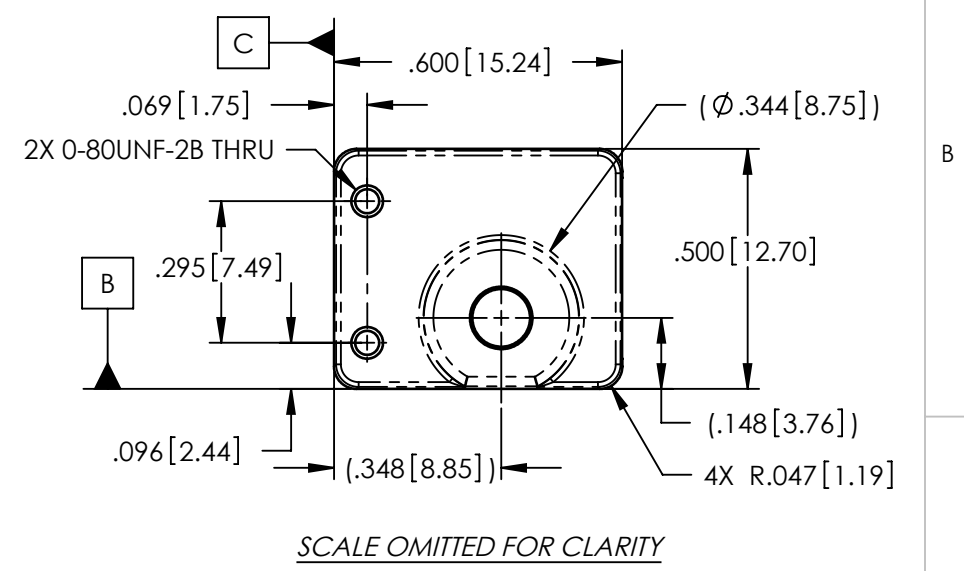
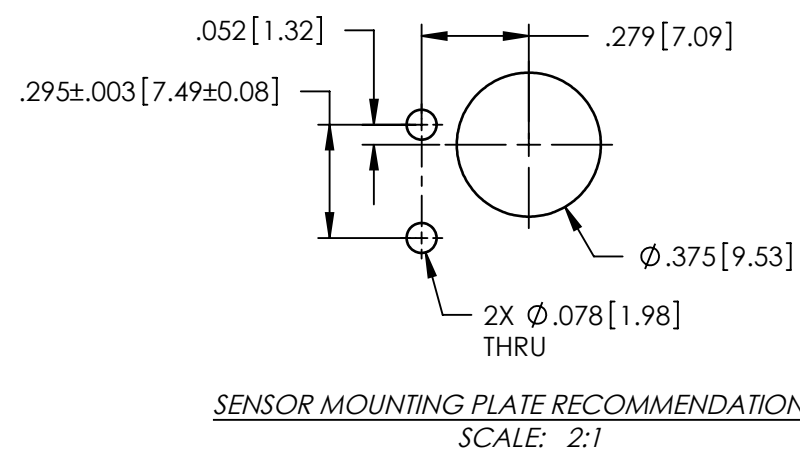
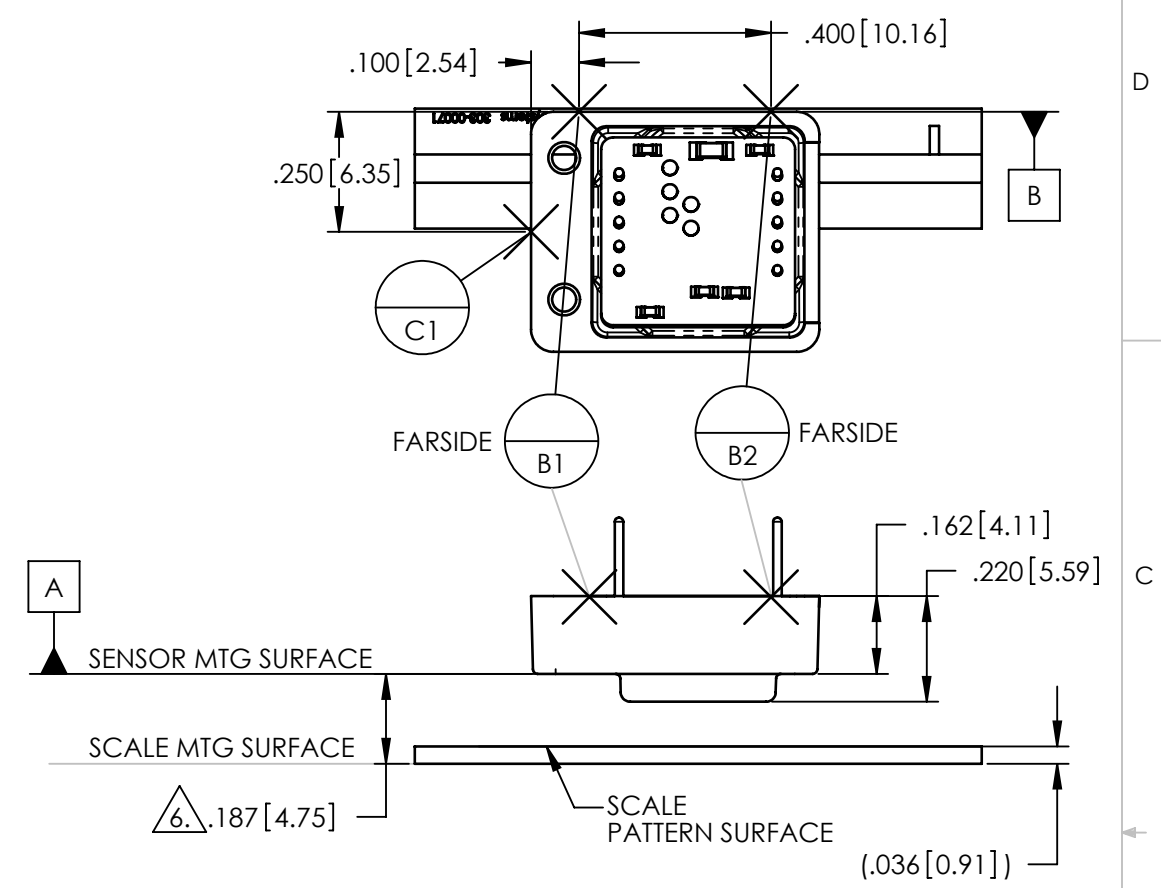
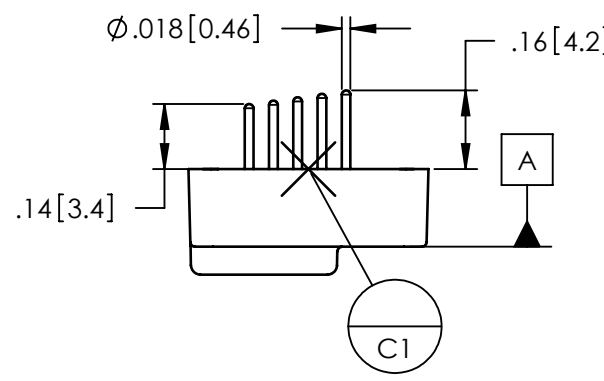
