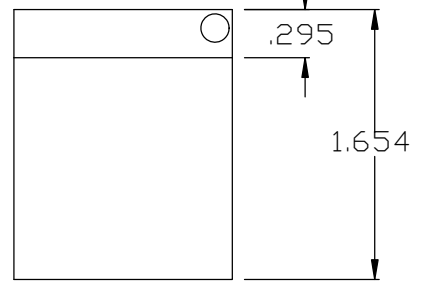
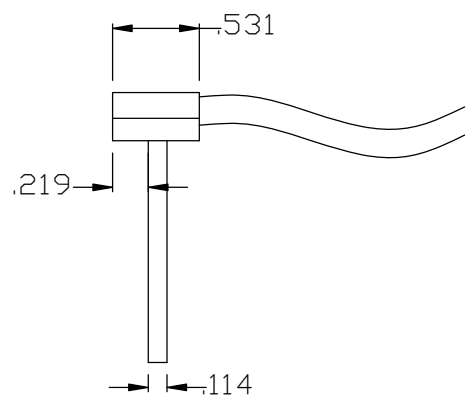
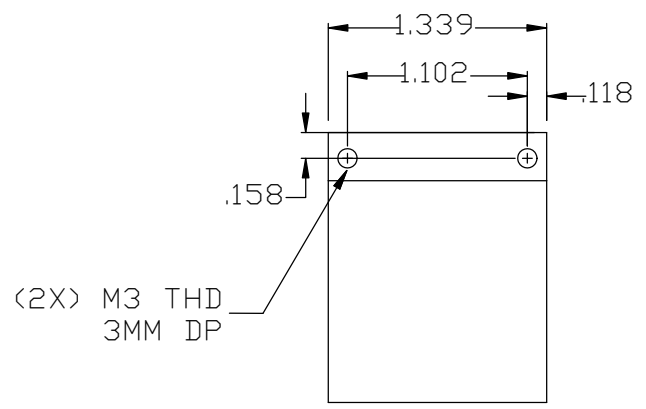
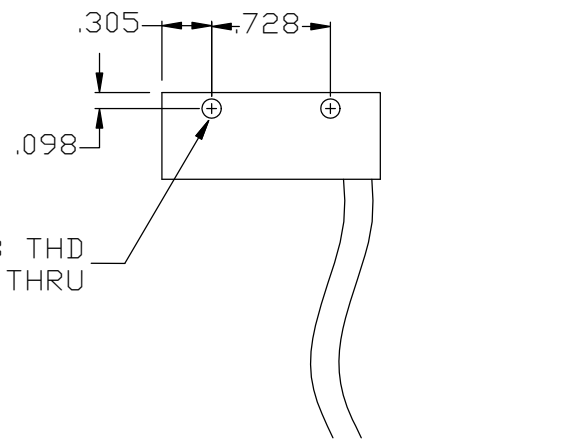


REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
A	000797	INITIAL RELEASE	18-DEC-07	DML
B	002918	CHANGED NOTE 1. CABLE WAS 3x 24AWG	03-FEB-12	ADR

PERFORMANCE WITH MAGNET  
TRACK IAW 1215-1-096-01

Kf: 11.35 ( $\pm 10\%$ ) N/Arms  
 Res: 10.0 ( $\pm 10\%$ ) OHM  
 Ke: 9.2( $\pm 10\%$ ) Vpk Sec/M  
 L: 1.2 ( $\pm 25\%$ ) mH

MAGNETIC PITCH: 16.5MM



POWER LEADS

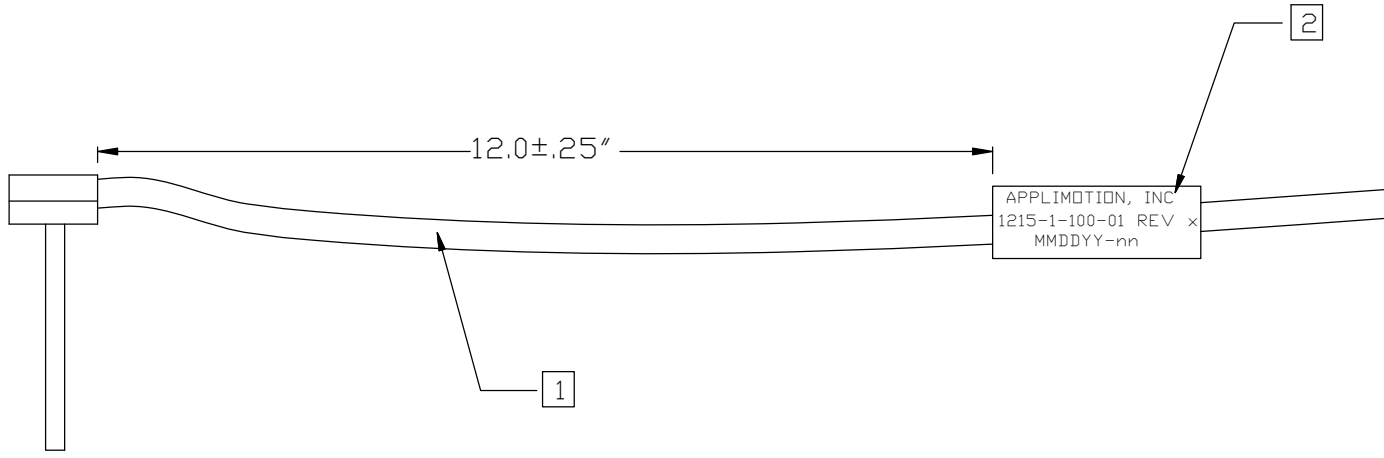
BLK - PHASE A  
 RED - PHASE B  
 WHT - PHASE C  
 SHLD - CASE GROUND

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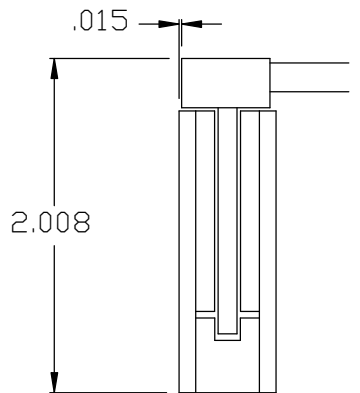
**CONFIDENTIAL**

