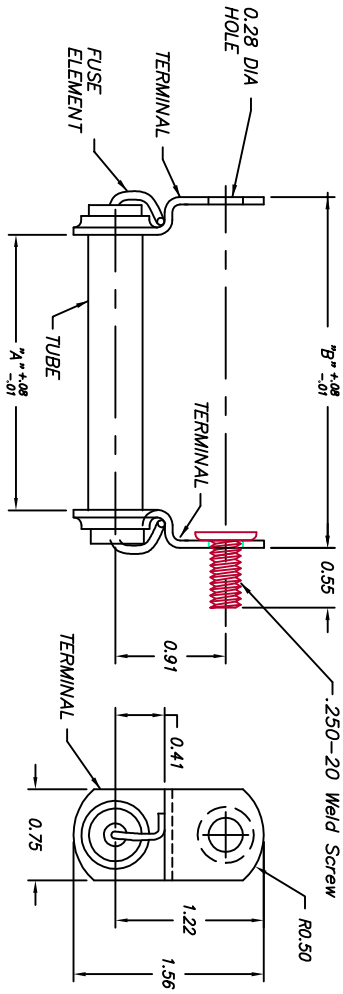


UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE	2 PL. DEC	3 PL. DEC	ANGLES
SURFACES	± 0.01	± 0.005	± .5 DEG

FIRST MADE FOR

9F54 Explosion Fuse

MODEL NUMBER	"A"	"B"	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54DA101	2.25	2.88	A1 SEE NOTE 1	5.2	3
9F54DA201	2.25	2.88	A2 SEE NOTE 1	5.2	4
9F54DA301	2.25	2.88	A3 SEE NOTE 1	5.2	5
9F54DA401	2.25	2.88	A4 SEE NOTE 1	5.2	7
9F54DA501	2.25	2.88	A5 SEE NOTE 1	5.2	9
9F54DA601	2.25	2.88	A6 SEE NOTE 1	5.2	10
9F54DA701	2.25	2.88	A7 SEE NOTE 1	5.2	12
9F54DA801	2.25	2.88	A8 SEE NOTE 1	5.2	15
9F54DA901	2.25	2.88	A9 SEE NOTE 1	5.2	19
9F54DAB001	2.25	2.88	A10 SEE NOTE 1	5.2	24
9F54DAB101	2.25	2.88	A11 SEE NOTE 1	5.2	28
9F54DAB201	2.25	2.88	A12 SEE NOTE 1	5.2	39
9F54DAB301	2.25	2.88	A13 SEE NOTE 1	5.2	45
9F54DAB401	2.25	2.88	A14 SEE NOTE 1	5.2	57
9F54DBA101	3.25	3.88	B1 SEE NOTE 2	8.4	3
9F54DBA201	3.25	3.88	B2 SEE NOTE 2	8.4	4
9F54DBA301	3.25	3.88	B3 SEE NOTE 2	8.4	5
9F54DBA401	3.25	3.88	B4 SEE NOTE 2	8.4	7
9F54DBA501	3.25	3.88	B5 SEE NOTE 2	8.4	9
9F54DBA601	3.25	3.88	B6 SEE NOTE 2	8.4	10
9F54DBA701	3.25	3.88	B7 SEE NOTE 2	8.4	12
9F54DBA801	3.25	3.88	B8 SEE NOTE 2	8.4	15
9F54DBA901	3.25	3.88	B9 SEE NOTE 2	8.4	19
9F54DBB001	3.25	3.88	B10 SEE NOTE 2	8.4	24
9F54DBB101	3.25	3.88	B11 SEE NOTE 2	8.4	28
9F54DBB201	3.25	3.88	B12 SEE NOTE 2	8.4	34
9F54DBB301	3.25	3.88	B13 SEE NOTE 2	8.4	40
9F54DBB401	3.25	3.88	B14 SEE NOTE 2	8.4	48



- NOTES:
1. MINIMUM MELTING T.C.C. - GES 8316
MAXIMUM TOTAL CLEARING T.C.C. - GES 8306
 2. MINIMUM MELTING T.C.C. - GES 8317
MAXIMUM TOTAL CLEARING T.C.C. - GES 8307
 3. FOR VERTICAL MOUNTING ONLY.

REVISIONS

0	14-Feb-1980	
1	G.Davis 15-June-89	Retraced; Updated Delin.
2	A. Downs 17-Mar-95	CHANGED ROUTING
3	K. Carroll 28-Jan-96	Updated Routing. Retraced onto Outline Template. Updated Terminal Asm per ECN# R80
4	STULPIN 11-MAR-98	CORRECTED MISSING DIM B & .56 & DEC PLACES TO DIM
5	STULPIN 03-FEB-99	UPDATED TEMPLATE
6	STULPIN 20-APR-01	ADDED AMP RATING
7	GILLAND 11/12/03	ADDED TOLERANCE

