SPIRE-AST-MOM-001516

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Minutes of Meeting

Herschel

Date: 24.1.03

Doc.-No.: HP-2-ASED-MN- 270

Meeting place: ASED - FN	Chairman: J. Lang
Date/Time:	Secretary
Agenda dated:	Close of Meeting:

Subject: Gyo-Harness Backshell Procurement

Participants: E. Kortmann Olenic W. Hund J. Lang T. Jang	Additional Distribution: See last sheet

Page: 1 of Page(s)

☐ Brief-Minutes (except following sheets)

☐ Summary of Results of Sheets 2 till

Reference	Results	Remarks
	CVV external Plug connector • Backshell type for 197-012P-24/22-35(N)(DRW-Rev.C) will be G 9254 F24/22 M Rev.G plus fitting adaptor 687-524 Rev.1 .. (see Annex 1+2) ⊗ Glenair to add the band adapter fitting and to investigate on G87524M xx the tolerances for AWG 44 Hangain braid fitting. • Plug connector 197-012 -24/22-35 S(N) DRW-Rev.C (see Annex 3) Solid wire contact length 15 mm behind rear insert surface. • Feedthrough 197-011 P24-35P Rev.B (Annex 4) " 197-011 P22-35P Rev.B (Annex 5) [197-011 P18-35P Rev.B (Annex 6)] not yet used	⟸ created of 447-732 Rev.1 will be split and fitting will be new.

Reference	Results	Remarks
	• Pin contacts for sample verification during manufacturing Tin plated contacts of type 197-011 Tinplated-MOQ500 ⊗ Glenair to provide delivery and price for 5000 pc. • SVM I/F-connector backshells (CVV external Harness Jxx) SCC 3401-044011B03xx 24-35 // 22-35 [18-35] Pin backshell type for EQM 440-110 Rev. 1 (Annex 7) For EQM this type will be ordered. ⊗ Parallel the Lamp thread version will be investigated similar to 687-524 Rev. 1 w.r.t. Manganinbraid (AWG44) + tolerances. Glenair requests sample braid from GORE. After confirmation of Glenair the new Lamp thread fittings can be ordered for SVM I/F-CB Jxx and CVV Plug backshells w.r.t. PFM Cryo-Harness. (cheaper, better accessibility and repair)	

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Reference	Results	Remarks
	SVM I/F-connector backshell, Plug connector Pxx [Copper stranded harness with 1 and 2 overall-shields] Backshell type 380FS007M22/24-03 to 06L-TBD (03) ⊗ TBD: Glenair to provide shortest length (approx. 45-50 mm) Currently for 03, the overall length is 1,52" + 0,85" ≈ 60 mm Data sheet see Annex 8. CUV external LOU-Harness (SCC3401-005 size 50) Backshell of type 557-357 (latest Rev. 4 will be Rev. 5. (M2/M3-thread) Glenair to provide drawing already received as converted pdf. file. Backshell height will be 10 mm longer for LOU-I/F only. ⊗ Glenair to provide drawing. In addition for SVM internal the outlet can be asymdron to backshell centre. ⊗ Glenair to provide new drawing.	(Annex 9)

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Reference	Results	Remarks
	Backshell 557-356 Rev 4 will be updated for lamp thread (braid AWG 44) and asymdrive outlet - straight version only. Glenair to provide new drawing ⊗	(Annex 10)
	CUV internal MWDM. connector backshells	
	Backshell 507-196 Rev. 5 (without thread) will be delivered as Rev. 6 with internal thread for cable shield - leg ~~fixation~~. ⊗ - Glenair to provide drawing for asymdrive outlet ⊗ for alternative (in case of close connector pitches).	(Annex 11)
	SVM internal SCC 3401-005 connector backshells	(Annex 12)
	Glenair propose to use 550T001MXX, but in this case the front or backpanel coupling pair shall be controlled. CC = cable to cable; FO = Front mounted R = Rear mounted (RS)	

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Reference	Results	Remarks
	NONO-connectors MRN4194 Rev. A ⇒DRW MRN3120 = fixation bolt. Already ordered via CPPA. (Annex 13) The fixation bolt with ellen-head seams to be not manufacturable. (male-hex socket) Cryo-harness propose to use hex-nut heads instead. TO BE CONFIRMED (A. Grasl) ⊗ Glenair to evaluate tooling furnished by Glenair as recommended by ASED. Cryo-cover vacuum feedthrough connector AAE selected from Glenair type 257-104 Rev. 4 (see Annex 14) feedthrough with solder lug fixation on both sides. ASED and AAE AIT decided, that the harness between the feedthrough and cover I/F-CB Receptacles	

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Reference	Results	Remarks
	shall be manufactured by ASED Harness group, due to not available SST inter-connection technology at Tele con Mr. Guttler on today 13ve with Mr. Lang. AAE. Forseen wire sizes are from AAE view: SPL-21-28 (SCC 3901-019) : for C100 sensors SPL-41-28 " for DT 1000 sensors. NED in addition copper stranded wires. For C/H flexibility AWG 28 wires are mandatory for the sensor wires over the cover hinges! Note: In case this interconnection technology have to trained by 25 operators, cry-harness propose to use 197-011/012 connectors instead. (To be clarified ASED internal) CVV internal feedthrough connector backshell The former backshell 447-735 Rev. 1. Alenia propose to use 2 fixations only; slit lower part and oval outlet for overshield interconnection.	

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Reference	Results	Remarks
	Glenair will provide updated drawing for SPIRE C/H. Isolated bushes will decouple backshell from connector case (required by RAL JD.) For HIFI and PACS S/H + CCH the ASTP designed backshells will be used. Evaluation of cost and delivery will be performed in sight of PFM cryo tranes. by ASED. (HERSKT 000058-0040 / 0042). (Annex 16) Glenair propose to provide all drawings within 4-5 weeks from now.	

TABLE I

SHELL SIZE A,D,F,L,S	SHELL SIZE H	E MAX REF	F MAX	G ENTRY	MAX ENTRY	KLBOW SIZE REF
08	09	.98	.68	.56	.250	08
10	11	1.11	.75	.62	.375	10
12	13	1.23	.81	.69	.500	12
14	15	1.36	.87	.72	.625	14
16	17	1.48	.93	.82	.750	16
18	19	1.60	1.00	.88	.875	18
20	21	1.73	1.06	.94	1.000	20
22	23	1.86	1.12	1.00	1.125	22
24	25	2.07	1.18	1.06	1.250	24
28	-	2.34	1.34	1.22	1.375	28
36	-	2.81	1.56	1.41	1.875	36
40	-	3.07	1.69	1.62	2.060	40
61	-	2.07	1.18	1.06	1.250	61

REFERENCE TABLE

ACCESSORY TYPE	GLENAIR DRAWING
RFI/EMI ADAPTERS	G9255
SHRINK BOOT W/ BRAIDED SHIELD	G9256
STRAIN RELIEF ADAPTERS	G9267
SHRINK BOOT ADAPTERS	G9654

REVISIONS

SYM.	DESCRIPTION	DATE	APPROVED
A	REVISED PER DCN 04624	10/27/83	M.P.
B	REVISED PER DCN 04645	11/21/83	J.P.
C	REVISED PER DCN 05191	01/16/85	S.S.
D	REVISED PER DCN 05421	02/05/86	C.S.
E	REDRAWN AND REVISED PER DCN 09240	05/17/91	T.L.
F	REVISED PER DCN 10731	10/06/91	T.L.
G	REVISED PER DCN 17687	03/28/01	T.L.

PART NUMBER DEVELOPMENT

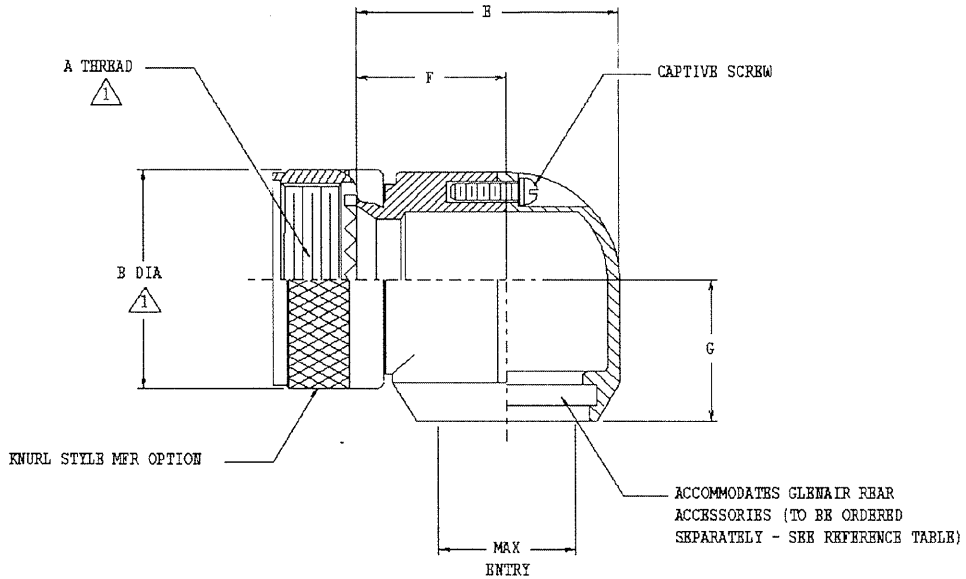
EXAMPLE: G9254 A 16 M

BASIC NO

CONN DESIGNATOR: A, D, F, H, L, OR S TABLE A (1)

SHELL SIZE, TABLE I

FINISH SYMBOL, TABLE II (1)



NOTES:

1. SEE SHEET 2 (COMMON ACCESSORY INTERFACE DATA).
2. FOR EFFECTIVE GROUNDING, CONNECTOR WITH CONDUCTIVE FINISH SHOULD BE USED.
3. MATERIAL/FINISH:
   COUPLING NUT, ELBOW - AL ALLOY/SEE TABLE II
   HARDWARE - CRES/PASSIVATED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS ± 1/16
DECIMALS ± .XX .01, ± .XXX .015
ANGLES ± 2°
DO NOT SCALE THIS DRAWING
M/F 91-6477 M/C 380°E

DRAWN T.LE 05/17/91
CHECK G.BURGE 05/17/91
ENGR P.OAKES 05/17/91
APPROVED
APPROVED
RELEASE DATE 05/17/91
ORIGINAL RELEASE DATE 08/26/83

GLENAIR, INC. CAD 1991
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

ELBOW, 90° , SPLIT

CAGE IDENT. NO 06324 | SIZE C | G9254 | REV. G

SCALE N/A | WEIGHT N/A | SHEET 1 OF 2

CVV ext. - Side

687-524

TABLE I				
DASH NO	J MAX	K MAX	L DIM	CABLE ENTRY MAX
02	.515 (13.1)	.968 (24.6)	.171 (4.3)	.250 (6.4)
03	.640 (16.3)	1.046 (26.6)	.197 (5.0)	.375 (9.5)
04	.765 (19.4)	1.156 (29.4)	.197 (5.0)	.500 (12.7)
05	.920 (23.4)	1.219 (31.0)	.197 (5.0)	.625 (15.9)
06	1.015 (25.8)	1.343 (34.1)	.197 (5.0)	.750 (19.1)
07	1.140 (29.0)	1.469 (37.3)	.197 (5.0)	.875 (22.2)
08	1.265 (32.1)	1.594 (40.5)	.197 (5.0)	1.000 (25.4)
09	1.432 (36.4)	1.719 (43.7)	.197 (5.0)	1.125 (28.6)

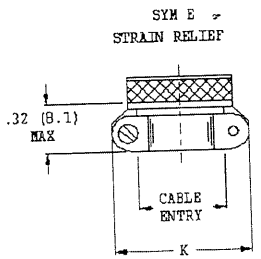
TABLE II	
SYM	FINISH DESCRIPTION
B	CADMIUM PLATE/OLIVE DRAB
J	GOLD IRIDITE OVER CADMIUM PLATE OVER NICKEL
M	ELECTROLESS NICKEL
N	CADMIUM PLATE/OLIVE DRAB OVER NICKEL
NF	CAD/O. D. OVER ELECTROLESS NICKEL (500 HOUR SALT SPRAY)
T	CADMIUM PLATE/BRIGHT DIP OVER NICKEL

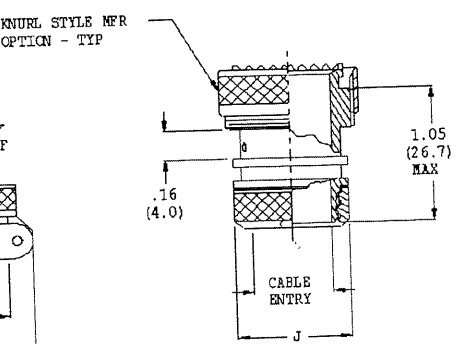
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	PRELIMINARY	12/14/02	

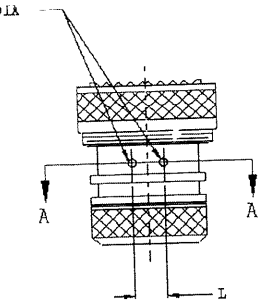
PART NUMBER DEVELOPMENT

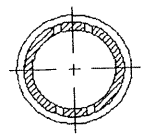
EXAMPLE: 687 - 524 M 04 E

- PRODUCT SERIES
- BASIC NO
- FINISH SYM, TABLE II
- DASH NO, TABLE I
- E = STRAIN RELIEF OMIT FOR NUT









SECTION A-A

NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. FOR EFFECTIVE GROUNDING, CONNECTOR WITH CONDUCTIVE FINISH SHOULD BE USED.
3. GLENAIR 600 SERIES BACKSHELL ASSEMBLY TOOLS ARE RECOMMENDED FOR ASSEMBLY AND INSTALLATION.
4. MATERIAL/FINISH:
   ADAPTER, NUT, CLAMP, SADDLES - AL ALLOY/SEE TABLE II
   HARDWARE - CRES/PASSIVATED

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES
FRACTIONS ± 1/16
DECIMALS .XX ± .03
.XXX ± .015
ANGLES ± 1°
DO NOT SCALE THIS DRAWING

DRAWN	T.LE	12/14/02
CHECK	P.DAKES	12/14/02
ENGR	R.PAINTER	12/14/02
APPROVED		
RELEASE DATE	12/14/02	
TECHNICAL RELEASE DATE		

NOT REPAIRABLE COMMERCIAL ITEM

B/P 02-1252 | P/C 687

GLENAIR, INC. CAGE 06324
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

ADAPTER, RFI/EMI, FOR GLENAIR SPLIT BACKSHELL

CODE IDENT. NO.	SIZE	687-524	REV.
06324	C		1
SCALE N/A	WEIGHT N/A	SHEET 1 OF 2	

HP-2-ASED-MN-027c

Annex 2

Connector CVV extern.

