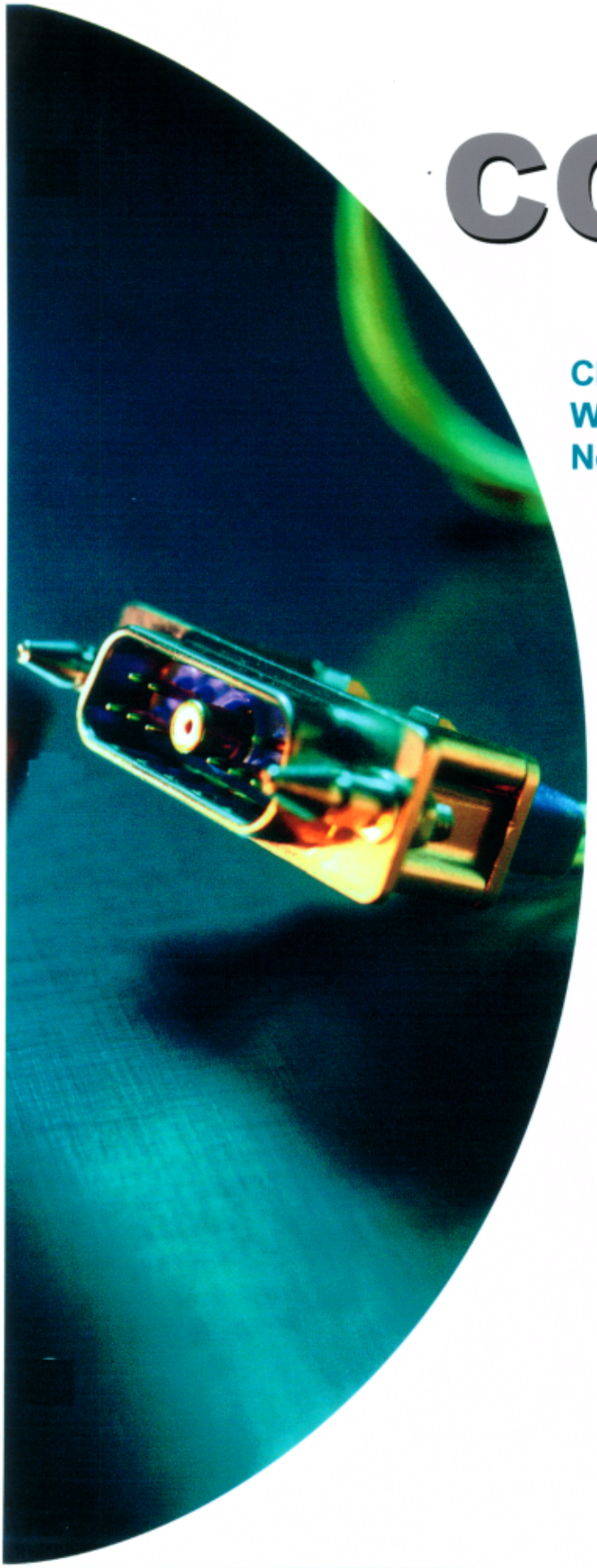

CQ Connectors

Click. It's connected.
With equal ease,it's disconnected.
No tools needed.

The only connectors of their kind, this Tri-Star innovation makes installation, modification, and maintenance faster and easier. The unique lock/unlock mechanism in Tri-Star's CQ connectors mates with an audible "click", making them ideal for blind mating applications and hard-to-reach places. Innovative ideas like this are the reason Tri-Star connectors are becoming the IFE industry standard worldwide.

TRI–STAR
ELECTRONICS INTERNATIONAL, INC.

2201 Rosecrans Avenue
El Segundo, CA 90245
Tel: (310) 536-0444
Fax: (310) 536-9322
E-mail: marketing@tri-starelectronics.com
www.tri-starelectronics.com

Features and Benefits

- Unique, built-in locking/unlocking mechanism
- Audible “click” confirms connectors are fully mated.
- No tools needed
- 5 different shell sizes
- Standard D-Subminiature insert arrangements for 9 through 50 positions; including 9 additional coaxial arrangements.
- Available in an environmentally sealed version that prevents moisture intrusion when mated.

Applications

- Ideal for blind mating applications and hard-to reach places such as passenger seats.
- Accommodates, power, signal and coaxial contacts.
- Mates with any standard D-Subminiature or MIL-C-24308 connector when lock post hardware is installed.

"CQ" Coaxial Pin and Socket Contacts

The "CQ" Coaxial Pin and Socket contacts were designed for the BMS 13-65 type "OE", "OF", and "OG" coaxial cables intended for the "CQ" series connectors.

The impedance for these coaxial contacts is 50 ohm. The termination is crimp style for both inner and outer contacts with a fold over braid over the ferrule with the exception on the 503 series which is overlay braid. The inner pin and socket are size 20 pin. The outer coax body engagement diameter is (.162 +/- .001).

Coaxial Pin Contacts P/N:

CQMEM-501D	For BMS13-65 type OE
CQMEM-502	For BMS13-65 type OF
CQMEM-503	For BMS 13-65 type OG

Coaxial Socket Contacts P/N:

CQMEF-501D	For BMS13-65 type OE
CQMEF-502A	For BMS13-65 type OF
CQMEF-503	For BMS13-65 type OG

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DWG. NO. CQ*RE*(***)S SH 1 REV. H

REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
	H	REVISED PER E.O. #14088		

14. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

13. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

12. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

11. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
  INSTALLING TOOL: BY HAND

10. DELETED

9. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

8. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

7. SUPPLIED WITH TWO (2) LOCKPOSTS, PART NUMBER CQP-R3, SHIPPED LOOSE, FOR REAR MOUNTING IN .050 INCH THICK (NOM) PANELS.

LOCKPOSTS SHOWN INSTALLED FOR REFERENCE ONLY.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION
- CQ*-CC = CONDUCTIVE ENCLOSED BACKSHELL

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

H 4. MATES WITH TSEI CQ*ME*(***)P AND CQ*CE*(***)P MOISTURE RESISTING PLUG CONNECTOR AND TSEI CQ*MA*(***)P NON MOISTURE RESISTING PLUG CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL AND RETAINING PLATE: ALUMINUM ALLOY WITH ELECTROLESS NICKEL PLATE PER MIL-C-26074.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.
- INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- GROMMET: SILICONE RUBBER, COLOR BLUE.
- RETAINING PLATE SCREW: STAINLESS STEEL.

H 2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

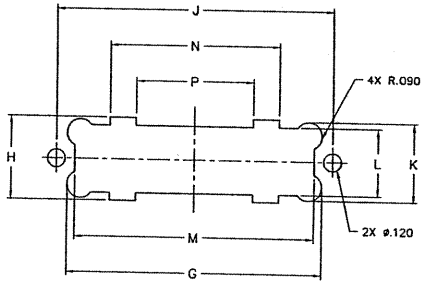
1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB007-5P (2020) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT; OR
- CB009-5P (2018) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT.

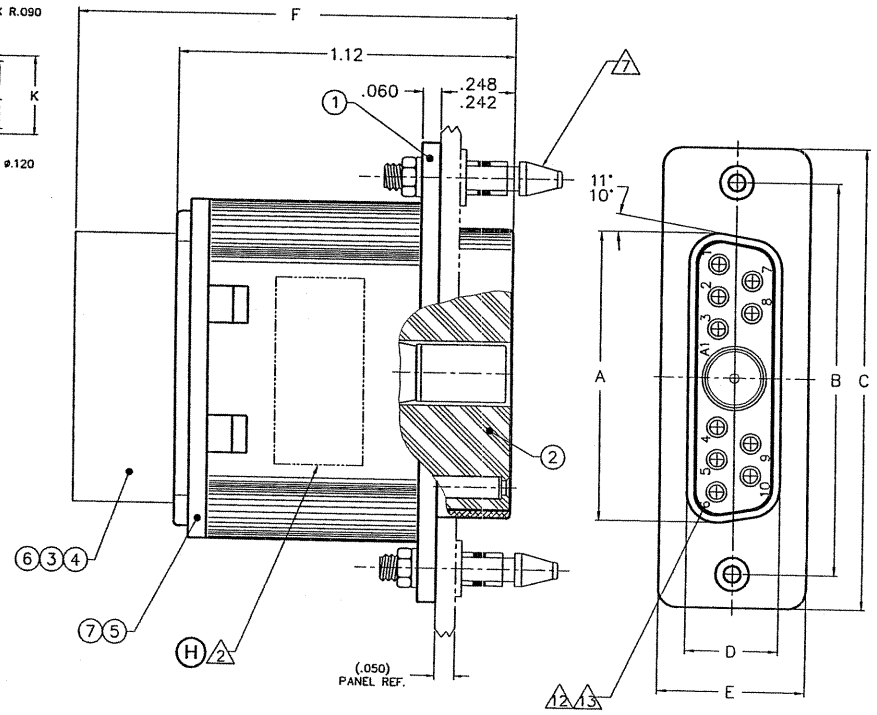
SIZE 8 COAX SKT CONTACT:
- CQMEF-501C FOR BMS 13-65 TYPE "OE".
- CQMEF-502A FOR BMS 13-65 TYPE "OF".
- CQMEF-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER SKT CONTACT:
- CMP002-S103 FOR 16-20 AWG WIRE
- CMP003-S103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