MADE BY: A. MILLIKEN 29-Jan-1980
 ISSUED BY: R. GILLAND 11/12/03
 APPROVAL: HICKORY ERMCO
 32B548085
 SH

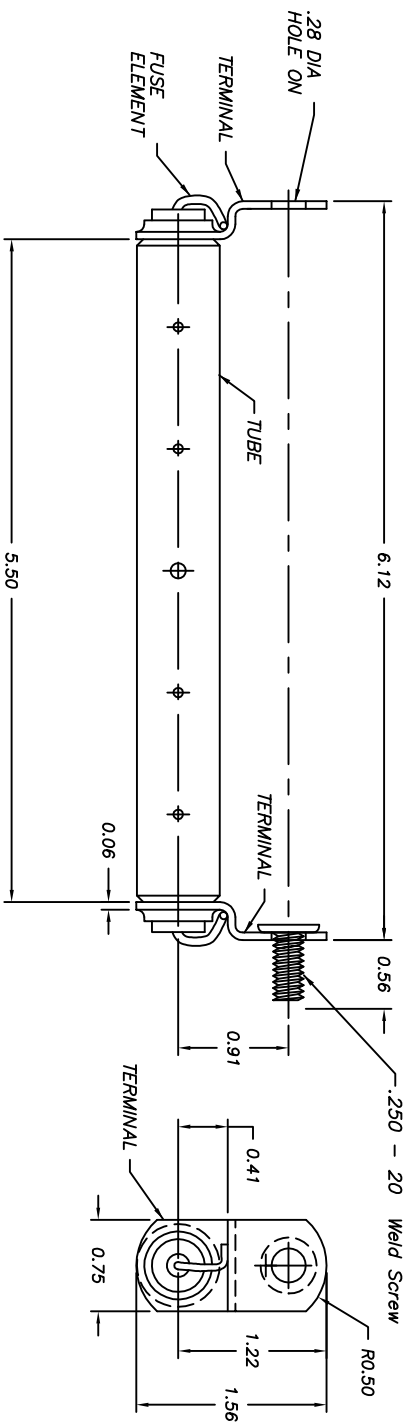
RCI-BTL	
PRINTS TO	



UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE			
SURFACES	± 0.03	2 PL. DEC	3 PL. DEC
✓		± 0.005	± 5 DEG
			ANGLES

TITLE
OUTLINE (EXPULSION FUSE)
 FIRST MADE FOR
 9F54 Expulsion Fuses

32B548086
 SH 1
 CONT ON SH 2



MODEL NUMBER	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54DCA101	C1 SEE NOTE 1	23.0	3
9F54DCA201	C2 SEE NOTE 1	23.0	4
9F54DCA301	C3 SEE NOTE 1	23.0	5
9F54DCA401	C4 SEE NOTE 1	23.0	7
9F54DCA501	C5 SEE NOTE 1	23.0	9
9F54DCA601	C6 SEE NOTE 1	23.0	10
9F54DCA701	C7 SEE NOTE 1	23.0	12
9F54DCA801	C8 SEE NOTE 1	23.0	15
9F54DCA901	C9 SEE NOTE 1	23.0	19
9F54DCB001	C10 SEE NOTE 1	23.0	24
9F54DCB101	C11 SEE NOTE 1	23.0	28

NOTES:
 1. MINIMUM MELTING T.C.C. - GES 8318
 MAXIMUM TOTAL CLEARING T.C.C. - GES 8308
 2. FOR VERTICAL MOUNTING ONLY.

REVISIONS

NO.	DESCRIPTION	DATE	BY	CHK'D BY
5	K. Carroll 27-June-97 <small>Deleted Dim on weeps holes. Updated Routing ECN # R101 Chg .250 RD-HD SCR Moved Old Dim's to Note Lyr</small>			
6	K. Carroll 24-February-98 Chg OA dim from 6.06. Chg 5.44 DIM ECN #R157			
7	STULPIN 04-FEB-99 UPDATED TEMPLATE			
8	STULPIN 20-APR-01 ADDED AMP RATINGS			

MADE BY: A. Millikan 04-Feb-80	APPROVALS	HICKORY ERMCO	32B548086	PRINTS
ISSUED BY: S. STULPIN 20-APR-01			CONT ON SH 2	NO.
				SH 1



TITLE

OUTLINE (EXPULSION FUSE)

CONT. ON SH

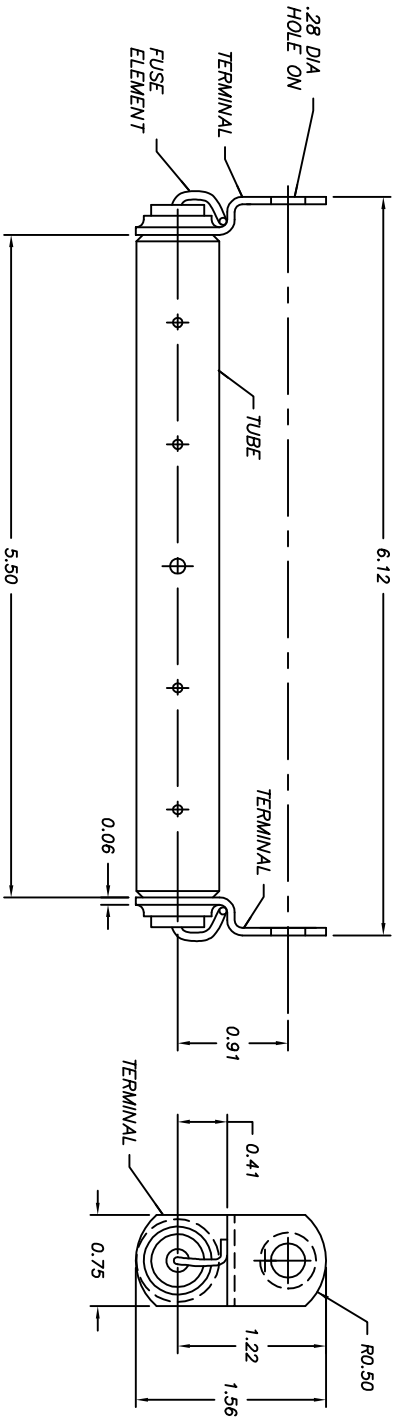
SH 2

32B548086

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE SURFACES ± 0.03 2 PL DEC ± 0.005 3 PL DEC ANGLES ± 5 DEG

