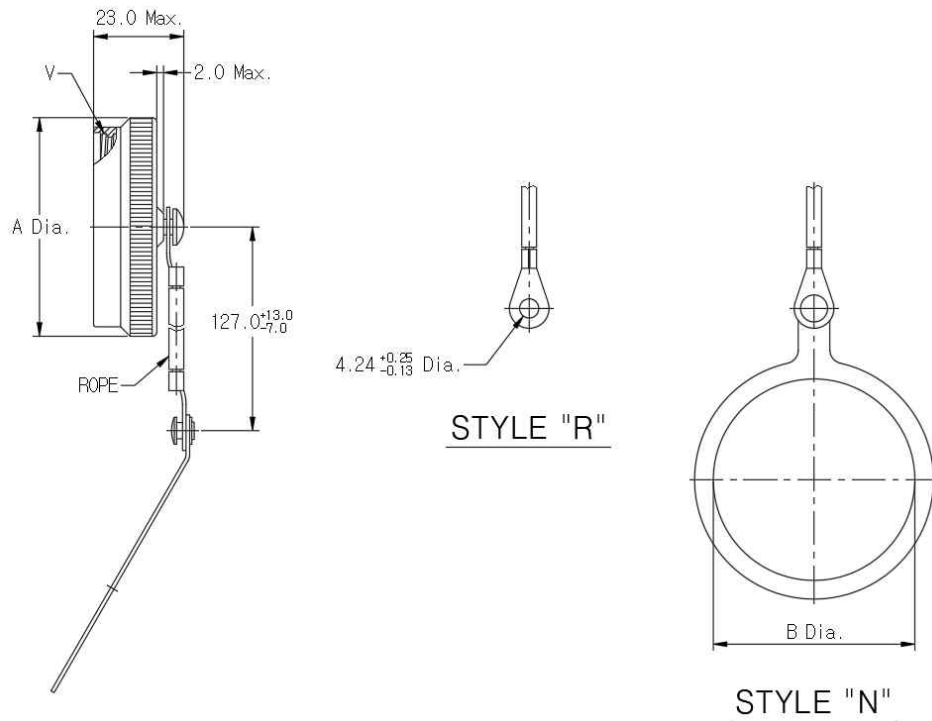
CLASS(FINSH)	
F	Electroless nickel
W	Olive drab, cadmium, nickel base

Military Standard Cross Reference	How To order
MS number _____ SHELL STYLE _____ CLASS _____ SHELL SIZE _____ STYLE _____ R - Rope N - With Rope and Ring	YH number _____ SHELL STYLE _____ CLASS _____ SHELL SIZE _____ STYLE _____ R - Rope N - With Rope and Ring

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

RECEPTACLE PROTECTION CAP

YH38999/33



UNITS : mm

SHELL SIZE	A Dia. Max.	B Dia. Min.	V (CLASS : 2B) Thd.
9	23.0	17.64	.6250-0.1P-0.3L-TS
11	28.0	21.97	.7500-0.1P-0.3L-TS
13	31.0	25.12	.8750-0.1P-0.3L-TS
15	32.0	29.92	1.0000-0.1P-0.3L-TS
17	37.0	32.00	1.1875-0.1P-0.3L-TS
19	39.0	36.27	1.2500-0.1P-0.3L-TS
21	42.0	38.25	1.3750-0.1P-0.3L-TS
23	45.0	42.62	1.5000-0.1P-0.3L-TS
25	49.0	44.45	1.6250-0.1P-0.3L-TS

CLASS(FINSH)	
F	Electroless nickel
W	Olive drab, cadmium, nickel base

Military Standard Cross Reference

	D38999/	33	W	11	R
MS number					
SHELL STYLE					
CLASS					
SHELL SIZE					
STYLE					
R - Rope					
N - With Rope and Ring					

How To order

	YH38999/	33	W	11	R
YH number					
SHELL STYLE					
CLASS					
SHELL SIZE					
STYLE					
R - Rope					
N - With Rope and Ring					

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR

YEONHAB(YH)

Military Standard Cross Reference : MIL-DTL-38999 Series IV

Military Nomenclature

CERTIFICATION MARKS(QPL)

"JAN" or "J" marking

The United States Government has adopted and is exercising legitimate control over the certification marks "JAN" or "J", respectively, to indicate that items so marked or identified are manufactured to, and meet all the requirements of specifications.



CONNECTOR TYPE

D38999/ - MIL-DTL-38999 Series IV

INSERT ARRANGEMENT

MIL-STD-1560

SHELL STYLE

- D38999/40 - Wall mount receptacle
- D38999/42 - Box mount receptacle
- D38999/44 - Jam nut receptacle
- D38999/46 - Straight Plug, Grounded
- D38999/49 - In-Line receptacle
- D38999/51 - Plug Protection Cap
- D38999/52 - Receptacle Protection Cap

CONTACT STYLE

- P - Pin
- S - Socket
- A - Less Pin Contact*
- B - Less Socket Contact*

* Used only when other than power contacts are to be installed(i.e., shielded, thermocouple, etc.)

