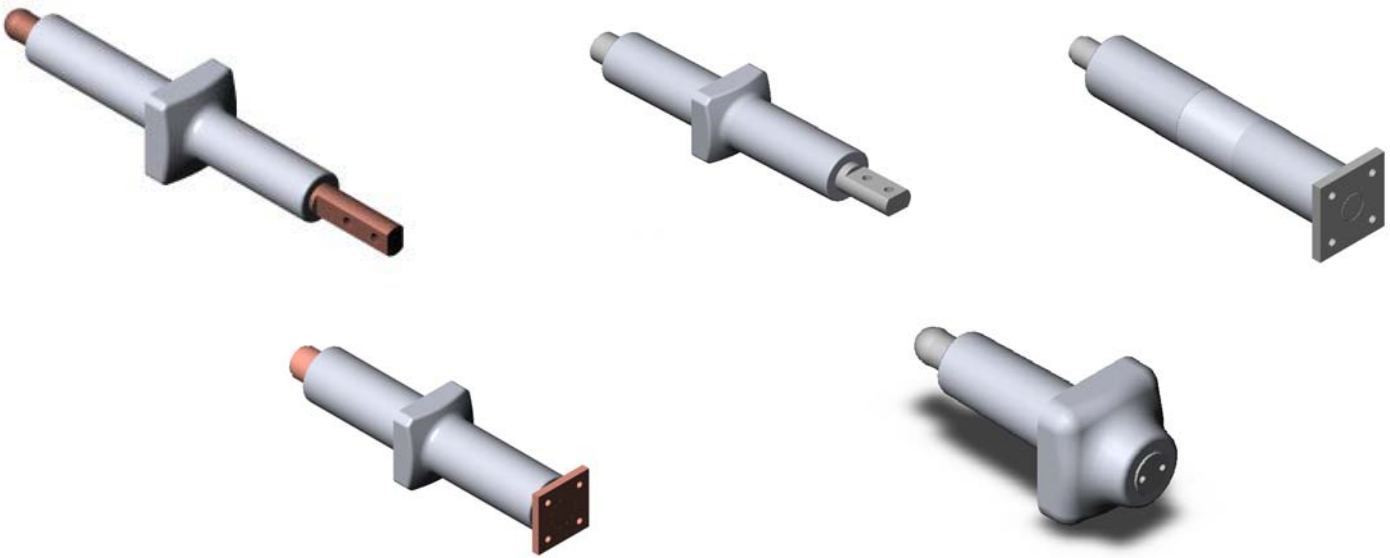




1500 and 1600 Series Miscellaneous Circuit Breaker Bushings Assorted Manufacturers Replacement and Conversion Units 1200 and 2000 Amp 5 to 15 kV Class



Use:

1500 and 1600 Series Circuit Breaker Bushings are designed for use in new, replacement and retrofit Circuit Breaker applications.

Construction:

1600 Series Secondary Bushings are constructed of tin or silver plated C110 electrolytic copper conductors for maximum conductivity. Insulation is cast Cycloaliphatic Epoxy. The bushings contain an integrally cast in ground shield to control distribution of the electrical field. The design is a one piece assembly eliminating all interfaces, offering very stable power factor and exceptional partial discharge characteristics.

Custom Options:

EPC Ltd. has a substantial library of assorted miscellaneous Circuit Breaker bushings that have been manufactured for numerous replacement and conversion applications for virtually all original equipment manufacturers. We specialize in the development of parts for any custom requirement. Consult factory for more information on available designs.

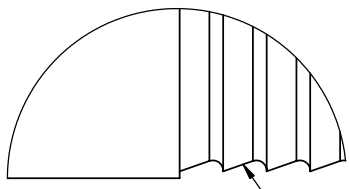
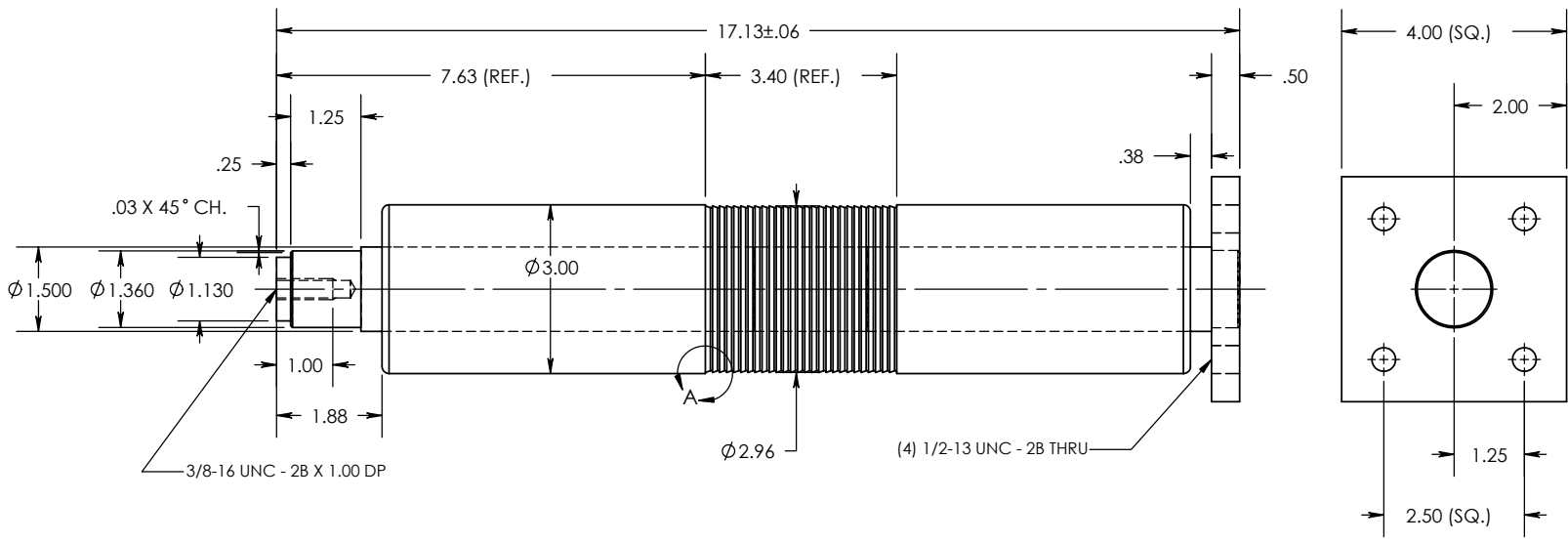
Engineered Power Components Ltd.
Unit E – 10 Keenleyside St.
Winnipeg, Manitoba, Canada
R2L 2B9