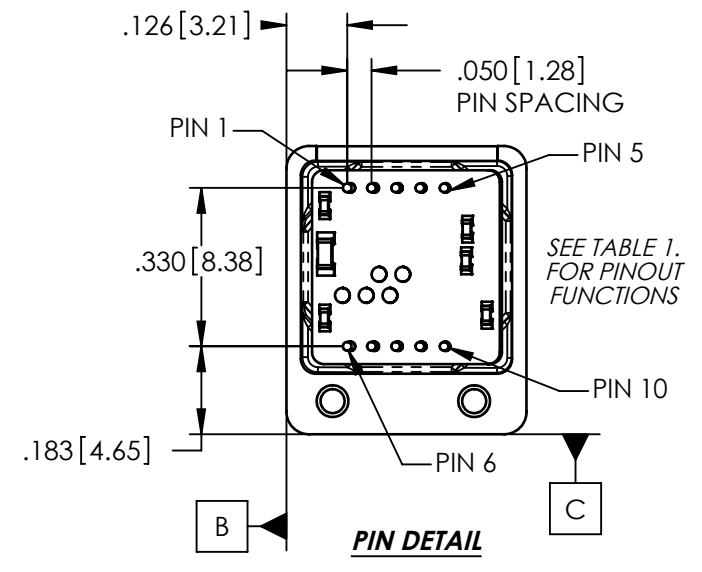
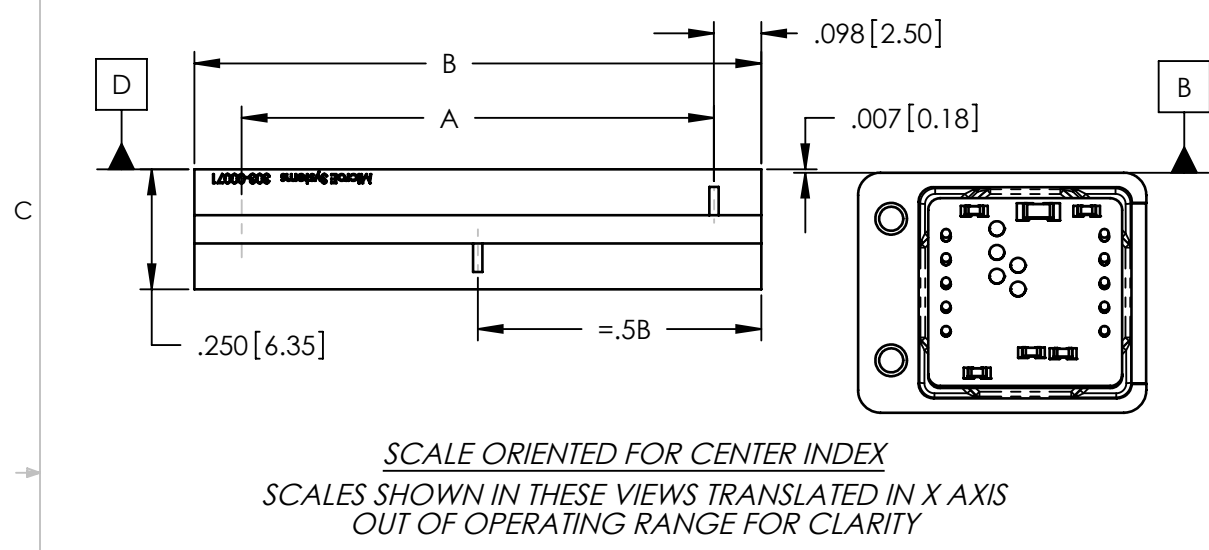
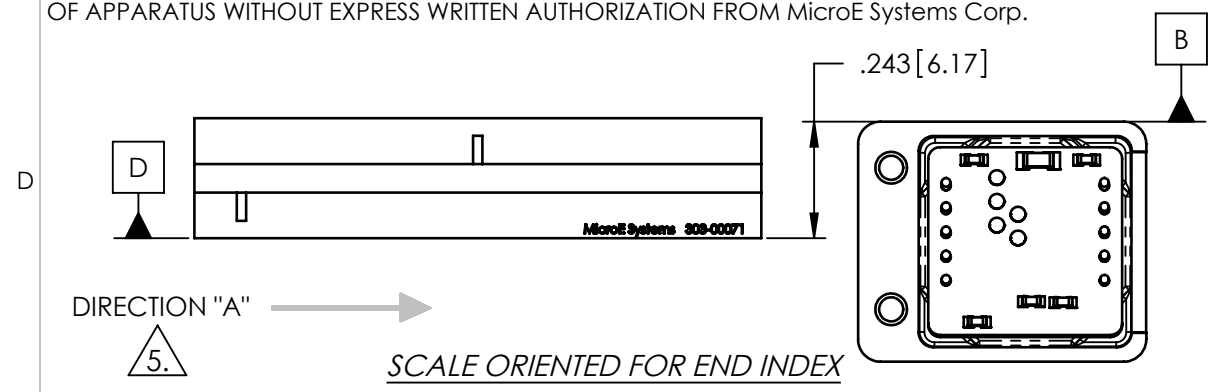