SERVICE CLASS (HARDWARE FINISH)

- F - Electroless nickel plating, -65°C to +200°C (-85°F to 392°F)
- W - Olive drab cadmium over electroless nickel plating, -65°C to +175°C(-85°F to +347°F)

POLARIZING POSITION

N(normal), A, B, C, D, E.

Note : To order MS connectors less standard power contacts, purchase order must state "Less Contacts".

SHELL SIZE

B	C	D	E	F	G	H	J	Shell Size Code
11	13	15	17	19	21	23	25	Shell Size

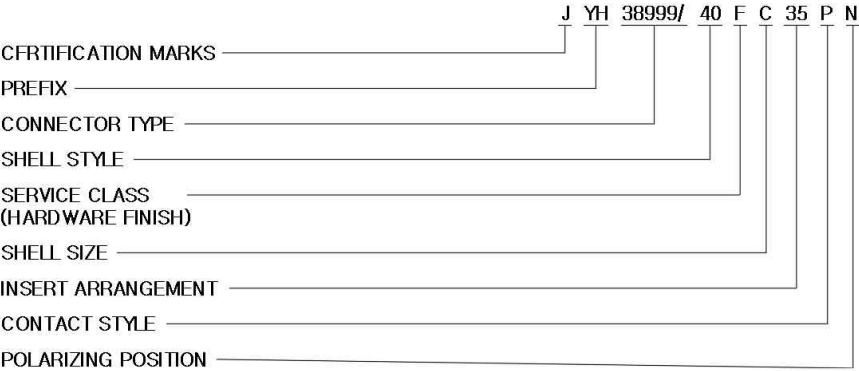
How To order

YEONHAB Nomenclature

CERTIFICATION MARKS(QPL)

"JAN" or "J" marking

The United States Government has adopted and is exercising legitimate control over the certification marks "JAN" or "J", respectively, to indicate that items so marked or identified are manufactured to, and meet all the requirements of specifications.



CONNECTOR TYPE

D38999/ - MIL-DTL-38999 Series IV

INSERT ARRANGEMENT

MIL-STD-1560

SHELL STYLE

- 38999/40 - Wall mount receptacle
- 38999/42 - Box mount receptacle
- 38999/44 - Jam nut receptacle
- 38999/46 - Straight Plug, Grounded
- 38999/49 - In-Line receptacle(Non-QPL)
- 38999/51 - Plug Protection Cap
- 38999/52 - Receptacle Protection Cap

CONTACT STYLE

- P - Pin
- S - Socket
- A - Less Pin Contact*
- B - Less Socket Contact*

* Used only when other than power contacts are to be installed(i.e., shielded, thermocouple, etc.)

SERVICE CLASS (HARDWARE FINISH)

- F - Electroless nickel plating, -65°C to +200°C (-85°F to 392°F)
- W - Olive drab cadmium over electroless nickel plating, -65°C to +175°C(-85°F to +347°F)

POLARIZING POSITION

N(normal), A, B, C, D, E.

SHELL SIZE

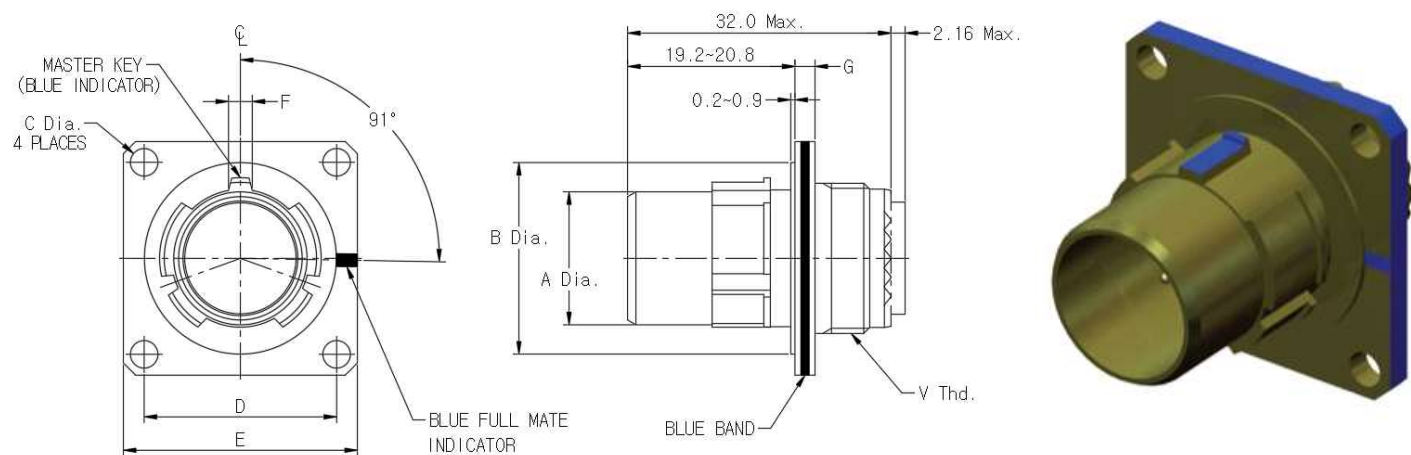
B	C	D	E	F	G	H	J	Shell Size Code
11	13	15	17	19	21	23	25	Shell Size