<b>APPLIMOTION, INC.</b>		CAGE CODE: 3DRL5	DRAWING SYMBOLS & TOLERANCE PER ANSI Y14.5
DWG NO: 1215-1-095-01	PROJECT: 1215	THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:
TITLE: FORCER INTERFACE		SHEET 1 of 2	DECIMALS LINEAR ANGULAR .X ±0.02 ±.5* .XX ±0.01 ±0.2* .XXX ±0.005 ±0.01*
DRAWN BY: DML 5/23/07	CHECKED BY: SRP 5/23/07	APPROVED BY: SRP 5/23/07	
		SURFACE FINISH : N/A	

REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
A	000797	INITIAL RELEASE	18-DEC-07	DML
B	002918	CHANGED NOTE 1. CABLE WAS 3x 24AWG	03-FEB-12	ADR



FORCER SHOWN ASSEMBLED WITH  
MAGNET TRACK  
(FOR REFERENCE ONLY)



NOTES

- 1 CABLE: 4X28AWG PVC, BRAIDED SHIELD  
LENGTH: 24" MIN
- 2 HEAT SHRINK LABEL  
"APPLIMOTION, INC "  
"1215-1-095-01 REV x" (x = CURRENT REV LEVEL)  
"MMDDYY-nn" (nn = SEQUENTIAL# ISSUED PER DATE)

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	DWG. NO. 1215-1-095-01		PROJECT: 1215	
	TITLE: FORCER, INTERFACE		SHEET: 2 of 2	
	DRAWN BY: DML 5/23/07	CHECKED BY: SRP 5/23/07	APPROVED BY: SRP 5/23/07	
SCALE : NTS		SURFACE FINISH : N/A		
UNITS : INCHES				

REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
P1	003639	INITIAL RELEASE	14-NOV-12	GSM
A	003963	RELEASE FOR PRODUCTION	2013-JUNE-18	GSM

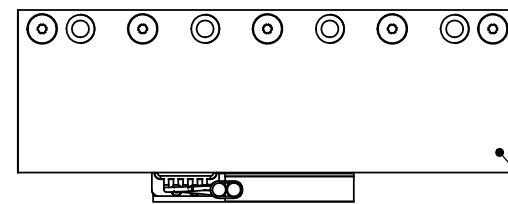
MODEL# :1215-1-000-02 W/132mm TRACK ASSY  
 MODEL# :1215-1-000-03 W/165mm TRACK ASSY

**MOTOR SPECS**  
 WHEN USED WITH MAGNET TRACK ASSY 1215-1-096-XX

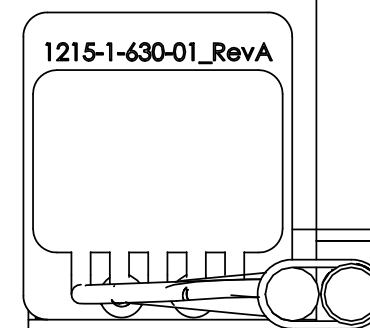
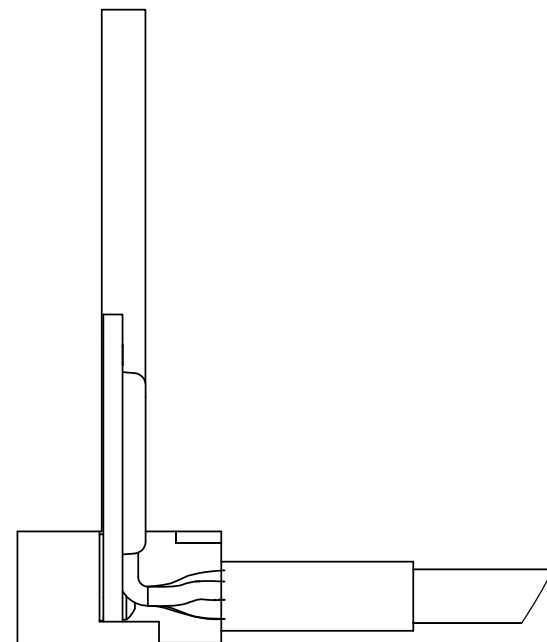
RESISTANCE: 10.0 OHMS (+/-10%)  
 FORCE CONSTANT: 11.35 N/Arms(+/- 10%)  
 INDUCTANCE: 1.2 mH (+/- 25%)

**LEADS**  
**POWER LEADS:** 28AWG PVC W/SHIELD  
 P/N: ALPHA WIRE 3304 (REF ONLY)  
 LEAD LENGTH: 24" MIN  
 PHASE A - BLACK  
 PHASE B - RED  
 PHASE C -WHITE  
 GND - GRN

**HALL LEADS:** 26AWG PVC W/SHIELD  
 P/N: COONER WIRE NMEF 5/26-6544SJ (REF ONLY)  
 LEAD LENGTH: 24" MIN  
 HALL PWR - RED  
 HALL RTN - BLACK  
 HALL 1 - WHT  
 HALL 2 - GRN  
 HALL 3 - YEL