Phone: (204) 663-4195
Fax: (204) 663-5256
Toll Free: 1-888-416-8111
Email: sales@epclimited.com
Website: www.epclimited.com

8 7 6 5 4 3 2 1

REV. 0
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CAD FILE: 1500 SERIES
 DWG. NO. 15-017-100



DETAIL A
 SCALE 2 : 1

NOTE: PROFILE TO MATCH ORIGINAL CLAMP

- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
- MATERIAL:
 1. E04 - CYCLOALIPHATIC EPOXY
 2. HD ETP C11000 GRADE COPPER (SILVER PLATED)
- SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 60KV
 2. NOMINAL CURRENT RATING 1200 AMPS
 3. TEMPERATURE CLASSIFICATION..... -5°C INDOOR

REVISIONS
 REF.

0	
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UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5°C
 VOLTAGE ±5%
 AMPERAGE ±5%
 RESISTANCE ±5%

* STATISTICAL DIMENSION
 NO. OF SAMPLES [0]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.	
APPROVALS	DATE
DRAWN BY: DB	27/02/2002
CHECKED BY: RM	01/03/2002
ENGINEERING: DB	01/03/2002
TOOLING REF.	T15-017-1
PRODUCT GROUP	1500 SERIES

1600 SERIES (CONVERSION) BUSHING
 5kV / 1200A
 FEDERAL PACIFIC DST-5-150/250

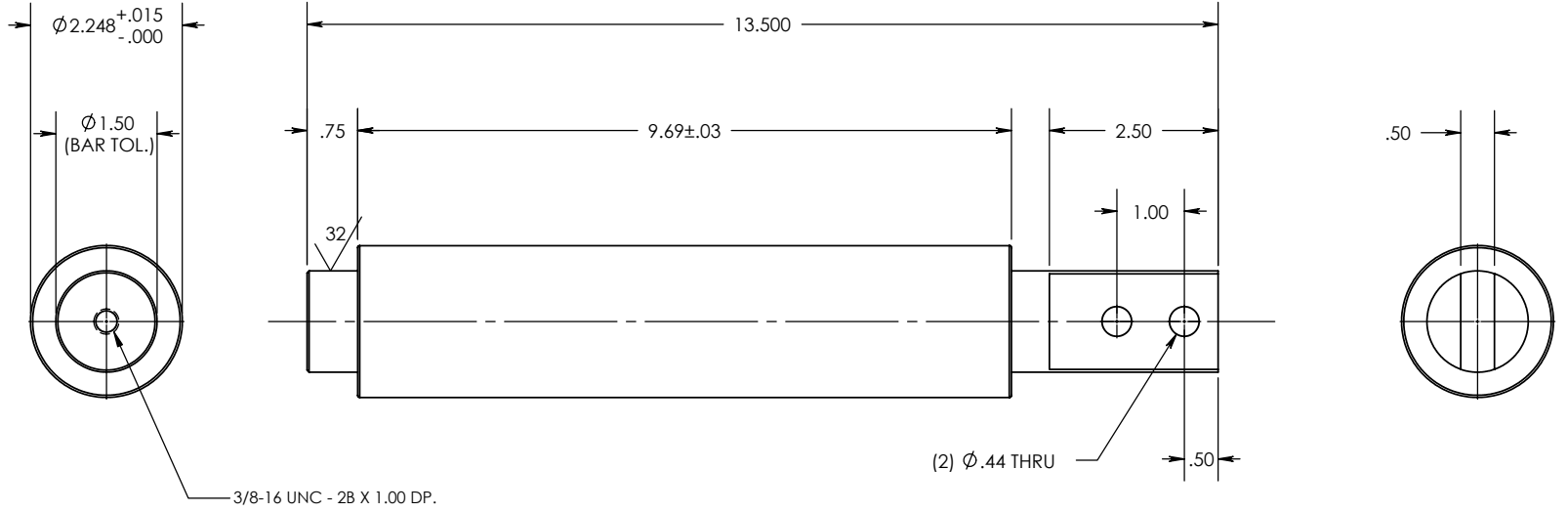
SIZE A	DWG. NO. 15-017-100	REV. 0
SCALE: 3	CAD FILE: 1500 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 15-019-000
 CAD FILE: 1500 SERIES