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REVISIONS				
LTR	ECO	DESCRIPTION	DATE	APPROVED
1		INITIAL	10/24/08	S. B.



- NOTE:
- IF BENCHING PINS ARE TO BE USED, PINS MUST BE PLACED ALONG DATUM EDGES OF BOTH THE SENSOR AND THE SCALE FOR PROPER ALIGNMENT. (REFERENCE DATUMS B1, B2 AND C1 FOR SENSOR BENCHING PINS).
  - HEIGHT OF SENSOR BENCHING PINS MUST BE A MINIMUM OF .162 [4.11] IN HEIGHT FROM DATUM A.
  - HEIGHT OF SCALE BENCHING PINS NOT TO EXCEED THE THICKNESS OF THE SCALE.
  - RECOMMENDED SENSOR MOUNTING PLATE THICKNESS: ALLOW FOR PLATE THICKNESS AND CLEARANCE OF SCREW HEAD TO SCALE AND SCALE MOUNTING HARDWARE (BENCHING SURFACES, CLAMPS, HUBS, ETC.)

5. WHEN SCALE MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL A+ (PIN 8) LEADS OUTPUT SIGNAL B+ (PIN 2).
6. FOR SCALES ATTACHED WITH ADHESIVE TAPE (LXX-T), THE SCALE MOUNTING SURFACE MUST BE .006" FURTHER AWAY FROM SENSOR MOUNTING SURFACE FOR NOMINAL Z HEIGHT. DIM = .193 [4.90]

**SCALE IDENTIFICATION AND SIZE.**

Scale Identification #	Dim A. Measured Length	Dim B. Scale Length
LXX	XXmm-5mm	XXmm
L30	30mm-5mm = 25mm	30mm
(max) L130	130mm-5mm = 125mm	130mm

THESE ARE EXAMPLES

Pin	Function
1	B-
2	B+
3	SIN+
4	COS+
5	+5V
6	INDEX WINDOW +
7	INDEX WINDOW -
8	A+
9	A-
10	GND

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES [MILLIMETERS] DIM. APPLY AFTER PROCESSING INTERPRET ALL GEOMETRIC TOLS. PER ANSI Y14.5M-1994

TOLERANCES ARE:  
 DECIMALS:  
 .XX [X] ± .01 [.25]  
 .XXX [XX] ± .005 [.13]