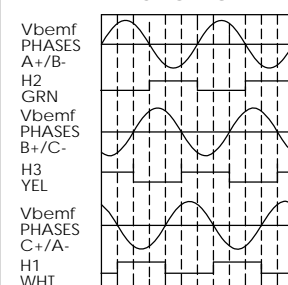
1215-1-096-03  
 SHOWN FOR CLARITY



1.649

2.089

PHASE RELATION OF BACK EMF  
 PHASE-TO-PHASE VOLTAGES AND HALL  
 OUTPUTS DURING FORCER MOVEMENT  
 IN THE DIRECTION OF ARROW A

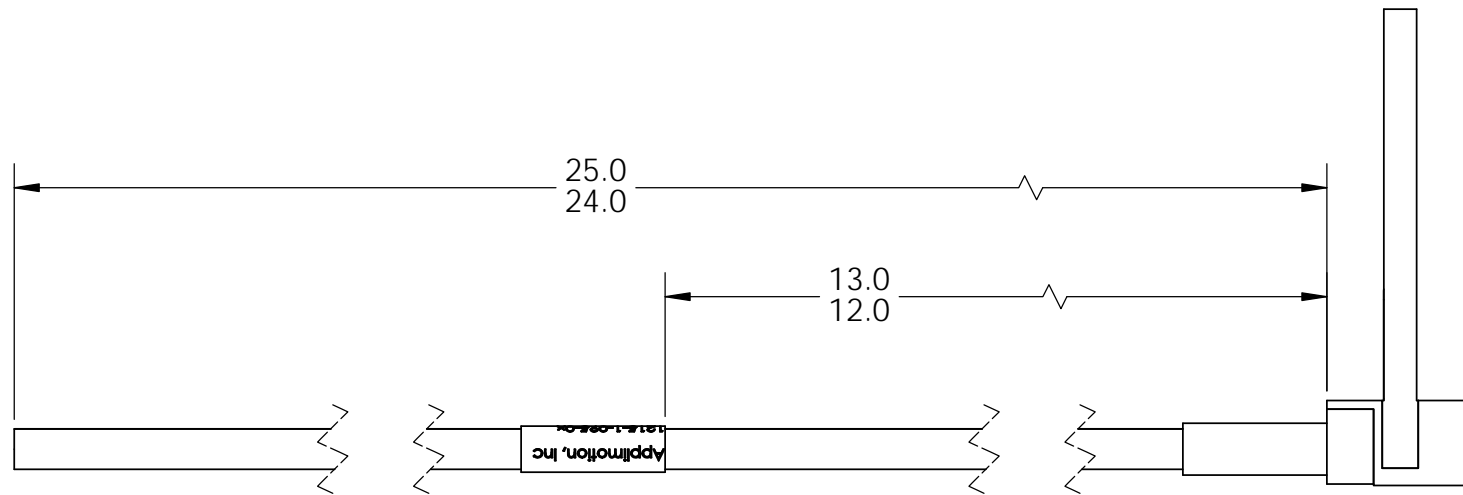
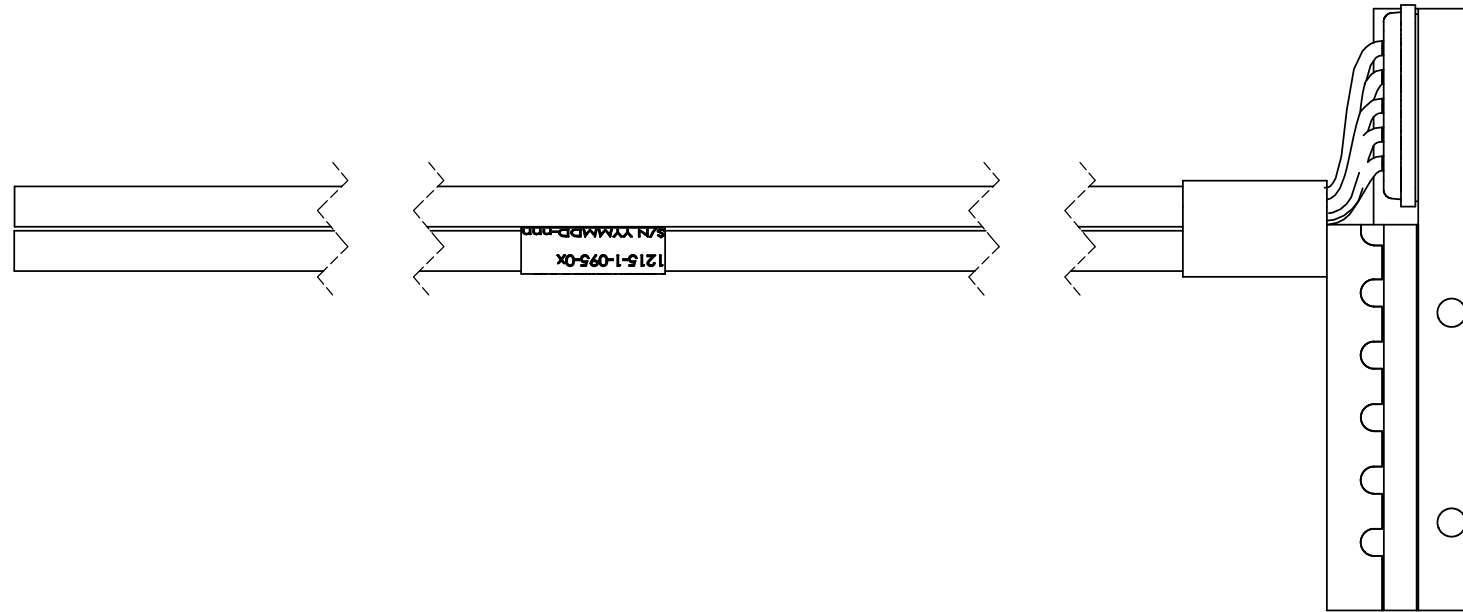