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

WALL MOUNTING RECEPTACLE

D38999/40 (YH38999/40)

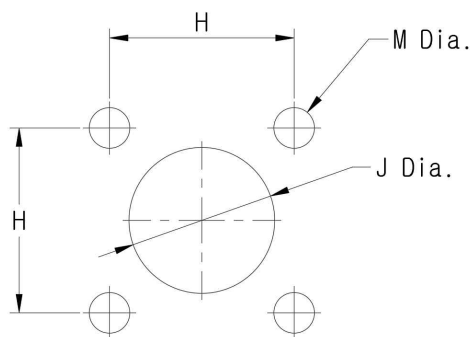
(CLASSES F, W)



UNITS : mm

SHELL SIZE	SHELL SIZE CODE	A Dia.	B Dia.	C Dia.	D BSC	E	F (BSC)		G	V Thd.
							SOCKET	PIN		
11	B	12.93 12.77	20.15 19.76	3.5 3.1	20.62	26.7 25.6	1.90	2.78	2.6 2.1	M15x1.0-6g 0.1R
13	C	16.10 15.94	23.35 22.96	3.5 3.1	23.02	29.1 28.0	1.94	2.85	2.6 2.1	M18x1.0-6g 0.1R
15	D	19.28 19.12	26.52 26.13	3.5 3.1	24.62	31.5 30.4	2.43	3.36	2.6 2.1	M22x1.0-6g 0.1R
17	E	22.48 22.32	29.72 29.33	3.5 3.1	26.98	33.9 32.8	2.45	3.40	2.6 2.1	M25x1.0-6g 0.1R
19	F	25.63 25.47	32.87 32.48	3.5 3.1	29.36	37.1 36.0	2.96	3.91	2.6 2.1	M28x1.0-6g 0.1R
21	G	28.80 28.64	36.05 35.66	3.5 3.1	31.76	40.2 39.1	2.99	3.94	3.4 2.9	M31x1.0-6g 0.1R
23	H	31.98 31.82	39.22 38.83	4.0 3.6	34.92	43.4 42.3	3.50	4.46	3.4 2.9	M34x1.0-6g 0.1R
25	J	35.15 35.00	42.40 42.01	4.0 3.6	38.10	46.6 45.5	3.53	4.49	3.4 2.9	M37x1.0-6g 0.1R

Front or Rear Panel Mounting Cut-Out



3.175 MAX. PANEL THICKNESS
FRONT OR REAR PANEL MOUNTING

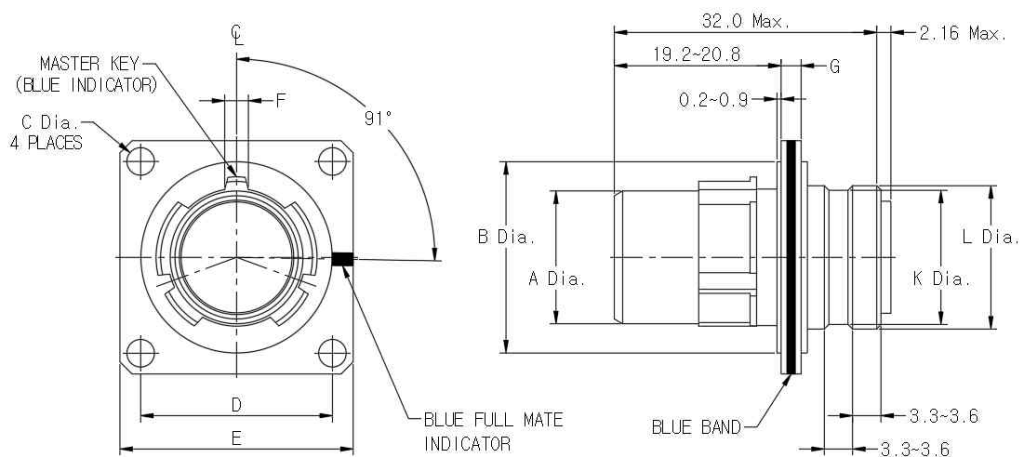
SHELL SIZE	H ±0.13	J Dia. Min.		K Dia. ±0.13
		FRONT	REAR	
11(B)	20.62	15.88	20.22	3.25
13(C)	23.01	19.05	23.42	3.25
15(D)	24.61	23.01	26.59	3.25
17(E)	26.97	25.81	30.96	3.25
19(F)	29.36	28.98	32.94	3.25
21(G)	31.75	32.16	36.12	3.25
23(H)	34.93	34.93	39.29	3.91
25(J)	38.10	37.69	42.47	3.81