APPROVALS	DATE
DRAWN V. BUCK CHECKED	10/22/08
ENGRG. D. GRIMES MFG ENG	10/24/08
QA	

UNITS: .in [mm]

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Division of GSI Group

125 Middlesex Tpk.  
Bedford, MA 01730

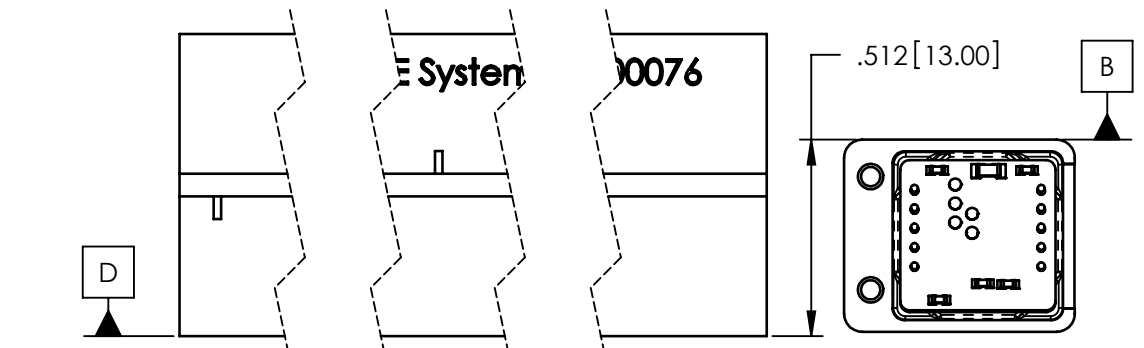
DESCRIPTION:  
INTERFACE, ENCODER, 20um,  
SHORT LINEAR SCALE  
MERCURY 1500P SENSOR

SIZE DWG. NO. REV.  
B ID-00357 1

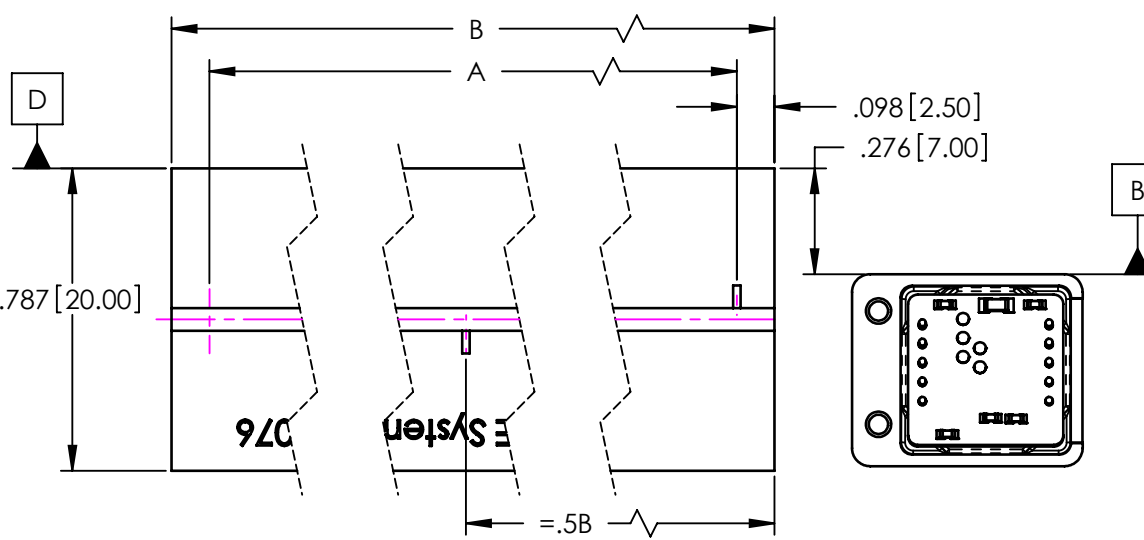
SCALE: 2.5:1 CAD FILE: 3RD ANGLE PROJECTION SHEET 1 OF 1