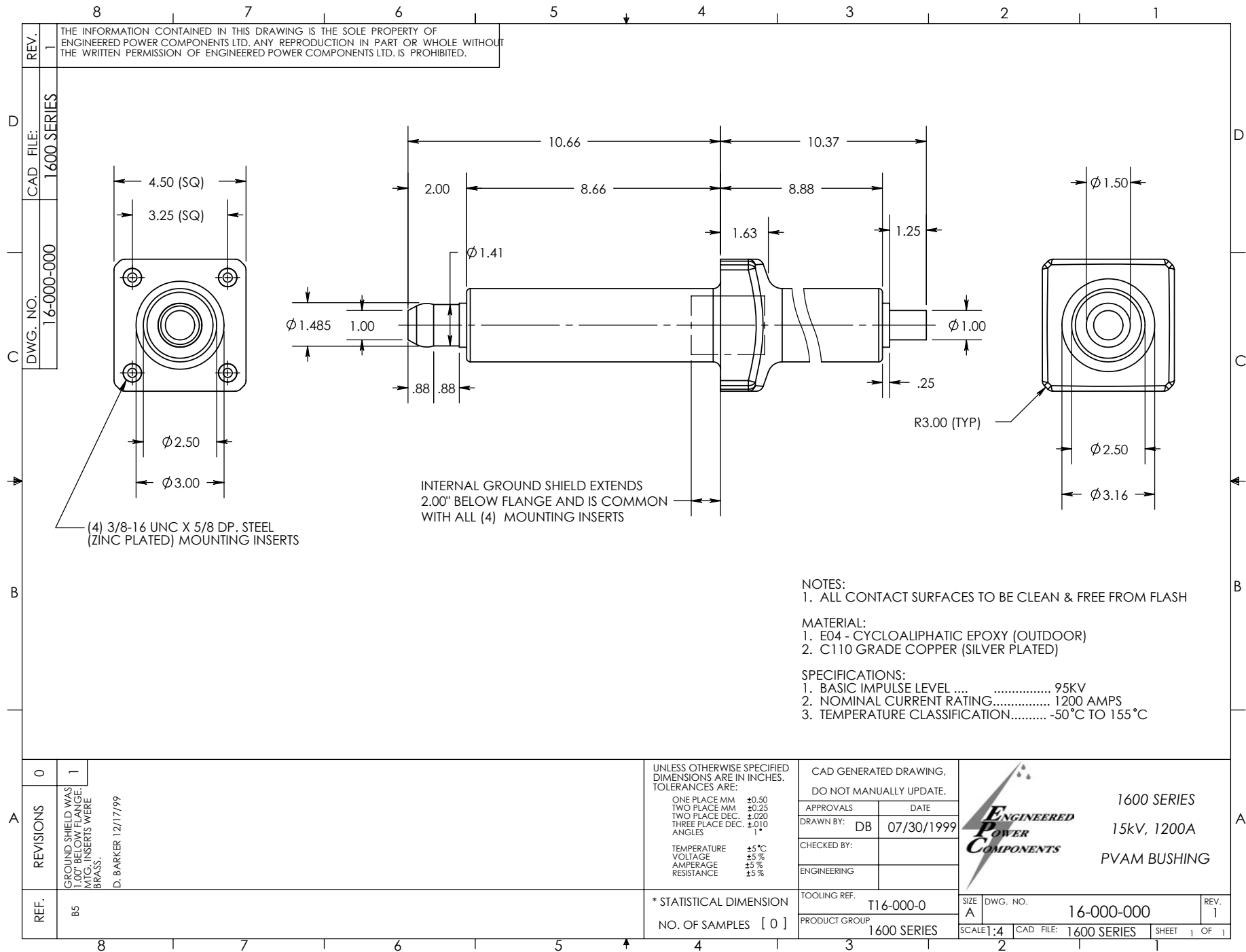
NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

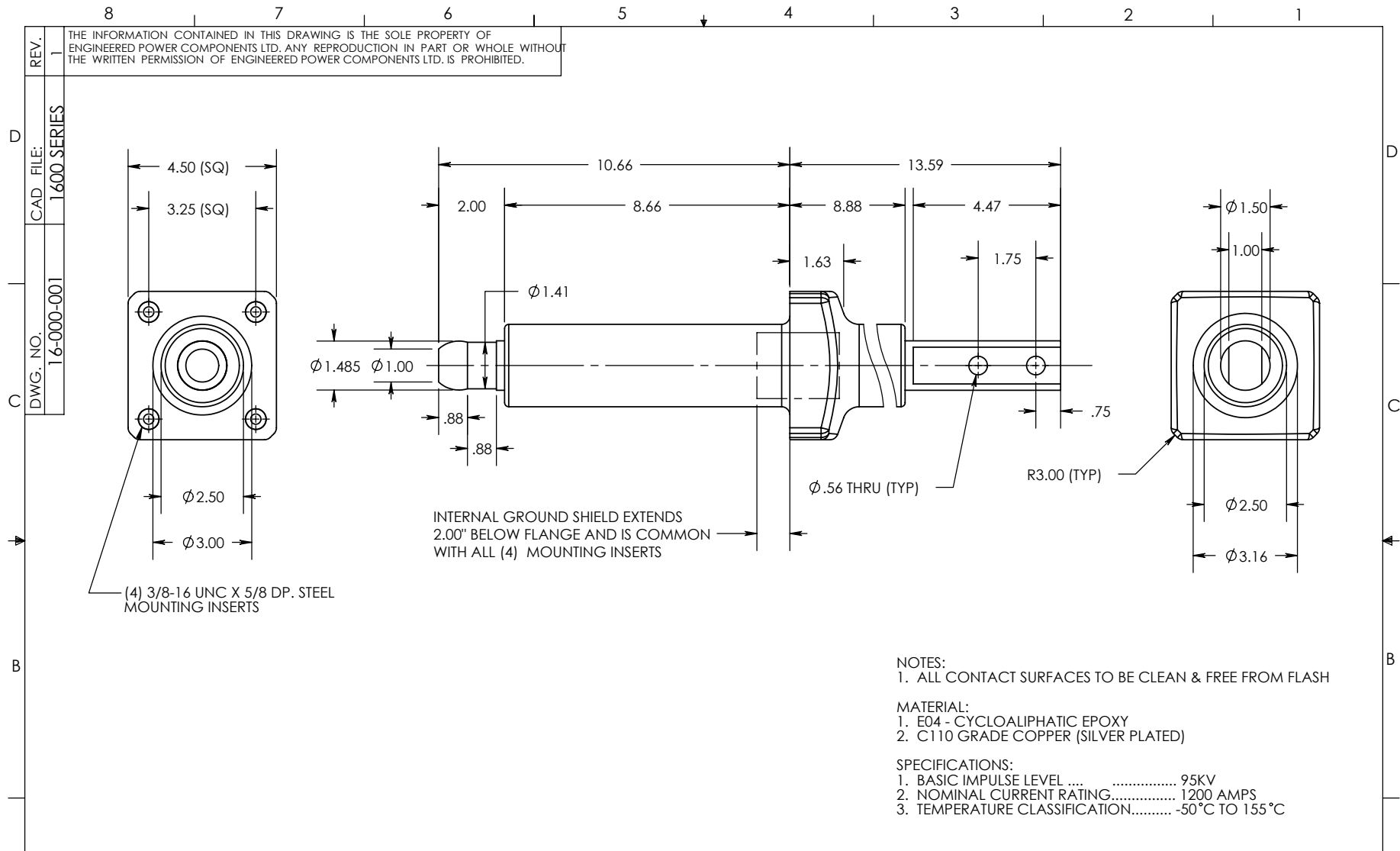
MATERIAL:
 1. E06 - BISPHENOL-A EPOXY
 2. HD ETP C11000 COPPER (SILVER PLATED)


SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 60KV
 2. NOMINAL CURRENT RATING 800 AMPS
 3. TEMPERATURE CLASSIFICATION -5°C TO 105°C INDOOR

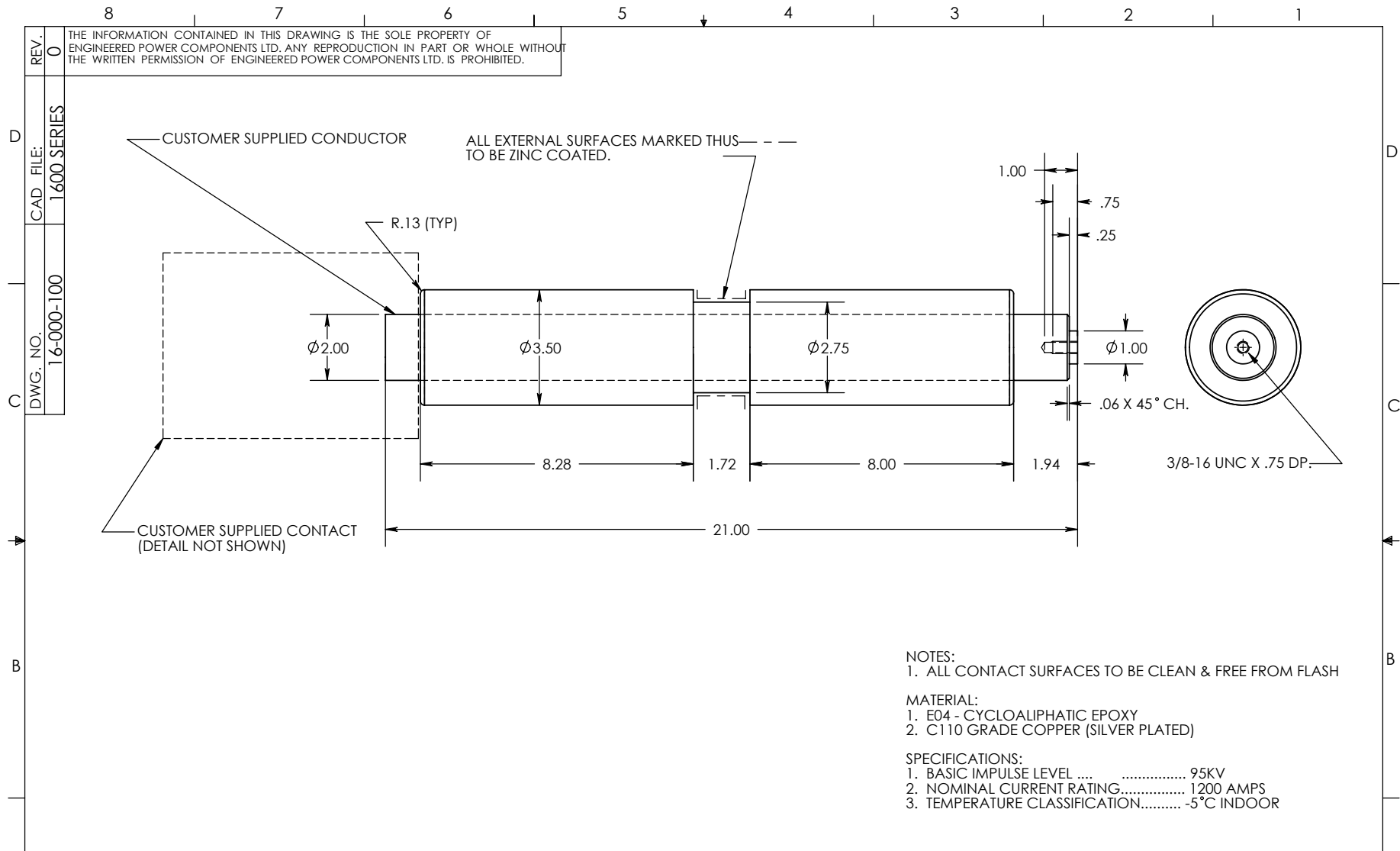
A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5 °C VOLTAGE ±5 % AMPERAGE ±5 % RESISTANCE ±5 %	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS DATE DRAWN BY: DB 12/09/2003 CHECKED BY: RM 15/09/2003 ENGINEERING DB 15/09/2003 TOOLING REF. T15-019-0 PRODUCT GROUP 1500 SERIES	 5 kV / 800A DST STAB	SIZE A	DWG. NO. 15-019-000	REV. 0
	REF.	* STATISTICAL DIMENSION NO. OF SAMPLES [0]				SCALE: 1:2.5	CAD FILE: 1500 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1






A	REVISIONS	0	GROUND SHIELD WAS 1.00" BELOW FLANGE. BRASS. D. BARKER 02/18/2000	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 07/29/1999 CHECKED BY: _____ ENGINEERING _____	 <p>1600 SERIES - 15KV G.E. MAGNABLAST RETROFIT BUSHING</p>
	REF.	B5				