RECOMMENDED PANEL CUTOUT
FOR FRONT AND REAR MOUNT



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*RE*(***)S

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQERE9S - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQARE11W1S - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

QTY REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
4			INSERT RETAINING PLATE SCREW		7
			CLIP, CONTACT RET., SIZE 20		6
1			PLATE, INSERT RETAINING		5
1			GROMMET		4
1			INSULATOR, SOCKET REAR		3
1			INSULATOR, SOCKET FRONT		2
1			SHELL, RECEPTACLE, SOCKET		1

PARTS LIST

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ±30' .XX ±.01 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL 3 TREATMENT: FINISH 3
REFERENCE

APPROVALS	DATE
DRAWN D. JOHN BRAGA JR.	7/18/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE
CONNECTOR, RECEPTACLE, SOCKET CONTACT, MOISTURE RESISTANT QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)S | REV. H
SCALE NONE | CAD FILE NO. 5-CQRASE1 | SHEET 1 OF 2

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DWG NO. CQ*RE*(***)S SH 2 REV –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISIONS		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.005	B ±.005	C ±.015	D ±.005	E ±.005	F ±.03	G	H	J	K ±.002	L ±.002	M ±.004	N ±.003	P ±.003	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQERE9S	#20	9	.643	.984	1.213	.311	.494	1.32	.843	.547	.984	.521	.445	.750	.285	–0–	10.43
2	15	CQARE15S	#20	15	.971	1.312	1.541	.311	.494	1.32	1.171	.547	1.312	.521	.445	1.078	.595	.275	14.96
	11W1	CQARE11W1S	#20	10						1.47									
			#8	1															
3	25	CQBRE25S	#20	25	1.511	1.852	2.088	.311	.494	1.32	1.709	.547	1.852	.521	.445	1.618	1.135	.715	20.85
	13W3	CQBRE13W3S	#20	10						1.47									
			#8	3															
	17W2	CQBRE17W2S	#20	15															
			#8	2															
	21W1	CQBRE21W1S	#20	20															
			#8	1															
4	37	CQCRE37S	#20	37	2.159	2.500	2.729	.311	.494	1.32	2.356	.547	2.500	.521	.445	2.266	1.783	1.213	26.75
	21W4	CQCRE21W4S	#20	17						1.47									
			#8	4															
	25W3	CQCRE25W3S	#20	22															
			#8	3															
5	50	CQDRE50S	#20	50	2.064	2.406	2.635	.423	.605	1.32	2.262	.659	2.406	.633	.557	2.172	1.689	1.115	31.28
	24W7	CQDRE24W7S	#20	17						1.47									
			#8	7															
	36W4	CQDRE36W4S	#20	32															
			#8	4															
	47W1	CQDRE47W1S	#20	46															
			#8	1															

NOTES (UNLESS OTHERWISE SPECIFIED)

NEXT ASSY	USED ON
APPLICATION	

QTY REQD	FROM NEL	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ±30' .XX ±.01 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL | TREATMENT | FINISH
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	7/28/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE
CONNECTOR, RECEPTACLE, SOCKET CONTACT, MOISTURE RESISTING QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)S | REV –
SCALE NONE | CAD FILE NEL CORASE1 | SHEET 2 OF 2

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DWG NO. CQ*RE*(***)P SH 1 REV H

ZONE	REV	REVISIONS DESCRIPTION	DATE	APPROVED
	H	REVISED PER E.O. #14088		

14. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

13. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

12. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

11. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

10. DELETED

9. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

8. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

7. SUPPLIED WITH TWO (2) LOCKPOSTS, PART NUMBER CQP-R3, SHIPPED LOOSE, FOR REAR MOUNTING IN .050 INCH THICK (NOM) PANELS.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION
- CQ*-CC = CONDUCTIVE ENCLOSED BACKSHELL

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

H 4. MATES WITH TSEI CQ*ME*(***)S AND CQ*CE*(***)S MOISTURE RESISTING PLUG CONNECTOR AND TSEI CQ*MA*(***)S NON MOISTURE RESISTING PLUG CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL AND RETAINING PLATE: ALUMINUM ALLOY WITH ELECTROLESS NICKEL PLATE PER MIL-C-26074.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.
- INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- GROMMET AND FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- RETAINING PLATE SCREW: STAINLESS STEEL.

H 2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

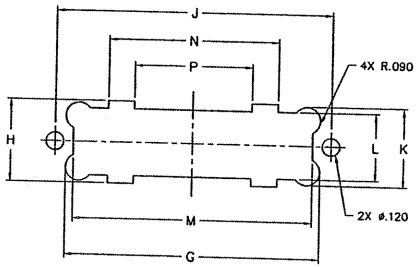
H 1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB006-5P (2020) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT; OR
- CB008-5P (2018) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT.

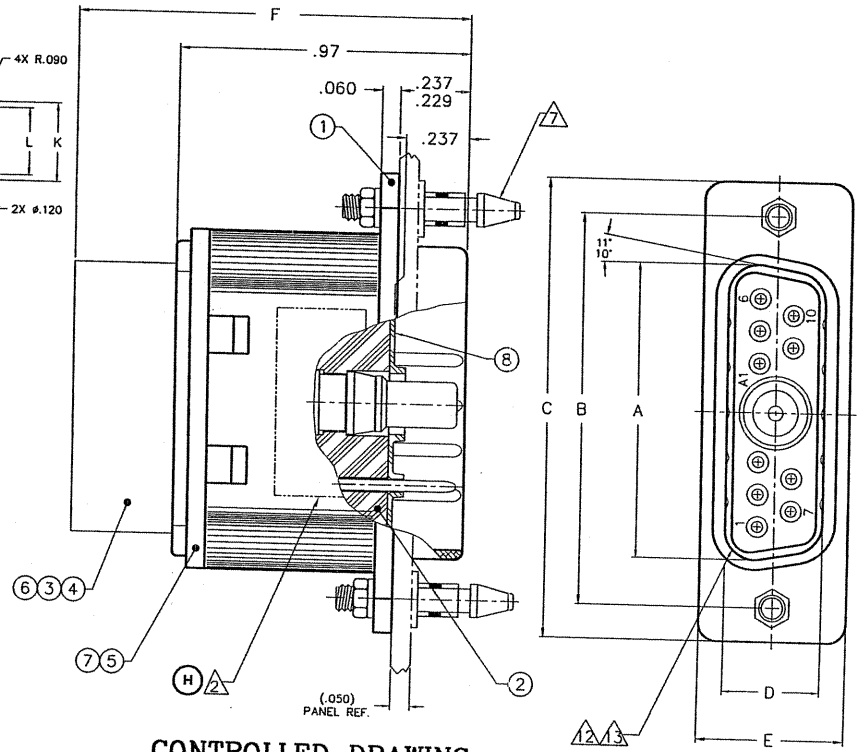
SIZE 8 COAX PIN CONTACT:
- CQMEM-501C FOR BMS 13-65 TYPE "OE".
- CQMEM-502 FOR BMS 13-65 TYPE "OF".
- CQMEM-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-P103 FOR 16-20 AWG WIRE
- CMP003-P103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



RECOMMENDED PANEL CUTOUT
FOR FRONT AND REAR MOUNT



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*RE*(***)P

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQERE9P - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQARE11W1P - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

QTY REQD	FROM NO.	PART OR IDENTIFING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
1			INTERFACIAL SEAL		8
4			INSERT RETAINING PLATE SCREW		7
			CLIP, CONTACT RET., SIZE 20		6
1			PLATE, INSERT RETAINING		5
1			GROMMET		4
1			INSULATOR, PIN REAR		3
1			INSULATOR, PIN FRONT		2
1			SHELL, RECEPTACLE, PIN		1

PARTS LIST

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.01 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL: 3 TREATMENT: FINISH: 3
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	7/29/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, RECEPTACLE, PIN CONTACT, MOISTURE RESISTING QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)P | REV H
SCALE NONE | CAD FILE NO. 5-CQRAPE1 | SHEET 1 OF 2