FIRST MADE FOR

9F54 Expulsion Fuses



MODEL NUMBER	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54DCA102	C1 SEE NOTE 1	23.0	3
9F54DCA202	C2 SEE NOTE 1	23.0	4
9F54DCA302	C3 SEE NOTE 1	23.0	5
9F54DCA402	C4 SEE NOTE 1	23.0	7
9F54DCA502	C5 SEE NOTE 1	23.0	9
9F54DCA602	C6 SEE NOTE 1	23.0	10
9F54DCA702	C7 SEE NOTE 1	23.0	12
9F54DCA802	C8 SEE NOTE 1	23.0	15
9F54DCA902	C9 SEE NOTE 1	23.0	19
9F54DCB002	C10 SEE NOTE 1	23.0	24
9F54DCB102	C11 SEE NOTE 1	23.0	28

- NOTES:
 1. MINIMUM MELTING T.C.C. - GES 831B
 2. MAXIMUM TOTAL CLEARING T.C.C. - GES 8308
 3. FOR VERTICAL MOUNTING ONLY.

REVISIONS

2	K. Carroll 27-June-97 Deleted Dims on weeps holes. ECN # R101 Updated Routing Moved Old Dim to Note Lyr
3	K. Carroll 24-Feb-98 Chg OA dim from 6.06 Chg 5.44 DIM ECN#R157
4	STULPIN 04-FEB-99 UPDATED TEMPLATE
5	STULPIN 20-APR-01 ADDED AMP RATINGS

MADE BY: A. Millikan 04-FEB-80
 ISSUED BY: S. STULPIN 20-APR-01

APPROVAL

HICKORY
ERMCO

32B548086
CONT. ON SH
SH 2

PRINTS TO

UNLESS OTHERWISE SPECIFIED

ERMCO COMPONENTS, INC.

DWG NO. 2B548092

SURFACES
✓

TOLERANCES		
2 PL DEC	3 PL DEC	ANGLES
± .03	±	±

THE INFORMATION CONTAINED ON THIS DOCUMENT IS PROPRIETARY TO ERMCO COMPONENTS, INC. AND MAY NOT BE USED FOR ANY OTHER PURPOSES THAN THOSE EXPRESSLY AUTHORIZED BY ECI.

SH 2 NUMBER OF SHS.
TITLE: **OUTLINE (EXPULSION FUSE)**
FIRST MADE FOR:

MODEL NUMBER	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54DDA102	C1 SEE NOTE 1	15	3
9F54DDA202	C2 SEE NOTE 1	15	4
9F54DDA302	C3 SEE NOTE 1	15	5
9F54DDA402	C4 SEE NOTE 1	15	7
9F54DDA502	C5 SEE NOTE 1	15	9
9F54DDA602	C6 SEE NOTE 1	15	10
9F54DDA702	C7 SEE NOTE 1	15	12
9F54DDA802	C8 SEE NOTE 1	15	15
9F54DDA902	C9 SEE NOTE 1	15	19
9F54DDB002	C10 SEE NOTE 1	15	24
9F54DDB102	C11 SEE NOTE 1	15	28

REVISIONS

NO.	DESCRIPTION	DATE
1	Update changes on parts 2A543006P03 & 2A953001P01	10/19/04

B

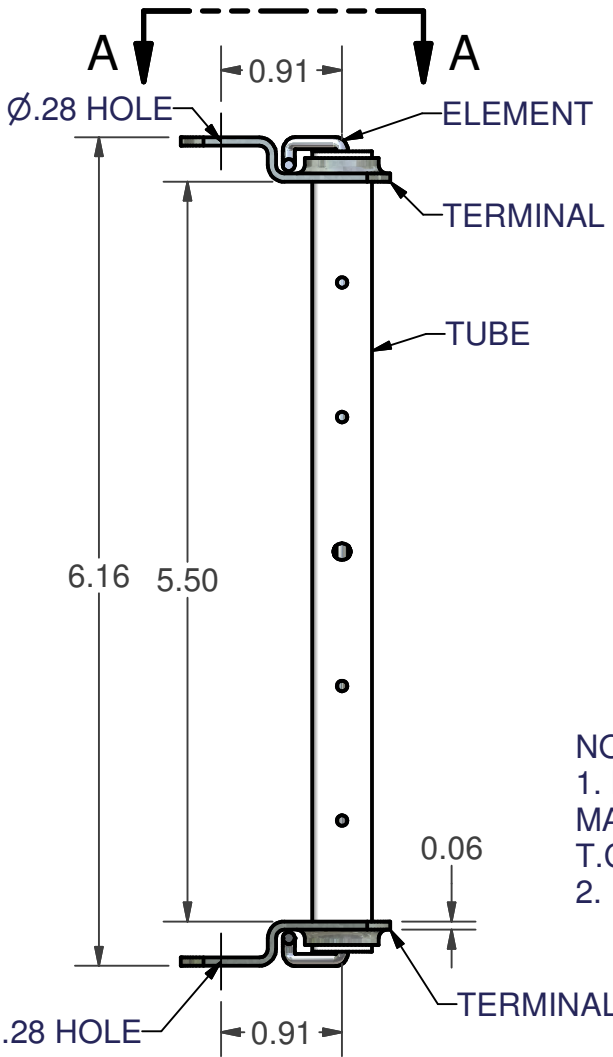
B

A

A

A

A



VIEW A-A

NOTES:
 1. MINIMUM MELTING T.C.C.-GES 8318
 MAXIMUM TOTAL CLEARING
 T.C.C.-GES 8308.
 2. FOR VERTICAL MOUNTING ONLY.