197-012

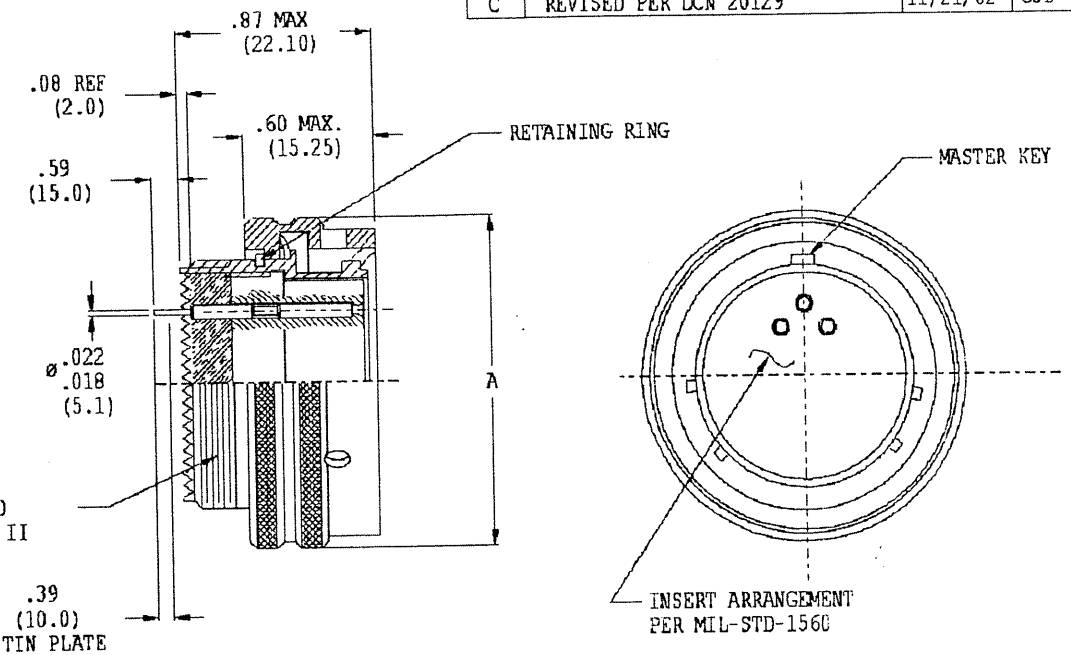
TABLE I			
SHELL SIZE	INSERT ARRANGEMENT	A DIA MAX	B THREAD CLASS 2A
18	18-35	1.391	1.062-18 UNEF
22	22-35	1.656	1.312-18 UNEF
24	24-35	1.777	1.438-18 UNEF

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	RELEASED	3/28/02	GSB
B	REVISED PER DCN 20019	10/31/02	GSB
C	REVISED PER DCN 20129	11/21/02	GSB

PART NUMBER DEVELOPMENT

EXAMPLE: 197 - 012 18 - 35 S

- PRODUCT SERIES
- BASIC NO.
- SHELL SIZE
- INSERT ARRANGEMENT
- CONTACT STYLE
  P= PIN
  S= SOCKET



1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N SPACE PERMITTING.

2. MATERIAL/FINISH:
   BARREL, COUPLING - AL ALLOY/ELECTROLESS NICKEL.
   WAVE WASHER - STAINLESS STEEL/PASSIVATE.
   CONTACTS - COPPER ALLOY/GOLD PLATE (TIN PLATE @ ENDS)
   INSULATORS - HI-GRADE RIGID DIELECTRIC/N.A.
   FILLER - EPOXY POTTING/ N.A

3. CONSULT FACTORY FOR ADDITIONAL SHELL SIZES AND INSERT ARRANGEMENTS.

4. METRIC DIMENSIONS (IN PARENTHESIS) ARE FOR REFERENCE ONLY AND ARE BASE ON 1 INCH = 25.4 mm

UNLESS OTHERWISE SPECIFIED	DRAWN	TKN	12/07/01
DIMENSIONS ARE IN INCHES	CHECK		
TOLERANCES: FRACTIONS ± 1/16, DECIMALS .XX ±.010 .XXX ±.005, ANGLES ± 1°	ENGR	P.OAKES	12/07/01
	APPROVED	P.D.Oakes	
	APPROVED	D.Brown	
DO NOT SCALE THIS DRAWING	RELEASE DATE		
B/F01-1021 P/C	ORIGINAL RELEASE DATE		

GLENAIR, INC. CAD 1991 ©
1211 AIR WAY GLENDALE, CALIF. 91201

PLUG, CONNECTOR, PC TAIL
MIL-C-38999, SERIES II

CODE IDENT. NO.	SIZE		REV.
06324	B	197-012	C
SCALE N/A	WEIGHT N/A	SHEET 1 OF 1	

HP-2-ASED-HN-0278

Annex 3

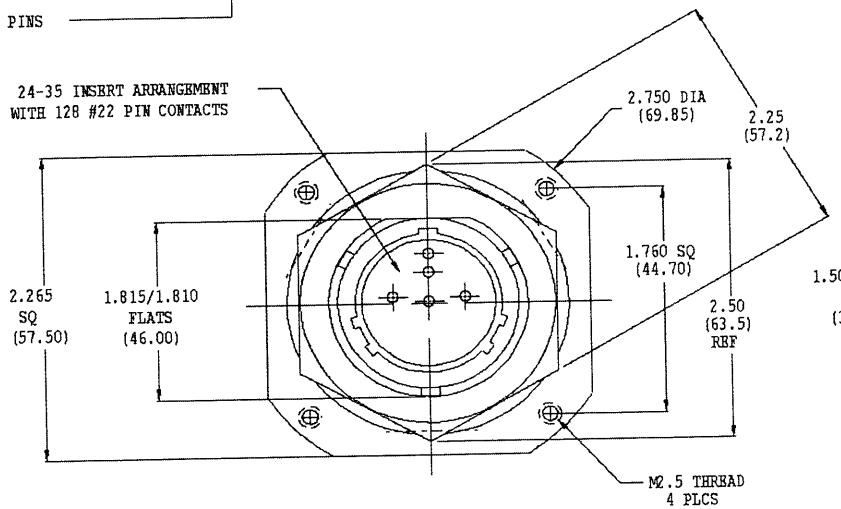
197-011P24-35P

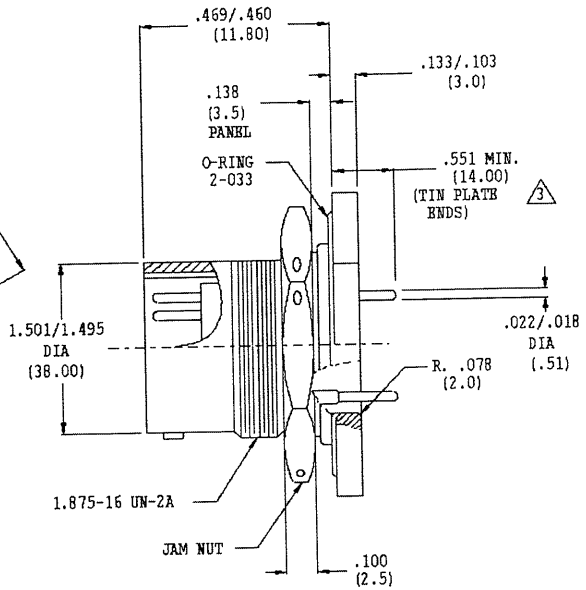
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	RELEASED	06/18/02	P.O.
B	REVISED PER DCN 19915	10/14/02	P.O.

PART NUMBER DEVELOPMENT

EXAMPLE: 197 - 011 P 24 - 35 P

- PRODUCT SERIES
- BASIC NO.
- FINISH SYMBOL P = NICKEL
- SHELL SIZE
- INSERT ARRANGEMENT
- CONTACT STYLE P = PINS





NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. INSERT ARRANGEMENT IN ACCORDANCE WITH MIL-STD-1560, ARRANGEMENT 24-35.
3. MATERIAL/FINISH:
   JAM NUT, BAYONET PINS, SHELL - CRES/NICKEL PLATE
   CONTACTS - ALLOY 52 STEEL/ GOLD PLATE (TIN PLATE @ ENDS)
   O-RING, SEAL - VITON/ N.A.
   INSULATOR - FUSED VITREOUS GLASS/ N.A.
4. METRIC DIMENSIONS (IN PARENTHESIS) ARE FOR REFERENCE ONLY AND ARE BASE ON 1 INCH = 25.4 mm

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONS ± 1/16
DECIMALS XX ±.03, XXX ±.015
ANGLES ± 2°

DO NOT SCALE THIS DRAWING

B/F 01-1021 | P/C 198

DRAWN	TNH	12/07/01
CHECK		
ENGR	P. OAKES	12/07/01

APPROVED

APPROVED

RELEASE DATE

OPTIONAL RELEASE DATE

NON REPARABLE COMMERCIAL ITEM

GLENAIR, INC. CAGE 1586

1211 AIR WAY - GLENDALE - CALIFORNIA 91201

RECEPTACLE, JAM NUT, SPECIAL PURPOSE
FOR MIL-C-38999 SERIES II.
SHELL SIZE 24, HERMETIC

CAGE IDENT. NO.	SIZE		REV.
06324	C	197-011P24-35P	B

SCALE N/A | WEIGHT N/A | SHEET 1 OF 1

HP-2-ASED-HN-0270

Annex 4

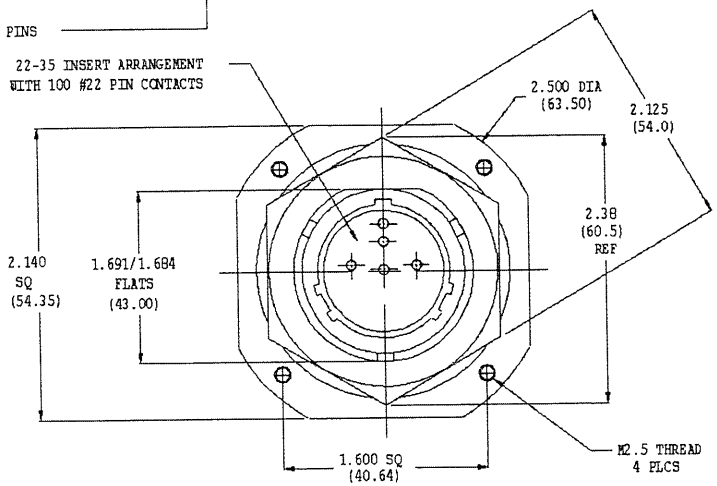
197-011P22-35P

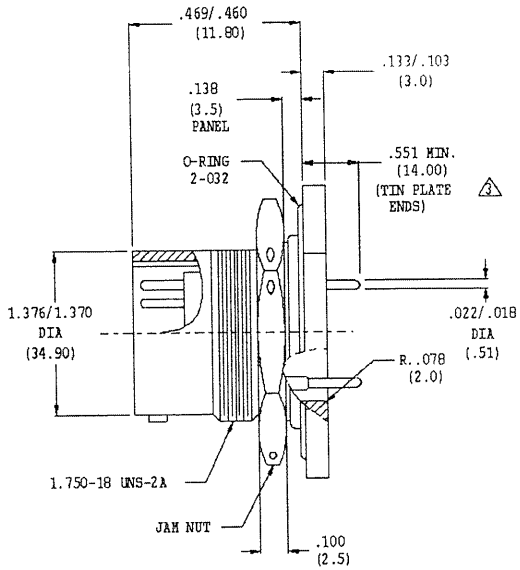
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	RELEASED	04/16/02	P.O.
B	REVISED PER DCN 19915	10/14/02	P.O.

PART NUMBER DEVELOPMENT

EXAMPLE: 197 - 011 P 22 - 35 P

- PRODUCT SERIES
- BASIC NO.
- FINISH SYMBOL P = NICKEL
- SHELL SIZE
- INSERT ARRANGEMENT
- CONTACT STYLE P = PINS





NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. INSERT ARRANGEMENT IN ACCORDANCE WITH MIL-STD-1560, ARRANGEMENT 22-35.
3. MATERIAL/FINISH:
   JAM NUT, BAYONET PINS, SHELL - CRES/NICKEL PLATE
   CONTACTS - ALLOY 52 STEEL/ GOLD PLATE (TIN PLATE @ ENDS)
   O-RING, SEAL - VITON/ N.A.
   INSULATOR - FUSED VITREOUS GLASS/ N.A.
4. METRIC DIMENSIONS (IN PARENTHESIS) ARE FOR REFERENCE ONLY AND ARE BASE ON 1 INCH = 25.4 mm

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONS ± 1/16
DECIMALS XX ± .02, XXX ± .015
ANGLES ± 1°

DO NOT SCALE THIS DRAWING

DRAWN	TKH	12/13/01
CHECK		
ENGR	P.OAKES	12/13/01

APPROVED

APPROVED

RELEASE DATE
CHANGE
RELEASE DATE

GLENAIR, INC. CAGE 06324
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

RECEPTACLE, JAM NUT, SPECIAL PURPOSE
FOR MIL-C-38999 SERIES II.
SHELL SIZE 22, HERMETIC

CAGE IDENT. NO.	SIZE	DWG NO.	REV
06324	C	197-011P22-35P	B

B/T 01-1021 | P/C 190 | NON APPARENT COMMERCIAL ITEM | SCALE N/A | WEIGHT N/A | SHEET 1 OF 1

HP-2-ASED-MN-0270

Annex S

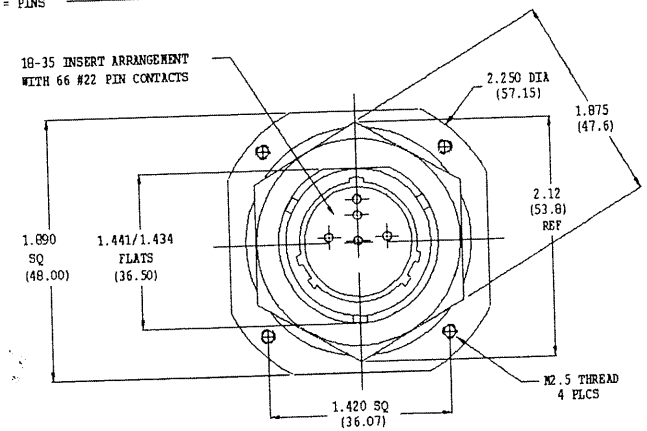
197-011P18-35P

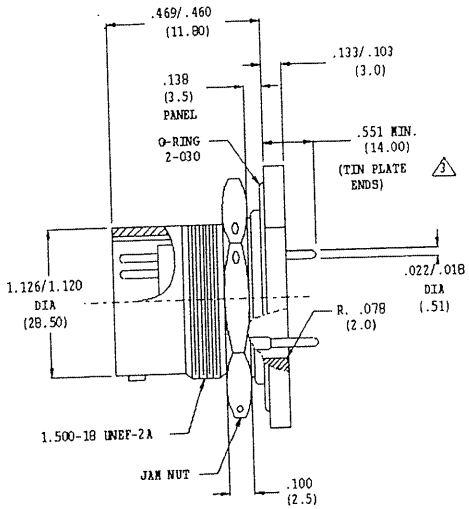
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	RELEASED	04/10/02	P.O.
B	REVISED PER DCN 19915	10/14/02	P.O.