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DWG. NO. 1215-1-095-02	PROJECT: 1215	SHEET 1 of 2		UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:	
TITLE: FORCER INTERFACE W/HALLS	SCALE: NTS	UNITS: INCH		DECIMALS LINEAR ANGULAR	
DRAWN BY: GSM	CHECKED BY: DML	COG ENGINEER: DML	SURFACE FINISH: SEE NOTES		X ±0.020 ±1°
10/17/2012	10/17/2012	10/17/2012			XX ±0.010 ±0.2°
					XXX ±0.005 ±0.01°

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REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
P1	003639	INITIAL RELEASE	14-NOV-12	GSM
A	003963	RELEASE FOR PRODUCTION	2013-JUNE-18	GSM



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DWG. NO: 1215-1-095-02	PROJECT: 1215	TITLE: FORCER INTERFACE W/HALLS		THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:
DRAWN BY: GSM	CHECKED BY: DML	COG ENGINEER: DML	SCALE: N1S	SURFACE FINISH: SEE NOTES	DECIMALS LINEAR ANGULAR X ±0.020 ±1° XX ±0.010 ±0.2° XXX ±0.005 ±0.01°
DATE: 10/17/2012		DATE: 10/17/2012		DATE: 10/17/2012	
UNITS: INCH		SHEET: 2 of 2		DRAWING SYMBOLS & TOLERANCE PER ANSI Y14.5	

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**MOTOR SPECS**  
WHEN USED WITH MAGNET TRACK ASSY 1215-1-096-01

RES: 10.0 ( $\pm 10\%$ ) OHMS  
Kf: 11.35 ( $\pm 10\%$ ) N/Arms  
Ke: 9.2 ( $\pm 10\%$ ) Vpk Sec/M  
L: 1.2 ( $\pm 25\%$ ) mH

MAGNETIC PITCH: 16.5 MM

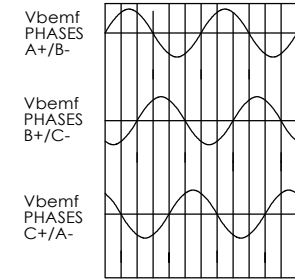
**LEADS**

**POWER LEADS:** 24 INCH MINIMUM LENGTH  
4X 28AWG PVC W/ BRAIDED SHIELD

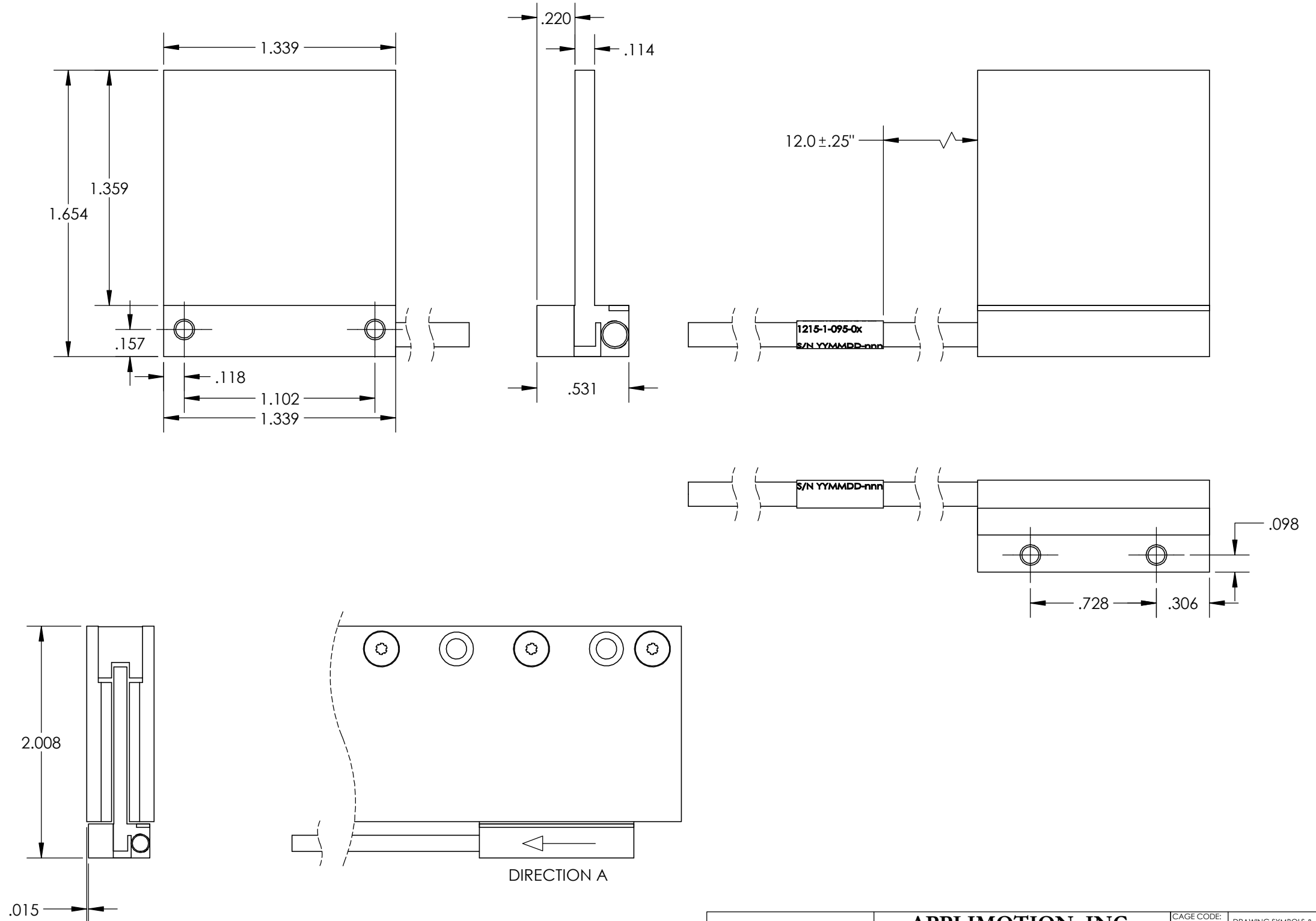
LEAD LENGTH: 24" MIN  
PHASE A - BLACK  
PHASE B - RED  
PHASE C - WHITE  
CASE GND - SHLD