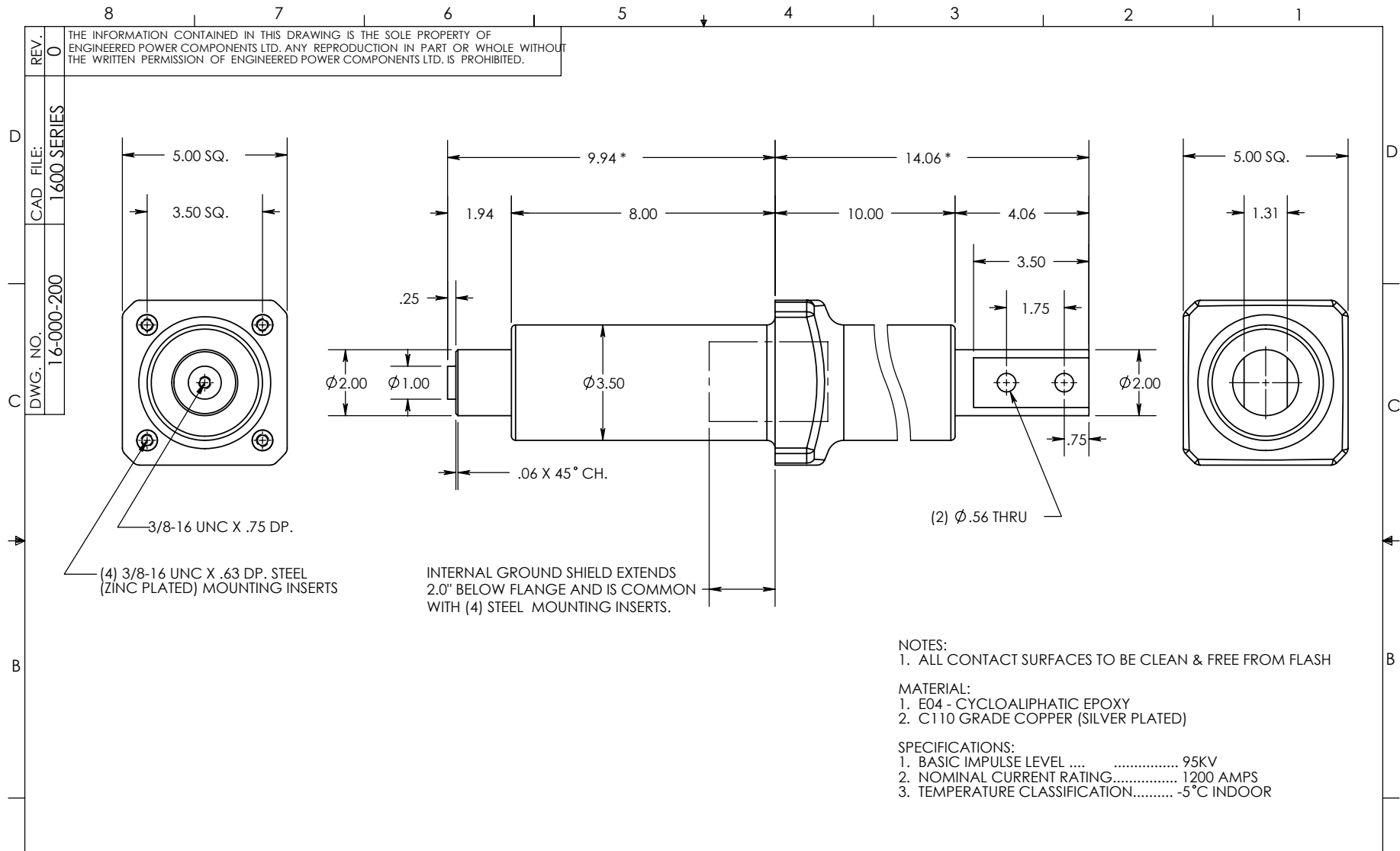



NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E04 - CYCLOALIPHATIC EPOXY
 2. C110 GRADE COPPER (SILVER PLATED)

SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 95KV
 2. NOMINAL CURRENT RATING..... 1200 AMPS
 3. TEMPERATURE CLASSIFICATION..... -5°C INDOOR

A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 09/23/1999 CHECKED BY: _____ ENGINEERING _____	 ITE BREAKER BUSHING
	REF.				

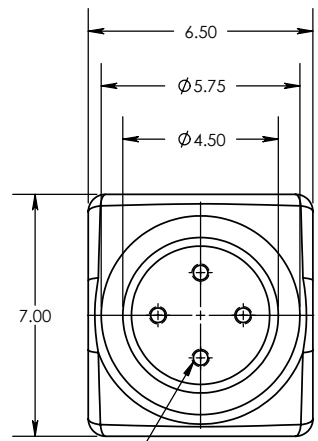


A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 09/24/1999 CHECKED BY: _____ ENGINEERING _____	 <p>1600 SERIES 15kV / 1200A ITE CIRCUIT BREAKER BUSHING</p>	SIZE A	DWG. NO. 16-000-200	REV. 0
	REF.	* STATISTICAL DIMENSION NO. OF SAMPLES [2]						

8 7 6 5 4 3 2 1

REV. 0
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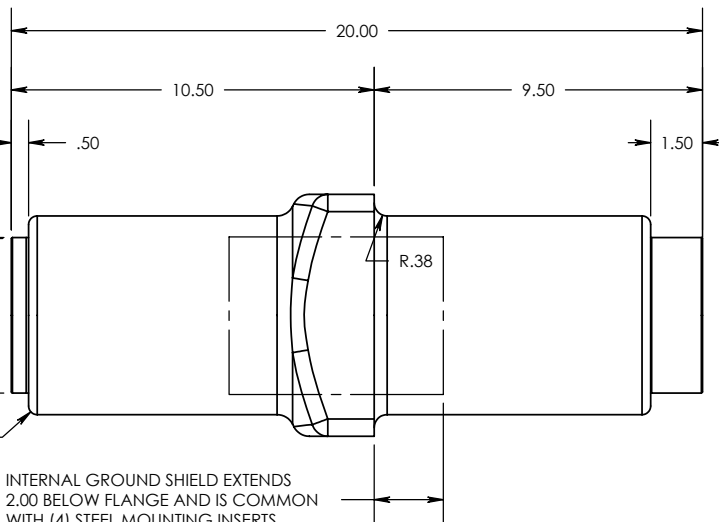
CAD FILE: 1600 SERIES
 DWG. NO. 16-000-700



(4) 1/2-13 UNC - 2B THRU, EQUALLY SPACED ON A ϕ 2 15/32 BOLT CIRCLE.

