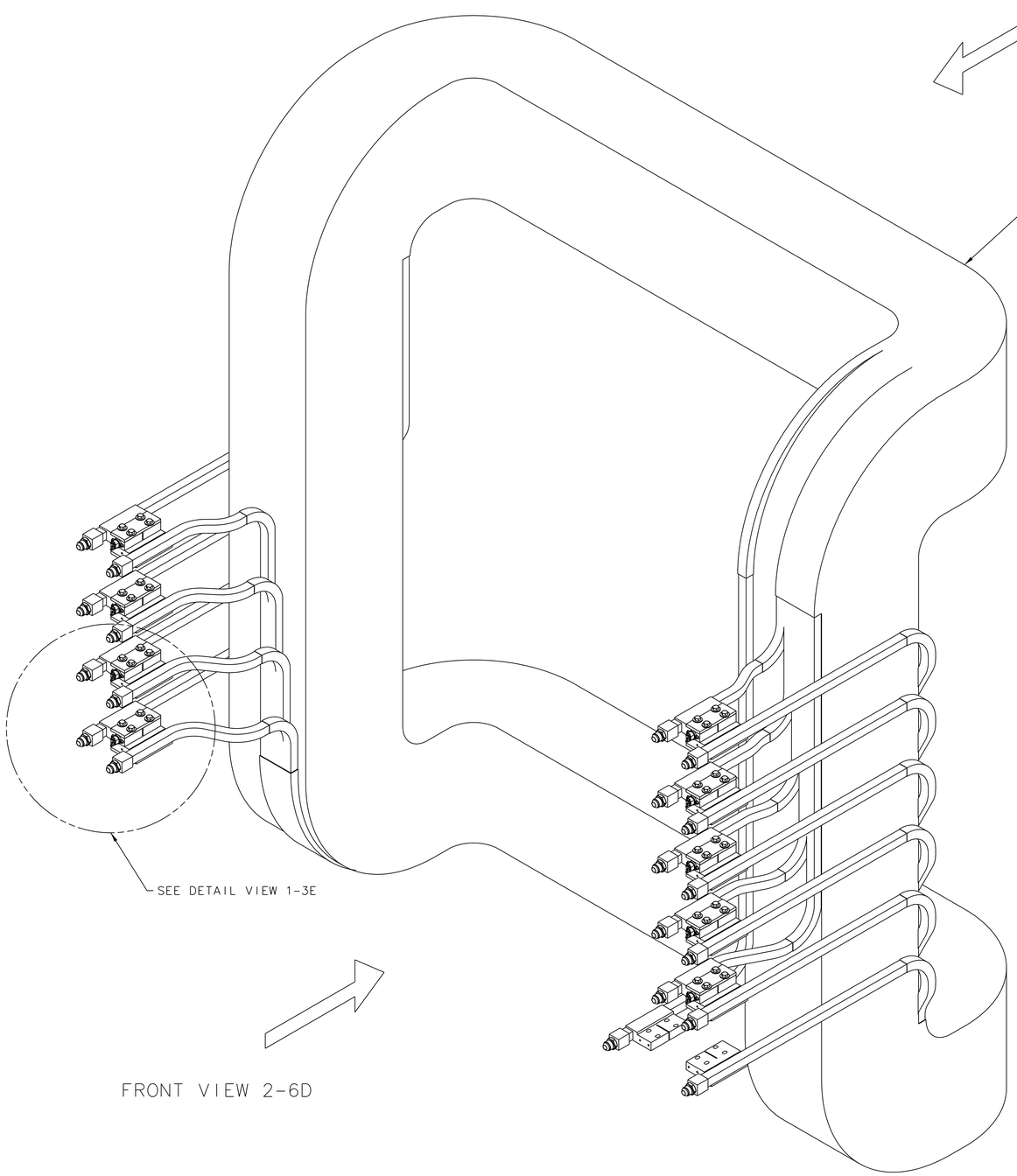
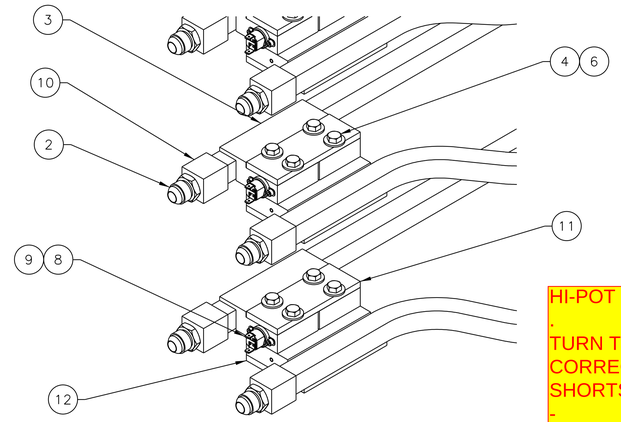
REVISION HISTORY				
ZONE	REV	DESCRIPTION	DATE	APPROVED
ALL	A	REVISED & REDRAWN; ADDED ITEMS 4 THRU 9	30OCT13	MILLER
			30OCT13	ARG
ALL	B	REVISED & REDRAWN; REVISED PARTS LIST ITEM 2 WAS HOSE BARB; REVISED MATL ITEMS 4 & 6; ADDED ITEMS 10,11 & 12 DELETED ITEMS 5 & 7; REVISED NOTES; ADDED SHEET 3	13FEB14	MILLER
			25FEB14	ARG
2-1F	C	ADDED OVERALL HEIGHT 73.134 & TOLERANCE -.250/-.500	11MAR14	MILLER
			11MAR14	ARG
ALL 2-4E 3-6H	D	DIMENSIONAL TOLERANCES WERE CHANGED FROM THREE DECIMAL PLACES TO TWO DECIMAL PLACES WITH THE EXCEPTION OF A FEW CRITICAL DIMENSIONS THAT DEFINE THE OVERALL SIZE OF THE COIL TO ENSURE THAT IT FITS WITHIN THE IRON. ADDED COIL TURN NUMBERING AND DIRECTION. + = IN, - = OUT SHOWN ON SHEETS 2 AND 3.	03 DEC 14	SME
			04 DEC 14	ARG
1-3B	E	REVISED PARTS LIST: ITEM 4 WAS McMASTER CARR PN 92186A546 & LENGTH WAS 1.5; ITEM 8 QTY WAS 5; ITEM 9 QTY WAS 10	11MAR14	MILLER