HEAT SHRINK LABEL:  
"CELERA MOTION"  
"P/N 1215-1-095-0x" WHERE x IS THE LAST NUMBER OF THE -095 P/N  
ON THE WORK ORDER" S/N yymmdd-nnn" WHERE yymmdd IS THE  
CURRENT DATE AND nnn IS A SEQUENTIAL SERIAL NUMBER

PHASE RELATION OF BACK EMF  
PHASE-TO-PHASE VOLTAGES AND HALL  
OUTPUTS DURING FORCER MOVEMENT  
IN THE DIRECTION OF ARROW A



REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
1	005491	INITIAL RELEASE	2015-DEC-04	RJA

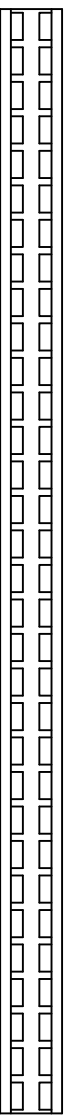
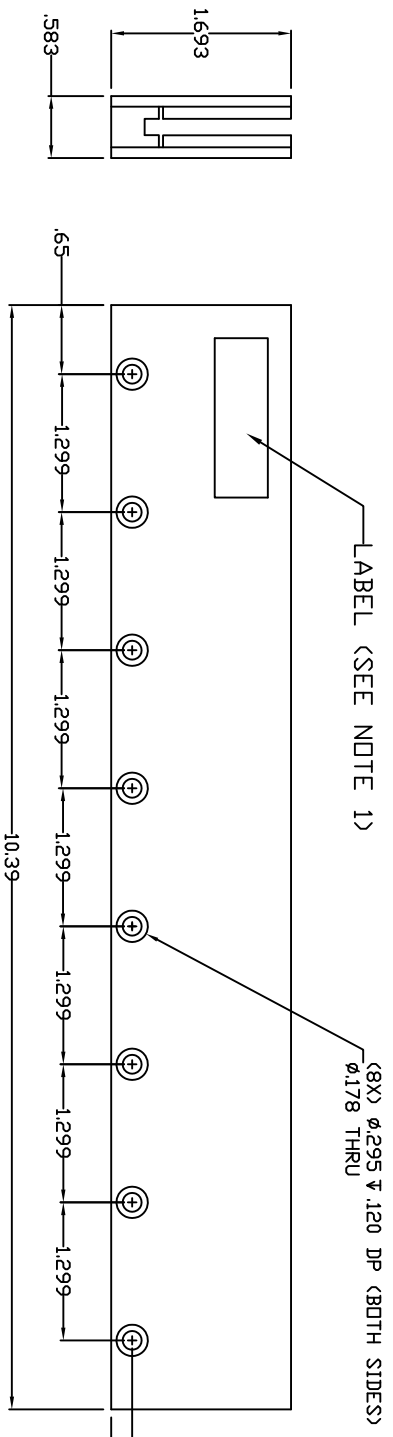


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DWG. NO.: 1215-1-095-04	PROJECT: 1215	THIRD ANGLE PROJECTION: 	SHEET: 1 of 1	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:	
TITLE: FORCER INTERFACE	DRAWN BY: RJA	CHECKED BY: JTE	COG ENGINEER: DML	SCALE: N1S	SURFACE FINISH: SEE NOTES
UNITS: INCH	DATE: 11/30/2015	DATE: 11/30/2015	DATE: 11/30/2015	UNITS: INCH	DECIMALS LINEAR ANGULAR .X ±0.020 ±1° .XX ±0.010 ±0.2° .XXX ±0.005 ±0.01°

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REV	DCN	REVISION DESCRIPTION	DATE	SIGN
A	000797	INITIAL RELEASE	12/18/07	DML



NOTES:  
 1) LABEL TO DENOTE THE FOLLOWING  
 'APPLIMOTION, INC.'  
 APPLIMOTION P/N: '1215-1-096-01'  
 S/N: MMDDYY-NN

2) MAGNETS TO BE ELECTROLYTIC NICKEL PLATED  
 THICKNESS: 10 MICRON MINIMUM  
 3) PARTS TO BE CLEAN AND INDIVIDUALLY PACKED.