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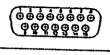
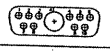
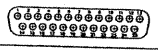
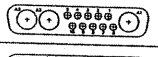
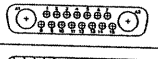
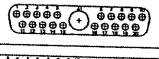
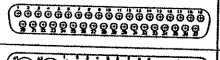
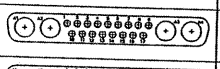
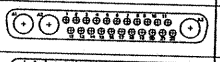
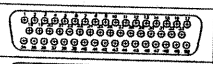
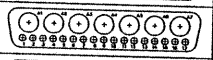
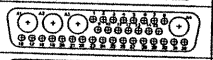
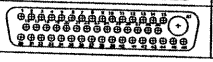
DWG. NO. CQ*RE*(***)P SH. 2 REV. –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISIONS		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.005	B ±.005	C ±.015	D ±.005	E ±.005	F ±.03	G	H	J	K ±.002	L ±.002	M ±.004	N ±.003	P ±.003	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQERE9P	#20	9	.666	.984	1.213	.329	.494	1.16	.843	.547	.984	.521	.445	.750	.285	-0-	9.15
2	15 	CQARE15P	#20	15	.994	1.312	1.541	.329	.494	1.16	1.171	.547	1.312	.521	.445	1.078	.595	.275	12.69
	11W1 	CQARE11W1P	#20	10															
			#8	1						1.31									
3	25 	CQBRE25P	#20	25	1.534	1.852	2.088	.329	.494	1.16	1.709	.547	1.852	.521	.445	1.618	1.135	.715	17.79
	13W3 	CQBRE13W3P	#20	10															
			#8	3						1.31									
	17W2 	CQBRE17W2P	#20	15															
			#8	2															
	21W1 	CQBRE21W1P	#20	20															
			#8	1															
4	37 	CQCRE37P	#20	37	2.182	2.500	2.729	.329	.494	1.16	2.356	.547	2.500	.521	.445	2.266	1.783	1.213	23.25
	21W4 	CQCRE21W4P	#20	17															
			#8	4						1.31									
	25W3 	CQCRE25W3P	#20	22															
			#8	3															
5	50 	CQDRE50P	#20	50	2.079	2.406	2.635	.436	.605	1.16	2.262	.659	2.406	.633	.557	2.172	1.689	1.115	27.50
	24W7 	CQDRE24W7P	#20	17															
			#8	7						1.31									
	36W4 	CQDRE36W4P	#20	32															
			#8	4															
	47W1 	CQDRE47W1P	#20	46															
			#8	1															

NOTES (UNLESS OTHERWISE SPECIFIED)

QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

NEXT ASSY | USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ±3.0° .XX ±.01 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL | TREATMENT | FINISH
REFERENCE

APPROVALS	DATE
DRAWN	
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, RECEPTACLE, PIN CONTACT, MOISTURE RESISTANT QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)P | REV. –
SCALE NONE | CAD FILE NO. CORAPE2 | SHEET 2 OF 2

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND EXCEPT WITH WRITTEN PERMISSION OF TRI-STAR ELECTRONICS INT'L, INC. SUCH INFORMATION SHALL NOT BE PUBLISHED, OR DISCLOSED TO OTHERS, OR USED FOR ANY PURPOSE, AND THE DOCUMENT SHALL NOT BE DUPLICATED IN WHOLE OR IN PART.

DWG. NO. CQ*ME*(***)S | SH. 1 | REV. F

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	REVISED PER E.O. #14088	2/15/01	FMA
	F	REVISED PER E.O. #14567		

13. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

12. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

11. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

10. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

9. DELETED

8. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

7. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

4. MATES WITH TSEI CQ*RE*(***)P MOISTURE RESISTING RECEPTACLE CONNECTOR AND TSEI CQ*RA*(***)P NON MOISTURE RESISTING RECEPTACLE CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL BODY & INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- RETURN SPRING, SPRING LATCH, PLATE LOCKING & SLOTTED SPRING PIN: STAINLESS STEEL, PASSIVATED
- GROMMET & FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.

2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

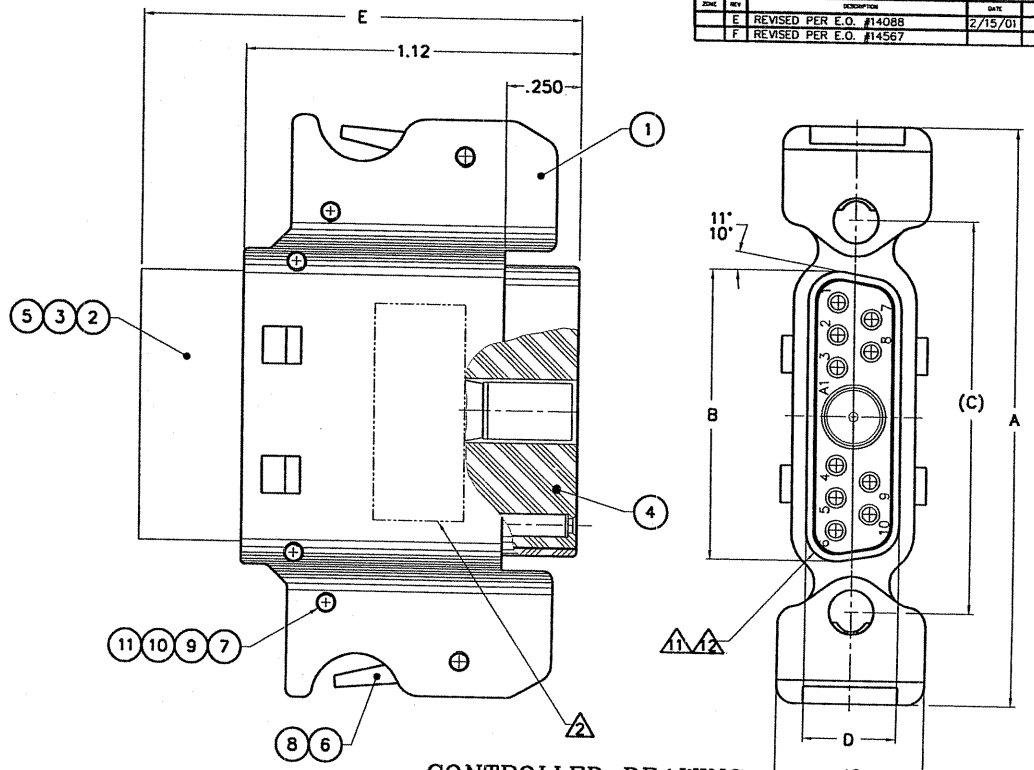
1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB007-5P (2020) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT; OR
- CB009-5P (2018) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT.

SIZE 8 COAX PIN CONTACT:
- (F) CQMEF-501D FOR BMS 13-65 TYPE "OE".
- CQMEF-502A FOR BMS 13-65 TYPE "OF".
- CQMEF-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-S103 FOR 16-20 AWG WIRE
- CMP003-S103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*ME*(***)S

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQEME9S - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQAME11W1S - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

PARTS LIST

QTY NEED	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
2			PLUG, COMPRESSION SPRING		11
4			PIN, SPIROL		10
2			SPRING, COMPRESSION		9
2			PLATE, LOCKING		8
2			PLATE, COMPRESSION SPRING		7
2			LATCH, SPRING, RETURN		6
1			CLIP, RETAINING, SZ 20		5
1			INSULATOR, SOCKET, FRONT		4
1			INSULATOR, SOCKET, REAR		3
1			GROMMET		2
1			SHELL, PLUG, SOCKET		1

NEXT ASSY | USED ON
APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ± 30' | .XX ± .03 | .XXX ± .005
DO NOT SCALE DRAWING
MATERIAL 3 | TREATMENT | FINISH 3
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	8/1/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, SOCKET CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

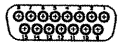
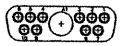
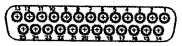
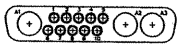
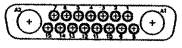
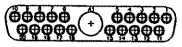
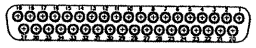
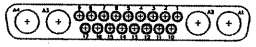
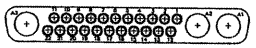
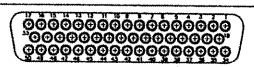
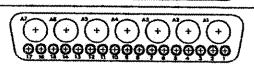
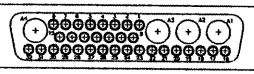
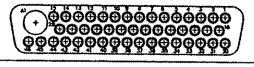
SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)S | REV. F
SCALE NONE | CAD FILE NO. 5-COMASE1 | SHEET 1 OF 2

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND EXCEPT WITH WRITTEN PERMISSION OF TRI-STAR ELECTRONICS INT'L, INC., SUCH INFORMATION SHALL NOT BE PUBLISHED, OR DISCLOSED TO OTHERS, OR USED FOR ANY PURPOSE, AND THE DOCUMENT SHALL NOT BE DUPLICATED IN WHOLE OR IN PART.