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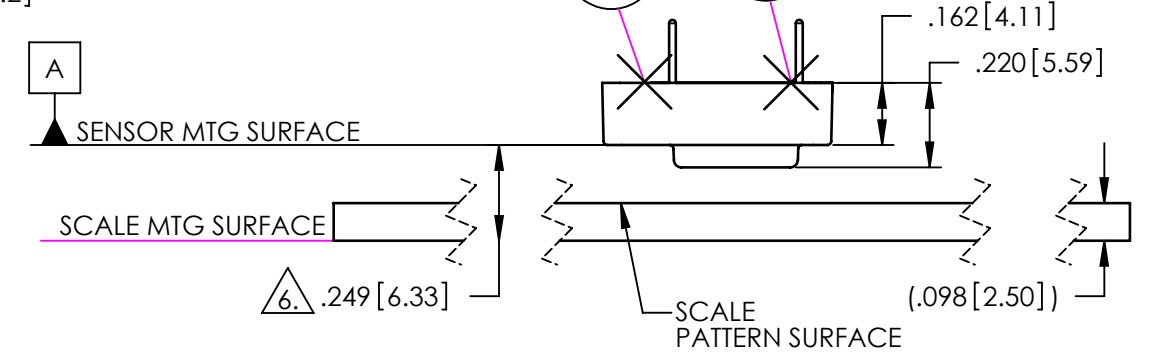
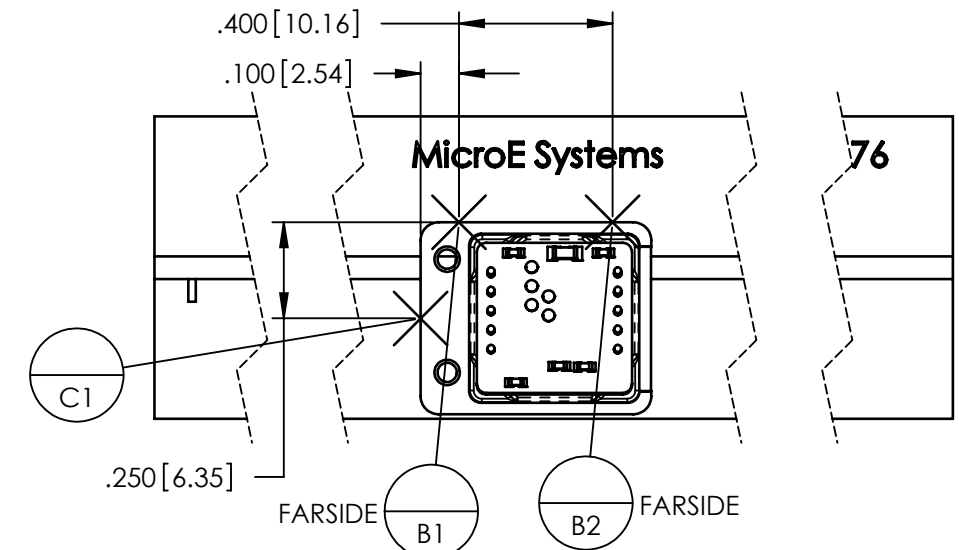
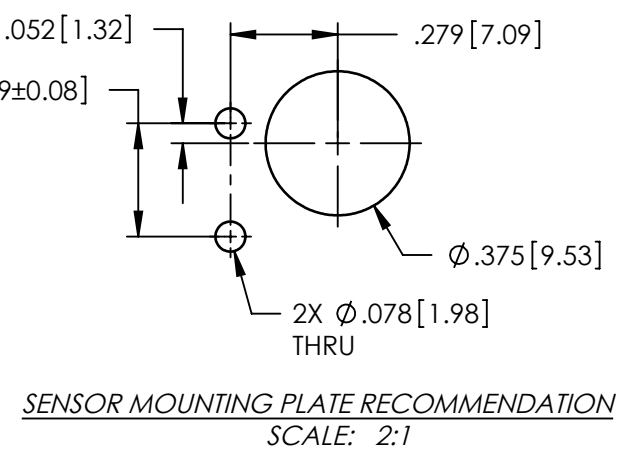
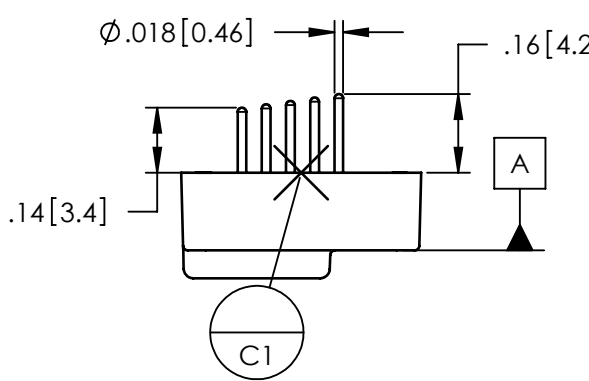
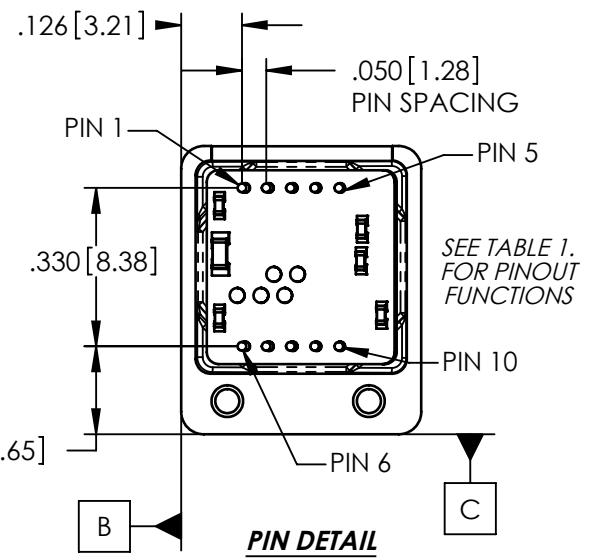
LTR		ECO	REVISIONS	DATE	APPROVED
			DESCRIPTION		
1			INITIAL	10/24/08	S. B.