PART NUMBER DEVELOPMENT

EXAMPLE: 197 - 011 P 18 - 35 P

- PRODUCT SERIES
- BASIC NO.
- FINISH SYMBOL P = NICKEL
- SHELL SIZE
- INSERT ARRANGEMENT
- CONTACT STYLE P = PINS





NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. INSERT ARRANGEMENT IN ACCORDANCE WITH MIL-STD-1560, ARRANGEMENT 18-35.
3. MATERIAL/FINISH:
   JAM NUT, BAYONET PINS, SHELL - CRES/NICKEL PLATE
   CONTACTS - ALLOY 52 STEEL/ GOLD PLATE (TIN PLATE @ ENDS)
   O-RING, SEAL - VITON/ N.A.
   INSULATOR - FUSED VITREOUS GLASS/ N.A.
4. METRIC DIMENSIONS (IN PARENTHESIS) ARE FOR REFERENCE ONLY AND ARE BASE ON 1 INCH = 25.4 mm

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONS ± 1/16
DECIMALS XX ± .02, XXX ± .010
ANGLES ± 1°
DO NOT SCALE THIS DRAWING
S/F 01-1021 P/C 190

DRAWN	TKH	12/12/01
CHECK		
ENGR	P.OAKES	12/12/01

APPROVED
APPROVED
RELEASE DATE
CAGE RELEASE DATE
NEW REPLACES COMMERCIAL ITEM

GLENAIR, INC. CAGE CODE 0
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

RECEPTACLE, JAM NUT, SPECIAL PURPOSE
FOR MIL-C-38999 SERIES II.
SHELL SIZE 18, HERMETIC

CAGE DRAWING NO	SIZE	197-011P18-35P	REV
06324	C		B
SCALE N/A	WEIGHT N/A	SHEET 1 OF 1	

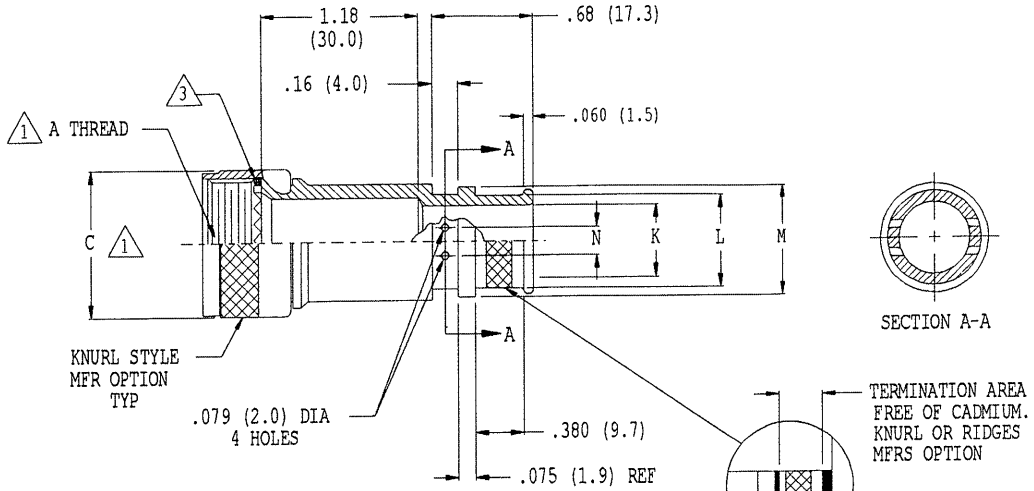
HP-2-ABED-MN-0270

(Annex G)

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	PRELIMINARY	10/07/02	

TABLE I				
SHELL SIZE		MAX AVAILABLE ENTRY		
A,F,L	H	A	F & H	L
08	09	02	02	32
10	11	03	03	33
12	13	04	04	04
14	15	34	05	35
16	17	35	06	36
18	19	06	36	07
20	21	07	37	08
22	23	08	09	09
24	25	09	10	10
28		10		
32		13		
36		14		

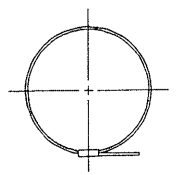
TABLE III							
DASH NO	K DIA		L DIA		M DIA		N DIM
02	.250	(3.2)	.375	(9.5)	.437	(11.1)	.171 (4.3)
32	.312	(7.9)	.438	(11.1)	.500	(12.7)	.197 (5.0)
03	.375	(9.5)	.500	(12.7)	.562	(14.3)	.197 (5.0)
33	.438	(11.1)	.562	(14.3)	.624	(15.8)	.197 (5.0)
04	.500	(12.7)	.625	(15.9)	.687	(17.4)	.197 (5.0)
34	.562	(14.3)	.688	(17.5)	.750	(19.1)	.197 (5.0)
05	.625	(15.9)	.750	(19.1)	.812	(20.6)	.197 (5.0)
35	.688	(17.5)	.812	(20.6)	.874	(22.2)	.197 (5.0)
06	.750	(19.1)	.875	(22.2)	.937	(23.8)	.197 (5.0)
36	.812	(20.6)	.938	(23.8)	1.000	(25.4)	.197 (5.0)
07	.875	(22.2)	1.000	(25.4)	1.062	(27.0)	.197 (5.0)
37	.938	(23.8)	1.062	(27.0)	1.124	(28.5)	.197 (5.0)
08	1.000	(25.4)	1.125	(28.6)	1.187	(30.1)	.197 (5.0)
38	1.062	(27.0)	1.188	(30.2)	1.250	(31.8)	.197 (5.0)
09	1.125	(28.6)	1.250	(31.8)	1.312	(33.3)	.197 (5.0)
10	1.250	(31.8)	1.375	(34.9)	1.437	(36.5)	.197 (5.0)
11	1.375	(34.9)	1.500	(38.1)	1.562	(39.7)	.197 (5.0)
12	1.500	(38.1)	1.625	(41.3)	1.687	(42.8)	.197 (5.0)
13	1.625	(41.3)	1.750	(44.5)	1.812	(46.0)	.197 (5.0)
14	1.750	(44.5)	1.875	(47.6)	1.937	(49.2)	.197 (5.0)
15	1.875	(47.6)	2.000	(50.8)	2.062	(52.4)	.197 (5.0)
16	2.000	(50.8)	2.125	(54.0)	2.187	(55.5)	.197 (5.0)



PART NUMBER DEVELOPMENT

EXAMPLE: 440 F S 110 M 20 12 B P

- PRODUCT SERIES
- CONNECTOR DESIGNATOR, A, F, L, OR H, TABLE I (1)
- ANGULAR FUNCTION, S = STRAIGHT
- BASIC NO
- FINISH SYMBOL, TABLE II (1)
- SHELL SIZE, TABLE I
- ENTRY SIZE, TABLE III
- B = BAND
  K = PRECOILED
  (OMIT IF NOT REQUIRED)
- POLYSULFIDE (OMIT IF NOT REQ'D)



BAND OPTION
(K OPTION SEE
P/N DEVELOPMENT)

NOTES:

1. SEE SHEET 2 (COMMON INTERFACE DATA).
2. FOR EFFECTIVE GROUNDING, CONNECTOR WITH CONDUCTIVE FINISH SHOULD BE USED.
3. O-RING NOT SUPPLIED WITH CONNECTOR DESIGNATOR "A".
4. MATERIAL/FINISH:
   ADAPTERS, COUPLING NUT - AL ALLOY/SEE TABLE II
   O-RING -SILICONE/N.A.
   BAND - CRES/PASSIVATED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS ± 1/16, DECIMALS .XX ±.03 .XXX ±.015, ANGLES ± 2°	DRAWN	T.LE	10/07/02
	CHECK	P.OAKES	10/07/02
	ENGR	R.PAINTER	10/07/02
	APPROVED		
	APPROVED		
	RELEASE DATE		10/07/02
DO NOT SCALE THIS DRAWING	ORIGINAL RELEASE DATE		
B/F 02-1376 P/C 440	NON REPARABLE COMMERCIAL ITEM		

GLENAIR, INC. CAD 2002 ©
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

BACKSHELL, RFI/EMI, BANDING,
FOR CONNECTORS PER TABLE I

CODE IDENT. NO.	SIZE		REV.
06324	C	440-110	1
SCALE N/A	WEIGHT N/A		SHEET 1 OF 2

HP-2-ASED-MN-0270

Annex 7

HD-2-ASED-HN-0270 Annex 8-1

Glenair®

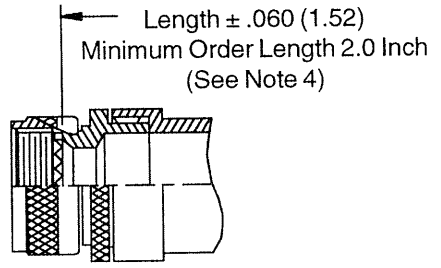
Series 38
EMI/RFI Non-Environmental Backshells

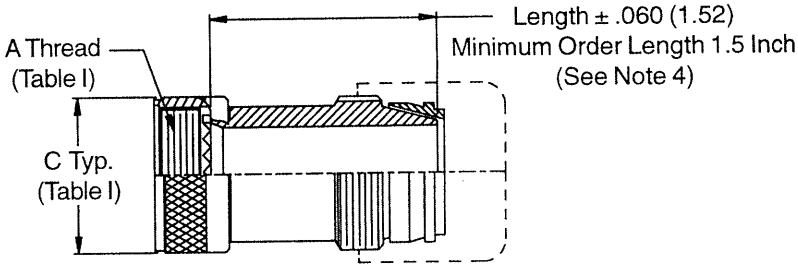
CONNECTOR DESIGNATORS
A-F-H-L-S
ROTATABLE COUPLING

TYPE C OVERALL SHIELD TERMINATION

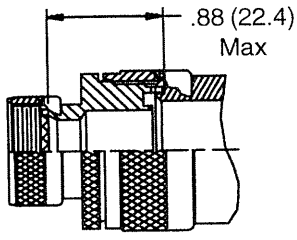
380 F S 007 M 16 05 L 6

- Product Series
- Connector Designator
- Angular Function
  - A = 90°
  - B = 45°
  - S = Straight
- Basic Part No.
- Finish (Table II)
- Shell Size (Table I)
- Dash No. (Tables IV, V)
- Strain Relief Style (L, G)
- Length: S only (1/2 inch increments: e.g. 6 = 3 inches)

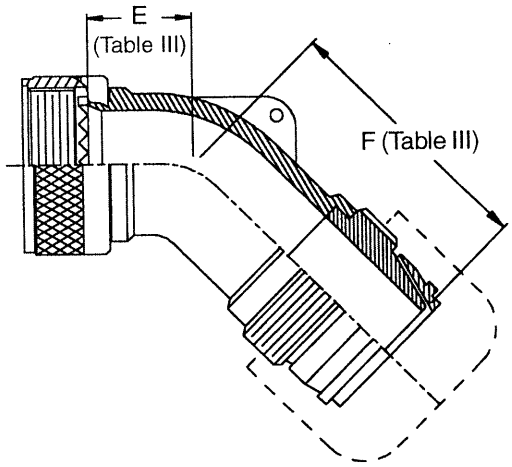


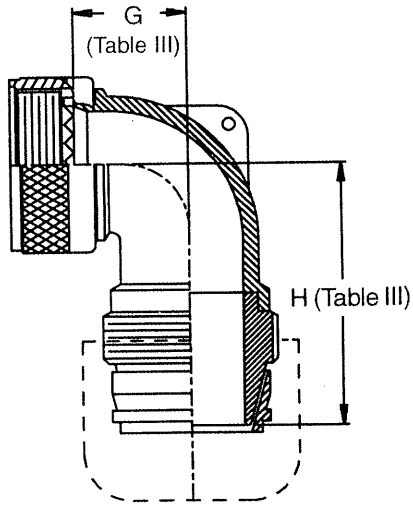


STYLE 2
(STRAIGHT
See Note 1)

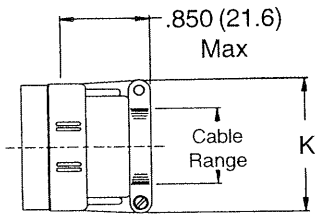


STYLE 2
(45° & 90°
See Note 1)

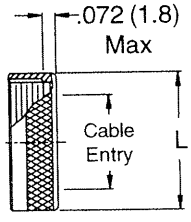




STYLE L
Light Duty
(Table IV)



STYLE G
Light Duty
(Table V)



Annex 8-2

See inside back cover fold-out or pages 13 and 14 for Tables I and II.