DWG NO. CQ*ME*(***)S SH 2 REV –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	SEE SHEET 1 FOR REVISION		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.030	B ±.005	C REF	D ±.005	E ±.03	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQEME9S	#20	9	1.600	.643	.984	.311	1.32	12.69
2	15 	CQAME15S	#20	15	1.928	.971	1.312	.311	1.32	17.23
	11W1 	CQAME11W1S	#20	10					1.47	
			#8	1						
3	25 	CQBME25S	#20	25	2.468	1.511	1.852	.311	1.32	22.21
	13W3 	CQBME13W3S	#20	10					1.47	
			#8	3						
	17W2 	CQBME17W2S	#20	15						
			#8	2						
	21W1 	CQBME21W1S	#20	20						
			#8	1						
4	37 	CQCME37S	#20	37	3.116	2.159	2.500	.311	1.32	27.83
	21W4 	CQCME21W4S	#20	17					1.47	
			#8	4						
	25W3 	CQCME25W3S	#20	22						
			#8	3						
5	50 	CQDME50S	#20	50	3.022	2.064	2.406	.423	1.32	34.36
	24W7 	CQDME24W7S	#20	17					1.47	
			#8	7						
	36W4 	CQDME36W4S	#20	32						
			#8	4						
	47W1 	CQDME47W1S	#20	46						
			#8	1						

NOTES (UNLESS OTHERWISE SPECIFIED)

QTY REQD	FIGN NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.03 .XXX ±.005

DO NOT SCALE DRAWING

MATERIAL | TREATMENT | FINISH

REFERENCE

NEXT ASSY | USED ON

APPLICATION

APPROVALS	DATE
DRAWN L. B. OOUCA	8/1/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, SOCKET CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)S | REV –

SCALE NONE | CAD FILE NO. CQMASE1 | SHEET 2 OF 2

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DWG NO. CQ*ME*(***)P SH 1 REV F

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	REVISED PER E.O. #14088	2/15/01	FMA
	F	REVISED PER E.O. #14567		

13. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

12. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

11. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

10. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

9. DELETED

8. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

7. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

4. MATES WITH TSEI CQ*RE*(***)S MOISTURE RESISTING RECEPTACLE CONNECTOR AND TSEI CQ* RA*(***)S NON MOISTURE RESISTING RECEPTACLE CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL BODY & INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- RETURN SPRING, SPRING LATCH, PLATE LOCKING & ROLL PIN: STAINLESS STEEL, PASSIVATED
- GROMMET & FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.

2. MARKINGS: TSEI, DATE CODE, CAGE CODE 55104 AND PART NUMBER.

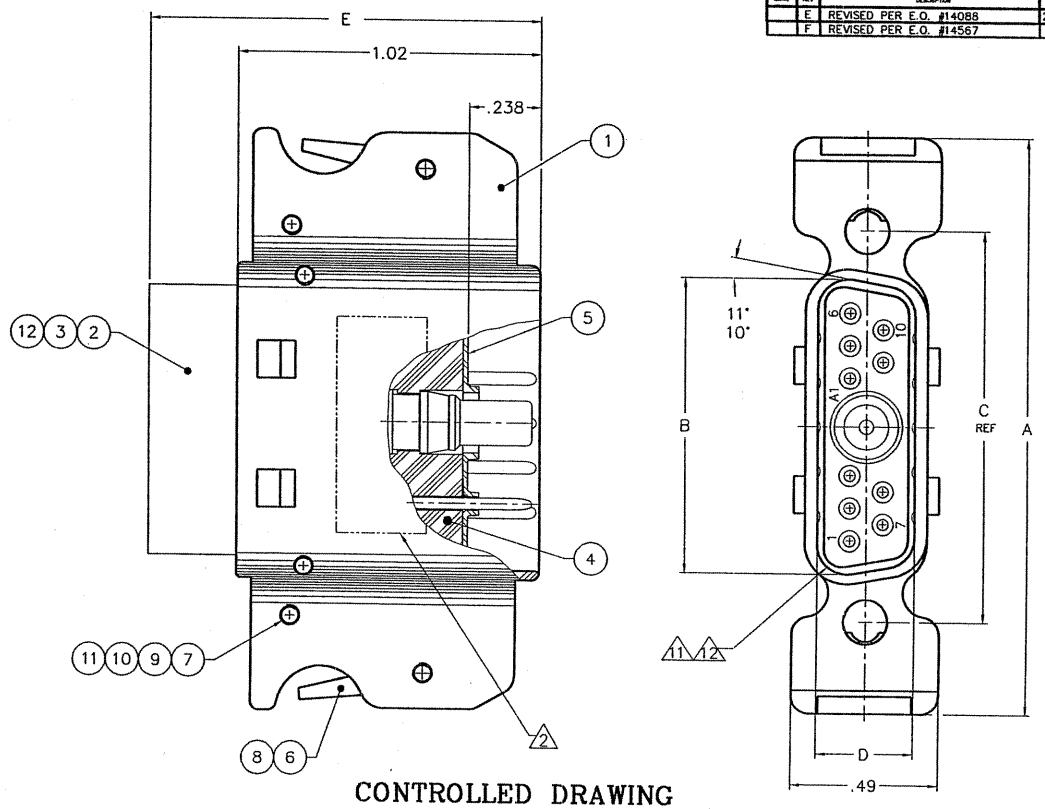
1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB006-5P (2020) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT; OR
- CB008-5P (2018) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT.

SIZE 8 COAX PIN CONTACT:
- (F) CQMEM-501D FOR BMS 13-65 TYPE "OE".
- CQMEM-502 FOR BMS 13-65 TYPE "OF".
- CQMEM-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-P103 FOR 16-20 AWG WIRE
- CMP003-P103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*ME*(***)P

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQEME9P - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQAME11W1P - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
			CLIP, RETAINING, SZ 20		12
2			PLUG, COMPRESSION SPRING		11
4			PIN, SPIROL		10
2			SPRING, COMPRESSION		9
2			PLATE, LOCKING		8
2			PLATE, COMPRESSION SPRING		7
2			LATCH, SPRING, RETURN		6
1			INTERFACIAL SEAL		5
1			INSULATOR, PIN, FRONT		4
1			INSULATOR, PIN, REAR		3
1			GROMMET		2
1			SHELL, PLUG, PIN		1

PARTS LIST

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.03 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL 3 TREATMENT FINISH 3
REFERENCE

APPROVALS	DATE
DRAWN O. BRAGA Jr.	7/18/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE CONNECTOR, PLUG, PIN CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D CAGE CODE 55104 DWG NO. CQ*ME*(***)P REV F
SCALE NONE CAD FILE NO. 5-CQMAPE1 SHEET 1 OF 2

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DWG NO. CQ*ME*(***)P SH 2 REV –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISION		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.030	B ±.005	C REF	D ±.005	E ±.03	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQEME9P	#20	9	1.600	.666	.984	.329	1.16	11.79
2	15	CQAME15P	#20	15	1.928	.994	1.312	.329	1.16	15.87
	11W1	CQAME11W1P	#20	10					1.31	
			#8	1						
3	25	CQBME25P	#20	25	2.468	1.534	1.852	.329	1.16	20.40
	13W3	CQBME13W3P	#20	10					1.31	
			#8	3						
	17W2	CQBME17W2P	#20	15						
			#8	2						
	21W1	CQBME21W1P	#20	20						
			#8	1						
4	37	CQCME37P	#20	37	3.116	2.182	2.500	.329	1.16	22.67
	21W4	CQCME21W4P	#20	17					1.31	
			#8	4						
	25W3	CQCME25W3P	#20	22						
			#8	3						
5	50	CQDME50P	#20	50	3.022	2.079	2.406	.436	1.16	31.73
	24W7	CQDME24W7P	#20	17					1.31	
			#8	7						
	36W4	CQDME36W4P	#20	32						
			#8	4						
	47W1	CQDME47W1P	#20	46						
			#8	1						

NOTES (UNLESS OTHERWISE SPECIFIED)

NEXT ASSY	USED ON
APPLICATION	

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ± 30' .XX ±.03 .XXX ±.005

DO NOT SCALE DRAWING

MATERIAL / TREATMENT / FINISH

REFERENCE

APPROVALS	DATE
DRAWN H. CONLEY JR.	7/17/97
CHECKED	
APPROVED	
APPROVED	

PARTS LIST

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, PIN CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)P | REV –

SCALE NONE | CAD FILE NO. COMAPE1 | SHEET 2 OF 2

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14. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

13. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

12. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

11. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

10. DELETED

9. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

8. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

7. SUPPLIED WITH TWO (2) LOCKPOSTS, PART NUMBER CQP-R3, SHIPPED LOOSE, FOR REAR MOUNTING IN .050 INCH THICK (NOM) PANELS.

LOCKPOSTS SHOWN INSTALLED FOR REFERENCE ONLY.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION
- CQ*-CC = CONDUCTIVE ENCLOSED BACKSHELL

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

H 4. MATES WITH TSEI CQ*ME*(***)P AND CQ*CE*(***)P MOISTURE RESISTING PLUG CONNECTOR AND TSEI CQ*MA*(***)P NON MOISTURE RESISTING PLUG CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL AND RETAINING PLATE: ALUMINUM ALLOY WITH ELECTROLESS NICKEL PLATE PER MIL-C-26074.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.
- INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- GROMMET: SILICONE RUBBER, COLOR BLUE.
- RETAINING PLATE SCREW: STAINLESS STEEL.

H 2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

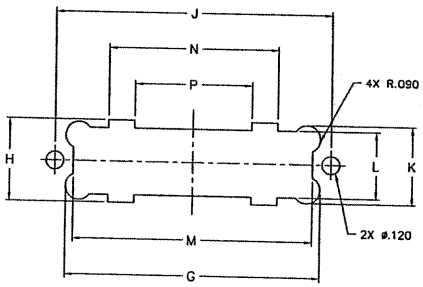
1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB007-5P (2020) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT; OR
- CB009-5P (2018) - TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT.