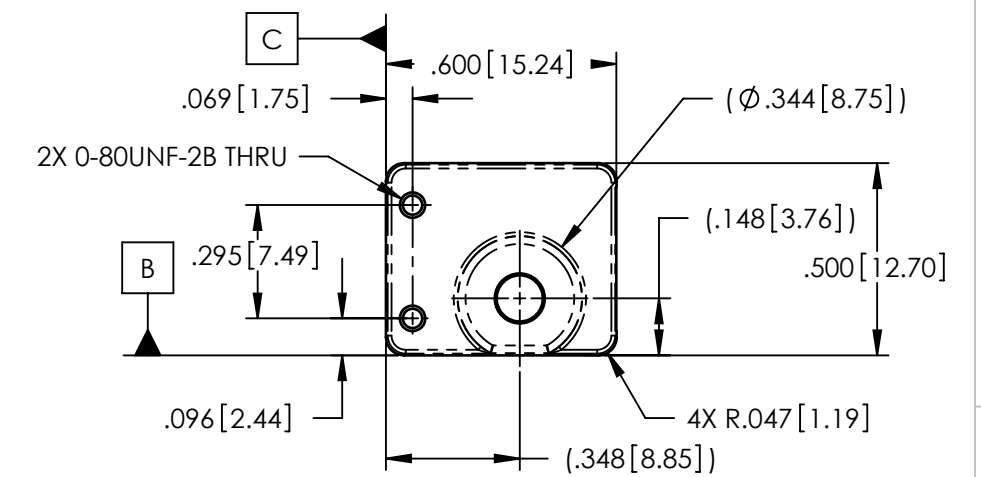
5. DIRECTION "A" → SCALE ORIENTED FOR END INDEX



SCALE ORIENTED FOR CENTER INDEX  
SCALES SHOWN IN THESE VIEWS TRANSLATED IN X AXIS OUT OF OPERATING RANGE FOR CLARITY



6. .249 [6.33] SCALE PATTERN SURFACE



SCALE OMITTED FOR CLARITY

NOTE:  
1. IF BENCHING PINS ARE TO BE USED, PINS MUST BE PLACED ALONG DATUM EDGES OF BOTH THE SENSOR AND THE SCALE FOR PROPER ALIGNMENT. (REFERENCE DATUMS B1, B2 AND C1 FOR SENSOR BENCHING PINS).

2. HEIGHT OF SENSOR BENCHING PINS MUST BE A MINIMUM OF .162 [4.11] IN HEIGHT FROM DATUM A.

3. HEIGHT OF SCALE BENCHING PINS NOT TO EXCEED THE THICKNESS OF THE SCALE.

4. RECOMMENDED SENSOR MOUNTING PLATE THICKNESS: ALLOW FOR PLATE THICKNESS AND CLEARANCE OF SCREW HEAD TO SCALE AND SCALE MOUNTING HARDWARE (BENCHING SURFACES, CLAMPS, HUBS, ETC.)

5. WHEN SCALE MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL A+ (PIN 8) LEADS OUTPUT SIGNAL B+ (PIN 2).

6. FOR SCALES ATTACHED WITH ADHESIVE TAPE (LXX-T), THE SCALE MOUNTING SURFACE MUST BE .006" FURTHER AWAY FROM SENSOR MOUNTING SURFACE FOR NOMINAL Z HEIGHT. DIM = .193[4.90]

SCALE IDENTIFICATION AND SIZE.

Scale Identification #	Dim A. Measured Length	Dim B. Scale Length
LXX	XXmm-5mm	XXmm
L155	155mm-5mm = 150mm	155mm
(max) L2025	2025mm-5mm = 2020mm	2025mm

THESE ARE EXAMPLES

Pin	Function
1	B-
2	B+
3	SIN+
4	COS+
5	+5V
6	INDEX WINDOW +
7	INDEX WINDOW -
8	A+
9	A-
10	GND

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES (MILLIMETERS) DIM. APPLY AFTER PROCESSING INTERPRET ALL GEOMETRIC TOLS. PER ANSI Y14.5M-1994

TOLERANCES ARE:  
DECIMALS: .XX [X] ±.01 [.25]  
.XXX [XX] ±.005 [.13]

APPROVALS  
DRAWN V. BUCK  
CHECKED  
ENGRG. D. GRIMES  
MFG ENG  
QA

DATE  
10/22/08  
10/24/08

UNITS: .in [mm]  
MicroE Systems  
Division of GSI Group  
125 Middlesex Tpk.  
Bedford, MA 01730