BACK VIEW 3-3D



FRONT VIEW 2-6D



DETAIL VIEW 1-3E

SCALE 1:2

NUMBER OF TURNS:	139
MAX CURRENT	2000 A
RESISTANCE @ 20°C	0.0594 Ω
WATER FLOW	170 l/min
MAX PRESSURE DROP	150 psi
MAX TEMP RISE	20 °C

HI-POT TEST: LEAKAGE<10mA
.
TURN TO TURN TEST: PROVE & DOCUMENT CORRECT NUMBER OF TURNS & NO INTERTURN SHORTS EXIST. (TRANSFORMER TEST)
-
IMPULSE TEST @ 1000V
.
PRESSURE TEST: 180psi FOR 30min WITH NO LEAKS.
.
FLOW TEST TO ENSURE NO RESTRICTIONS & FLOW CAN BE OBTAINED @ PRESSURE DIFFERENCE

NOTES:
1. DIMENSIONS ARE IN INCHES/mm.
2. ~~COIL TO BE WOUND IN PANCAKE FASHION.~~
3. COIL TO BE FABRICATED WITH NO CONDUCTOR JOINTS OR SPLICES.
4. ~~WATER PASSAGE CONNECTIONS AND CONDUCTOR LEAD FLAGS MUST BE LOCATED IN THIS AREA.~~
5. USE NEMA GRADE G-10 FILLERS WHERE APPLICABLE.
6. CONDUCTOR LEAD FLAGS (ITEM 3) TO BE BRAZED & CONTACT SURFACE COATED WITH COOL-AMP SILVER PLATE BEFORE BEING BOLTED TOGETHER WITH 1/4-20 BOLTS AND SPREADERS.
7. INSULATION TO BE .011 HALF LAP.
8. COIL TO BE FABRICATED ACCORDING TO A000000405-0850-SPEC.