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

BOX MOUNT RECEPTACLE

D38999/42 (YH38999/42)

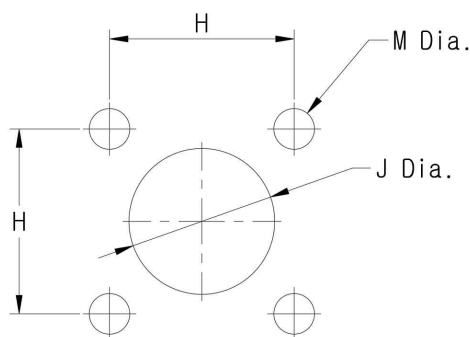
(CLASSES F, W)



UNITS : mm

SHELL SIZE	SHELL SIZE CODE	A Dia.	B Dia.	C Dia.	D BSC	E	F (BSC)		G	K Dia.	L Dia.
							SOCKET	PIN			
11	B	12.93 12.77	20.15 19.76	3.5 3.1	20.62	26.7 25.6	1.90	2.78	2.6 2.1	13.6 13.2	14.7 14.3
13	C	16.10 15.94	23.35 22.96	3.5 3.1	23.02	29.1 28.0	1.94	2.85	2.6 2.1	16.5 16.1	17.6 17.2
15	D	19.28 19.12	26.52 26.13	3.5 3.1	24.62	31.5 30.4	2.43	3.36	2.6 2.1	19.6 19.2	20.8 20.4
17	E	22.48 22.32	29.72 29.33	3.5 3.1	26.98	33.9 32.8	2.45	3.40	2.6 2.1	22.8 22.4	24.0 23.6
19	F	25.63 25.47	32.87 32.48	3.5 3.1	29.36	37.1 36.0	2.96	3.91	2.6 2.1	25.5 25.1	26.7 26.3
21	G	28.80 28.64	36.05 35.66	3.5 3.1	31.76	40.2 39.1	2.99	3.94	3.4 2.9	28.7 28.3	29.8 29.4
23	H	31.98 31.82	39.22 38.83	4.0 3.6	34.92	43.4 42.3	3.50	4.46	3.4 2.9	31.9 31.5	33.0 32.6
25	J	35.15 35.00	42.40 42.01	4.0 3.6	38.10	46.6 45.5	3.53	4.49	3.4 2.9	35.0 34.6	36.2 35.8