DRAWN BY: R. GILLAND
 ECN 5/8/2003

APPROVAL
 ECI

DWG NO. 2B548092
 SH 2 NUMBER OF SHS.
 TITLE: **OUTLINE (EXPULSION FUSE)**

ISSUED BY: Nicholas Adams
 10/19/2004

FIRST MADE FOR:



TITLE

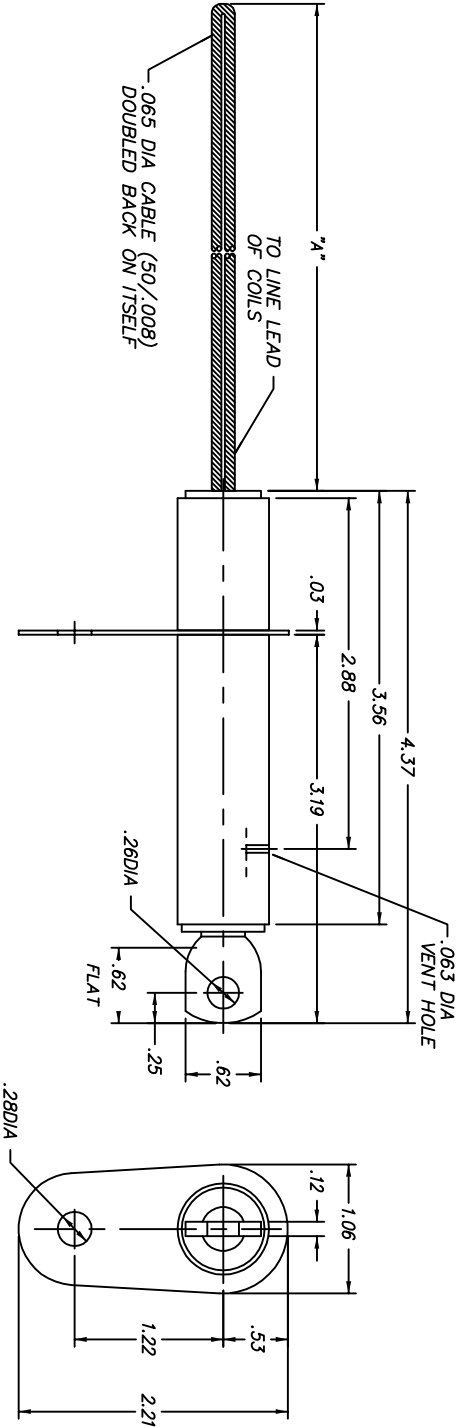
OUTLINE (EXPULSION FUSE)

32B548089
CONT ON SH 2
SH 1

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE			
SURFACES	2 PL DEC	3 PL DEC	ANGLES
✓	± 0.03	± 0.005	± 5 DEG

FIRST MADE FOR

9F54 Expulsion Fuses



MODEL NUMBER	*A*	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54WLD002	4.00	30 SEE NOTE 1	15.0	24
9F54WLD102	4.00	31 SEE NOTE 1	15.0	41
9F54WLD202	4.00	32 SEE NOTE 1	15.0	74
9F54WLD303	4.00	33 SEE NOTE 1	15.0	104
9F54WLD302	8.00	33 SEE NOTE 1	15.0	104

- NOTES:
 1. MINIMUM MELTING T.C.C. - GES 8311
 2. MAXIMUM TOTAL CLEARING T.C.C. - GES 8301-A
 3. FUSE MUST BE MOUNTED VERTICAL WITH THE .12 X .62 COPPER TANG UP.

REVISIONS

2	JAN. 20, 1982																		
3	G.DAVIS JUNE 19, 1989	RETRACED; UPDATE DELIN.																	
4	ABD 17MAR95	CHG ROUTING																	
5	STULPIN 04-FEB-99	UPDATED TEMPLATE																	
6	STULPIN 20-APR-01	ADDED AMP RATINGS																	

MADE BY: A.MILLIKAN FEB. 11, 1980
 ISSUED BY: S. STULPIN 20-APR-01

APPROVAL

HICKORY ERMCO

32B548089
CONT ON SH 2
SH 1

REPLACES
3127B54801006



TITLE

OUTLINE (EXPULSION FUSE)