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**APPLIMOTION, INC.**

DWG NO: 1215-1-096-01

TITLE: MAGNET TRACK, INTERFACE

DRAWN BY: DML

CHECKED BY:

APPROVED BY: SRP

DATE: 5/23/07

SHEET: 1 OF 1

PROJECT:

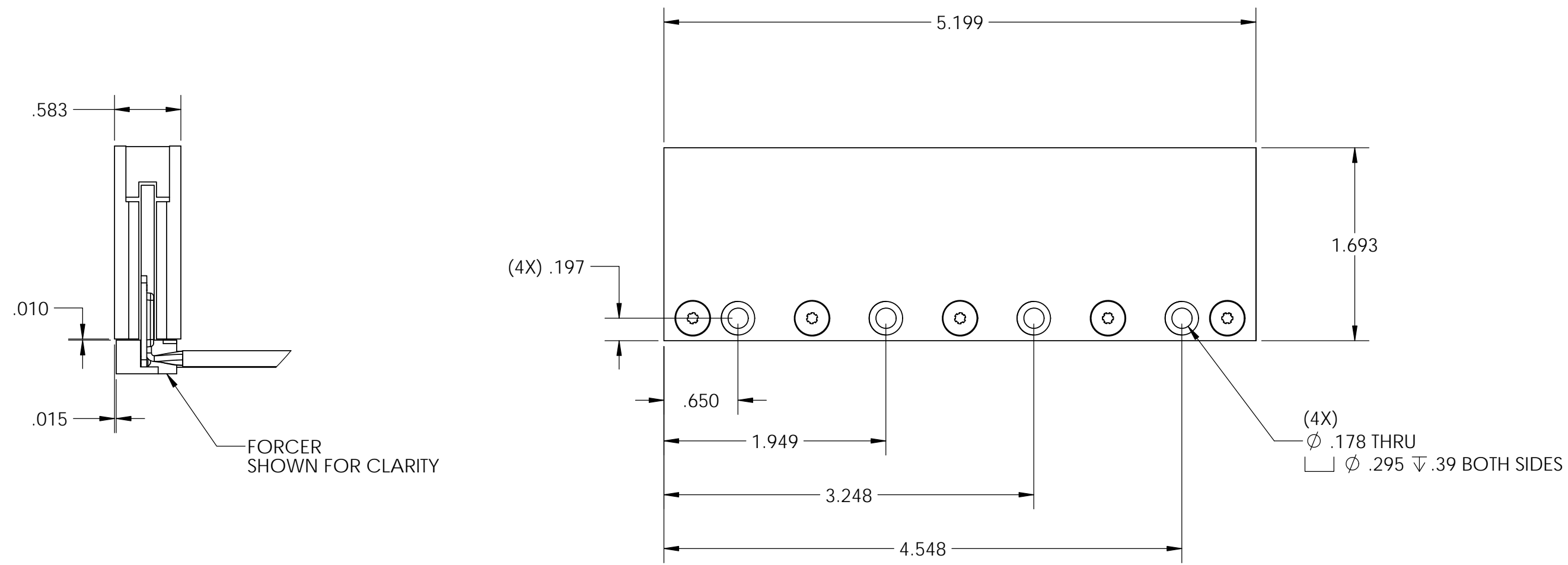
PROJECTION: 3DR L 5

DRAWING SYMBOLS & UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES:

TOLERANCES ARE:  
 .X DECIMALS LINEAR ±.020  
 .XX DECIMALS LINEAR ±.010  
 .XXX DECIMALS LINEAR ±.005  
 .XXX ANGULAR ±1.0°  
 .XXX ANGULAR ±0.2°  
 .XXX ANGULAR ±0.01°

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REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
P1	003639	INITIAL RELEASE	14-NOV-12	GSM