Front or Rear Panel Mounting Cut-Out



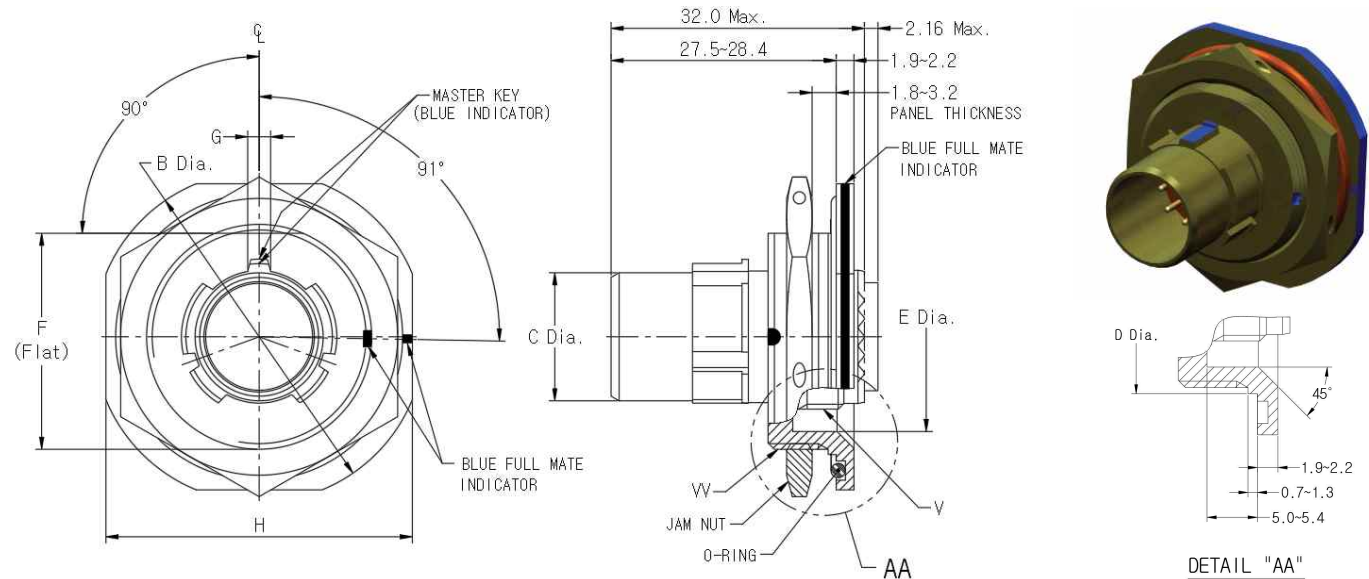
3.175 MAX. PANEL THICKNESS
FRONT OR REAR PANEL MOUNTING

SHELL SIZE	H ±0.13	J Dia. Min.		M Dia. ±0.13
		FRONT	REAR	
11(B)	20.62	20.22	15.88	3.25
13(C)	23.01	23.42	19.05	3.25
15(D)	24.61	26.59	23.01	3.25
17(E)	26.97	30.96	25.81	3.25
19(F)	29.36	32.94	28.98	3.25
21(G)	31.75	36.12	32.16	3.25
23(H)	34.93	39.29	34.93	3.91
25(J)	38.10	37.69	42.47	3.81

JAM NUT RECEPTACLE

D38999/44 (YH38999/44)

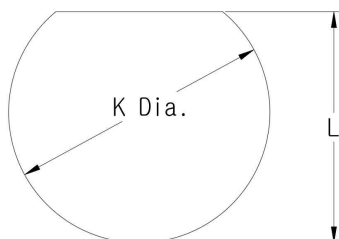
(CLASSES F, W)



UNITS : mm

SHELL SIZE	SHELL SIZE CODE	B Dia.	C Dia.	D Dia.	E Dia.	F Flat.	G (BSC)		H	V Thd.	VV Thd.	JAM NUT YH38999/28 DASH No.	O-RING YH3582 DASH No.
							SOCKET	PIN					
11	B	38.6 37.6	12.93 12.77	25.40 25.15	20.42 20.17	23.93 23.74	1.90	2.78	35.4 34.4	M15x1.0-6g 0.1R	M25x1.0-6g 0.1R	-3	-024
13	C	41.7 40.7	16.10 15.94	28.58 28.33	23.57 23.32	27.08 26.89	1.94	2.85	38.6 37.6	M18x1.0-6g 0.1R	M28x1.0-6g 0.1R	-4	-026
15	D	44.9 43.9	19.28 19.12	31.75 31.50	26.56 26.31	30.26 30.07	2.43	3.36	41.7 40.7	M22x1.0-6g 0.1R	M31x1.0-6g 0.1R	-5	-028
17	E	49.7 48.7	22.48 22.32	34.92 34.67	30.02 29.77	33.56 33.37	2.45	3.40	45.7 44.7	M25x1.0-6g 0.1R	M34x1.0-6g 0.1R	-7	-029
19	F	51.7 50.7	25.63 25.47	38.10 37.85	32.91 32.66	36.61 36.42	2.96	3.91	48.5 47.5	M28x1.0-6g 0.1R	M38x1.0-6g 0.1R	-9	-030
21	G	54.8 53.8	28.80 28.64	41.28 41.03	36.11 35.86	39.78 39.59	2.99	3.94	51.7 50.7	M31x1.0-6g 0.1R	M41x1.0-6g 0.1R	-10	-031
23	H	58.0 57.0	31.98 31.82	44.45 44.20	39.26 39.01	42.96 42.77	3.50	4.46	54.8 53.8	M34x1.0-6g 0.1R	M44x1.0-6g 0.1R	-11	-032
25	J	61.2 60.2	35.15 35.00	47.63 47.38	42.46 42.21	46.13 45.94	3.53	4.49	58.0 57.0	M37x1.0-6g 0.1R	M47x1.0-6g 0.1R	-12	-033