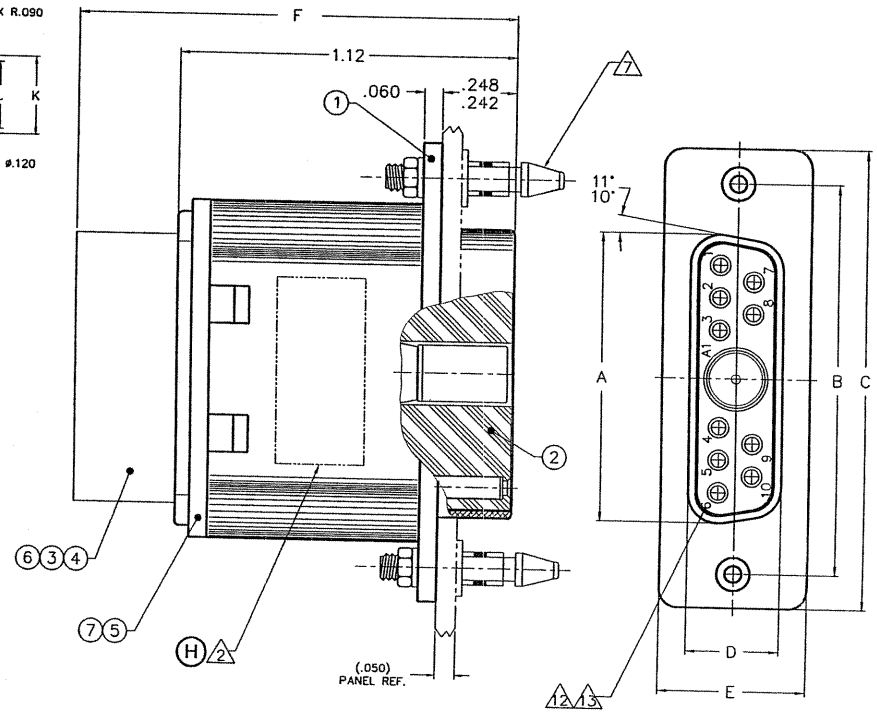
SIZE 8 COAX SKT CONTACT:
- CQMEF-501C FOR BMS 13-65 TYPE "OE".
- CQMEF-502A FOR BMS 13-65 TYPE "OF".
- CQMEF-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER SKT CONTACT:
- CMP002-S103 FOR 16-20 AWG WIRE
- CMP003-S103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



RECOMMENDED PANEL CUTOUT
FOR FRONT AND REAR MOUNT



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*RE*(***)S

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQERE9S - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQARE11W1S - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

QTY REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
4			INSERT RETAINING PLATE SCREW		7
			CLIP, CONTACT RET., SIZE 20		6
1			PLATE, INSERT RETAINING		5
1			GROMMET		4
1			INSULATOR, SOCKET REAR		3
1			INSULATOR, SOCKET FRONT		2
1			SHELL, RECEPTACLE, SOCKET		1

PARTS LIST

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.01 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL: 3 TREATMENT: FINISH: 3
REFERENCE

APPROVALS	DATE
DRAWN D. JOHN BRAGA JR.	7/18/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, RECEPTACLE, SOCKET CONTACT, MOISTURE RESISTANT QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)S | REV. H
SCALE NONE | CAD FILE NO. 5-CQRASE1 | SHEET 1 OF 2

DWG NO.	REV
CQ*RE*(***)S	H

ZONE	REV	DESCRIPTION	DATE	APPROVED
	H	REVISED PER E.O. #14088		

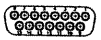
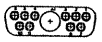
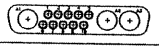
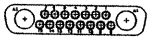
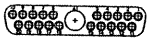
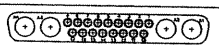
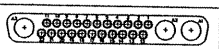
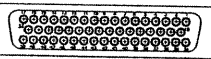
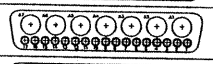
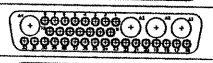
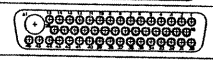
REVISIONS

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND EXCEPT WITH WRITTEN PERMISSION OF TRI-STAR ELECTRONICS INT'L, INC., SUCH INFORMATION SHALL NOT BE PUBLISHED, OR DISCLOSED TO OTHERS, OR USED FOR ANY PURPOSE, AND THE DOCUMENT SHALL NOT BE DUPLICATED IN WHOLE OR IN PART.

DWG. NO. CQ*RE*(***)S | SH. 2 | REV. –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISIONS		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.005	B ±.005	C ±.015	D ±.005	E ±.005	F ±.03	G	H	J	K ±.002	L ±.002	M ±.004	N ±.003	P ±.003	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQERE9S	#20	9	.643	.984	1.213	.311	.494	1.32	.843	.547	.984	.521	.445	.750	.285	–0–	10.43
2	15 	CQARE15S	#20	15	.971	1.312	1.541	.311	.494	1.32	1.171	.547	1.312	.521	.445	1.078	.595	.275	14.96
	11W1 	CQARE11W1S	#20	10						1.47									
			#8	1															
3	25	CQBRE25S	#20	25	1.511	1.852	2.088	.311	.494	1.32	1.709	.547	1.852	.521	.445	1.618	1.135	.715	20.85
	13W3 	CQBRE13W3S	#20	10						1.47									
			#8	3															
	17W2 	CQBRE17W2S	#20	15															
			#8	2															
	21W1 	CQBRE21W1S	#20	20															
			#8	1															
4	37	CQCRE37S	#20	37	2.159	2.500	2.729	.311	.494	1.32	2.356	.547	2.500	.521	.445	2.266	1.783	1.213	26.75
	21W4 	CQCRE21W4S	#20	17						1.47									
			#8	4															
	25W3 	CQCRE25W3S	#20	22															
			#8	3															
5	50 	CQDRE50S	#20	50	2.064	2.406	2.635	.423	.605	1.32	2.262	.659	2.406	.633	.557	2.172	1.689	1.115	31.28
	24W7 	CQDRE24W7S	#20	17						1.47									
			#8	7															
	36W4 	CQDRE36W4S	#20	32															
			#8	4															
	47W1 	CQDRE47W1S	#20	46															
			#8	1															

NOTES (UNLESS OTHERWISE SPECIFIED)

QTY REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.01 .XXX ±.005 DO NOT SCALE DRAWING

MATERIAL | TREATMENT | FINISH

REFERENCE

APPROVALS	DATE
DRAWN L. B. OOUCA	7/28/97
CHECKED	
APPROVED	
APPROVED	

NEXT ASSY | USED ON

APPLICATION

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, RECEPTACLE, SOCKET CONTACT, MOISTURE RESISTING QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)S | REV. –

SCALE NONE | CAD FILE NO. CQRASE1 | SHEET 2 OF 2

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DWG NO. CQ*RE*(***)P SH 1 REV H

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	H	REVISED PER E.O. #14088		

14. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

13. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

12. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

11. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

10. DELETED

9. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

8. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

7. SUPPLIED WITH TWO (2) LOCKPOSTS, PART NUMBER CQP-R3, SHIPPED LOOSE, FOR REAR MOUNTING IN .050 INCH THICK (NOM) PANELS.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION
- CQ*-CC = CONDUCTIVE ENCLOSED BACKSHELL

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

H 4. MATES WITH TSEI CQ*ME*(***)S AND CQ*CE*(***)S MOISTURE RESISTING PLUG CONNECTOR AND TSEI CQ*MA*(***)S NON MOISTURE RESISTING PLUG CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL AND RETAINING PLATE: ALUMINUM ALLOY WITH ELECTROLESS NICKEL PLATE PER MIL-C-26074.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.
- INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- GROMMET AND FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- RETAINING PLATE SCREW: STAINLESS STEEL.

H 2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

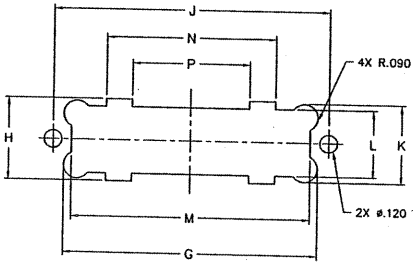
H 1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB006-5P (2020) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT; OR
- CB008-5P (2018) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT.