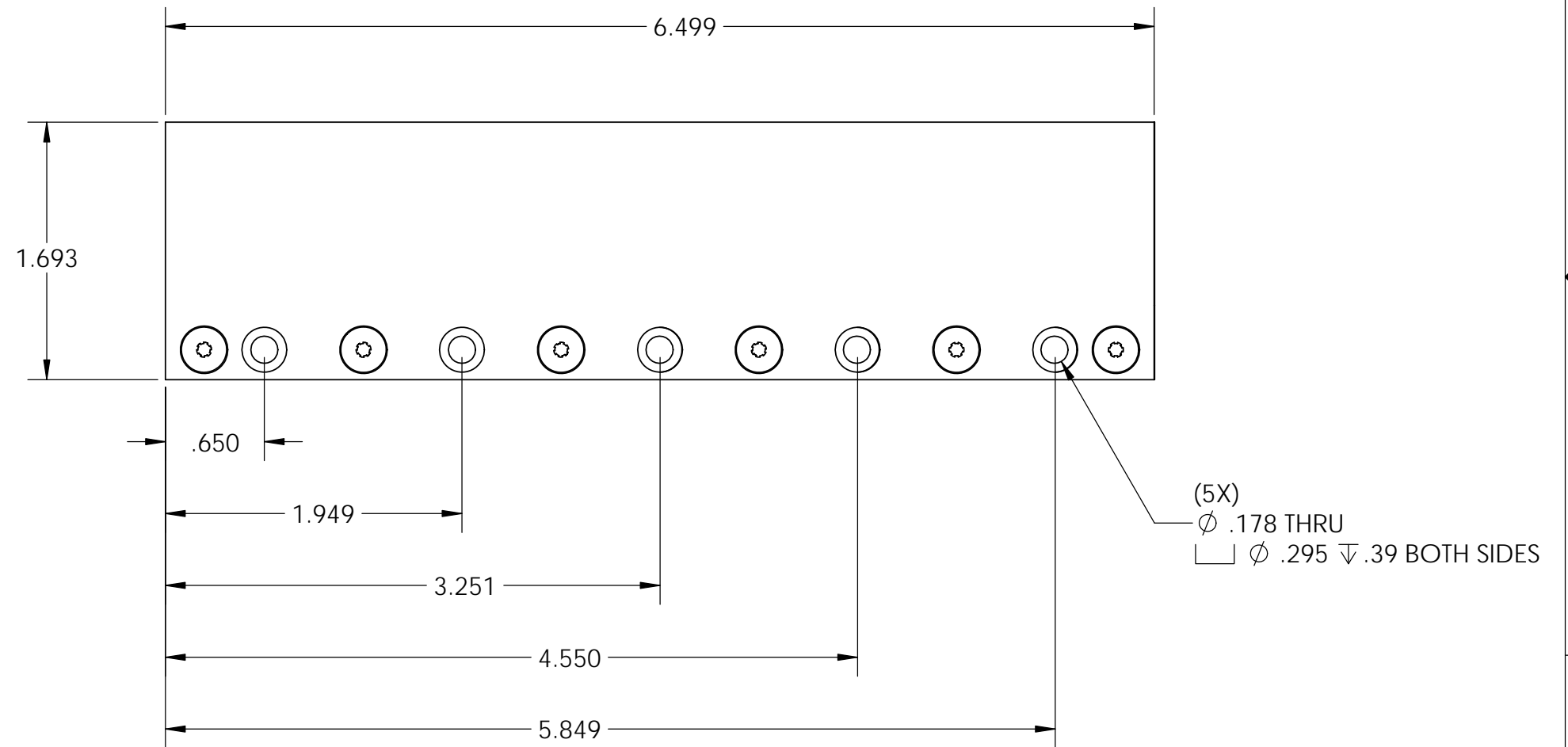
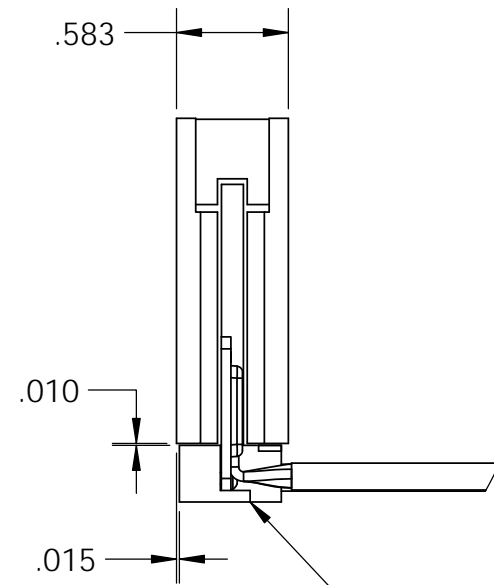


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DWG. NO: 1215-1-096-02	PROJECT: 1215	TITLE: MAGNET TRACK INTERFACE		THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:
DRAWN BY: GSM	CHECKED BY: DML	COG ENGINEER: DML	SCALE: N1S	SURFACE FINISH: SEE NOTES	DECIMALS LINEAR ANGULAR X ±0.020 ±1° XX ±0.010 ±0.2° XXX ±0.005 ±0.01°
11/14/2012	11/14/2012	11/14/2012	UNITS: INCH	SHEET 1 of 1	

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REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN:
P1	003639	INITIAL RELEASE	14-NOV-12	GSM



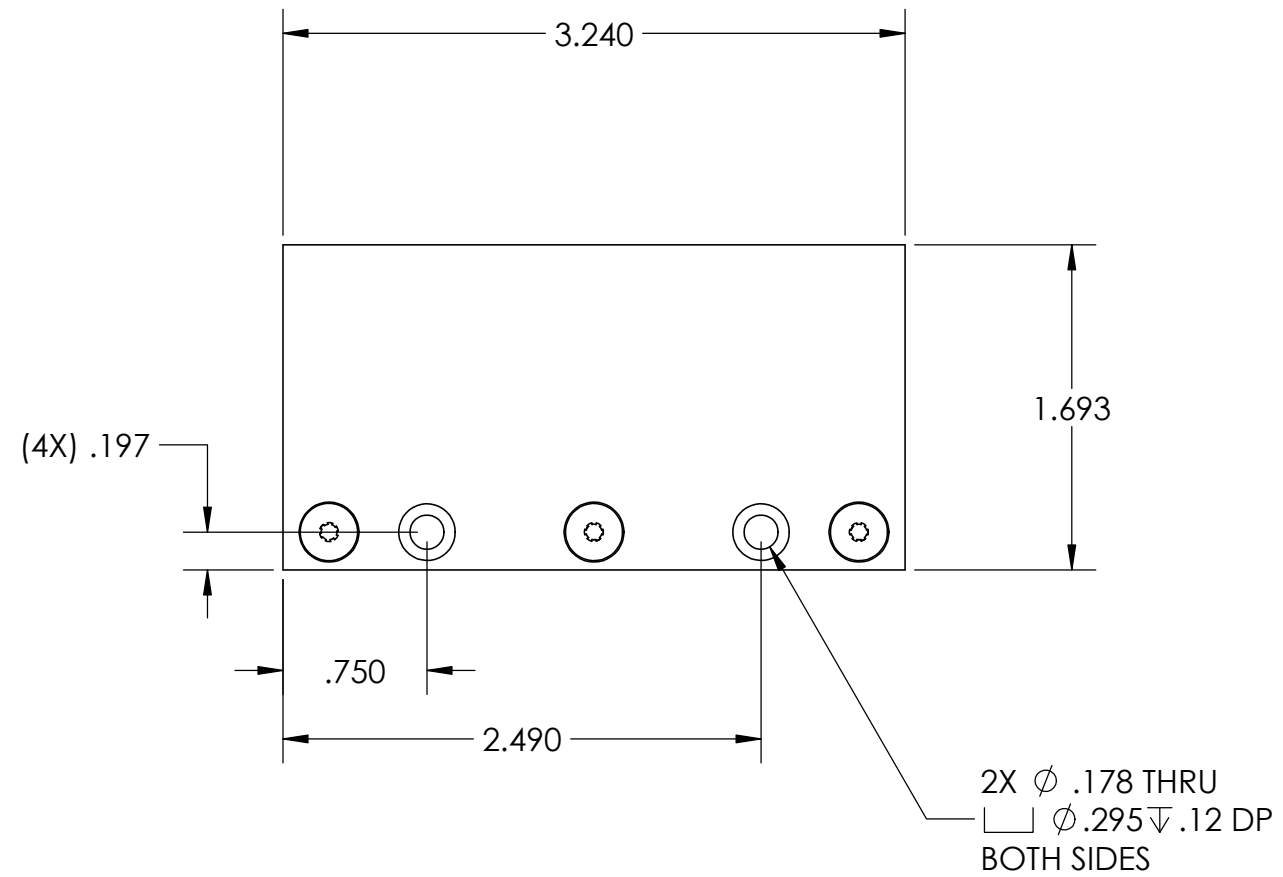
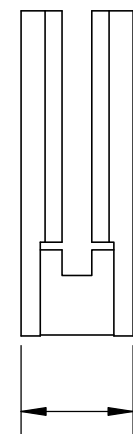
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DWG. NO: 1215-1-096-03	PROJECT: 1215	TITLE: MAGNET TRACK INTERFACE		THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:
DRAWN BY: GSM	CHECKED BY: DML	COG ENGINEER: DML	SCALE: N1S	SURFACE FINISH: SEE NOTES	DECIMALS LINEAR ANGULAR
11/14/2012	11/14/2012	11/14/2012	UNITS: INCH		X ±0.020 ±1° XX ±0.010 ±0.2° XXX ±0.005 ±0.01°