QTY REQD	ITEM NO.	PART OR IDENTIFYING NO.	NOMENCLATURE OR DESCRIPTION	MATERIAL SPECIFICATION	NOTES
~~20~~ 9	12	A00000-04-05-0205	SPREADER BASE	STAINLESS STEEL	-
~~20~~	11	A00000-04-05-0204	SPREADER	STAINLESS STEEL	-
20	10	A00000-04-05-0203	BRAZE BLOCK	COPPER	-
18	9	McMASTER CARR 92185A144 OR EQ	SOCKET HEAD CAP SCREW #6-32 UNC X .25 LG	316 STAINLESS STEEL	-
9	8	KLIXON 7BT2-3B	THERMOSTAT VERTICAL SOLDER W/ MOUNTING BRACKET	-	-
-	7	-	-	-	-
36	6	McMASTER CARR 92147A029 OR EQ	WASHER SPLIT LOCK 1/4 NOM DIA	STAINLESS STEEL	6
-	5	-	-	-	-
36	4	FASTENAL 77012 OR EQ	SCREW HEX HD 1/4-20 X 2.25 LG	STAINLESS STEEL	6
20	3	A00000-04-05-0202	CONDUCTOR FLAG	COPPER	6
20	2	PARKER 8-8-FTX-B OR EQUIV	TUBE FITTING 1/2 DIA 1/2 MNPT	BRONZE	-
A/R	1	LUVATA 8465	HOLLOW CONDUCTOR 19.6mm X 20.1mm WITH 11mm HOLE	COPPER C10200 OR C10300	-

PARTS LIST

EACH SHEET OF MULTI-SHEET DRAWINGS SHALL ALWAYS HAVE THE SAME REVISION LEVEL.

DOCUMENT CONTROL STAMP

MATERIAL: SEE PARTS LIST

FINISH MACHINED SURFACES: N/A — UNLESS OTHERWISE NOTED
DEBURR & BREAK ALL SHARP EDGES

DO NOT SCALE DRAWING

DIM & TOL PER ASME Y14.5
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES
TOLERANCES ARE:
FRACTIONS ± N/A; DECIMAL .X ± .1, .XX ± .01, .XXX ± .005; ANGLES ± .50°

THIRD ANGLE PROJECTION

TRACKING NO. N/A

APPROVALS		DATE
DRAWN	J. MILLER	06AUG13
CHECKED	A. GAVALYA	05SEP13
APPROVED	A. GAVALYA	05SEP13
APPROVED	R. WINES	05SEP13

United States Department of Energy — Jefferson Lab, Thomas Jefferson National Accelerator Facility — Newport News Virginia