TABLE III

Shell Size Conn. Desig. A-F-L-S	H	E Max	F Max	G Max	H Max
08	09	.457 (11.6)	1.680 (42.7)	.500 (12.7)	1.781 (45.2)
10	11	.520 (13.2)	1.740 (44.2)	.595 (15.1)	1.901 (48.3)
12	13	.582 (14.8)	1.800 (45.7)	.610 (15.5)	1.921 (48.8)
14	15	.645 (16.4)	1.890 (48.0)	.700 (17.8)	1.991 (50.6)
16	17	.738 (18.7)	2.000 (50.8)	.885 (22.5)	2.081 (52.9)
18	19	.926 (23.5)	2.190 (55.6)	.975 (24.8)	2.251 (57.2)
20	21	.926 (23.5)	2.190 (55.6)	.975 (24.8)	2.251 (57.2)
22	23	1.020 (25.9)	2.340 (59.4)	1.125 (28.6)	2.361 (60.0)
24	25	1.020 (25.9)	2.340 (59.4)	1.125 (28.6)	2.361 (60.0)
28		1.145 (29.1)	2.390 (60.7)	1.225 (31.1)	2.531 (64.3)
36		1.207 (30.7)	2.490 (63.2)	1.575 (40.0)	2.781 (70.6)
40		1.238 (31.4)	2.580 (65.5)	1.775 (45.1)	2.781 (70.6)

TABLE IV

Dash No.	K Max	Cable Range Min	Cable Range Max
01	.781 (19.8)	.062 (1.6)	.125 (3.2)
02	.968 (24.6)	.125 (3.2)	.250 (6.4)
03	1.046 (26.6)	.250 (6.4)	.375 (9.5)
04	1.156 (29.4)	.250 (6.4)	.500 (12.7)
05	1.218 (30.9)	.375 (9.5)	.625 (15.9)
06	1.343 (34.1)	.500 (12.7)	.750 (19.1)
07	1.468 (37.3)	.625 (15.9)	.875 (22.2)
08	1.593 (40.5)	.625 (15.9)	1.000 (25.4)
09	1.718 (43.6)	.750 (19.1)	1.125 (28.6)
10	1.843 (46.8)	.875 (22.2)	1.250 (31.8)

TABLE V

Dash No.	L Max	Cable Entry Max
01	.593 (15.1)	.125 (3.2)
02	.718 (18.2)	.250 (6.4)
03	.843 (21.4)	.375 (9.5)
04	.968 (24.6)	.500 (12.7)
05	1.109 (28.2)	.625 (15.9)
06	1.218 (30.9)	.750 (19.1)
07	1.343 (34.1)	.875 (22.2)
08	1.468 (37.3)	1.000 (25.4)
09	1.593 (40.5)	1.125 (28.6)
10	1.718 (43.6)	1.250 (31.8)

1. When maximum cable entry (page 21) is exceeded, Style 2 will be supplied. Dimensions E, F, G and H will not apply. Please consult factory.
2. Metric dimensions (mm) are indicated in parentheses.
3. Cable range is defined as the accommodations range for the wire bundle or cable. Dimensions shown are not intended for inspection criteria.
4. Consult factory for shorter lengths on straight backshells.

CAGE Code 06324
Printed in U.S.A.

557-357

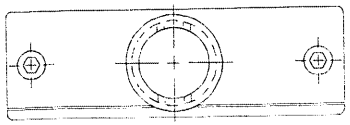
REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
4	PRELIMINARY	07/24/02	

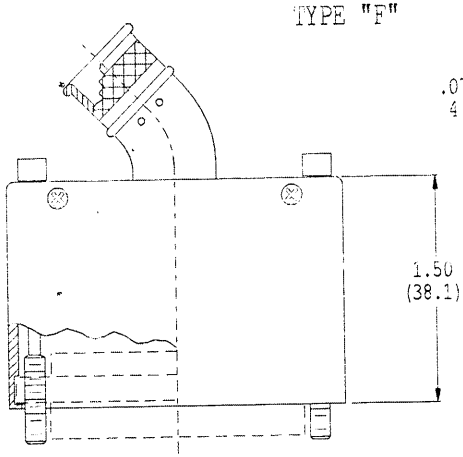
TABLE I				
SHELL SIZE	A MAX	B MAX	C ±.005 (.1)	MAX DASH NO
1	1.393 (35.4)	.624 (15.8)	.984 (25.0)	03
2	1.706 (43.3)	.624 (15.8)	1.312 (33.3)	03
3	2.265 (57.5)	.624 (15.8)	1.852 (47.0)	03
4	2.900 (73.7)	.624 (15.8)	2.500 (63.5)	03
5	2.800 (71.1)	.750 (19.1)	2.406 (61.1)	04
6	2.900 (73.7)	.844 (21.4)	2.500 (63.5)	04

TABLE II		
DASH NO	D DIA	E DIA
32	.312 (7.9)	.438 (11.1)
03	.375 (9.5)	.500 (12.7)
33	.438 (11.1)	.562 (14.3)
04	.500 (12.7)	.625 (15.9)

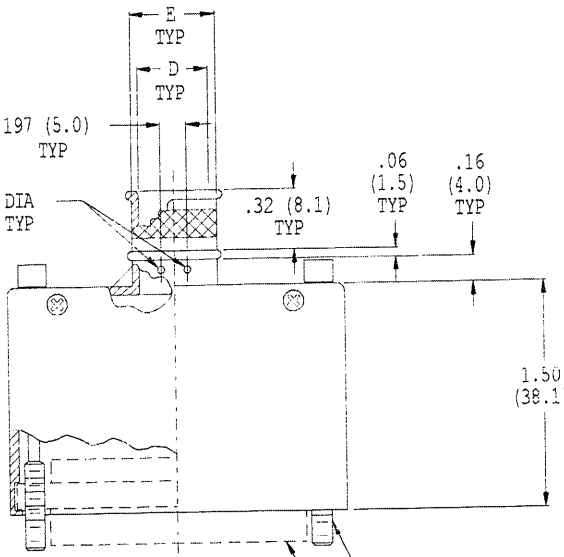
TABLE III	
SYM	FINISH DESCRIPTION
B	CADMIUM PLATE/OLIVE DRAB
J	GOLD IRIDITE OVER CADMIUM PLATE OVER NICKEL
M	ELECTROLESS NICKEL
N	CADMIUM PLATE/OLIVE DRAB OVER NICKEL
NF	CAD/O. D. OVER ELECTROLESS NICKEL (500 HOUR SALT SPRAY)
T	CADMIUM PLATE/BRIGHT DIP OVER NICKEL

TYPE "F"





STYLE B - 45° ENTRY

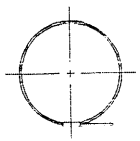


STYLE T - TOP ENTRY

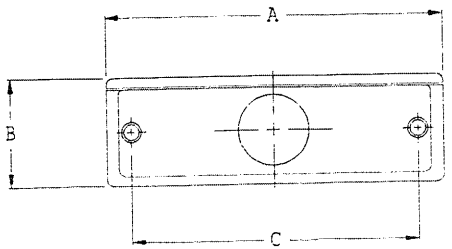
PART NUMBER DEVELOPMENT

EXAMPLE: 557 T 357 M 2 02 B F

- 557 — PRODUCT SERIES
- T — CABLE ENTRY STYLE
  T = TOP
  B = 45°
- 357 — BASIC NO
- M — FINISH SYM, TABLE III
- 2 — SHELL SIZE, TABLE I
- 02 — ENTRY SIZE, TABLE II
- B — B = BAND SUPPLIED
  K = COILED BAND SUPPLIED
  OMIT FOR NO BAND TO BE SUPPLIED (2)
- F — F = FEMALE JACKPOSTS
  OMIT FOR STANDARD MALE



SYM K BAND (2)



NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. USE GLENAIR 600-057 BAND AND 600-061 TOOL.
3. MATERIAL/FINISH:
   BACKSHELL, ELBOW, COVER, ADAPTER - AL ALLOY/SEE TABLE III
   HARDWARE - CRES/PASSIVATED
   WIRE PROTECTION TUBING - CLEAR KYNAR

UNLESS OTHERWISE SPECIFIED	DRAWN	T.LE	04/04/02
DIMENSIONS ARE IN INCHES	CHECK	R.OAKES	04/04/02
TOLERANCES:	ENGR	R.PAINTER	04/04/02
FRACTIONS ± 1/16	APPROVED		
DECIMALS .XX ±.03 .XXX ±.015	APPROVED		
ANGLES ± 2°	DFT/PARE DATE	04/04/02	
DO NOT SCALE THIS DRAWING	ORIGINAL DFT/PARE DATE		

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1211 AIR WAY - GLENDALE - CALIFORNIA 91201

BACKSHELL, RFI/EMI,
BANDING FOR MIL-C-24308
D-SUBMINIATURE CONNECTORS

CODE IDENT. NO.	SIZE		REV.
06324	C	557-357	4

B/F 02 1306	P/C 557	NON REPARABLE COMMERCIAL ITEM	SCALE N/A	WEIGHT N/A	SHEET 1 OF 1

HR-2-ARED-HN-0270

Annex 9

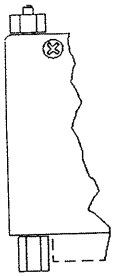
557-356

TABLE I				
SHELL SIZE	A MAX	B MAX	C ±.005 (.1)	MAX DASH NO
1	1.393 (35.4)	.624 (15.8)	.984 (25.0)	03
2	1.706 (43.3)	.624 (15.8)	1.312 (33.3)	03
3	2.265 (57.5)	.624 (15.8)	1.852 (47.0)	03
4	2.900 (73.7)	.624 (15.8)	2.500 (63.5)	03
5	2.800 (71.1)	.750 (19.1)	2.406 (61.1)	04
6	2.900 (73.7)	.844 (21.4)	2.500 (63.5)	04

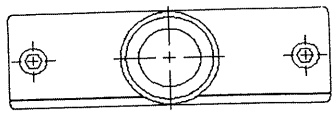
TABLE II	
SYM	FINISH DESCRIPTION
B	CADMIUM PLATE/OLIVE DRAB
J	GOLD IRIDITE OVER CADMIUM PLATE OVER NICKEL
M	ELECTROLESS NICKEL
N	CADMIUM PLATE/OLIVE DRAB OVER NICKEL
NF	CAD/O. D. OVER ELECTROLESS NICKEL (500 HOUR SALT SPRAY)
T	CADMIUM PLATE/BRIGHT DIP OVER NICKEL

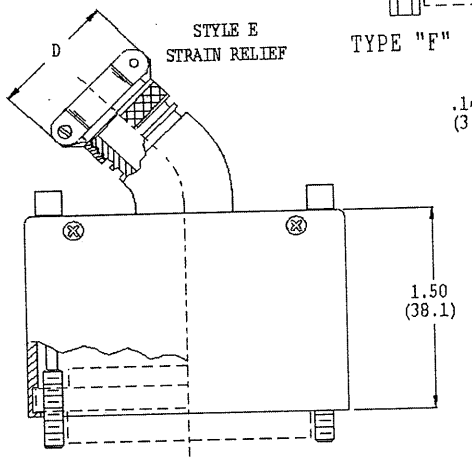
TABLE III				
DASH NO	CLAMP RANGE MIN	CLAMP RANGE MAX	D DIA MAX	E MAX
02	.125 (3.2)	.250 (6.4)	.968 (24.6)	.515 (13.1)
03	.250 (6.4)	.375 (9.5)	1.046 (26.6)	.640 (16.3)
04	.312 (7.9)	.500 (12.7)	1.156 (29.4)	.765 (19.4)

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
4	PRELIMINARY	07/24/02	

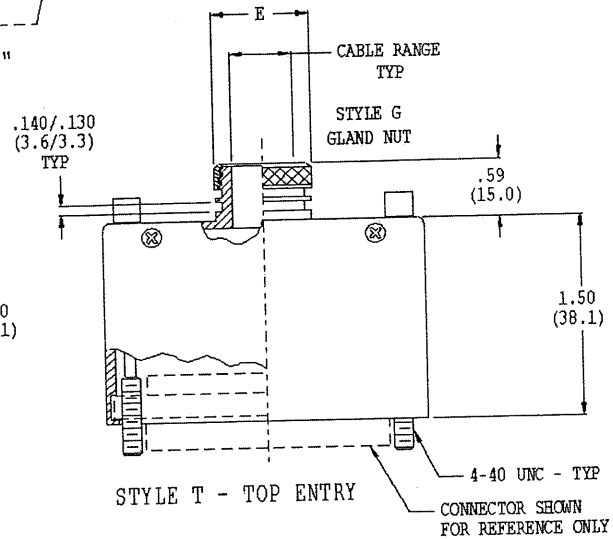


TYPE "F"





STYLE B - 45° ENTRY

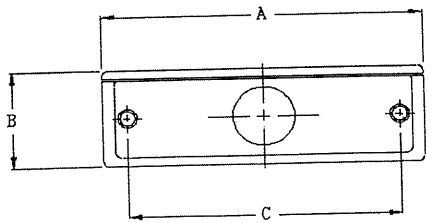


STYLE T - TOP ENTRY

PART NUMBER DEVELOPMENT

EXAMPLE: 557 T 356 M 2 02 G F

- 557 — PRODUCT SERIES
- T — CABLE ENTRY STYLE
  T = TOP
  B = 45°
- 356 — BASIC NO
- M — FINISH SYM, TABLE II
- 2 — SHELL SIZE, TABLE I
- 02 — DASH NO, TABLE III
- G — G = GLAND NUT, E = STRAIN RELIEF
- F — F = FEMALE JACKPOSTS, OMIT FOR STANDARD MALE



NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. MATERIAL/FINISH:
   BACKSHELL, COVER, ADAPTER, CLAMP, NUT - AL ALLOY/SEE TABLE II
   HARDWARE - CRES/PASSIVATED
   WIRE PROTECTION TUBING - CLEAR KYNAR

UNLESS OTHERWISE SPECIFIED	DRAWN	T. LE 04/03/02
DIMENSIONS ARE IN INCHES	CHECK	P. OAKES 04/03/02
TOLERANCES:	ENGR	R. PAINTER 04/03/02
FRACTIONS ± 1/16	APPROVER	R. Painter
DECIMALS .XX ±.02, .XXX ±.015	APPROVER	P. Oakes
ANGLES ± 2°	RELEASE DATE	04/03/02
DO NOT SCALE THIS DRAWING	GENERAL RELEASE DATE	
B/F 02-1306 P/C 557	NON REPARABLE COMMERCIAL ITEM	

GLENAIR, INC. CAGE 06324
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

BACKSHELL, RFI/EMI, FOR
MIL-C-24308 D-SUBMINIATURE
CONNECTORS

CODE IDENT. NO.	SIZE		REV.
06324	C	557-356	4
SCALE N/A	WEIGHT N/A	SHEET 1 OF 1	

HP-2-ASED-MN-0270

Annex 10

D-Sub-Connectors

MDM - Stecher

507-196

HP-2-ASED-MN-0270

Annex 11

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
5	PRELIMINARY	07/24/02	

TABLE I

SHELL SIZE	A MAX	B ±.005 (.13)	C MAX	D THREAD	E ±.005 (.127)
09	.915 (23.4)	.565 (14.4)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
15	1.065 (27.1)	.715 (18.2)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
21	1.215 (30.9)	.865 (22.0)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
25	1.315 (33.4)	.965 (24.5)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
31	1.465 (37.2)	1.115 (28.3)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
37	1.615 (41.0)	1.265 (32.1)	.450 (11.4)	2-56 UNC-2A	.285 (7.2)
51	1.565 (39.8)	1.215 (30.9)	.495 (12.6)	2-56 UNC-2A	.350 (8.9)
100	2.305 (51.7)	1.800 (45.7)	.540 (13.7)	4-40 UNC-2A	.490 (12.4)