CONT ON SH 2

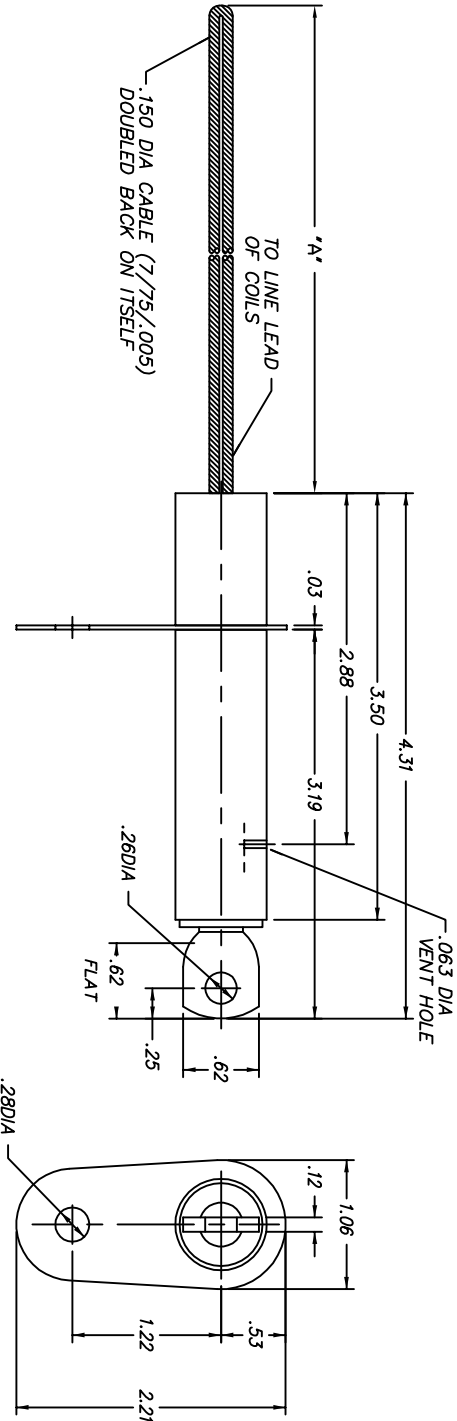
SH 1

32B548090

UNLESS OTHERWISE SPECIFIED, TOLERANCES ARE			
SURFACES	2 PL DEC	3 PL DEC	ANGLES
✓	±	±	± DEG

FIRST MADE FOR

9F54 Expulsion Fuses



MODEL NUMBER	"A"	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATINGS
9F54WLD402	4.00	34 SEE NOTE 1	15.0	146
9F54WLD502	4.00	35 SEE NOTE 1	15.0	200
9F54WLD602	4.00	36 SEE NOTE 1	15.0	272

NOTES:
 1. MINIMUM MELTING T.C.C. - GES 8311
 2. MAXIMUM TOTAL CLEARING T.C.C. - GES 8301-A
 3. FUSE MUST BE MOUNTED VERTICAL WITH THE .12 X .62 COPPER TANG UP.

REVISIONS

1	OCT. 24, 1980																		
2	C. DAVIS JUNE 19, 1989	RETRACED; UPDATE DELIN.																	
4	ABD 17MAR95	CHG ROUTING																	
5	STULPIN 04-FEB-99	UPDATED TEMPLATE																	
6	STULPIN 21-JAN-01	ADDED COLUMN A & DIM A ECN: NONE																	
7	STULPIN 20-APR-01	ADDED AMP RATINGS																	

REPLACES
 3127B54801007

MADE BY: A.MILLIKAN FEB. 11, 1980
 ISSUED BY: S. STULPIN 20-APR-01

APPROVAL
 HICKORY
 ERMCO

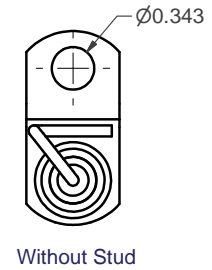
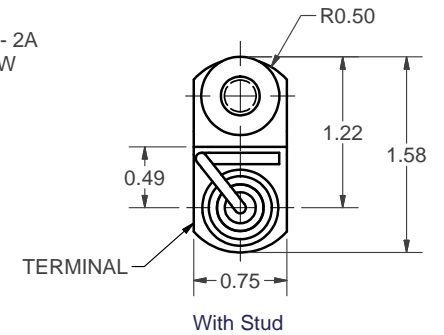
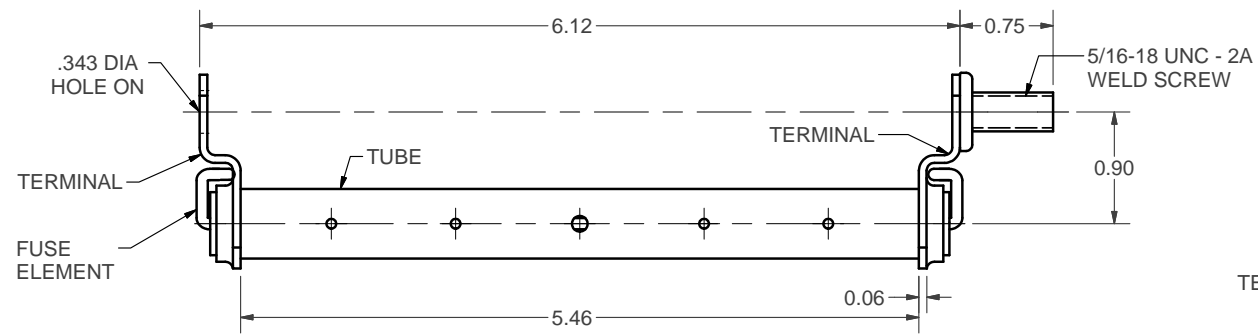
32B548090
 CONT ON SH 2
 SH 1

PRINTS
 TO

REV. 1
B
B-23
A
6/11

4 3 2 1

UNLESS OTHERWISE SPECIFIED			ERMCO COMPONENTS, INC.		DWG NO. 2B548093
SURFACES ✓	TOLERANCES		THE INFORMATION CONTAINED ON THIS DOCUMENT IS PROPRIETARY TO ERMCO COMPONENTS, INC. AND MAY NOT BE USED FOR ANY OTHER PURPOSES THAN THOSE EXPRESSLY AUTHORIZED BY ECI.		SH 1 NUMBER OF SHS. 1 TITLE: Outline (Expulsion Fuse) FIRST MADE FOR: 9F54 Expulsion Fuses
	2 PL DEC	3 PL DEC			
	± .010	± .005	± 5°		