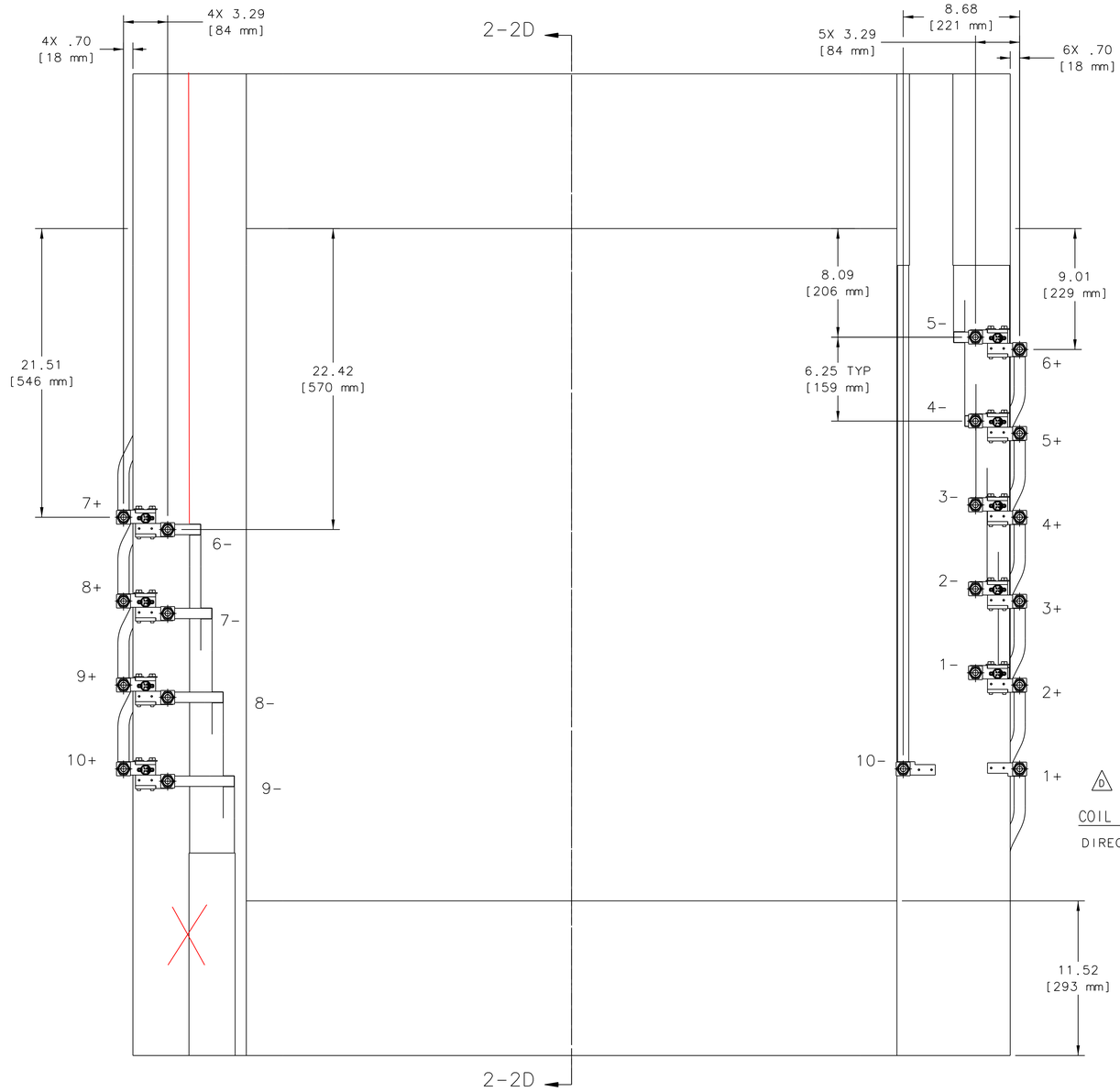
HALL A - GENL EQUIPMENT
MAGNET - 48D48 DIPOLE
48D48 DIPOLE
SADDLE COIL ASSY

SIZE E — DWG. NO. A00000-04-05-0300 — REV. E