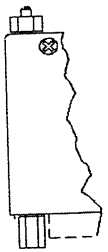
TABLE II

SYM	FINISH DESCRIPTION
B	CADMIUM PLATE/OLIVE DRAB
J	GOLD IRIDITE OVER CADMIUM PLATE OVER NICKEL
M	ELECTROLESS NICKEL
N	CADMIUM PLATE/OLIVE DRAB OVER NICKEL
NF	CAD/O. D. OVER ELECTROLESS NICKEL (500 HOUR SALT SPRAY)
T	CADMIUM PLATE/BRIGHT DIP OVER NICKEL

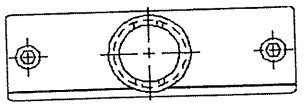
PART NUMBER DEVELOPMENT

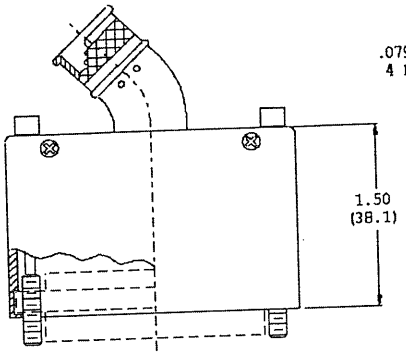
EXAMPLE: 507 T 196 M 21 B F

- 507 — PRODUCT SERIES
- T — CABLE ENTRY STYLE: T = TOP, E = 45°
- 196 — BASIC NO
- M — FINISH SYM, TABLE II
- 21 — SHELL SIZE, TABLE I
- B — B = BAND SUPPLIED; K = COILED BAND SUPPLIED; OMIT FOR NO BAND TO BE SUPPLIED (2)
- F — F = FEMALE JACKPOSTS; OMIT FOR STANDARD MALE

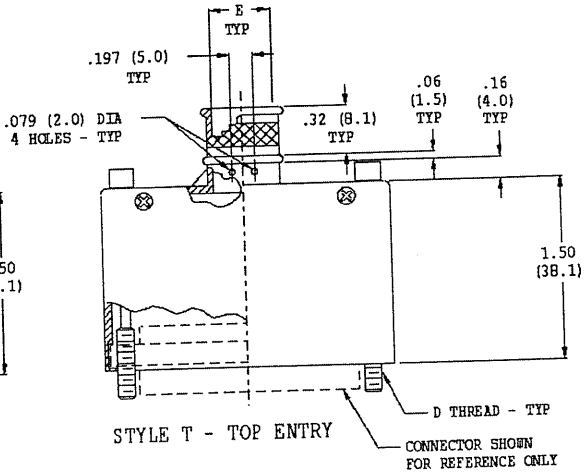


TYPE "F"

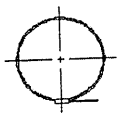




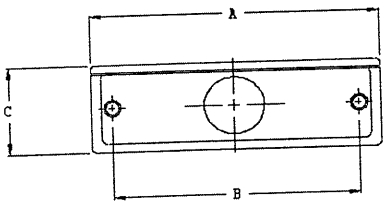
STYLE E - 45° ENTRY



STYLE T - TOP ENTRY



SYM K
BAND (2)



NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. USE GLENAIR 600-057 BAND AND 600-061 TOOL.
3. MATERIAL/FINISH:
   BACKSHELL, ELBOW, COVER, ADAPTER - AL ALLOY/SEE TABLE II
   HARDWARE - CRES/PASSIVATED
   WIRE PROTECTION TUBING - CLEAR KYNAR

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES:
FRACTIONS ± 1/16
DECIMALS .XX ± .03
.XXX ± .010
ANGLES ± 2°

DO NOT SCALE THIS DRAWING

B/T 82-1386 P/C 587

DRAWN	T.LE	04/03/02
CHECK	P.OAKES	04/03/02
ENGR	R.PAINTER	04/03/02

RELEASE DATE 04/03/02
OVERSEAS RELEASE DATE
NON REPARABLE COMMERCIAL ITEM

GLENAIR, INC.
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

CAGE 06324 ©

BACKSHELL, RFI/EMI, BANDING
FOR MIL-C-83513 CONNECTORS

CODE IDENT. NO.	SIZE		REV.
06324	C	507-196	5
SCALE N/A	WEIGHT N/A	SHEET 1 OF 1	

HP-2-ASED-MN-0270 Annex 12-1

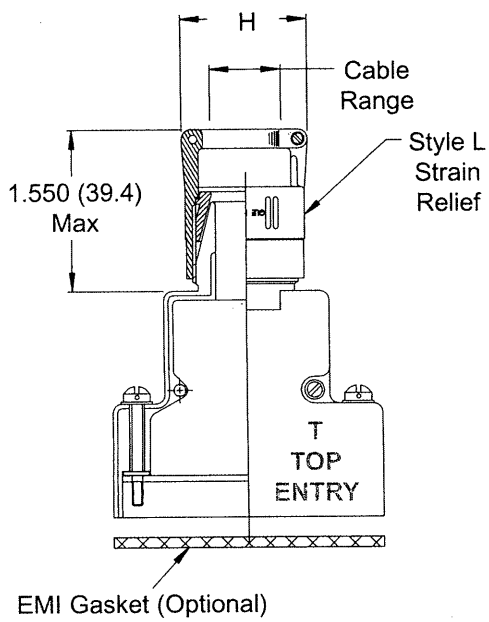
MIL-C-24308 D-Subminiature

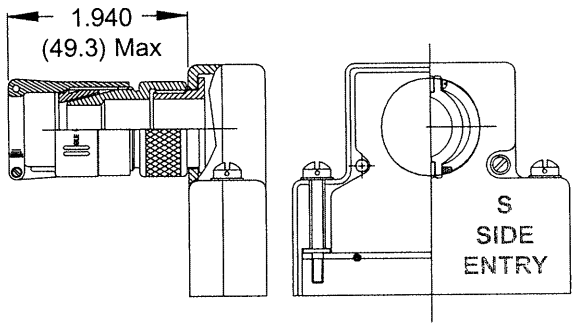
Glenair®

Non-Environmental D-Subminiature Strain Relief Split Backshells with Overall Shielding 550-001

550 T 001 M 2 FO B 1 L

- Basic Part No.
- Cable Entry Style
  - T = Top
  - S = Side
  - E = End
- Basic Part Number
- Finish Symbol (Page A-6)
- Shell Size (Table I)
- Receptacle Mounting (Right Page)
  - CC = Cable-to-Cable Mounting
  - F0 = Front Mounting
  - R1-R9 = Rear Mounting
- Jackscrew Type (Page A-7)
- 0 = Without EMI Gasket
  1 = With EMI Gasket
- L = Strain Relief, G = Gland Nut





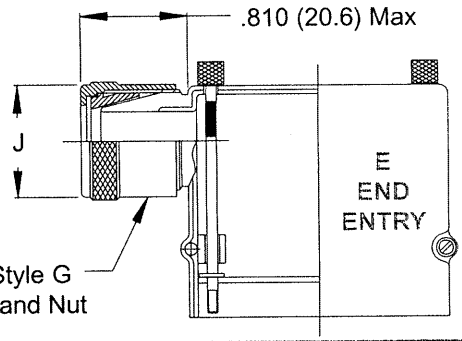


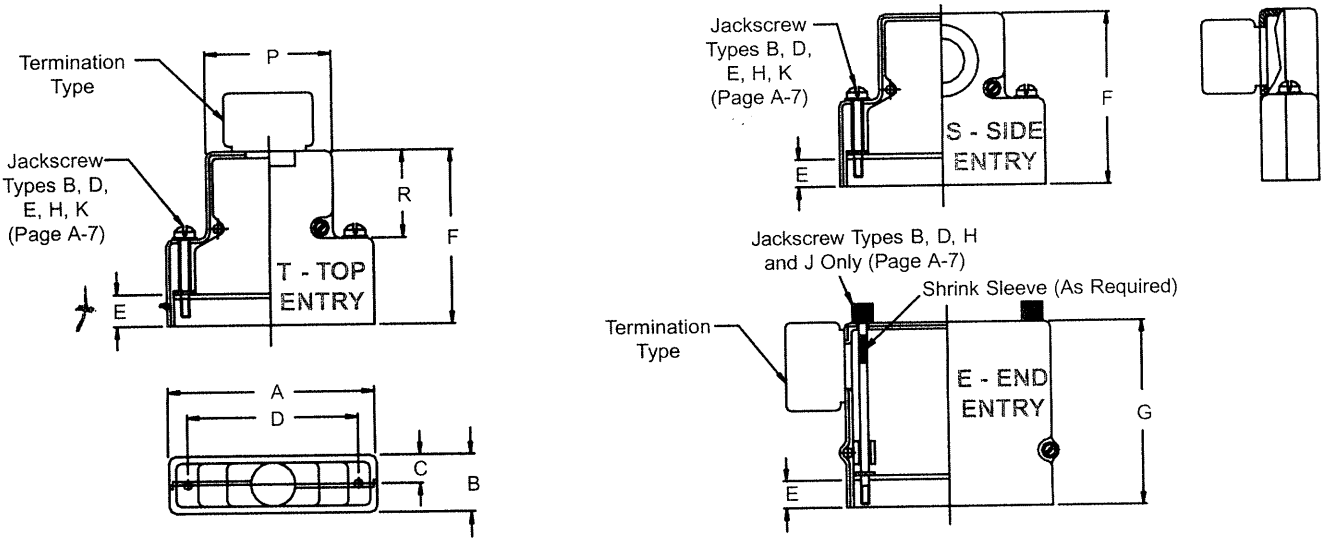
TABLE I

Shell Size	Com'l Shell Size Ref	H Max	J Max	Entry Styles S & T Cable Range Min	Entry Styles S & T Cable Range Max	Entry Style E Cable Range Min	Entry Style E Cable Range Max
1	E/09	1.046 (26.6)	.843 (21.4)	.125 (3.2)	.250 (6.4)	.250 (6.4)	.375 (9.5)
2	A/15	1.046 (26.6)	.843 (21.4)	.250 (6.4)	.375 (9.5)	.250 (6.4)	.375 (9.5)
3	B/25	1.156 (29.4)	.968 (24.6)	.312 (7.9)	.475 (12.1)	.312 (7.9)	.475 (12.1)
4	C/37	1.156 (29.4)	.968 (24.6)	.312 (7.9)	.475 (12.1)	.312 (7.9)	.475 (12.1)
5	D/50	1.218 (30.9)	1.109 (28.2)	.437 (11.1)	.575 (14.6)	.437 (11.1)	.575 (14.6)
6*	F/104	1.594 (40.5)	1.468 (37.3)	.812 (20.6)	1.000 (25.4)	n/a	n/a

* Shell Size 6 Available in Top Entry Only.

1. Metric dimensions (mm) are indicated in parentheses.
2. **DO NOT USE CONNECTORS WITH FLOAT MOUNTINGS.**
3. Overall shield. Thickness range: 0 to .062 (1.6)

D-Subminiature Split Backshells
Standard Dimensions



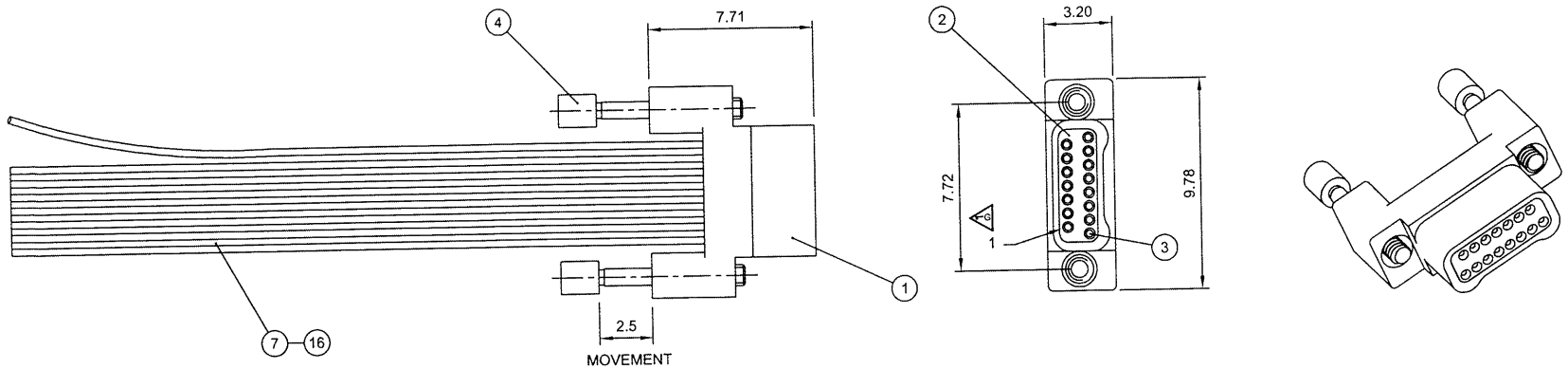
COMMON BACKSHELL DIMENSIONS

Shell Size	Com'l Shell Size Ref	A Max	B Max	C Ref.	D ±.005 (.1)	P	R Ref
1	E/09	1.393 (35.4)	.624 (15.8)	.312 (7.9)	.984 (25.0)	.730 (18.5)	.719 (18.3)
2	A/15	1.706 (43.3)	.624 (15.8)	.312 (7.9)	1.312 (33.3)	1.050 (26.7)	.719 (18.3)
3	B/25	2.265 (57.5)	.624 (15.8)	.312 (7.9)	1.852 (47.0)	1.594 (40.5)	.938 (23.8)
4	C/37	2.900 (73.7)	.624 (15.8)	.312 (7.9)	2.500 (63.5)	2.240 (56.9)	.938 (23.8)
5	D/50	2.800 (71.1)	.750 (19.1)	.375 (9.5)	2.406 (61.1)	2.140 (54.4)	.938 (23.8)
6	F/104	2.900 (73.7)	.844 (21.4)	.422 (10.7)	2.500 (63.5)	2.240 (56.9)	1.094 (27.8)