Panel Mounting Cut-Out

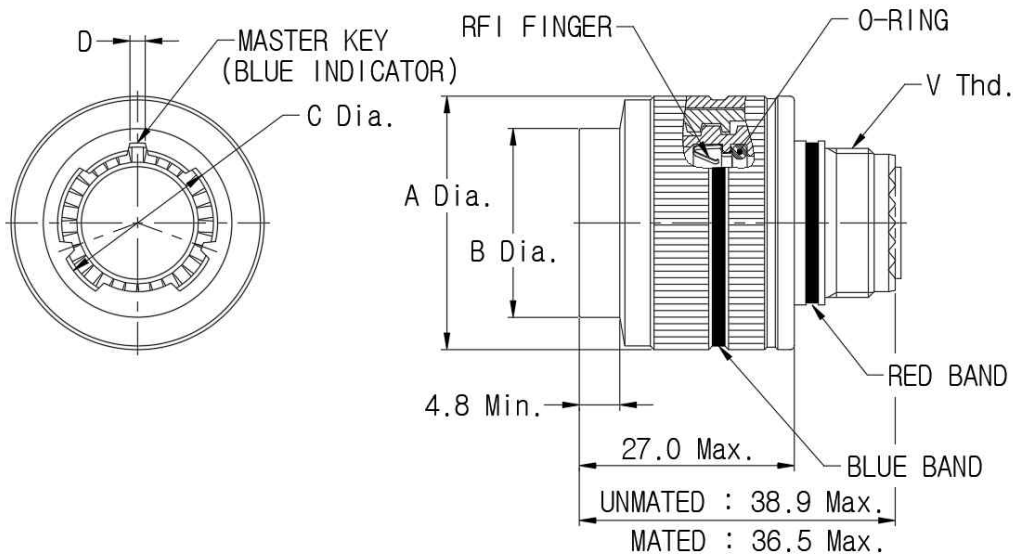


SHELL SIZE	Jam Nut TORQUE INCH-LBS	K Dia. +0.25 -0.00	L +0.00 -0.25
11(B)	55/60	25.65	24.26
13(C)	70/75	28.83	27.56
15(D)	70/75	32.01	30.73
17(E)	80/85	35.18	33.91
19(F)	100/110	38.35	37.08
21(G)	110/120	41.53	40.26
23(H)	120/130	44.70	43.42
25(J)	120/130	47.88	46.61

STRAIGHT PLUG(EMI)

D38999/46 (YH38999/46)

(CLASSES F, W)



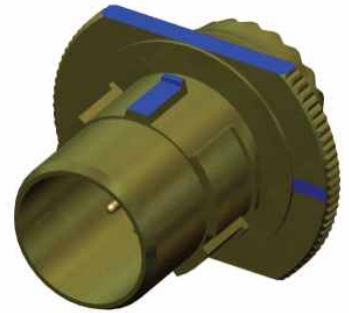
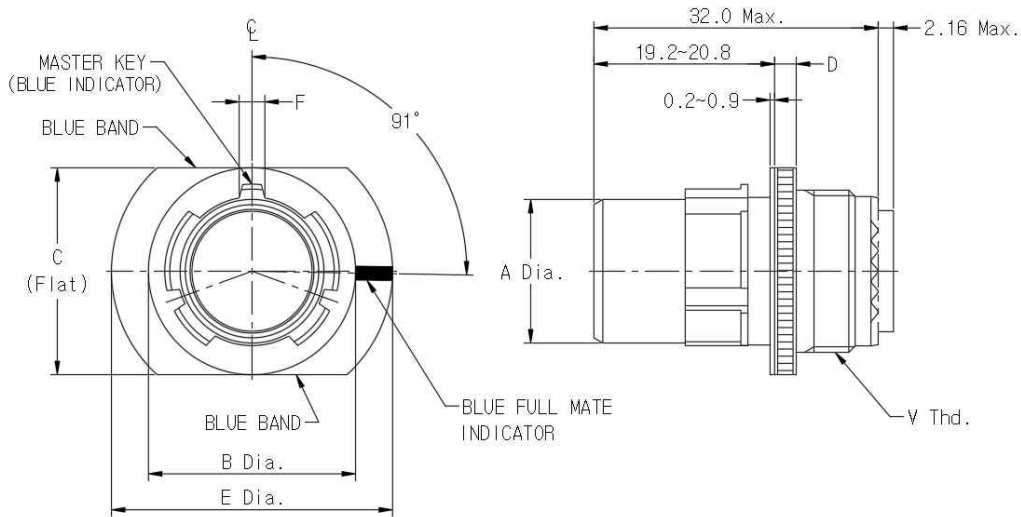
UNITS : mm

SHELL SIZE	SHELL SIZE CODE	A Dia. MAX.	B Dia. MAX.	C Dia. (BSC)	D (BSC)		V (Thd.)
					SOCKET	PIN	
11	B	26.6	19.7	16.28	2.84	1.82	M15x1.0-6g 0.1R
13	C	31.0	22.9	19.35	2.87	1.85	M18x1.0-6g 0.1R
15	D	34.2	26.4	22.50	3.37	2.36	M22x1.0-6g 0.1R
17	E	37.4	29.2	25.68	3.37	2.36	M25x1.0-6g 0.1R
19	F	40.2	32.4	27.71	3.89	2.87	M28x1.0-6g 0.1R
21	G	43.3	35.6	30.88	3.89	2.87	M31x1.0-6g 0.1R
23	H	46.5	38.8	34.16	4.39	3.37	M34x1.0-6g 0.1R
25	J	49.7	41.9	37.38	4.39	3.37	M37x1.0-6g 0.1R

IN-LINE RECEPTACLE

YH38999/49

(CLASSES F, W)