DESCRIPTION:  
INTERFACE, ENCODER, 20um,  
LONG LINEAR SCALE  
MERCURY 1500P SENSOR

SIZE DWG. NO. REV.  
B ID-00358 1

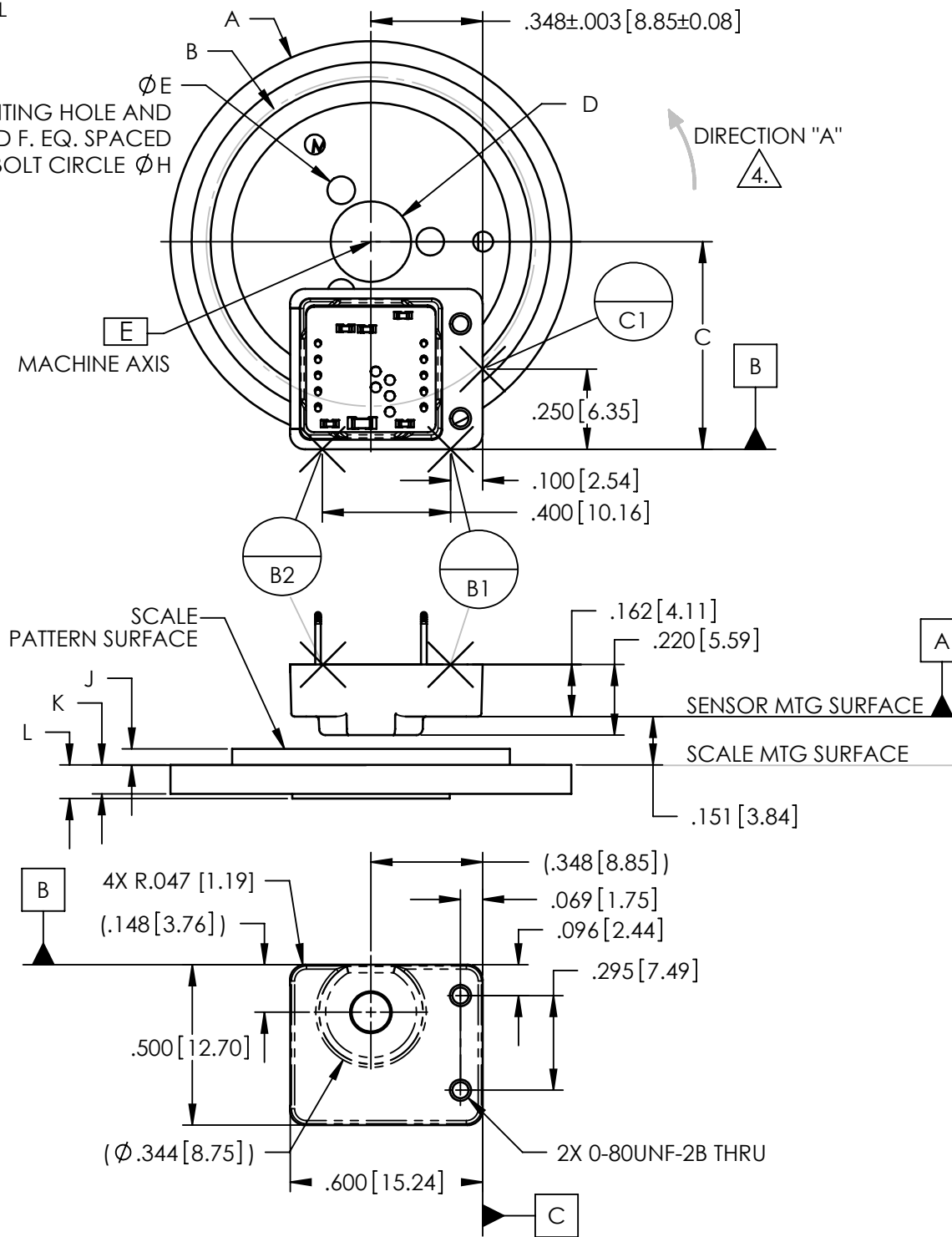
SCALE: 2:1 CAD FILE: 3RD ANGLE PROJECTION SHEET 1 OF 1