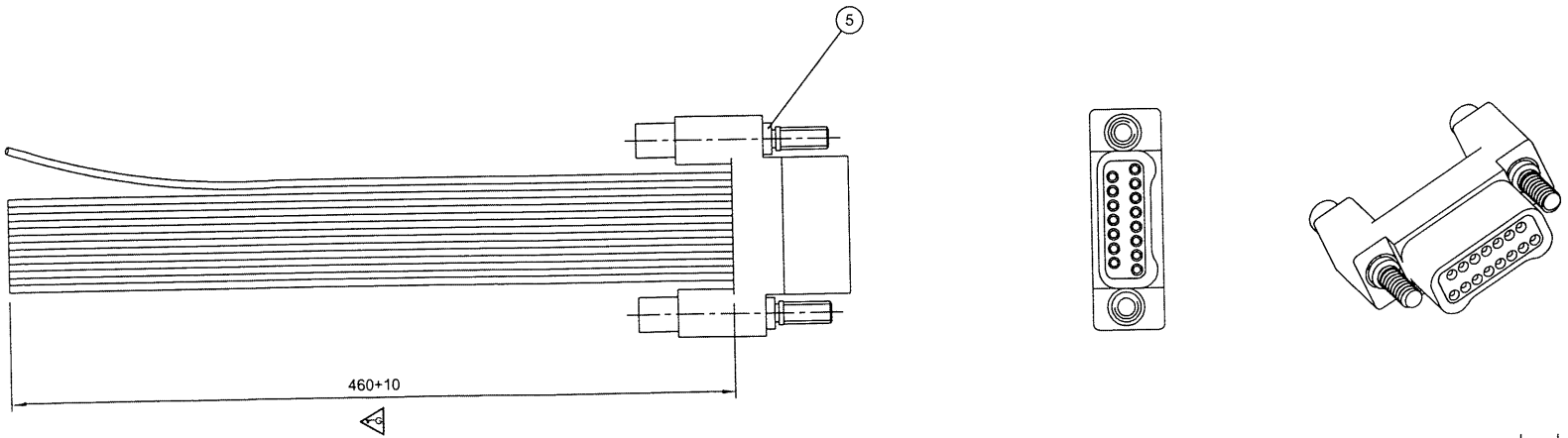
CABLE MOUNTING DIMENSIONS

Dash No.	Panel Thickness	E	F Sizes 1 & 2	F Sizes 3 - 5	F Size 6	G Sizes 1 & 2	G Sizes 3 - 5
CC	n/a	.174 (4.4)	1.625 (41.3)	1.844 (46.8)	2.000 (50.8)	1.750 (44.5)	2.000 (50.8)
F0	n/a	.343 (8.7)	1.451 (36.9)	1.671 (42.4)	2.000 (50.8)	1.583 (40.2)	1.831 (46.5)
R1	.031 (.8)	.247 (6.3)	1.525 (38.7)	1.745 (44.3)	1.890 (48.0)	1.656 (42.1)	1.904 (48.4)
R2	.047 (1.2)	.231 (5.9)	1.509 (38.3)	1.728 (43.9)	1.875 (47.6)	1.640 (41.7)	1.888 (48.0)
R3	.062 (1.6)	.216 (5.5)	1.500 (38.1)	1.720 (43.7)	1.860 (47.2)	1.625 (41.3)	1.873 (47.6)
R4	.093 (2.4)	.185 (4.7)	1.470 (37.3)	1.690 (42.9)	1.829 (46.5)	1.594 (40.5)	1.842 (46.8)
R5	.104 (2.6)	.174 (4.4)	1.451 (36.9)	1.671 (42.4)	1.820 (46.2)	1.583 (40.2)	1.831 (46.5)
R6	.125 (3.2)	.153 (3.9)	1.430 (36.3)	1.650 (41.9)	1.798 (45.7)	1.563 (39.7)	1.811 (46.0)
R7	.156 (4.0)	.125 (3.2)	1.400 (35.6)	1.620 (41.1)	1.767 (44.9)	1.531 (38.9)	1.781 (45.2)
R8	.135 (3.4)	.140 (3.6)	1.417 (36.0)	1.637 (41.6)	1.805 (45.8)	1.550 (39.4)	1.798 (45.7)
R9	.188 (4.8)	.094 (2.4)	1.368 (34.7)	1.590 (40.4)	1.740 (44.2)	1.500 (38.1)	1.750 (44.5)

1. Metric dimensions (mm) are indicated in parentheses.
2. Consult factory for shell size 6 configurations if not listed in Table I.



ASSEMBLY WITH JACKSREW IN 'MATE-DISMATE' POSITION



ASSEMBLY WITH JACKSREW IN 'MATED' POSITION

MATERIAL										
FINISH										
		DENOTES KEY FEATURE OR DIMENSION TO BE INSPECTED IN ACCORDANCE WITH MREI 6058						REV	DCO No.	DATE
								DIS	2775	SHT 2
								EPF		OF 2

Glenair.
GLENAIR UK LTD
OAKHAM BUSINESS PARK
MANSFIELD, NOTTINGHAMSHIRE
UNITED KINGDOM.

TITLE
ASSEMBLY OF SPECIAL NANO 15
WAY PIN CONNECTOR
C/W SPECIAL JACKSCREWS

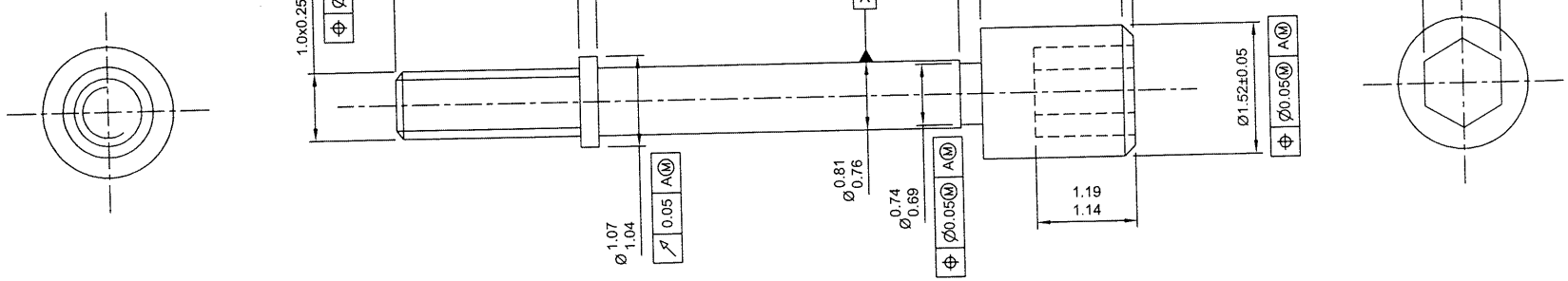
UNLESS STATED OTHERWISE
THE POSITION OF ANY BASIC SIZE HOLES ARE SUBJECT TO THE FOLLOWING GEOMETRIC TOLERANCES ⌖ ø 0.20
ALL DIMENSIONS RELATIVE TO DATUM ARE SUBJECT TO THE FOLLOWING GEOMETRIC TOLERANCES ⌭ 0.08

TOLERANCES
.XX = ± 0.13
.X = ± 0.25
HOLES = ± 0.08
ANGLES = ± 0.5°

DIMENSIONS	DRAWN BY	DATE	PROJECTION
mm.	A.Louch	30/07/02	
SCALE	DESIGN APPR'	DATE	DRAWING No.
5:1	R.Kimpton	01/08/02	MRN4194

REV A

HP-2-ASED-MN-0270 - Annex 13-1



APPLY A DRY FILM LUBRICANT PER DOD-L-85645, TYPE 1

MATERIAL	303 ST. STEEL PER ASTM A581
FINISH	PASSIVATE QQ-P-35, TYPE 2

Glenair.

GLENAIR UK LTD
OAKHAM BUSINESS PARK
MANSFIELD, NOTTINGHAMSHIRE
UNITED KINGDOM.

TITLE
SPECIAL 1mm NANO JACKSCREW

UNLESS STATED OTHERWISE
THE POSITION OF ANY BASIC SIZE HOLES ARE SUBJECT TO THE FOLLOWING GEOMETRIC TOLERANCES ⌖ ø 0.20
ALL DIMENSIONS RELATIVE TO DATUM ARE SUBJECT TO THE FOLLOWING GEOMETRIC TOLERANCES ⌭ 0.06

TOLERANCES
.XX = ± 0.13
.X = ± 0.25
HOLES = ± 0.08
ANGLES = ± 0.5°

DIMENSIONS	DRAWN BY	DATE	PROJECTION	REV	DCO No. / DATE
mm.	A.Louch	25/07/02		DIS	SHT 1
SCALE	DESIGN APPR'	DATE		EPF	OF 1
	R.Kimpton	25/07/02	DRAWING No. MRN3120		REV A

13-2

BILL OF MATERIALS

ITEM No.	PART No.	DESCRIPTION	QUANTITY
1	MRN1039-N3	SPECIAL 15 WAY NANO PIN SHELL	1
2	322-0005-15	INSULATOR, PLUG, DUALOBE 2 ROW	1
3	01-01	NANO PIN CONTACTS	15
4	MRN3120	SPECIAL NANO JACKSCREWS	2
5	331-0010-02	NANO JACKSCREW RETAINING RING	2
6	EE4215/HD3561	DEXTER HYSOL POTTING	AS REQD
7	C471	30 AWG PTFE 100 VRMS CABLE BLACK	0.5m
8	C472	30 AWG PTFE 100 VRMS CABLE BROWN	0.5m
9	C473	30 AWG PTFE 100 VRMS CABLE RED	0.5m
10	C474	30 AWG PTFE 100 VRMS CABLE ORANGE	0.5m
11	C475	30 AWG PTFE 100 VRMS CABLE YELLOW	0.5m
12	C476	30 AWG PTFE 100 VRMS CABLE GREEN	0.5m
13	C477	30 AWG PTFE 100 VRMS CABLE BLUE	0.5m
14	C478	30 AWG PTFE 100 VRMS CABLE VIOLET	0.5m
15	C479	30 AWG PTFE 100 VRMS CABLE GREY	0.5m
16	C480	30 AWG PTFE 100 VRMS CABLE WHITE	0.5m
17			
18			
19			
20			
21			
22			
23			
24			
25			
26			
27			
28			
29			
30			
31			
32			