UNITS : mm

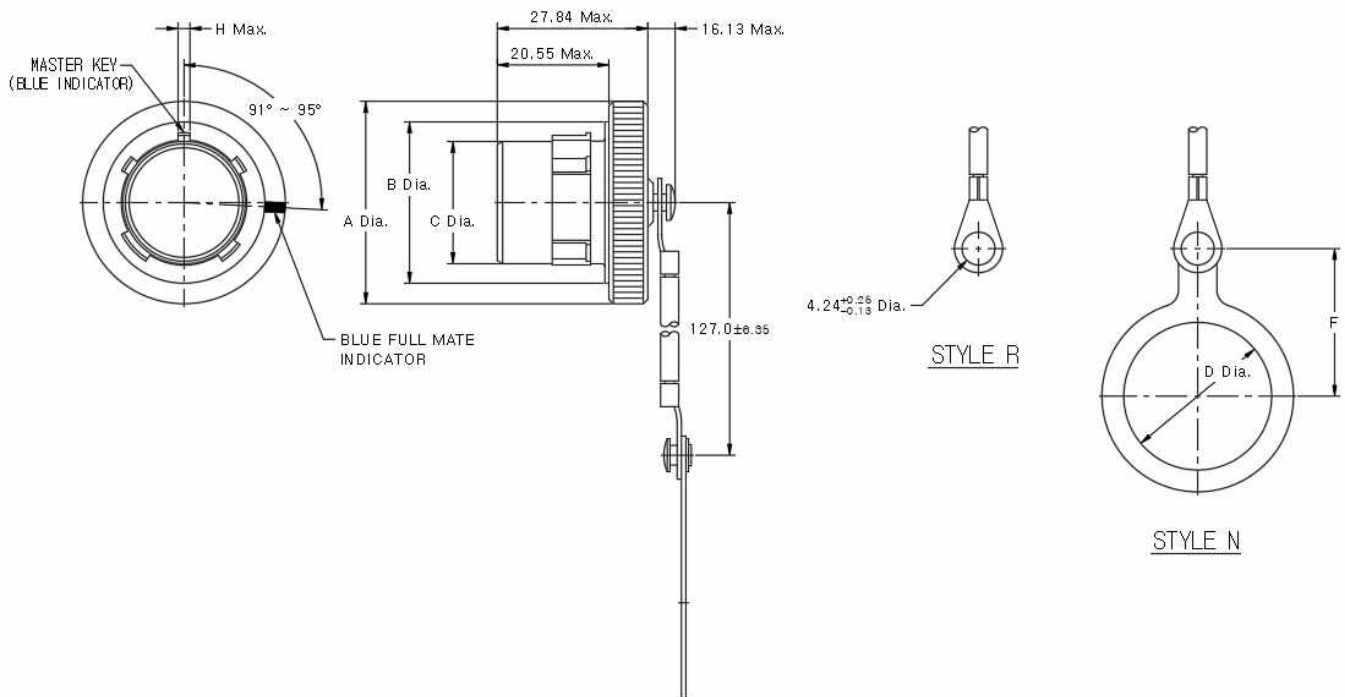
SHELL SIZE	SHELL SIZE CODE	A Dia.	B Dia.	C Flat	D	E Dia. Max.	F (BSC)		V (Thd.)
							SOCKET	PIN	
11	B	12.93 12.77	20.15 19.76	20.15 19.76	2.6 2.1	26.78	1.90	2.78	M15x1.0-6g 0.1R
13	C	16.10 15.94	23.35 22.96	23.35 22.96	2.6 2.1	31.15	1.94	2.85	M18x1.0-6g 0.1R
15	D	19.28 19.12	26.52 26.13	26.52 26.13	2.6 2.1	34.32	2.43	3.36	M22x1.0-6g 0.1R
17	E	22.48 22.32	29.72 29.33	29.72 29.33	2.6 2.1	37.50	2.45	3.40	M25x1.0-6g 0.1R
19	F	25.63 25.47	32.87 32.48	32.87 32.48	2.6 2.1	40.29	2.96	3.91	M28x1.0-6g 0.1R
21	G	28.80 28.64	36.05 35.66	36.05 35.66	3.4 2.9	43.46	2.99	3.94	M31x1.0-6g 0.1R
23	H	31.98 31.82	39.22 38.83	39.22 38.83	3.4 2.9	46.64	3.50	4.46	M34x1.0-6g 0.1R
25	J	35.15 35.00	42.40 42.01	42.40 42.01	3.4 2.9	49.89	3.53	4.49	M37x1.0-6g 0.1R

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR

YEONHAB(YH)

PLUG PROTECTION CAP

D38999/51 (YH38999/51)



UNITS : mm

SHELL SIZE	A Dia. Max.	B Dia. Max.	C Dia.	D Dia. Min.	F	H Max.
11	35.05	20.14	12.929 12.776	18.0	20.5 18.0	1.651
13	39.88	23.34	16.10 15.95	20.0	27.0 20.0	1.651
15	42.17	26.52	19.28 19.13	23.0	22.5 18.0	2.159
17	49.47	29.72	22.48 22.33	26.0	30.5 23.5	2.159
19	48.77	32.87	25.63 25.48	29.0	31.5 25.0	2.667
21	52.33	36.04	28.80 28.65	32.0	33.0 26.5	2.667
23	57.15	39.22	31.98 31.83	34.0	34.0 27.5	3.175
25	60.45	42.39	35.15 35.00	39.0	38.0 30.0	3.175