SCALE 1:4 — USED ON ASSY NO. A00000-04-05-0000 — SHEET 1 OF 3

ISO VIEW 1-6A

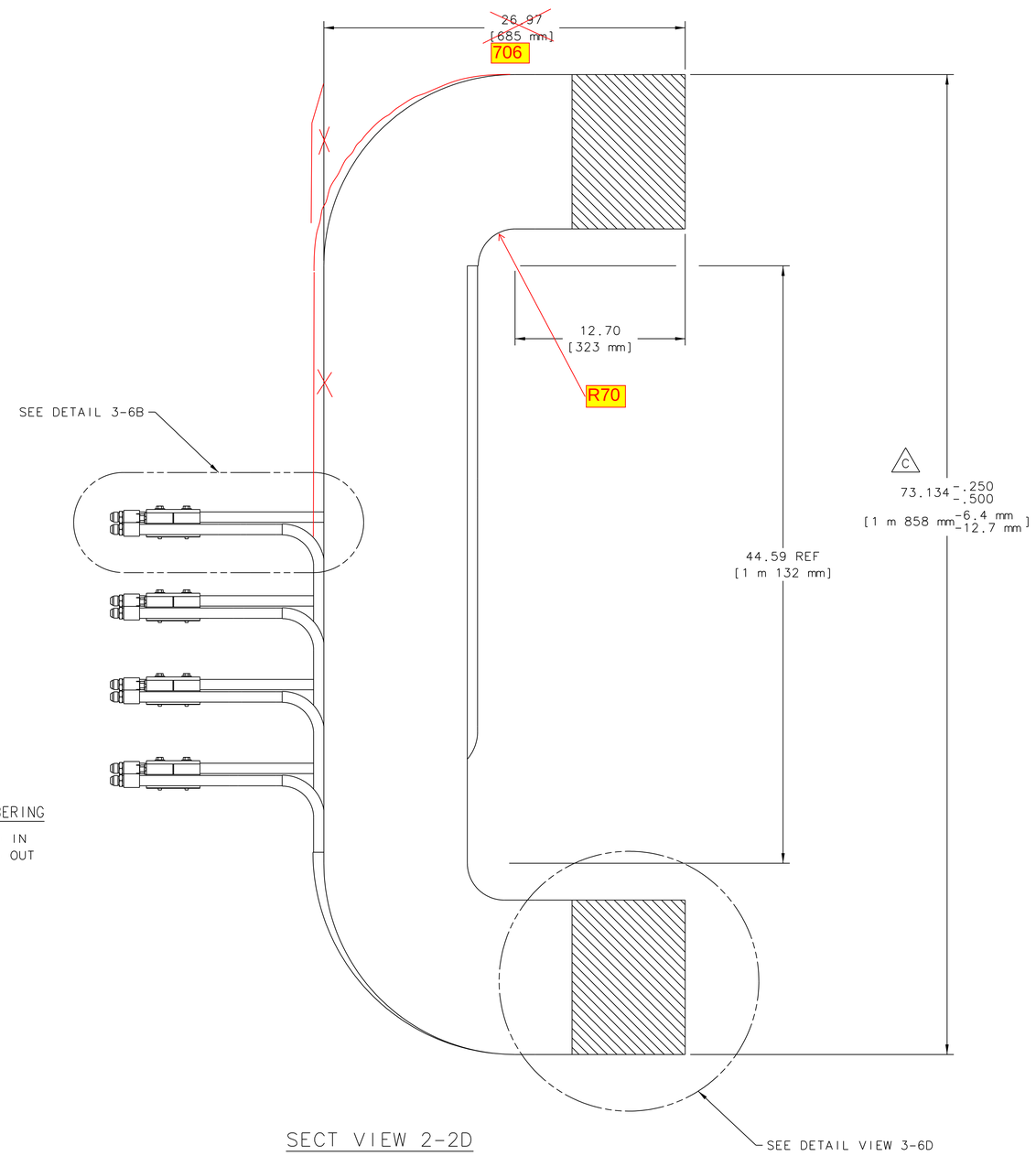
Approved: 4/8/2015; E-Sign ID : 298400; signed by: R. Wines, A. Gavalya, T. Fuell