CUSTOMER REF No

TOOLING REQD

REV.	DCO No.	DATE

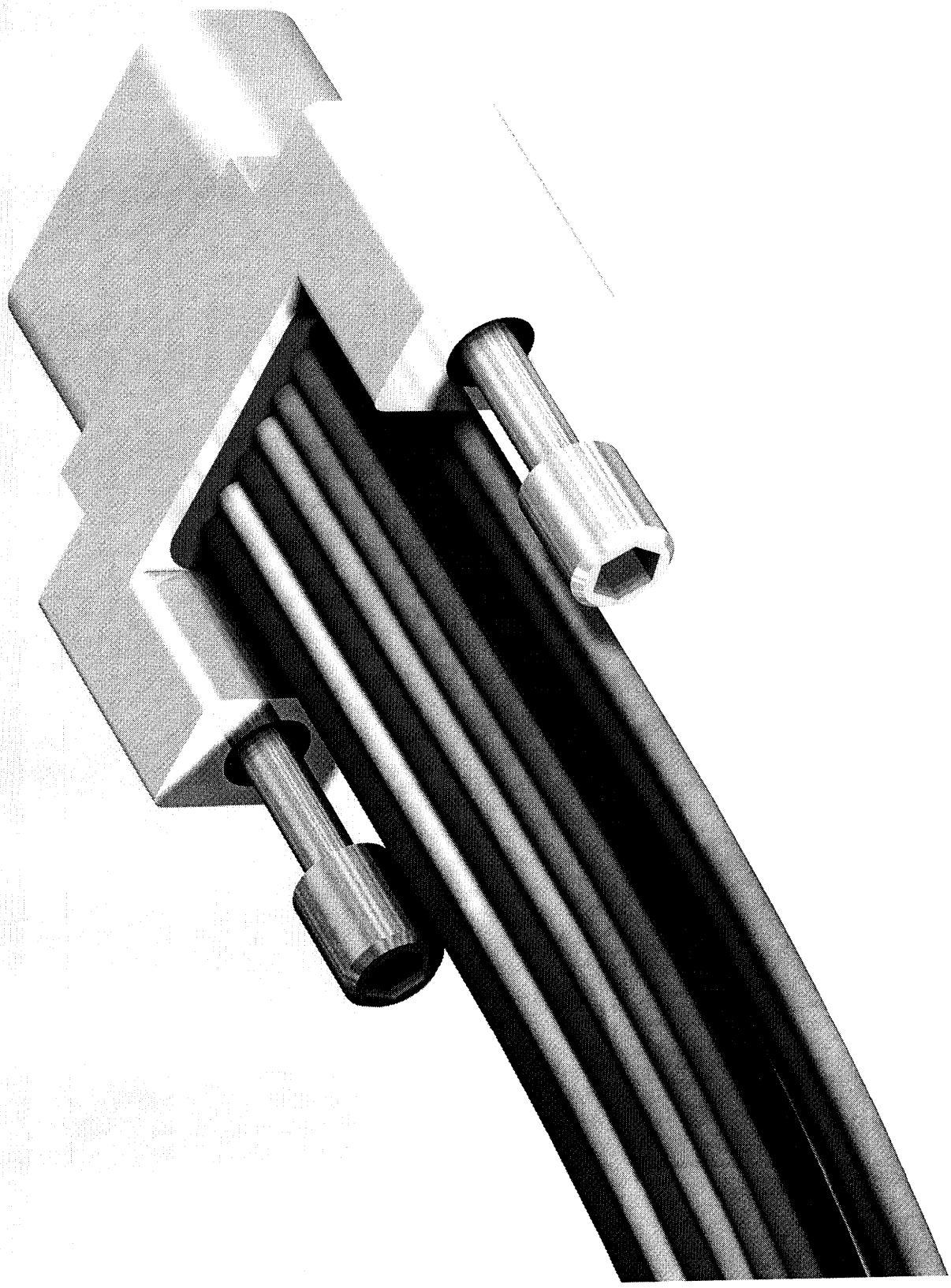
TITLE ASSEMBLY OF SPECIAL NANO 15 WAY PIN CONNECTOR C/W SPECIAL JACKSCREWS

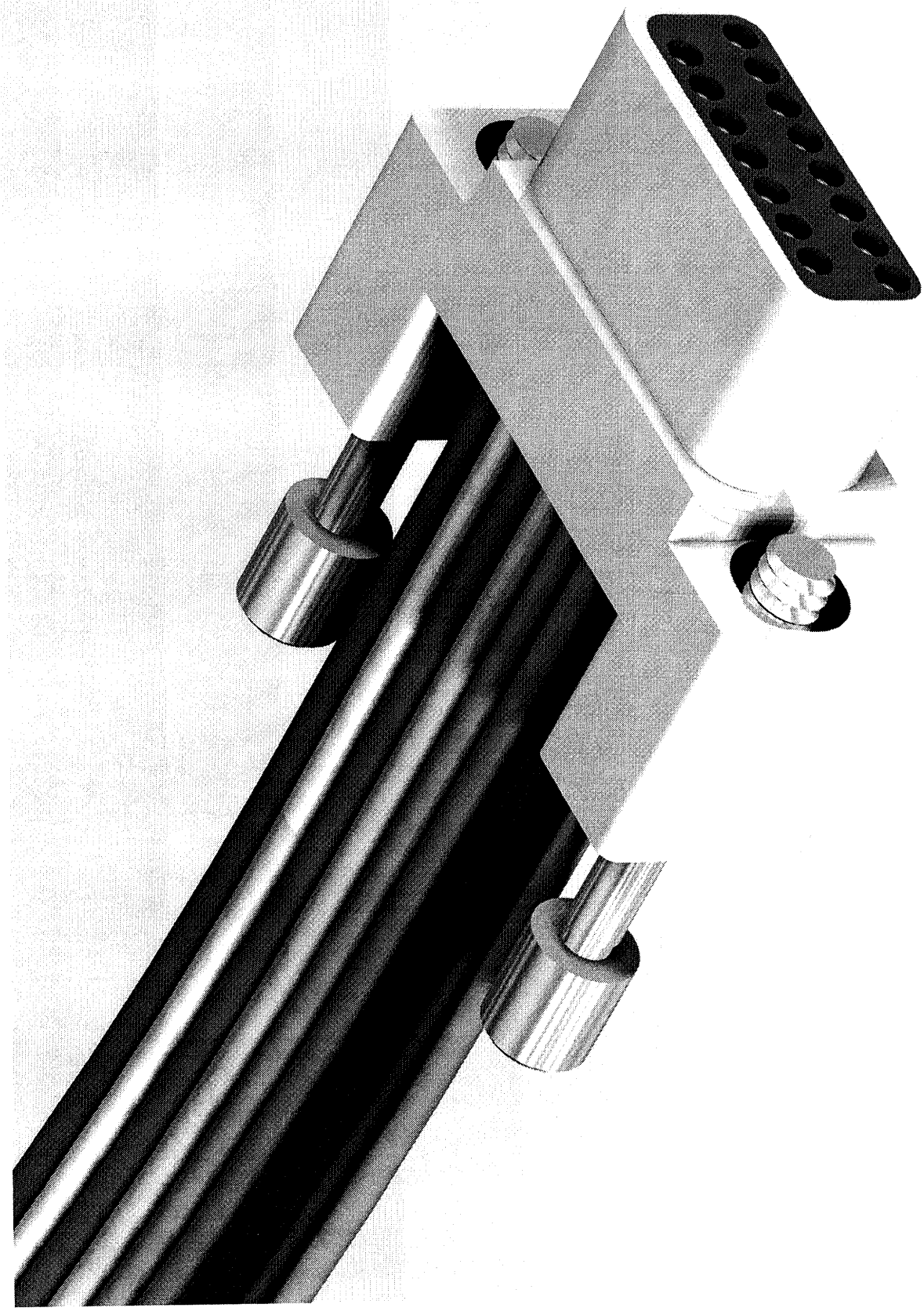
EPF	DIS	DRAWN BY	DATE	SHT / OF
	2775	A.Louch	10/07/02	SHT 1 OF 2

DESIGN APPROVAL	DATE	DRAWING NUMBER
R.Kimpton	01/08/02	MRN4194

Glenair.
GLENAIR UK LTD
OAKHAM BUSINESS PARK
MANSFIELD, NOTTINGHAMSHIRE
UNITED KINGDOM.

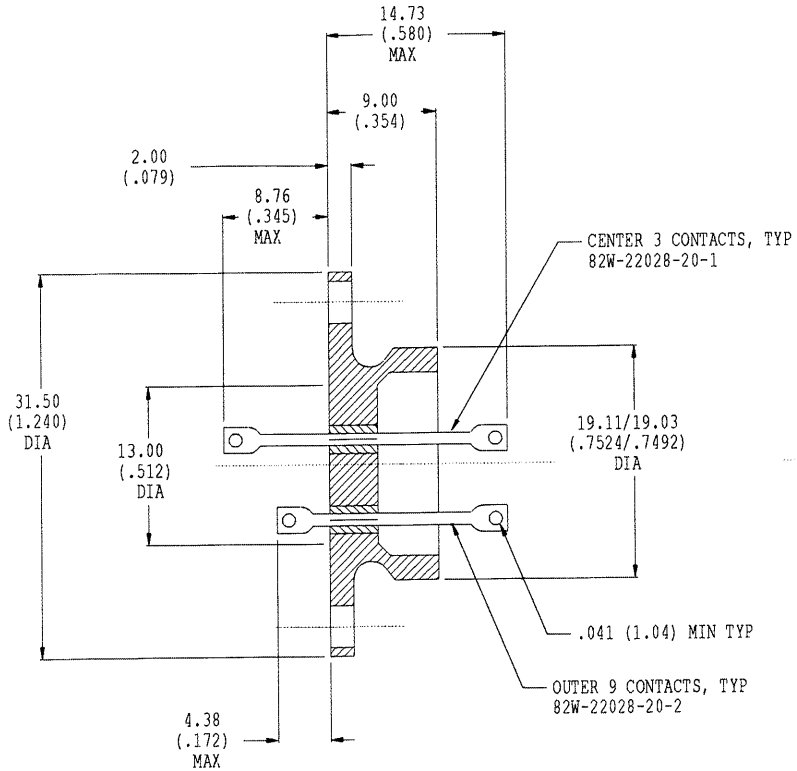
REVISION
ALL DOCUMENTS UNDER THIS DRAWING NUMBER ARE AT REVISION A



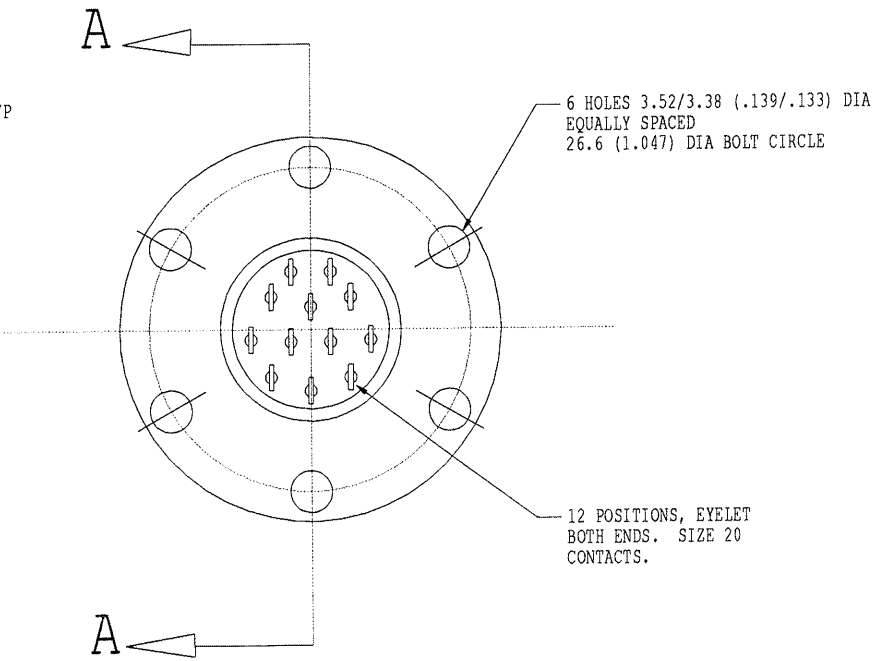


257-104

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
A	REDRAWN	10-8-96 DAP	
B	SEE DCN NO. 12880	10-11-96 DAP	
C	SEE DCN NO. 12881	11-22-96 DAP	
D	REVISED PER DCN. 17161	11/21/00 T.L	
E	REVISED PER DCN. 17328	01/08/01 JLT	



SECTION A - A



NOTES:
1. MATERIAL/ FINISH: SHELL- CRES (303SE OR 304L)/ PASSIVATED
   CONTACTS- ALLOY 52/ GOLD PLATE
   .0013 (.000050) THK
   HERMETIC GLASS SEAL- VITREOUS GLASS
2. REMOVE ALL BURRS AND SHARP EDGES .25/.12 (.010/.005)
3. DIAMETERS TO BE CONCENTRIC WITHIN .25 (.010) TRUE POSITION
4. ALL DIMENSIONS METRIC (INCH IN PARENTHESES)
5. MAXIMUM WEIGHT NOT TO EXCEED 21 GRAMS.
6. ASS'Y WILL MEET OR EXCEED REQ'TS OF BMW ROLLS ROYCE GmbH
   SCD NO. BRE442D1209.

UNLESS OTHERWISE SPECIFIED
DIMENSIONS ARE IN INCHES
TOLERANCES:
DECIMALS .XX ±.25 (.010)
ANGLES ± 5°
DO NOT SCALE THIS DRAWING

DRAWN	D. PARKER	9-26-96
CHECK		
ENGR	D. PARKER	9-26-96
APPROVED		
APPROVED		
RELEASE DATE		
ORIGINAL RELEASE DATE		

B/F 96-3271 | P/C 257 | NON REPAIRABLE COMMERCIAL ITEM

GLENAIR, INC.
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

SCD FOR NL SPEED
PROBE HERMETIC INSERT

CODE IDENT. NO.	SIZE		REV.
06324	C	257-104	E

SCALE N/A | WEIGHT N/A | SHEET 1 OF 1

HP-2-ASED-HN-0270

Annex 14

REVISIONS			
SYM.	DESCRIPTION	DATE	APPROVED
1	PRELIMINARY	04/16/02	

TABLE I					
SHELL SIZE	A	B	C	D	E DIA
18	1.890 (48.00)	1.42 (36.07)	1.000 (25.40)	.81 (20.57)	2.25 (57.15)
22	2.140 (54.35)	1.60 (40.64)	1.250 (31.75)	1.06 (26.92)	2.50 (63.50)
24	2.265 (57.50)	1.76 (44.70)	1.312 (33.32)	1.14 (28.96)	2.75 (69.85)

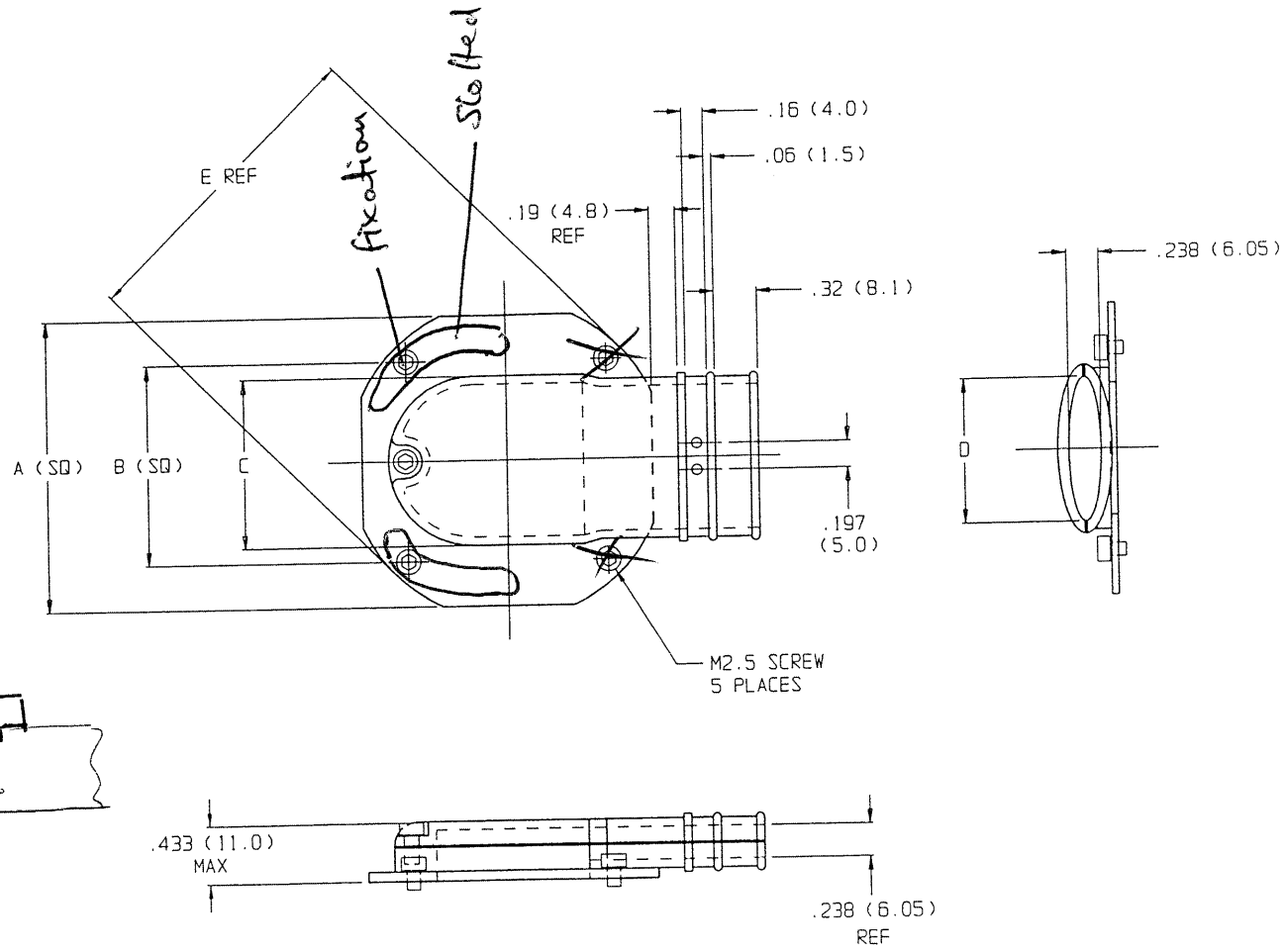
HP-2-ASED-MN-0270

Annex 15

PART NUMBER DEVELOPMENT

EXAMPLE: 447-735 M 22

- PRODUCT SERIES
- BASIC NO
- FINISH SYM, TABLE II
- SHELL SIZE, TABLE I



NOTES:

1. ASSEMBLY IDENTIFIED WITH MANUFACTURER'S NAME AND P/N, SPACE PERMITTING.
2. GLENAIR 600 SERIES BACKSHELL ASSEMBLY TOOLS ARE RECOMMENDED FOR ASSEMBLY AND INSTALLATION.
3. MATERIAL/FINISH:
   BACKSHELL - AL ALLOY/SEE TABLE II
   HARDWARE - CRES/PASSIVATED

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES TOLERANCES: FRACTIONS ± 1/16, DECIMALS .XX ±.03 .XXX ±.015, ANGLES ± 2°	DRAWN	T.LE	04/16/02
	CHECK	P.OAKES	04/16/02
	ENGR	R.PAINTER	04/16/02
	APPROVED		
	APPROVED		
	RELEASE DATE		04/16/02
DO NOT SCALE THIS DRAWING	ORIGINAL RELEASE DATE		
B/F 02-1377 P/C 447	NON REPARABLE COMMERCIAL ITEM		

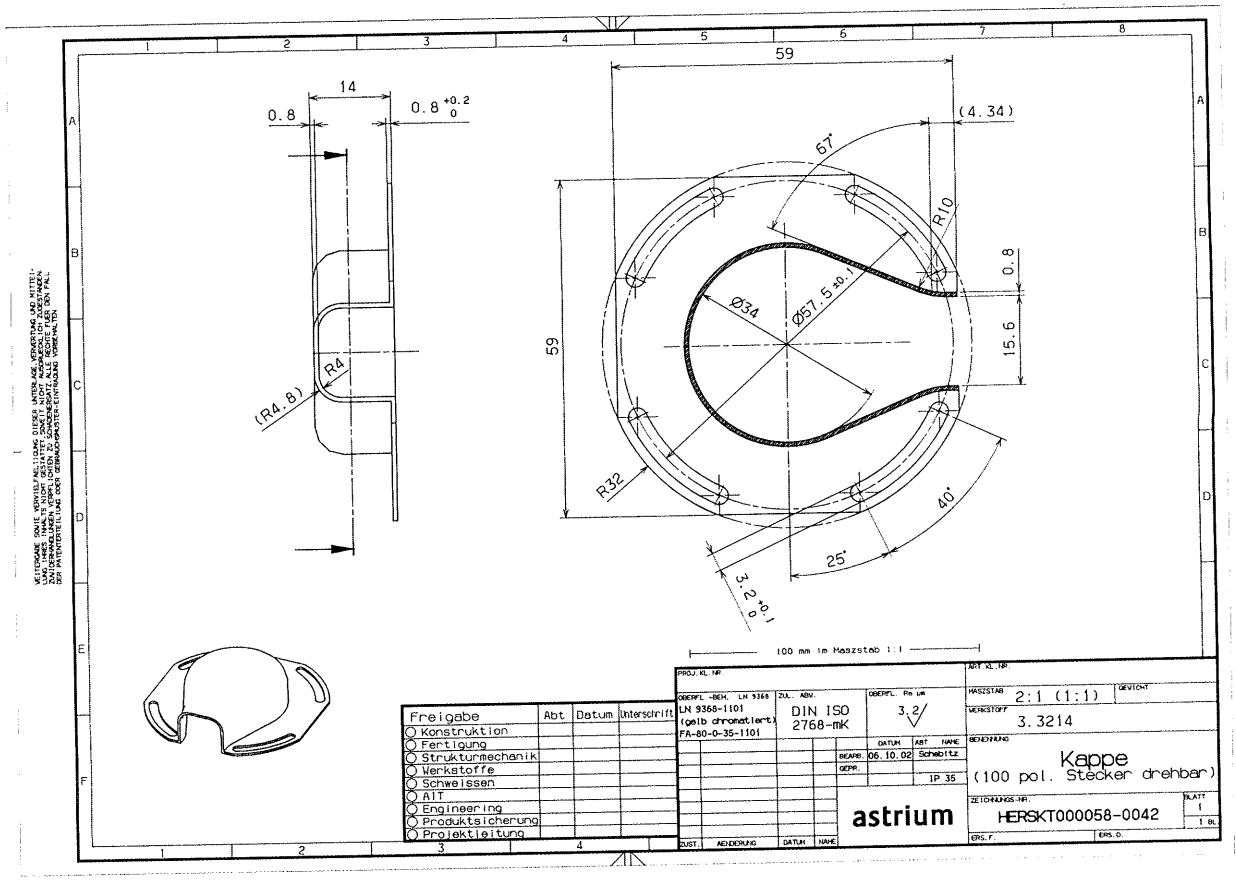
GLENAIR, INC. CAD 2002©
1211 AIR WAY - GLENDALE - CALIFORNIA 91201

BACKSHELL, SPECIAL PURPOSE
FOR 197-011P CONNECTORS

CODE IDENT. NO.	SIZE		REV.
06324	C	447-735	1
SCALE N/A	WEIGHT N/A	SHEET 1 OF 1	

HP-2-ASED-MN-0270

Annex 16-1



Freigabe	Abt	Datum	Unterschrift
Konstruktion			
Fertigung			
Strukturmechanik			
Werkstoffe			
Schweissen			
AIT			
Engineering			
Produktsicherung			
Projektleitung			

PROJ. KL. NR.

OBERFL. -BEH. LN 9368
LN 9368-1101
(gelb chromatiert)
FA-80-0-35-1101

ZUL. ABW.
DIN ISO 2768-mK

OBERFL. Ra µm
3.2

ART. KL. NR.

MASSSTAB 2:1 (1:1)

GEWICHT

WERKSTOFF 3.3214

BENENNUNG
Kappe
(100 pol. Stecker drehbar)

	DATUM	ABT	NAME
BEARB.	06.10.02	Schmitz	
GEPR.			
		IP 35	

astrium

ZEICHNUNGS-NR.
HERSKT000058-0042

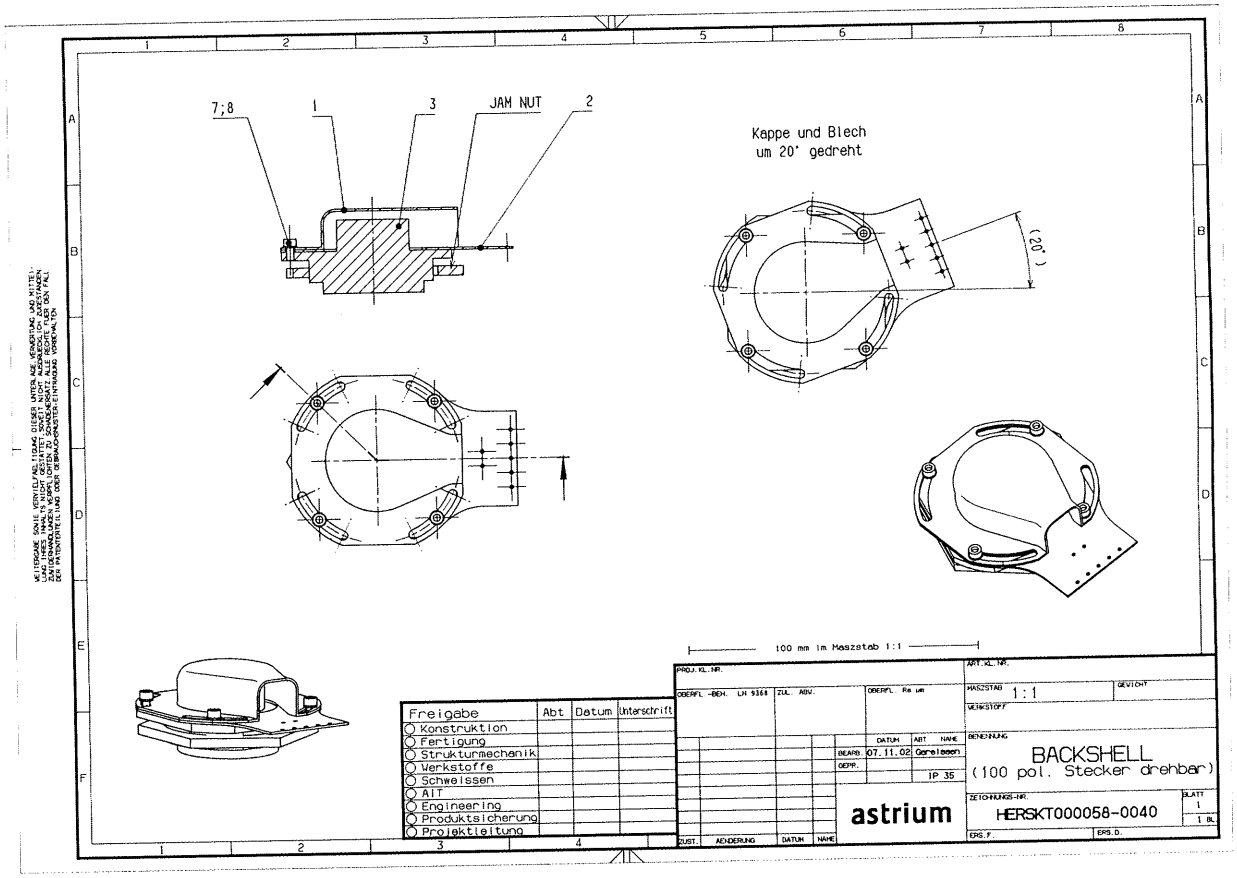
BLATT 1
1 BL

ERS. F.

ERS. O.

ZUST.	ÄNDERUNG	DATUM	NAME

Annex 16-2



Freigabe	Abt	Datum	Unterschrift
Konstruktion			
Fertigung			
Strukturmechanik			
Verkstoffe			
Schweissen			
AIT			
Engineering			
Produktsicherung			
Projektleitung			

PROJ. KL. NR.
OBERFL. -BEH. LH 9368 | ZUL. ABW. | OBERFL. Ra um
ART. KL. NR.
MASZSTAB 1:1 | GEWICHT
WERKSTOFF

	DATUM	ABT	NAME
BEARB.	07.11.02		Gerelaeen
GEPR.			
		IP 35	

BENENNUNG
BACKSHELL
(100 pol. Stecker drehbar)

astrium

ZEICHNUNGS-NR.
HERSKT000058-0040
BLATT 1
1 BL.

ERS. F. | ERS. D.

ZUST.	AENDERUNG	DATUM	NAME

	Name	Dep./Comp.
X	Alberti von Mathias Dr.	SM 34
X	Alo Hakan	OTN/IP 35
	Barlage Bernhard	ED 11
	Bayer Thomas	ED 541
X	Faas Horst	EA 65
X	Fehringer Alexander	SM 33
	Frey Albrecht	ED 422
X	Gerner Willi	ED 13
X	Grasl Andreas	OTN/EN 64
X	Grasshoff Brigitte (CH2000)	ED 521
	Hartmann Hans Dr.	ED 422
X	Hauser Armin	SM 31
	Hinger Jürgen	SM 31
X	Hohn Rüdiger	ED 541
X	Hölzle Edgar	ED 421
X	Huber Johann	ED 543
X	Hund Walter	SE 76
X	Idler Siegmund	ED 432
	Iványi von András	ACE 32
	Jahn Gerd Dr.	SM 31
X	Kalde Clemens	ED 532
X	Kameter Rudolf	OTN/EN 64
	Kersting Stefan	OTN/EN 63
X	Kettner Bernhard	SM 34
X	Knoblauch August	ED 531
X	Koelle Markus	ED 533
	Kroeker Jürgen	ED 542
	Kunz Oliver	SM 31
	Lamprecht Ernst	OTN/SM 222
X	Lang Jürgen	SE 76
	Langfermann Michael	ED 541
	Mack Paul	OTN/EN 64
X	Moritz Konrad Dr.	ED 65
	Müller Lutz	OTN/EN 64
	Muhl Eckhard	OTN/EN 64
X	Pastorino Michel	ASPI Resid.
	Peitzker Helmut	ED 65
X	Peltz Heinz-Willi	SM 33
X	Peters, Gerhard	ED 531
	Pietroboni Karin	ED 65
	Puttlitz Joachim	OTN/EN 64
	Rebholz Reinhold	ED 541
	Reuß Friedhelm	ED 62
X	Rühe Wolfgang	ED 6
	Runge Axel	OTN/EN 64

	Name	Dep./Comp.
	Sachsse Bernt	ED 21
	Schäffler Johannes	OTN/EN 64
X	Schink Dietmar	ED 422
X	Schlosser Christian	OTN/EN 64
	Schweickert Gunn	SM 34
X	Stauss Oliver	SM 33
	Steininger Eric	ED 422
X	Stritter Rene	ED 11
	Suttner Klaus	SM 32
	Tenhaeff Dieter	SM 34
	Thörmer Klaus-Horst Dr.	OTN/ED 65
	Wagner Adalbert	OTN/IP 35
	Wagner Klaus	SM 31
X	Wietbrock, Walter	ED 521
	Wöhler Hans	SM 34
X	Zipf Ludwig	ACE 32
X	Gareisen-Ferdinand	OTN/IP35
X	Alcatel	ASPI
X	ESA/ESTEC	ESA
X	Alenia - Mr. Bolfaro	ALS
	Instruments:	
X	MPE (PACS)	MPE
X	RAL (SPIRE)	RAL
X	SRON (HIFI)	SRON
	Subcontractors:	
	Air Liquide, Space Department	AIR
	Air Liquide, Orbital System	AIRT
	Alcatel Bell Space	ABSP
X	Astrium Sub-Subsyst. & Equipment	ASSE
X	Austrian Aerospace	AAE
	APCO Technologies S. A.	APCO
	Astrium GmbH Space Infrastr.	ASIP
	BOC Edwards	BOCE
	Dutch Space Solar Arrays	DSSA
X	EADS CASA ESPACIO	CASA
	Eurocopter	ECDE
	HTS AG Zürich	HTSZ
	Linde	LIND
	Patria New Technologies Oy	PANT
	Phoenix, Volkmarsen	PHOE
	Rembe, Brilon	REMB
	SENER Ingenieria SA	SEN
	Stöhr, Königsbrunn	STOE