MODEL NUMBER WITH STUD	MODEL NUMBER WITHOUT STUD	TIME CURRENT CURVE NUMBER	MAXIMUM DESIGN KV	AMP RATING
9F54ECA101	9F54ECA102	C1 SEE NOTE 1	23.0	3
9F54ECA201	9F54ECA202	C2 SEE NOTE 1	23.0	4
9F54ECA301	9F54ECA302	C3 SEE NOTE 1	23.0	5
9F54ECA401	9F54ECA402	C4 SEE NOTE 1	23.0	7
9F54ECA501	9F54ECA502	C5 SEE NOTE 1	23.0	9
9F54ECA601	9F54ECA602	C6 SEE NOTE 1	23.0	10
9F54ECA701	9F54ECA702	C7 SEE NOTE 1	23.0	12
9F54ECA801	9F54ECA802	C8 SEE NOTE 1	23.0	15
9F54ECA901	9F54ECA902	C9 SEE NOTE 1	23.0	19
9F54ECB001	9F54ECB002	C10 SEE NOTE 1	23.0	24
9F54ECB101	9F54ECB102	C11 SEE NOTE 1	23.0	28

NOTES:
1. MINIMUM MELTING T.C.C. - GES 8318
MAXIMUM TOTAL CLEARING T.C.C. - GES 8308
2. FOR VERTICAL MOUNTING ONLY.

REVISIONS	
1	Added without stud ECN B648
	N. Adams 6/10/11
	PRINTS TO ECI-BTL

DRAWN BY: Nicholas Adams	ECN B591 1/11/2011	APPROVAL ECI	DWG NO. 2B548093
ISSUED BY: Nicholas Adams	6/10/2011		SH 1 NUMBER OF SHS. 1 TITLE: Outline (Expulsion Fuse)

4 3 2 1

REV. 0
B
B-24
A
6/11

4

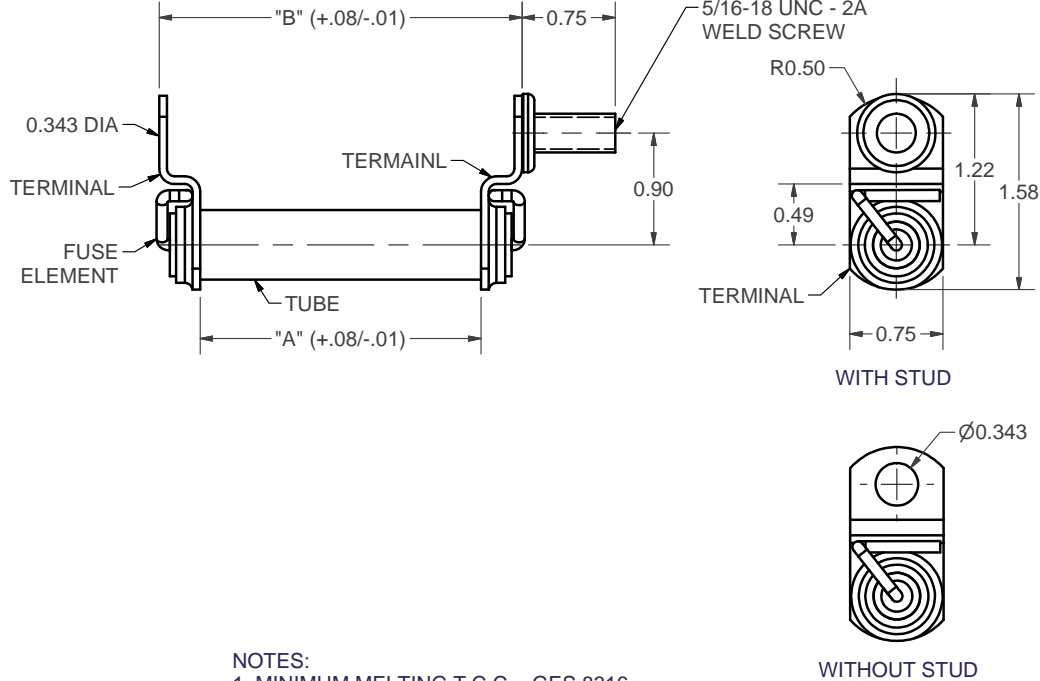
3

2

1

UNLESS OTHERWISE SPECIFIED		ERMCO COMPONENTS, INC.		DWG NO. 2B548094
SURFACES ✓	2 PL DEC ± .010	TOLERANCES 3 PL DEC ± .005	ANGLES ± 5°	NUMBER OF SHS.
THE INFORMATION CONTAINED ON THIS DOCUMENT IS PROPRIETARY TO ERMCO COMPONENTS, INC. AND MAY NOT BE USED FOR ANY OTHER PURPOSES THAN THOSE EXPRESSLY AUTHORIZED BY ECI.				TITLE: Outline (Expulsion Fuse) <small>FIRST MADE FOR: 9F54 Expulsion Fuses</small>