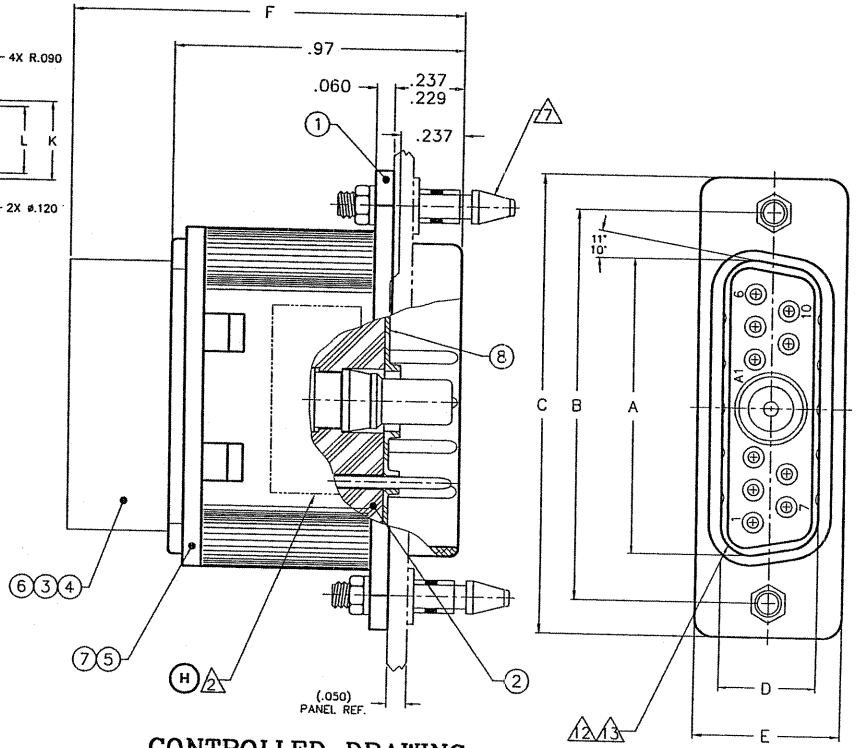
SIZE 8 COAX PIN CONTACT:
- CQMEM-501C FOR BMS 13-65 TYPE "OE".
- CQMEM-502 FOR BMS 13-65 TYPE "OF".
- CQMEM-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-P103 FOR 16-20 AWG WIRE
- CMP003-P103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



RECOMMENDED PANEL CUTOUT
FOR FRONT AND REAR MOUNT



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*RE*(***)P

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQERE9P - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQARE11W1P - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

PARTS LIST

QTY REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
1			INTERFACIAL SEAL		8
4			INSERT RETAINING PLATE SCREW		7
			CLIP, CONTACT RET., SIZE 20		6
1			PLATE, INSERT RETAINING		5
1			GROMMET		4
1			INSULATOR, PIN REAR		3
1			INSULATOR, PIN FRONT		2
1			SHELL, RECEPTACLE, PIN		1

NEXT ASSY | USED ON
APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ±30 | .XX ±.01 | .XXX ±.003
DO NOT SCALE DRAWING
MATERIAL 3 | TREATMENT | FINISH 3
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	7/29/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE
CONNECTOR, RECEPTACLE, PIN CONTACT, MOISTURE RESISTING QUICK DISCONNECT

SIZE D | CLIP CODE 55104 | DWG NO. CQ*RE*(***)P | REV H
SCALE NONE | CAD FILE NO. 5-CQRAPE1 | SHEET 1 OF 2

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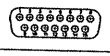
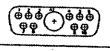
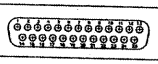
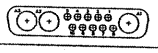
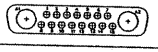
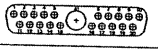
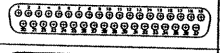
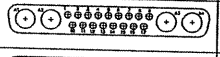
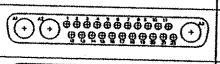
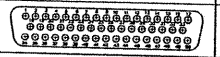
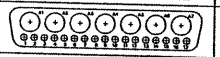
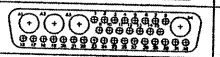
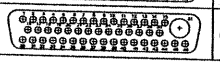
DWG. NO. CQ*RE*(***)P | SH. 2 | REV. –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISIONS		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.005	B ±.005	C ±.015	D ±.005	E ±.005	F ±.03	G	H	J	K ±.002	L ±.002	M ±.004	N ±.003	P ±.003	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQERE9P	#20	9	.666	.984	1.213	.329	.494	1.16	.843	.547	.984	.521	.445	.750	.285	–0–	9.15
2	15 	CQARE15P	#20	15	.994	1.312	1.541	.329	.494	1.16	1.171	.547	1.312	.521	.445	1.078	.595	.275	12.69
	11W1 	CQARE11W1P	#20	10															
			#8	1						1.31									
3	25 	CQBRE25P	#20	25	1.534	1.852	2.088	.329	.494	1.16	1.709	.547	1.852	.521	.445	1.618	1.135	.715	17.79
	13W3 	CQBRE13W3P	#20	10															
			#8	3						1.31									
	17W2 	CQBRE17W2P	#20	15															
			#8	2															
	21W1 	CQBRE21W1P	#20	20															
			#8	1															
4	37 	CQCRE37P	#20	37	2.182	2.500	2.729	.329	.494	1.16	2.356	.547	2.500	.521	.445	2.266	1.783	1.213	23.25
	21W4 	CQCRE21W4P	#20	17															
			#8	4						1.31									
	25W3 	CQCRE25W3P	#20	22															
			#8	3															
5	50 	CQDRE50P	#20	50	2.079	2.406	2.635	.436	.605	1.16	2.262	.659	2.406	.633	.557	2.172	1.689	1.115	27.50
	24W7 	CQDRE24W7P	#20	17															
			#8	7						1.31									
	36W4 	CQDRE36W4P	#20	32															
			#8	4															
	47W1 	CQDRE47W1P	#20	46															
			#8	1															

NOTES (UNLESS OTHERWISE SPECIFIED)

NEXT ASSY	USED ON
APPLICATION	

PARTS LIST

QTY REQD	FIGN NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	FIGN NO.

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±30' .XX ±.01 .XXX ±.005 DO NOT SCALE DRAWING

MATERIAL | TREATMENT | FINISH

REFERENCE

APPROVALS	DATE
DRAWN	
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, RECEPTACLE, PIN CONTACT, MOISTURE RESISTANT QUICK DISCONNECT

SIZE D | CAGE CODE 55104 | DWG NO. CQ*RE*(***)P | REV. –

SCALE NONE | CAD FILE NO. CQRAPE2 | SHEET 2 OF 2

THIS DOCUMENT CONTAINS PROPRIETARY INFORMATION AND EXCEPT WITH WRITTEN PERMISSION OF TRI-STAR ELECTRONICS INT'L, INC., SUCH INFORMATION SHALL NOT BE PUBLISHED, OR DISCLOSED TO OTHERS, OR USED FOR ANY PURPOSE, AND THE DOCUMENT SHALL NOT BE DUPLICATED IN WHOLE OR IN PART.

DWG. NO. CQ*ME*(***)S | SH 1 | REV. F

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	REVISED PER E.O. #14088	2/15/01	FMA
	F	REVISED PER E.O. #14567		

13. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

12. CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

11. CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

10. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

9. DELETED

8. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

7. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK.

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

4. MATES WITH TSEI CQ*RE*(***)P MOISTURE RESISTING RECEPTACLE CONNECTOR AND TSEI CQ*RA*(***)P NON MOISTURE RESISTING RECEPTACLE CONNECTOR.

3. MATERIAL AND FINISH:
- SHELL BODY & INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- RETURN SPRING, SPRING LATCH, PLATE LOCKING & SLOTTED SPRING PIN: STAINLESS STEEL, PASSIVATED
- GROMMET & FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.

2. MARKINGS: "TSEI", DATE CODE, CAGE CODE "55104" AND PART NUMBER.

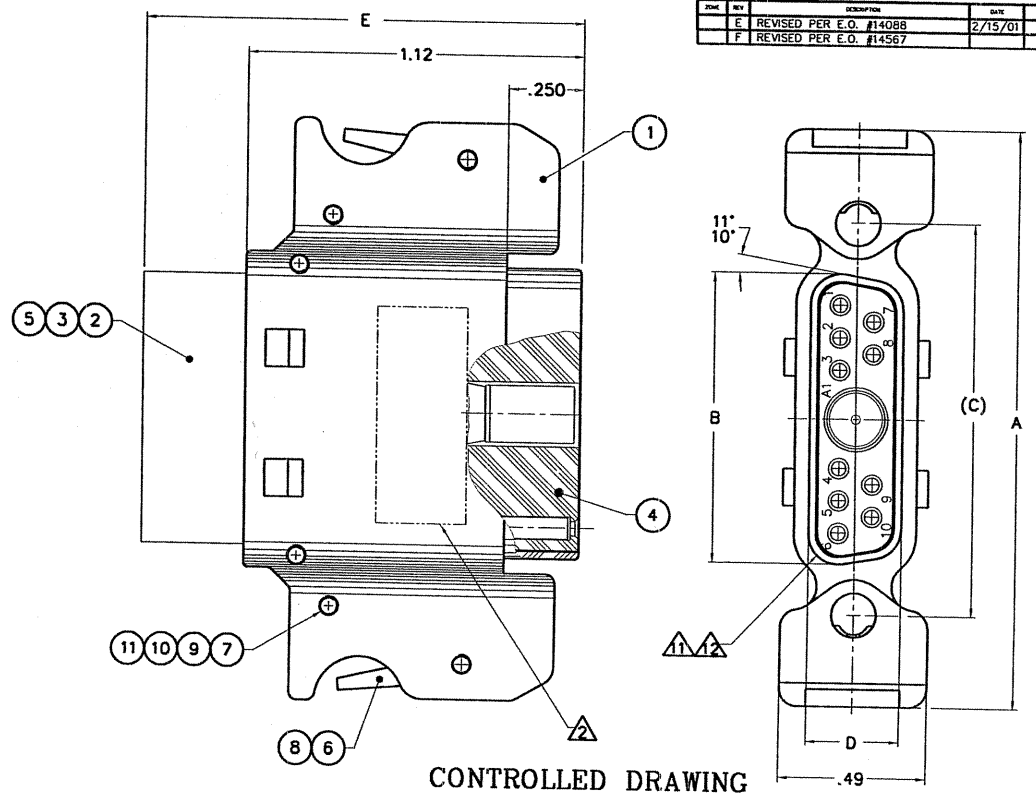
1. CONTACT ACCOMMODATION:

SIZE 20 CAVITIES:
- CB007-5P (2020) – TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT; OR
- CB009-5P (2018) – TSEI PALLADIUM PLATED L.I.F. SOCKET CONTACT.