CLASS(FINSH)	
F	Electroless nickel
W	Olive drab, cadmium, nickel base

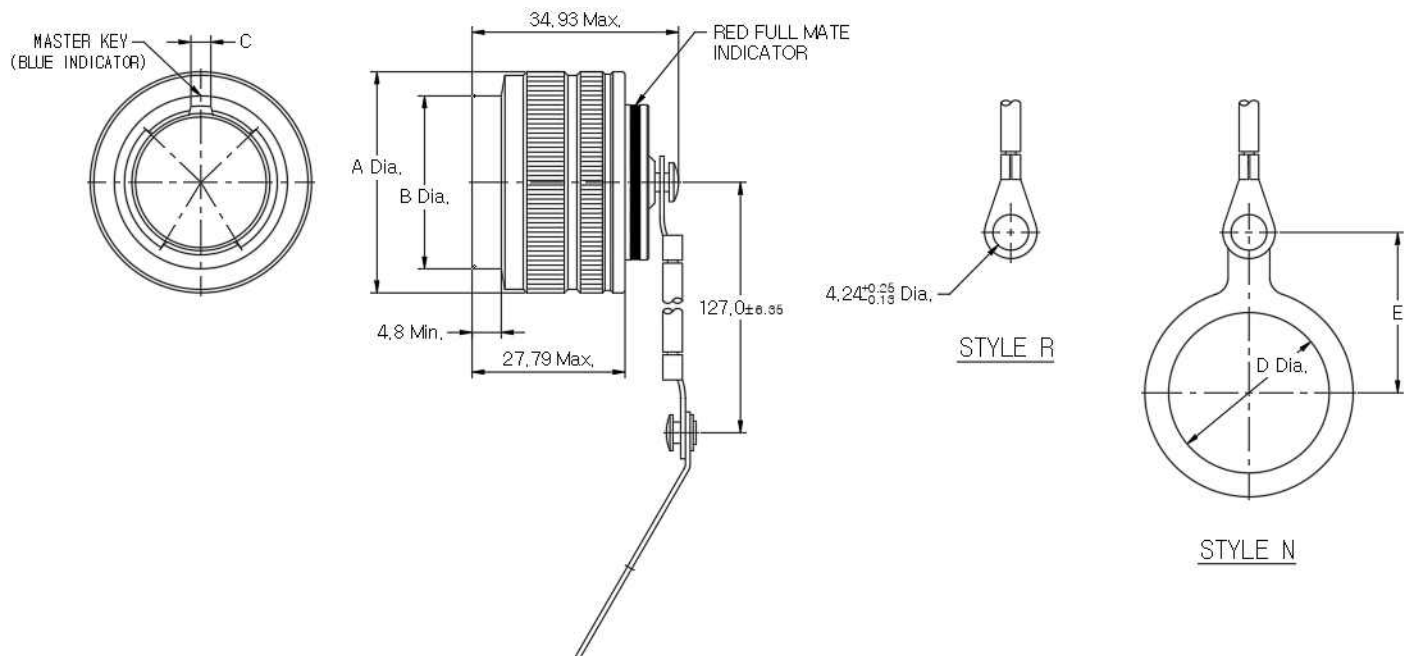
Military Standard Cross Reference

D38999/ 51 W 11 R	YH38999/ 51 W 11 R
MS number	YH number
SHELL STYLE	SHELL STYLE
CLASS	CLASS
SHELL SIZE	SHELL SIZE
STYLE	STYLE
R - Rope	R - Rope
N - With Rope and Ring	N - With Rope and Ring

MIL-DTL-38999 SERIES I, III STYLE & IV(QPL) CONNECTOR YEONHAB(YH)

RECEPTACLE PROTECTION CAP

D38999/52 (YH38999/52)



UNITS : mm

SHELL SIZE	A Dia. Max.	B Dia. Max.	C BSC	D Min.	E
11	26.59	19.18	2.84	25.12	22.5 19.5
13	30.99	22.86	2.87	29.92	25.0 23.5
15	34.19	26.42	3.37	31.50	27.0 24.5
17	37.39	29.21	3.37	34.75	32.0 26.0
19	40.21	32.39	3.89	38.05	34.0 28.0
21	43.31	35.56	3.89	42.55	36.5 30.5
23	46.50	38.74	4.39	44.35	36.5 31.0
25	49.71	41.91	4.39	47.55	39.0 33.0

CLASS(FINSH)	
F	Electroless nickel
W	Olive drab, cadmium, nickel base

Military Standard Cross Reference

D38999/ 52 W 11 R	YH38999/ 52 W 11 R
MS number _____	YH number _____
SHELL STYLE _____	SHELL STYLE _____
CLASS _____	CLASS _____
SHELL SIZE _____	SHELL SIZE _____
STYLE _____	STYLE _____
R - Rope	R - Rope
N - With Rope and Ring	N - With Rope and Ring