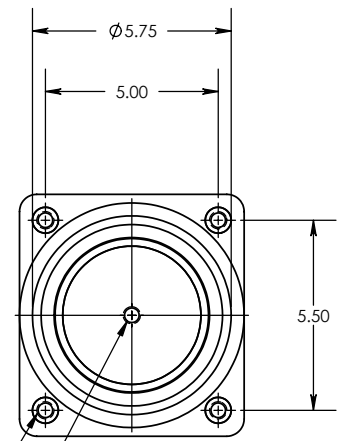
.03 X 45° CH. (BOTH ENDS)

R.25 (TYP.) BOTH ENDS

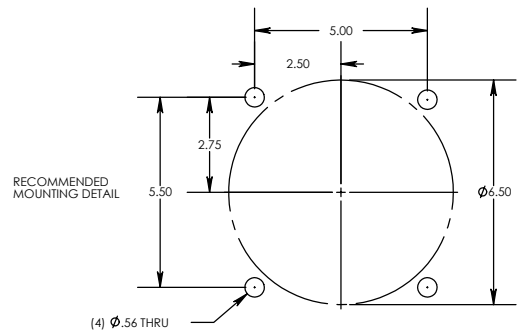


INTERNAL GROUND SHIELD EXTENDS 2.00 BELOW FLANGE AND IS COMMON WITH (4) STEEL MOUNTING INSERTS.

(4) 1/2-13 UNC X .75 DP. ZINC PLATED STEEL INSERTS (COMMON WITH GROUND SHIELD).



1/2-13 UNC - 2B THRU



RECOMMENDED MOUNTING DETAIL

(4) ϕ .56 THRU

NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. ALL UNSPECIFIED RADII TO BE R.50

MATERIAL:
 1. E04 - CYCLOALIPHATIC EPOXY, GREY
 2. C110 GRADE COPPER (SILVER PLATED), ϕ 4.50 O.D. X ϕ 4.00 ID, C/W SOLID ENDS

SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 95KV
 2. NOMINAL CURRENT RATING..... 3000 AMPS
 3. TEMPERATURE CLASSIFICATION..... -5°C INDOOR

A	REVISIONS	0
	REF.	

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM \pm 0.50
 TWO PLACE MM \pm 0.25
 TWO PLACE DEC. \pm 0.020
 THREE PLACE DEC. \pm 0.010
 ANGLES 1°
 TEMPERATURE \pm 5°C
 VOLTAGE \pm 5%
 AMPERAGE \pm 5%
 RESISTANCE \pm 5%

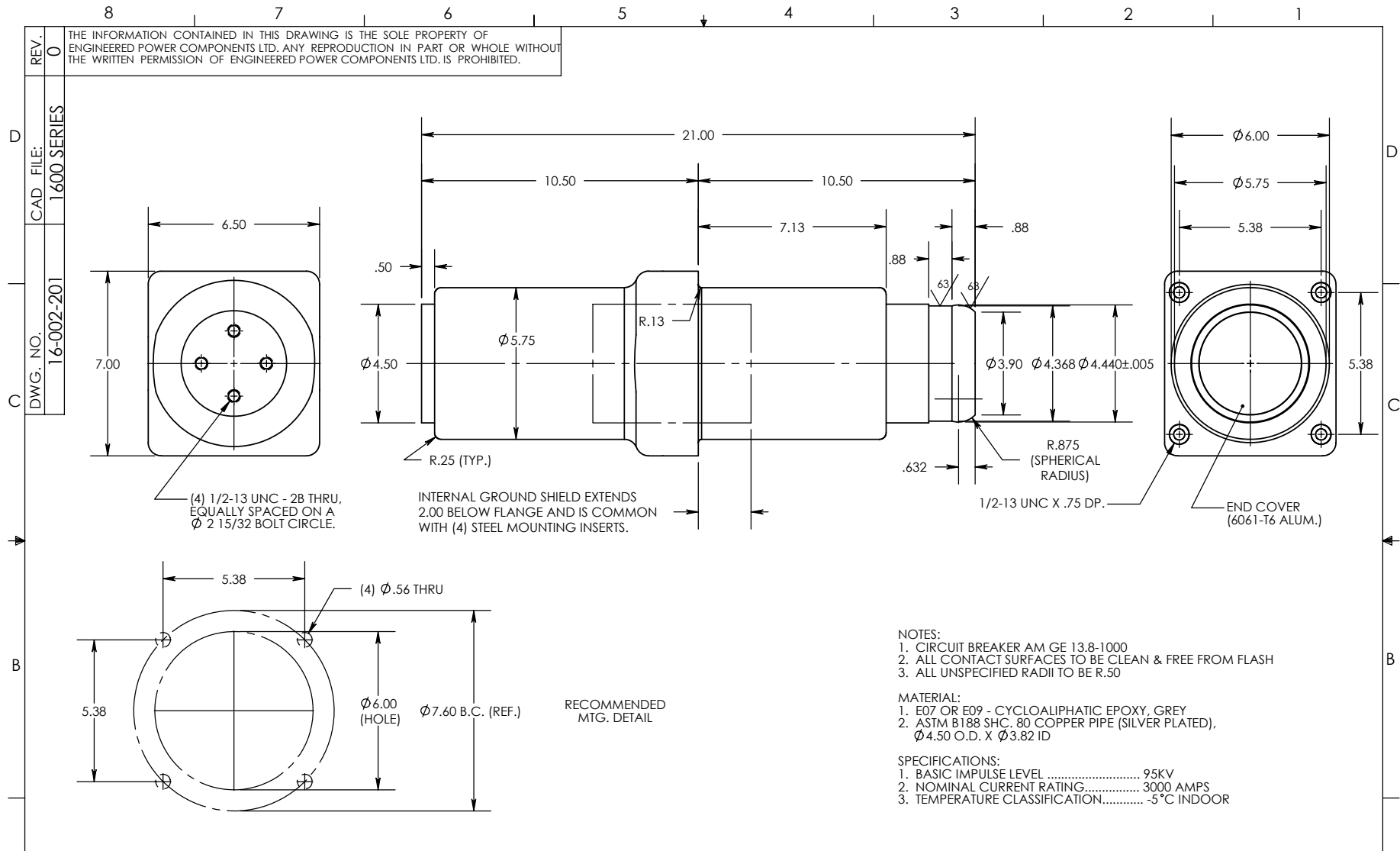
* STATISTICAL DIMENSION
 NO. OF SAMPLES [0]


CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.	
APPROVALS	DATE
DRAWN BY: DB	04/08/2000
CHECKED BY:	
ENGINEERING	
TOOLING REF.	T16-000-7
PRODUCT GROUP	1600 SERIES

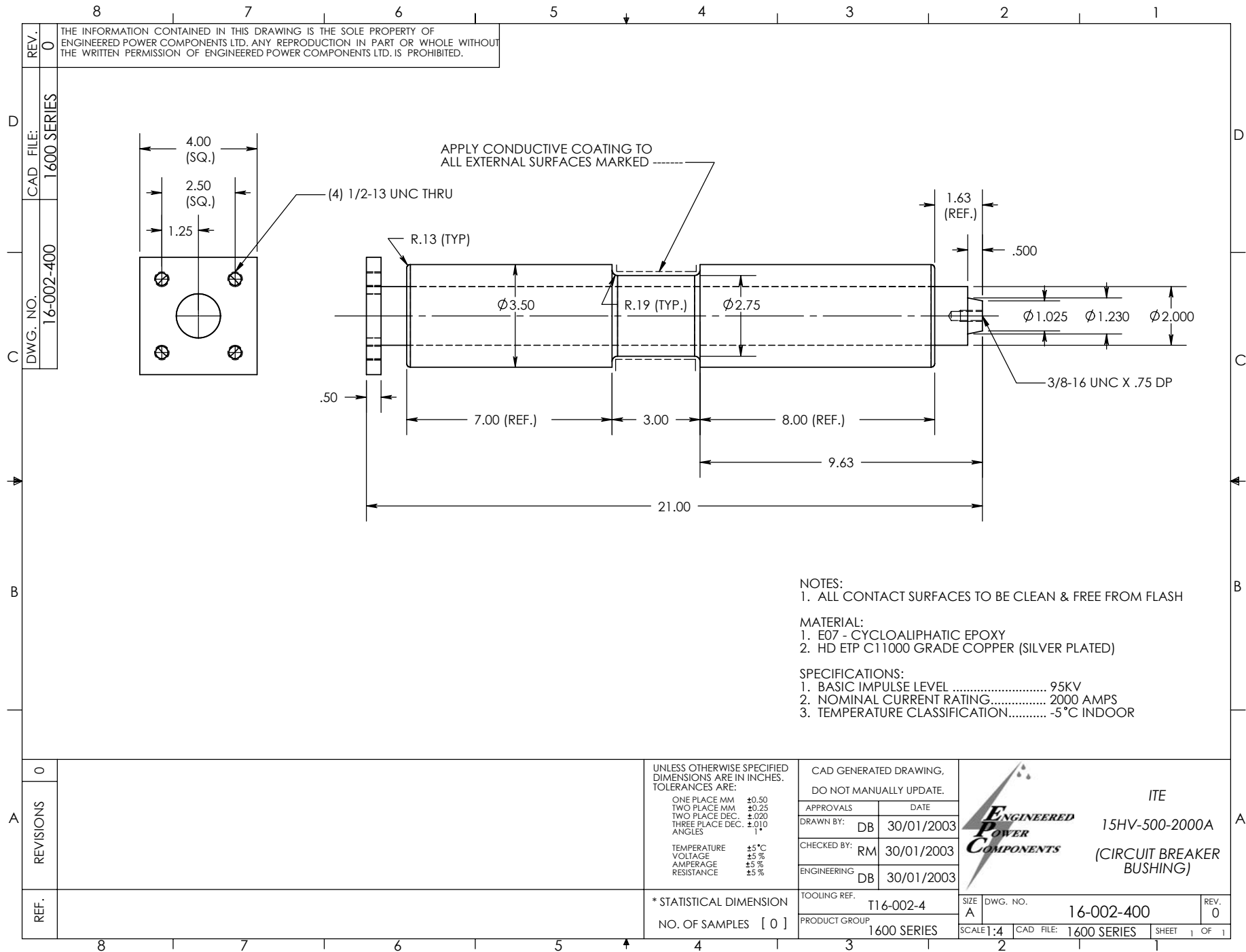
1600 SERIES
 15kV / 3000A
 ITE (RETROFIT)
 CIRCUIT BREAKER
 BUSHING

SIZE A	DWG. NO. 16-000-700	REV. 0
SCALE: 1:5	CAD FILE: 1600 SERIES	SHEET 1 OF 1

8 7 6 5 4 3 2 1



A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ± 0.50 TWO PLACE MM ± 0.25 TWO PLACE DEC. ± 0.020 THREE PLACE DEC. ± 0.010 ANGLES 1° TEMPERATURE $\pm 5^\circ\text{C}$ VOLTAGE $\pm 5\%$ AMPERAGE $\pm 5\%$ RESISTANCE $\pm 5\%$	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE. APPROVALS _____ DATE _____ DRAWN BY: DB 12/09/2003 CHECKED BY: RM 12/09/2003 ENGINEERING DB 12/09/2003	 <p>1600 SERIES AM 15kV / 3000A PRIMARY BUSHING</p>
	REF.	* STATISTICAL DIMENSION NO. OF SAMPLES [0]			



REV. 0
 CAD FILE: 1600 SERIES
 DWG. NO. 16-002-400

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APPLY CONDUCTIVE COATING TO ALL EXTERNAL SURFACES MARKED

(4) 1/2-13 UNC THRU

1.63 (REF.)