SIZE 8 COAX PIN CONTACT:
(F)
- CQMEF-501D FOR BMS 13-65 TYPE "OE".
- CQMEF-502A FOR BMS 13-65 TYPE "OF".
- CQMEF-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-S103 FOR 16-20 AWG WIRE
- CMP003-S103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)



CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*ME*(***)S

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQEME9S – SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQAME11W1S – SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

PARTS LIST

REV. REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
2			PLUG, COMPRESSION SPRING		11
4			PIN, SPIROL		10
2			SPRING, COMPRESSION		9
2			PLATE, LOCKING		8
2			PLATE, COMPRESSION SPRING		7
2			LATCH, SPRING, RETURN		6
1			CLIP, RETAINING, SZ 20		5
1			INSULATOR, SOCKET, FRONT		4
1			INSULATOR, SOCKET, REAR		3
1			GROMMET		2
1			SHELL, PLUG, SOCKET		1

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ± 30' .XX ±.03 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL 3 | TREATMENT | FINISH 3
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	8/1/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE
CONNECTOR, PLUG, SOCKET CONTACT
MOISTURE RESISTING, QUICK DISCONNECT
(NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)S | REV. F
SCALE NONE | CAD FILE NO. 5-COMASE1 | SHEET 1 OF 2

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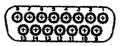
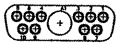
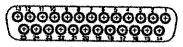
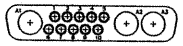
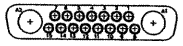
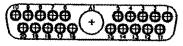
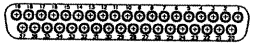
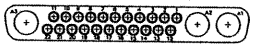
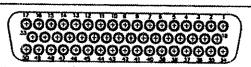
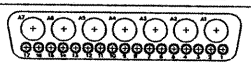
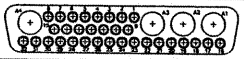
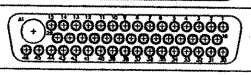
DWG NO. CQ*ME*(***)S | SH 2 | REV –

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	–	SEE SHEET 1 FOR REVISION		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.030	B ±.005	C REF	D ±.005	E ±.03	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQEME9S	#20	9	1.600	.643	.984	.311	1.32	12.69
2	15 	CQAME15S	#20	15	1.928	.971	1.312	.311	1.32	17.23
	11W1 	CQAME11W1S	#20	10					1.47	
			#8	1						
3	25 	CQBME25S	#20	25	2.468	1.511	1.852	.311	1.32	22.21
	13W3 	CQBME13W3S	#20	10					1.47	
			#8	3						
	17W2 	CQBME17W2S	#20	15						
			#8	2						
	21W1 	CQBME21W1S	#20	20						
			#8	1						
4	37 	CQCME37S	#20	37	3.116	2.159	2.500	.311	1.32	27.83
	21W4	CQCME21W4S	#20	17					1.47	
			#8	4						
	25W3 	CQCME25W3S	#20	22						
			#8	3						
5	50 	CQDME50S	#20	50	3.022	2.064	2.406	.423	1.32	34.36
	24W7 	CQDME24W7S	#20	17					1.47	
			#8	7						
	36W4 	CQDME36W4S	#20	32						
			#8	4						
	47W1 	CQDME47W1S	#20	46						
			#8	1						

NOTES (UNLESS OTHERWISE SPECIFIED)

QTY REQD	FSCM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ± 30' .XX ±.03 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL: TREATMENT: FINISH:
REFERENCE

APPROVALS	DATE
DRAWN L. B. ODUCA	8/1/97
CHECKED	
APPROVED	
APPROVED	

NEXT ASSY | USED ON
APPLICATION

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, SOCKET CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)S | REV –
SCALE NONE | CAD FILE NO. COMASE1 | SHEET 2 OF 2

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DWG NO. CQ*ME*(***)P SH 1 REV F

REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
	E	REVISED PER E.O. #14088	2/15/01	FMA
	F	REVISED PER E.O. #14567		

13. CHANGES IN PRODUCT DESIGN OR QUALITY AS SPECIFIED IN THE APPROVED DRAWING BASELINE AND THE BOEING SOW SHALL NOT BE EFFECTED WITHOUT PRIOR BOEING APPROVAL.

△12 CONNECTOR SHOWN DEPICTS SIZE 2 CONNECTOR WITH 11W1 INSERT ARRANGEMENT.

△11 CONTACTS SHOWN FOR REFERENCE ONLY. NOT SUPPLIED WITH THE CONNECTOR.

10. INSTALLING AND REMOVAL TOOL:
- SIZE 20 CONTACT: M81969/1-02.
- SIZE 8 REMOVAL TOOL: DRK 38.
- INSTALLING TOOL: BY HAND

9. DELETED

8. MEETS APPLICABLE REQUIREMENTS OF BOEING SPECIFICATION D1-9000.

7. CONNECTOR MEETS THE REQUIREMENTS OF BOEING SOW "MOISTURE RESISTING QUICK DISCONNECT D-SHAPED RECTANGULAR & KEYHOLE ELECTRICAL CONNECTOR DEVELOPMENT PROGRAM STATEMENT OF WORK".

6. BACKSHELL ARE PURCHASED SEPARATELY UNDER FOLLOWING P/N:
- CQ*-PL = POLAR TYPE ORIENTATION
- CQ*-EL = POLAR TYPE ORIENTATION
- CQ*-SL = STRAIGHT TYPE ORIENTATION

5. CONNECTOR IS DESIGNED FOR APPLICATIONS REQUIRING MOISTURE RESISTING PROPERTIES. SEE BOEING SOW FOR LIMITATIONS ON USE.

4. MATES WITH TSEI CQ*RE*(***)S MOISTURE RESISTING RECEPTACLE CONNECTOR AND TSEI CQ* RA*(***)S NON MOISTURE RESISTING RECEPTACLE CONNECTOR.

△3 MATERIAL AND FINISH:
- SHELL BODY & INSULATOR: HIGH GRADE DIELECTRIC, COLOR BLACK.
- RETURN SPRING, SPRING LATCH, PLATE LOCKING & ROLL PIN: STAINLESS STEEL, PASSIVATED
- GROMMET & FACE SEAL: SILICONE RUBBER, COLOR BLUE.
- CONTACT RETAINING CLIP: BERYLLIUM COPPER, HEAT TREATED.

△2 MARKINGS: TSEI, DATE CODE, CAGE CODE 55104 AND PART NUMBER.

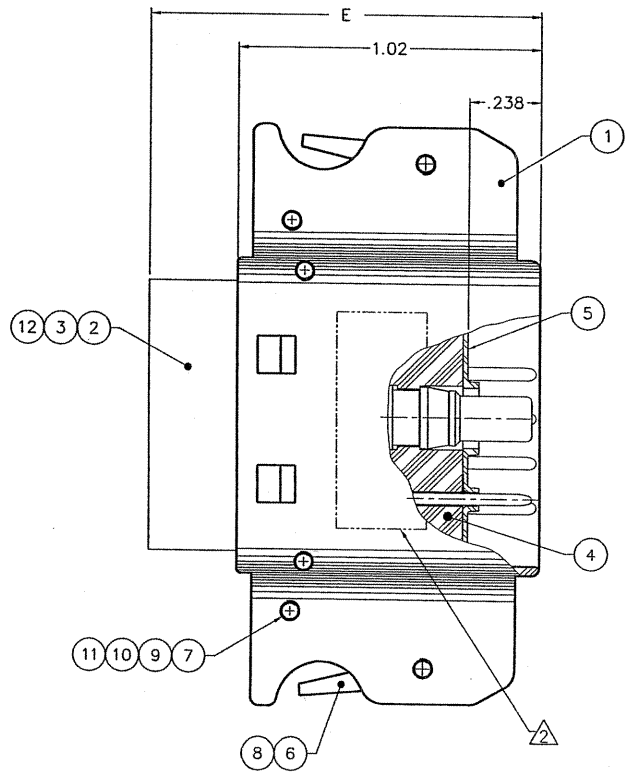
1. CONTACT ACCOMMODATION:

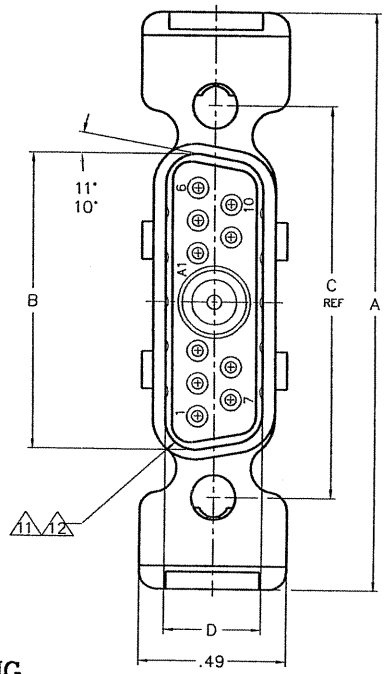
SIZE 20 CAVITIES:
- CB006-5P (2020) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT; OR
- CB008-5P (2018) - TSEI PALLADIUM PLATED L.I.F. PIN CONTACT.