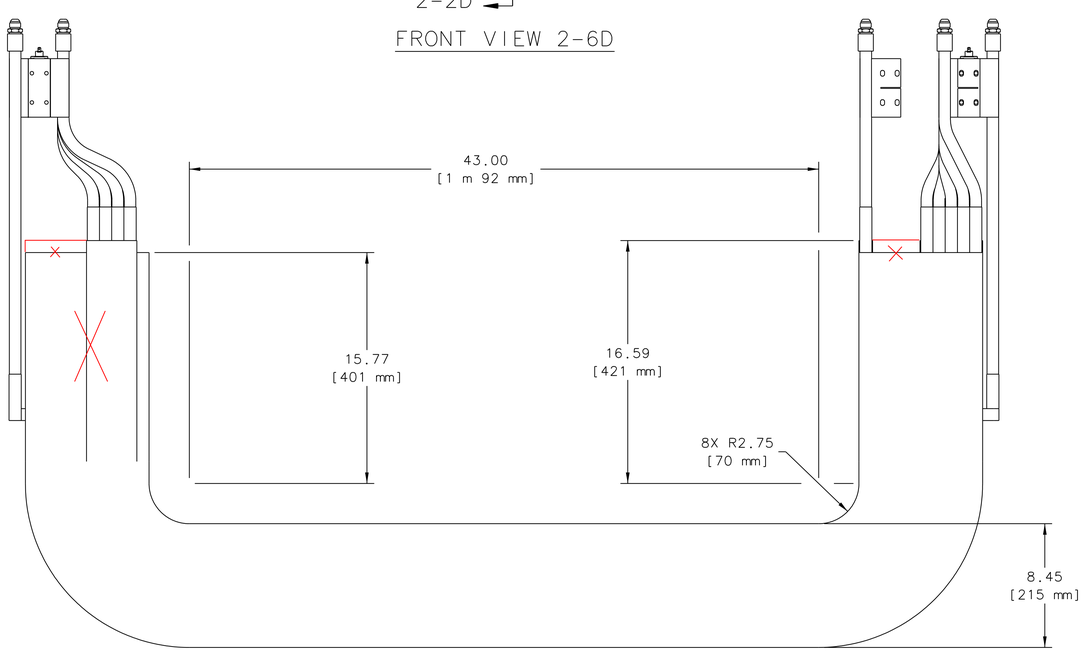
FRONT VIEW 2-6D

COIL TURN NUMBERING

DIRECTION: + = IN
- = OUT



SECT VIEW 2-2D

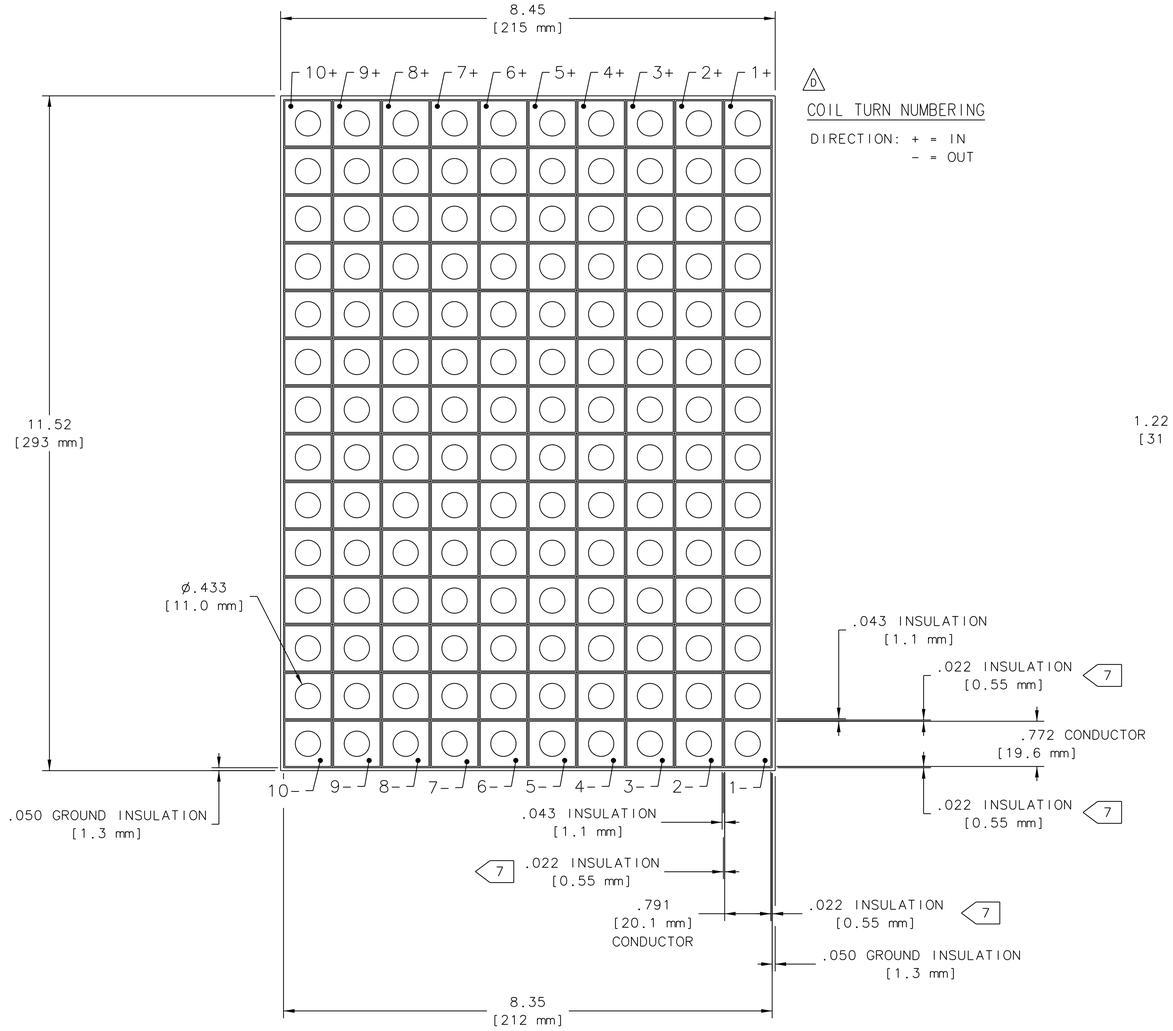


BOTTOM VIEW 2-6A

PANCAKES 1-5 & 7-9 ARE 14 TURNS