.500

Ø3.50

Ø2.75

Ø1.025

Ø1.230

Ø2.000

3/8-16 UNC X .75 DP

7.00 (REF.)

3.00

8.00 (REF.)


9.63

21.00

NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH

MATERIAL:
 1. E07 - CYCLOALIPHATIC EPOXY
 2. HD ETP C11000 GRADE COPPER (SILVER PLATED)

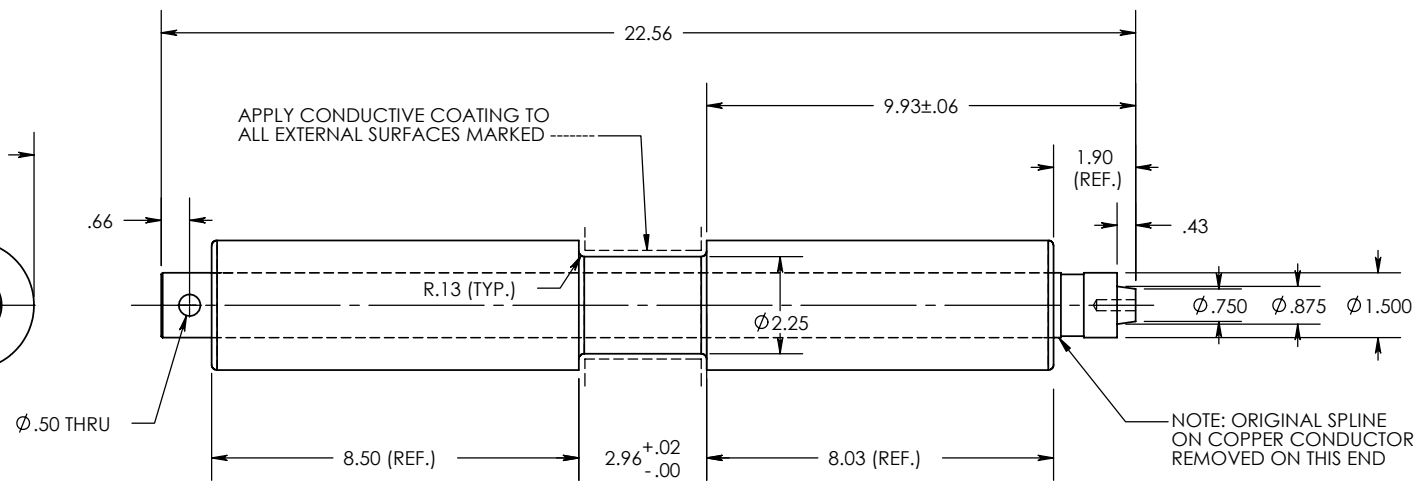
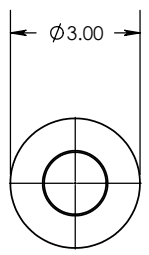
SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 95KV
 2. NOMINAL CURRENT RATING..... 2000 AMPS
 3. TEMPERATURE CLASSIFICATION..... -5°C INDOOR

A	REVISIONS	0	UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE: ONE PLACE MM ±0.50 TWO PLACE MM ±0.25 TWO PLACE DEC. ±0.020 THREE PLACE DEC. ±0.010 ANGLES 1° TEMPERATURE ±5°C VOLTAGE ±5% AMPERAGE ±5% RESISTANCE ±5%	CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.		 ITE 15HV-500-2000A (CIRCUIT BREAKER BUSHING)
	REF.			* STATISTICAL DIMENSION NO. OF SAMPLES [0]	APPROVALS DRAWN BY: DB 30/01/2003 CHECKED BY: RM 30/01/2003 ENGINEERING DB 30/01/2003	

8 7 6 5 4 3 2 1

REV. 0
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DWG. NO. 16-002-500
 CAD FILE: 1600 SERIES



APPLY CONDUCTIVE COATING TO ALL EXTERNAL SURFACES MARKED

R.13 (TYP.)

NOTE: ORIGINAL SPLINE ON COPPER CONDUCTOR REMOVED ON THIS END

- NOTES:
 1. ALL CONTACT SURFACES TO BE CLEAN & FREE FROM FLASH
 2. COPPER CONDUCTOR SUPPLIED BY CUSTOMER
- MATERIAL:
 1. E06 - BISPHENOL-A EPOXY
 2. HD ETP C11000 GRADE COPPER (SILVER PLATED)
- SPECIFICATIONS:
 1. BASIC IMPULSE LEVEL 95KV
 2. NOMINAL CURRENT RATING..... 1200 AMPS
 3. TEMPERATURE CLASSIFICATION..... -5°C INDOOR

REVISIONS 0
 REF.

UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCES ARE:
 ONE PLACE MM ±0.50
 TWO PLACE MM ±0.25
 TWO PLACE DEC. ±0.020
 THREE PLACE DEC. ±0.010
 ANGLES 1°
 TEMPERATURE ±5 °C
 VOLTAGE ±5 %
 AMPERAGE ±5 %
 RESISTANCE ±5 %

* STATISTICAL DIMENSION
 NO. OF SAMPLES [0]

CAD GENERATED DRAWING, DO NOT MANUALLY UPDATE.
 APPROVALS DATE
 DRAWN BY: DB 27/02/2003
 CHECKED BY: RM 28/02/2003
 ENGINEERING DB 28/02/2003
 TOOLING REF. T16-002-5
 PRODUCT GROUP 1600 SERIES

ITE
 7.5kV / 1200A
 (CIRCUIT BREAKER BUSHING)

SIZE A DWG. NO. 16-002-500
 SCALE: 4 CAD FILE: 1600 SERIES SHEET 1 OF 1

8 7 6 5 4 3 2 1