MODEL NUMBER		"A"	"B"	TIME CURRENT	MAXIMUM	AMP
WITH STUD	WITHOUT STUD			CURVE NO.	DESIGN KV	RATING
9F54EAA101	9F54EAA102	2.26	2.92	A1	5.2	3
9F54EAA201	9F54EAA202	2.26	2.92	A2	5.2	4
9F54EAA301	9F54EAA302	2.26	2.92	A3	5.2	5
9F54EAA401	9F54EAA402	2.26	2.92	A4	5.2	7
9F54EAA501	9F54EAA502	2.26	2.92	A5	5.2	9
9F54EAA601	9F54EAA602	2.26	2.92	A6	5.2	10
9F54EAA701	9F54EAA702	2.26	2.92	A7	5.2	12
9F54EAA801	9F54EAA802	2.26	2.92	A8	5.2	15
9F54EAA901	9F54EAA902	2.26	2.92	A9	5.2	19
9F54EAB001	9F54EAB002	2.26	2.92	A10	5.2	24
9F54EAB101	9F54EAB102	2.26	2.92	A11	5.2	28
9F54EAB201	9F54EAB202	2.26	2.92	A12	5.2	39
9F54EAB301	9F54EAB302	2.26	2.92	A13	5.2	45
9F54EAB401	9F54EAB402	2.26	2.92	A14	5.2	57
9F54EBA101	9F54EBA102	3.26	3.92	B1	8.4	3
9F54EBA201	9F54EBA202	3.26	3.92	B2	8.4	4
9F54EBA301	9F54EBA302	3.26	3.92	B3	8.4	5
9F54EBA401	9F54EBA402	3.26	3.92	B4	8.4	7
9F54EBA501	9F54EBA502	3.26	3.92	B5	8.4	9
9F54EBA601	9F54EBA602	3.26	3.92	B6	8.4	10
9F54EBA701	9F54EBA702	3.26	3.92	B7	8.4	12
9F54EBA801	9F54EBA802	3.26	3.92	B8	8.4	15
9F54EBA901	9F54EBA902	3.26	3.92	B9	8.4	19
9F54EBB001	9F54EBB002	3.26	3.92	B10	8.4	24
9F54EBB101	9F54EBB102	3.26	3.92	B11	8.4	28
9F54EBB201	9F54EBB202	3.26	3.92	B12	8.4	34
9F54EBB301	9F54EBB302	3.26	3.92	B13	8.4	40
9F54EBB401	9F54EBB402	3.26	3.92	B14	8.4	48



- NOTES:**
- MINIMUM MELTING T.C.C. - GES 8316
MAXIMUM TOTAL CLEARING T.C.C. - GES 8306
 - MINIMUM MELTING T.C.C. - GES 8317
MAXIMUM TOTAL CLEARING T.C.C. - GES 8307
 - FOR VERTICAL MOUNTING ONLY.

REVISIONS	

DRAWN BY: Nicholas Adams 6/10/2011	ECN B648	APPROVAL	DWG NO. 2B548094
ISSUED BY: Nicholas Adams 6/10/2011		ECI	NUMBER OF SHS.
			TITLE: Outline (Expulsion Fuse)

4

3

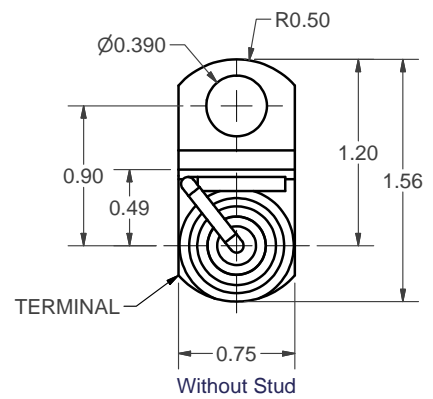
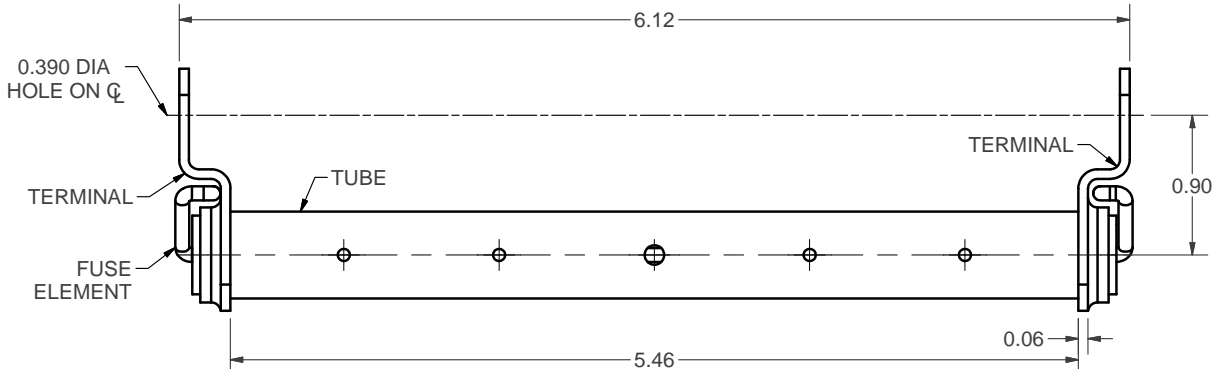
2

1

REV. 0
B
B-25
A
9/11

4 3 2 1

UNLESS OTHERWISE SPECIFIED			ERMCO COMPONENTS, INC.	DWG NO. 2B548095
SURFACES ✓	TOLERANCES			DWG SH. 1 NUMBER OF SHS. 1 TITLE: Outline (Expulsion Fuse) FIRST MADE FOR: 9F54 Expulsion Fuses
	2 PL DEC ± .010	3 PL DEC ± .005	ANGLES ± 5°	
THE INFORMATION CONTAINED ON THIS DOCUMENT IS PROPRIETARY TO ERMCO COMPONENTS, INC. AND MAY NOT BE USED FOR ANY OTHER PURPOSES THAN THOSE EXPRESSLY AUTHORIZED BY ECI.				



REVISIONS	
PRINTS TO	
ECI-BTL	

MODEL NUMBER		TIME CURRENT CURVE NUMBER	MAXIMUM DESIGN KV	AMP RATING
WITH STUD	WITHOUT STUD			
	9F54GCA102	C1 SEE NOTE 1	23.0	3
	9F54GCA202	C2 SEE NOTE 1	23.0	4
	9F54GCA302	C3 SEE NOTE 1	23.0	5
	9F54GCA402	C4 SEE NOTE 1	23.0	7
	9F54GCA502	C5 SEE NOTE 1	23.0	9
	9F54GCA602	C6 SEE NOTE 1	23.0	10
	9F54GCA702	C7 SEE NOTE 1	23.0	12
	9F54GCA802	C8 SEE NOTE 1	23.0	15
	9F54GCA902	C9 SEE NOTE 1	23.0	19
	9F54GCB002	C10 SEE NOTE 1	23.0	24
	9F54GCB102	C11 SEE NOTE 1	23.0	28

- NOTES:
1. MINIMUM MELTING T.C.C. - GES 8318
MAXIMUM TOTAL CLEARING T.C.C. - GES 8308
2. FOR VERTICAL MOUNTING ONLY.