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**NOTE:**

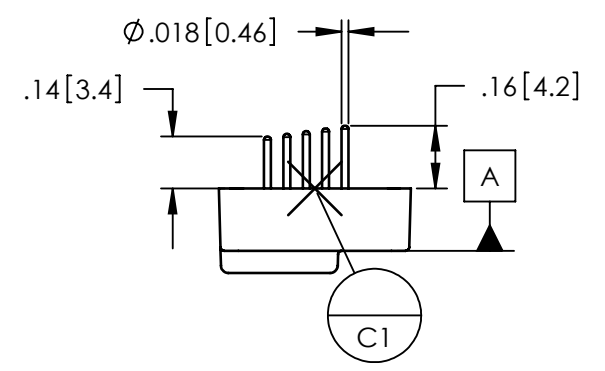
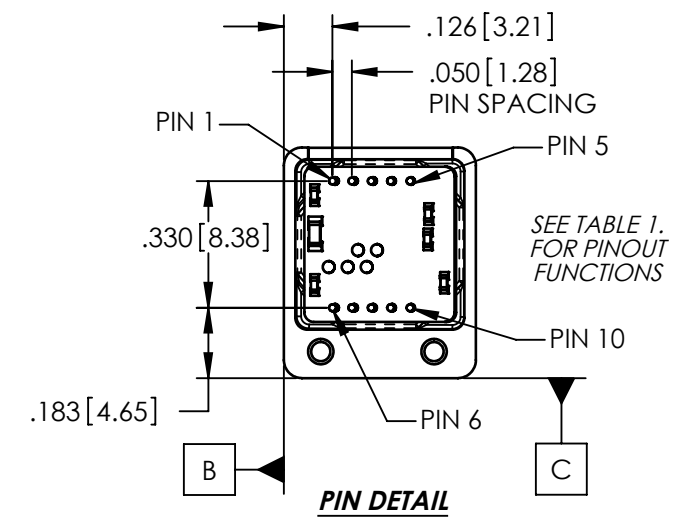
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- WHEN SCALES MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL B+ (PIN 2) LEADS OUTPUT SIGNAL A+ (PIN 8).

MOUNTING HOLE AND THREAD F. EQ. SPACED ON A BOLT CIRCLE ØH



REVISIONS				
LTR	ECO	DESCRIPTION	DATE	APPROVED
1		INITIAL	10/24/08	S.B.

Pin	Function
1	B-
2	B+
3	SIN+
4	COS+
5	+5V
6	INDEX WINDOW+
7	INDEX WINDOW-
8	A+
9	A-
10	GND



**SCALE SIZE AND MOUNTING OPTIONS. DIMENSIONS IN INCHES [MILLIMETERS]**

Scale Identification	Counts/Rev	Dim. A Scale O.D.	Scale I.D.	Dim. B Optical Dia.	Dim. C Mounting Dim.	Dim. D Hub I.D.	Dim. E Mounting Hole Dia.	Thread F	Dim. H Bolt Circle	Dim. J Hub Height	Dim. K Scale Thickness	Dim. L Hub Relief
R 1206	1,650	0.472 [12.00]	.250±.005 [6.35±.13]	0.413 [10.50]	0.341±.002 [8.66±.05]	0.1253±.0005±.0000 [3.182±.013±.000]	N/A	N/A	N/A	0.040 [1.02]	.036±.002 [91±.05]	0.009 [2.29]
R 1910	2,500	0.750 [19.05]	.375±.005 [9.53±.013]	0.627 [15.92]	0.447±.002 [11.36±.05]	0.1253±.0005±.0000 [3.182±.013±.000]	0.047 [1.19]	0-80	0.250 [6.35]	0.040 [1.02]	.090±.008 [2.29±.20]	0.105 [2.67]
R 3213	4,096	1.250 [31.75]	.500±.005 [12.70±.013]	1.027 [26.08]	0.647±.002 [16.44±.05]	0.2503±.0005±.0000 [6.357±.013±.000]	0.070 [1.78]	2-56	0.370 [9.40]	0.050 [1.27]	.090±.008 [2.29±.20]	0.105 [2.67]
R 5725	8,192	2.250 [57.15]	1.000±.005 [25.40±.013]	2.053 [52.15]	1.161±.002 [29.48±.05]	0.5003±.0005±.0000 [12.707±.013±.000]	0.136 [3.45]	8-32	0.750 [19.05]	0.060 [1.52]	.090±.008 [2.29±.20]	0.105 [2.67]
R 10851	16,384	4.250 [107.95]	2.000±.005 [50.80±.013]	4.106 [104.30]	2.187±.002 [55.56±.05]	1.0003±.0005±.0000 [25.408±.013±.000]	0.136 [3.45]	8-32	1.375 [34.93]	0.080 [2.03]	.090±.008 [2.29±.20]	0.105 [2.67]

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES [MILLIMETERS] DIM. APPLY AFTER PROCESSING INTERPRET ALL GEOMETRIC TOLS. PER ANSI Y14.5M-1994

TOLERANCES ARE:  
 DECIMALS: .XX [X]±.01 [25]  
 .XXX [XX]±.005 [13]  
 ANGULAR: ±30 MIN.

APPROVALS	DATE
DRAWN V. BUCK CHECKED	10/22/08
ENGRG. D. GRIMES MFG ENG	10/24/08
QA	

UNITS: .in [mm]

**MicroE Systems**  
Division of GSI Group

125 Middlesex Tpk.  
Bedford, MA 01730

DESCRIPTION:  
**INTERFACE, ENCODER, 20um, ROTARY SCALE w/HUB MERCURY 1500P SENSOR**

SIZE B DWG. NO. **ID-00359** REV. **1**

SCALE: 2:1 CAD FILE: 3RD ANGLE PROJECTION SHEET 1 OF 1