SIZE 8 COAX PIN CONTACT:
- (F) CQMEM-501D FOR BMS 13-65 TYPE "OE".
- CQMEM-502 FOR BMS 13-65 TYPE "OF".
- CQMEM-503 FOR BMS 13-65 TYPE "OG".

SIZE 8 POWER PIN CONTACT:
- CMP002-P103 FOR 16-20 AWG WIRE
- CMP003-P103 FOR 12-14 AWG WIRE

NOTES (UNLESS OTHERWISE SPECIFIED)





CONTROLLED DRAWING

PART NUMBER EXPLANATION
CQ*ME*(***)P

INSERT ARRANGEMENT (SEE TABLE)
PART NUMBER EXAMPLE:
CQEME9P - SHELL SIZE 1 WITH 9 PIN INSERT ARRANGEMENT.
CQAME11W1P - SHELL SIZE 2 WITH 11W1 INSERT ARRANGEMENT.

SHELL SIZE
E = 1
A = 2
B = 3
C = 4
D = 5

PARTS LIST

QTY REQD	FROM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.
			CLIP, RETAINING, SZ 20		12
2			PLUG, COMPRESSION SPRING		11
4			PIN, SPIROL		10
2			SPRING, COMPRESSION		9
2			PLATE, LOCKING		8
2			PLATE, COMPRESSION SPRING		7
2			LATCH, SPRING, RETURN		6
1			INTERFACIAL SEAL		5
1			INSULATOR, PIN, FRONT		4
1			INSULATOR, PIN, REAR		3
1			GROMMET		2
1			SHELL, PLUG, PIN		1

NEXT ASSY	USED ON

APPLICATION

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
ANGLES ±30' .XX ±.03 .XXX ±.005
DO NOT SCALE DRAWING
MATERIAL △3 TREATMENT FINISH △3
REFERENCE

	APPROVALS	DATE
DRAWN	O. BRAGA Jr.	7/18/97
CHECKED		
APPROVED		
APPROVED		

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, PIN CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)P | REV F
SCALE NONE | CAD FILE NO. 5-CQMAPE1 | SHEET 1 OF 2

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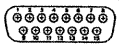
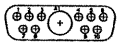
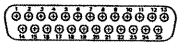
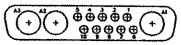
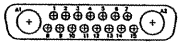
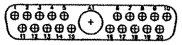
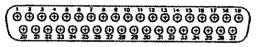
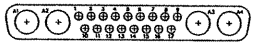
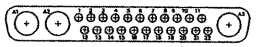
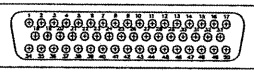
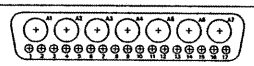
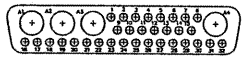
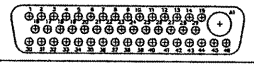
REVISIONS

ZONE	REV	DESCRIPTION	DATE	APPROVED
		SEE SHEET 1 FOR REVISION		

SHELL SIZE	INSERT ARRANGEMENT	TSEI PART No.	CONTACT SIZE	CONTACT QTY.	A ±.030	B ±.005	C REF	D ±.005	E ±.03	APPROX WEIGHT (LESS CONTACT) GRAMS
1	9	CQEME9P	#20	9	1.600	.666	.984	.329	1.16	11.79
2	15 	CQAME15P	#20	15	1.928	.994	1.312	.329	1.16	15.87
	11W1 	CQAME11W1P	#20	10					1.31	
			#8	1						
3	25 	CQBME25P	#20	25	2.468	1.534	1.852	.329	1.16	20.40
	13W3 	CQBME13W3P	#20	10					1.31	
			#8	3						
	17W2 	CQBME17W2P	#20	15						
			#8	2						
	21W1 	CQBME21W1P	#20	20						
			#8	1						
4	37 	CQCME37P	#20	37	3.116	2.182	2.500	.329	1.16	22.67
	21W4 	CQCME21W4P	#20	17					1.31	
			#8	4						
	25W3 	CQCME25W3P	#20	22						
			#8	3						
5	50 	CQDME50P	#20	50	3.022	2.079	2.406	.436	1.16	31.73
	24W7 	CQDME24W7P	#20	17					1.31	
			#8	7						
	36W4 	CQDME36W4P	#20	32						
			#8	4						
	47W1 	CQDME47W1P	#20	46						
			#8	1						

NOTES (UNLESS OTHERWISE SPECIFIED)

QTY REQD	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	ITEM NO.

PARTS LIST

UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ANGLES ±.30°, .XX ±.03, .XXX ±.002. DO NOT SCALE DRAWING. MATERIAL / TREATMENT / FINISH. REFERENCE.

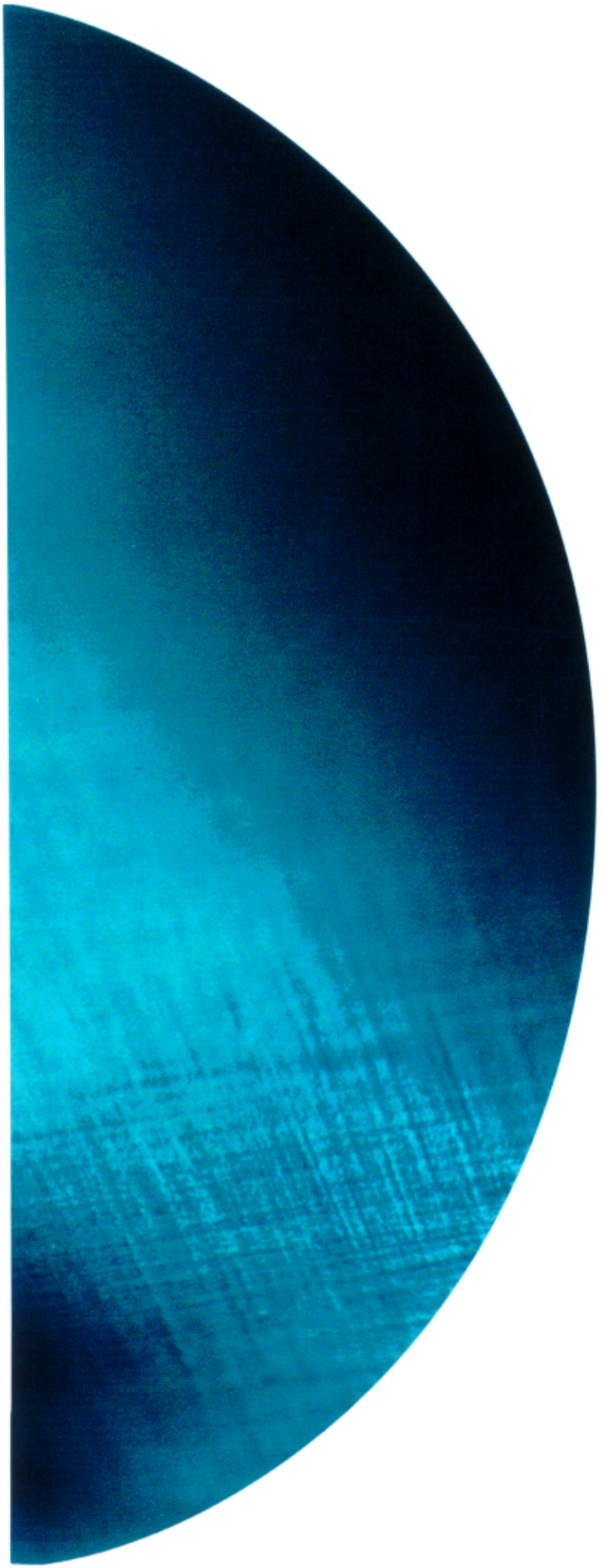
NEXT ASSY	USED ON
APPLICATION	

APPROVALS	DATE
DRAWN H. CONLEY JR.	7/17/97
CHECKED	
APPROVED	
APPROVED	

TRI-STAR ELECTRONICS INT'L, INC.
2201 ROSECRANS AVE., EL SEGUNDO, CA 90245

TITLE: CONNECTOR, PLUG, PIN CONTACT MOISTURE RESISTING, QUICK DISCONNECT (NON-CONDUCTIVE)

SIZE D | CAGE CODE 55104 | DWG NO. CQ*ME*(***)P | REV –

SCALE NONE | CAD FILE NO. COMAPE1 | SHEET 2 OF 2

Rev 001: 2004