DRAWN BY: Nicholas Adams	ECN B676 9/21/2011	APPROVAL ECI	DWG NO. 2B548095
ISSUED BY: Nicholas Adams	9/21/2011		DWG SH. 1 NUMBER OF SHS. 1 TITLE: Outline (Expulsion Fuse)

4 3 2 1

UNLESS OTHERWISE SPECIFIED

ERMCO COMPONENTS, INC.

DWG NO. 2B548096

SURFACES
✓

TOLERANCES		
2 PL DEC	3 PL DEC	ANGLES
± .03	±	±

THE INFORMATION CONTAINED ON THIS DOCUMENT IS PROPRIETARY TO ERMCO COMPONENTS, INC. AND MAY NOT BE USED FOR ANY OTHER PURPOSES THAN THOSE EXPRESSLY AUTHORIZED BY ECI.

SH 1 NUMBER OF SHS. 1
TITLE: **OUTLINE (EXPULSION FUSE)**

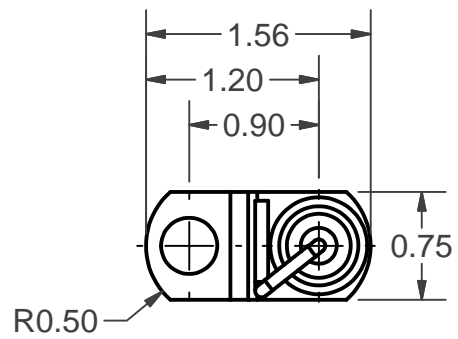
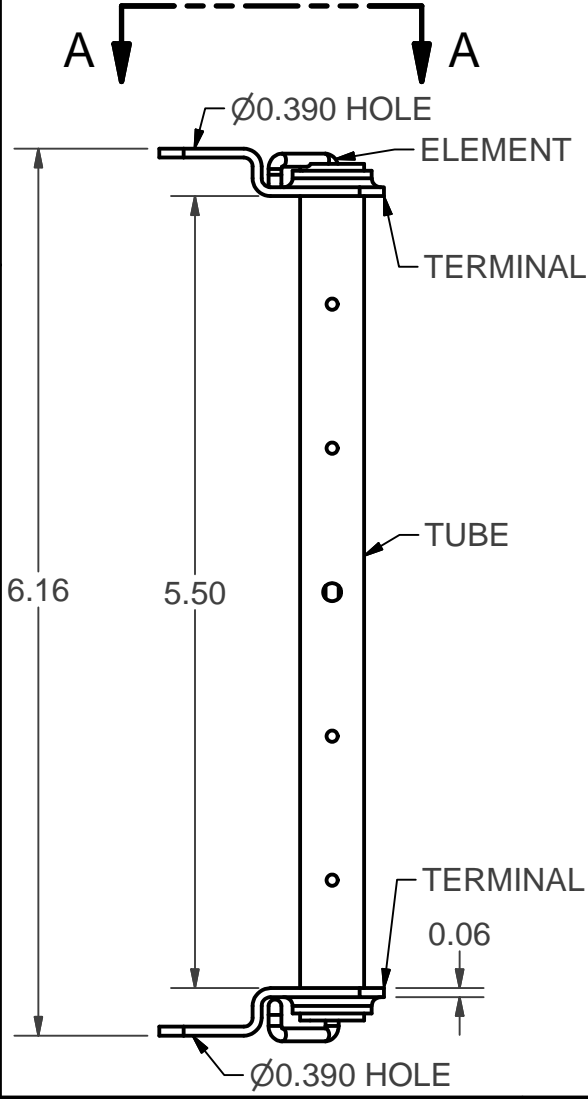
FIRST MADE FOR: Fuses

MODEL NUMBER	TIME CURRENT CURVE NO.	MAXIMUM DESIGN KV	AMP RATING
9F54GDA102	C1 SEE NOTE 1	15	3
9F54GDA202	C2 SEE NOTE 1	15	4
9F54GDA302	C3 SEE NOTE 1	15	5
9F54GDA402	C4 SEE NOTE 1	15	7
9F54GDA502	C5 SEE NOTE 1	15	9
9F54GDA602	C6 SEE NOTE 1	15	10
9F54GDA702	C7 SEE NOTE 1	15	12
9F54GDA802	C8 SEE NOTE 1	15	15
9F54GDA902	C9 SEE NOTE 1	15	19
9F54GDB002	C10 SEE NOTE 1	15	24
9F54GDB102	C11 SEE NOTE 1	15	28

REVISIONS

B

B



VIEW A-A



NOTES:
 1. MINIMUM MELTING T.C.C.-GES 8318
 MAXIMUM TOTAL CLEARING
 T.C.C.-GES 8308.
 2. FOR VERTICAL MOUNTING ONLY.

A

PRINTS TO
ECI-BTL
Measurement
INCHES

DRAWN BY: ECN B692
Nicholas Adams 11/23/2011

APPROVAL

ECI

DWG NO. 2B548096

SH 1 NUMBER OF SHS. 1
TITLE: **OUTLINE (EXPULSION FUSE)**

FIRST MADE FOR:

ISSUED BY:
Nicholas Adams 11/23/2011