PANCAKES 6 & 10 ARE 13.5 TURNS
(NB. PANCAKE 10 IS THE FIRST
LAYER TO BE WOUND)

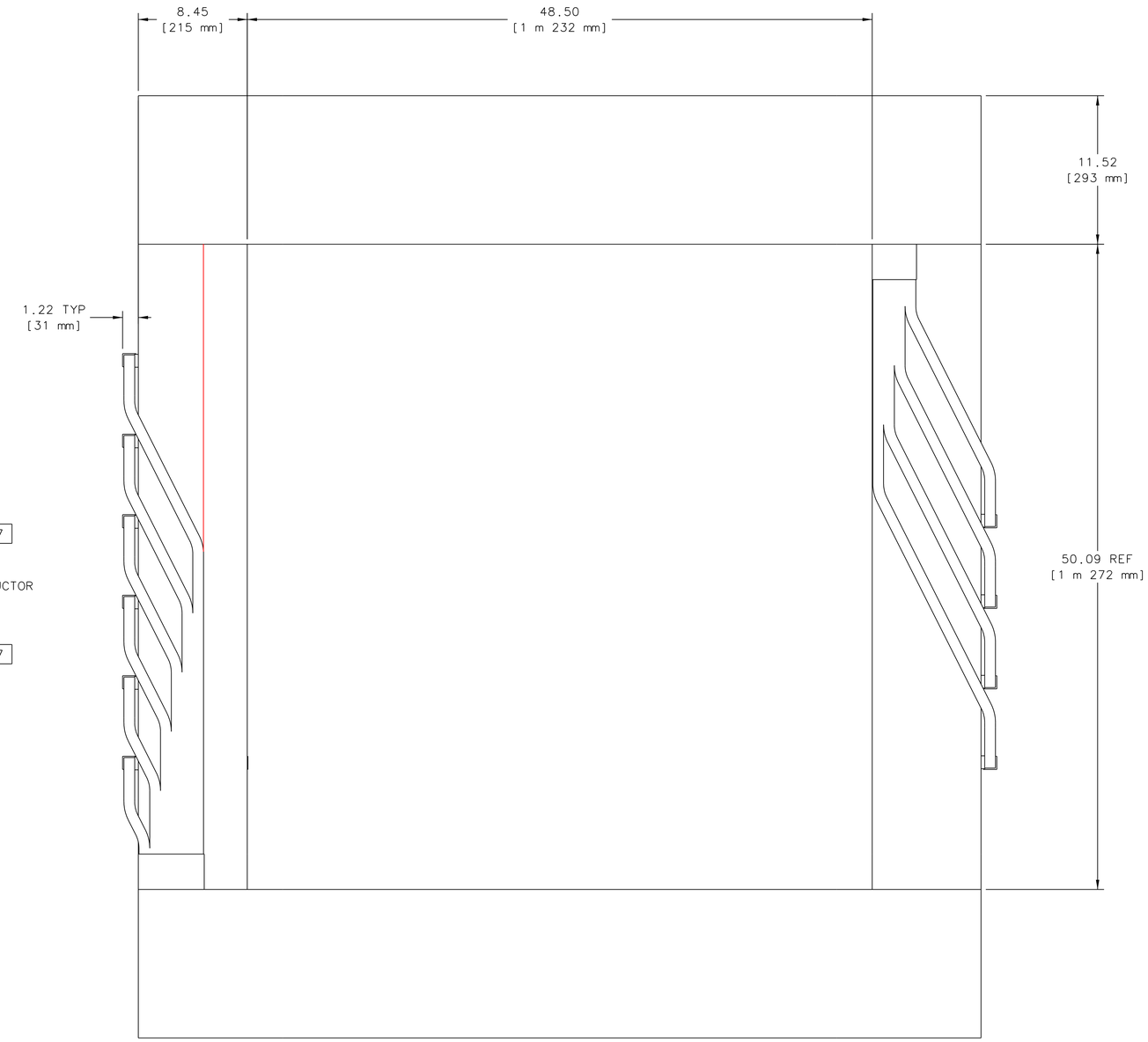
SIZE	DWG. NO.	REV.
E	A00000-04-05-0300	E
SCALE 1:4	USED ON ASSY NO. A00000-04-05-0000	SHEET 2 OF 3