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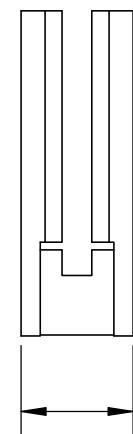
REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN
P1	005401	INITIAL RELEASE	2015-OCT-01	DML



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DWG. NO. 1215-1-096-04	PROJECT: 1215	TITLE: MAGNET TRACK INTERFACE		THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:
DRAWN BY: DML 9/23/2015	CHECKED BY: DML 9/23/2015	COG ENGINEER: JPC 9/23/2015	SCALE: N1S UNITS: INCH	SHEET 1 of 1	DECIMALS LINEAR ANGULAR X ±0.020 ±1° XX ±0.010 ±0.2° XXX ±0.005 ±0.01°
<b>CONFIDENTIAL</b>			SEE NOTES		

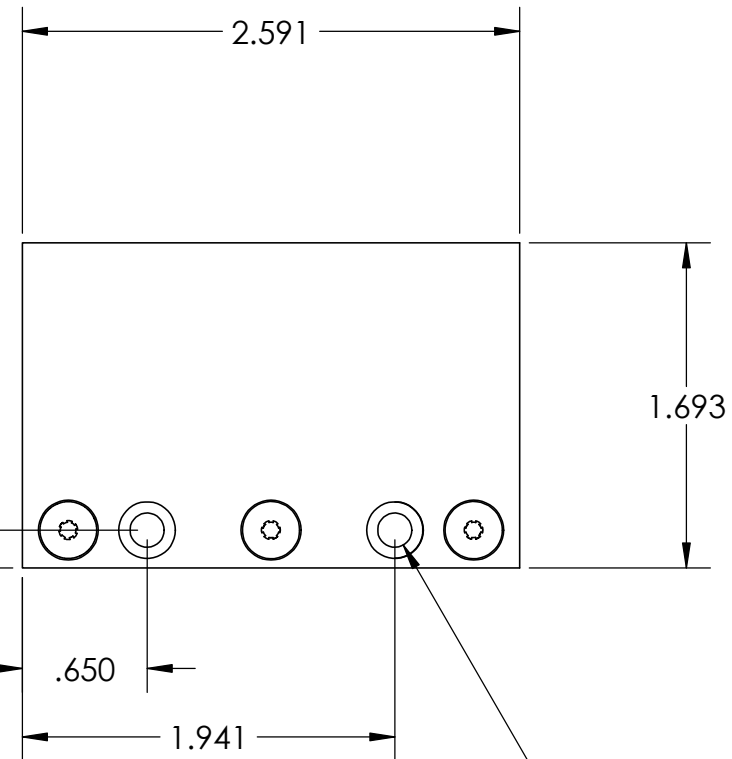
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REV.	DCN:	DESCRIPTION OF CHANGE:	DATE:	SIGN:
P1	005401	INITIAL RELEASE	2015-OCT-01	DML



.583±.007

(4X) .197



2X Ø .178 THRU  
 Ø .295 .12 DP  
 BOTH SIDES

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DWG. NO. 1215-1-096-05	PROJECT: 1215		THIRD ANGLE PROJECTION:	UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES TOLERANCES ARE:	
TITLE: MAGNET TRACK INTERFACE	SHEET 1 of 1		SCALE :	DECIMALS LINEAR ANGULAR	
DRAWN BY: DML	CHECKED BY: DML	COG ENGINEER: JPC	UNITS : INCH	X ±0.020 ±1° XX ±0.010 ±0.2° XXX ±0.005 ±0.01°	
DATE: 9/23/2015			DATE: 9/23/2015	DATE: 9/23/2015	SEE NOTES

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