Approved: 4/8/2015; E-Sign ID : 298400; signed by: R. Wines, A. Gavalya, T. Fuell



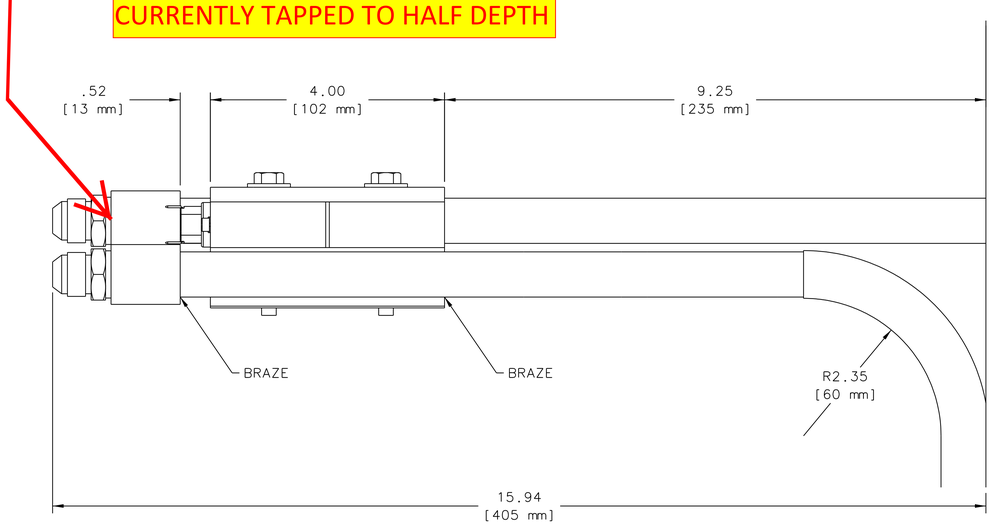
SECT VIEW 3-6D

SCALE: FULL



BACK VIEW 3-3D

1/2 NPT TAP AFTER BRAZING
CURRENTLY TAPPED TO HALF DEPTH



DETAIL VIEW 3-6B

SCALE: FULL

SIZE	DWG. NO.	REV.
E	A00000-04-05-0300	E
SCALE 1:4	USED ON ASSY NO. A00000-04-05-0000	SHEET 3 OF 3

Approved: 4/8/2015; E-Sign ID : 298400; signed by: R. Wines, A. Gavalya, T. Fuell