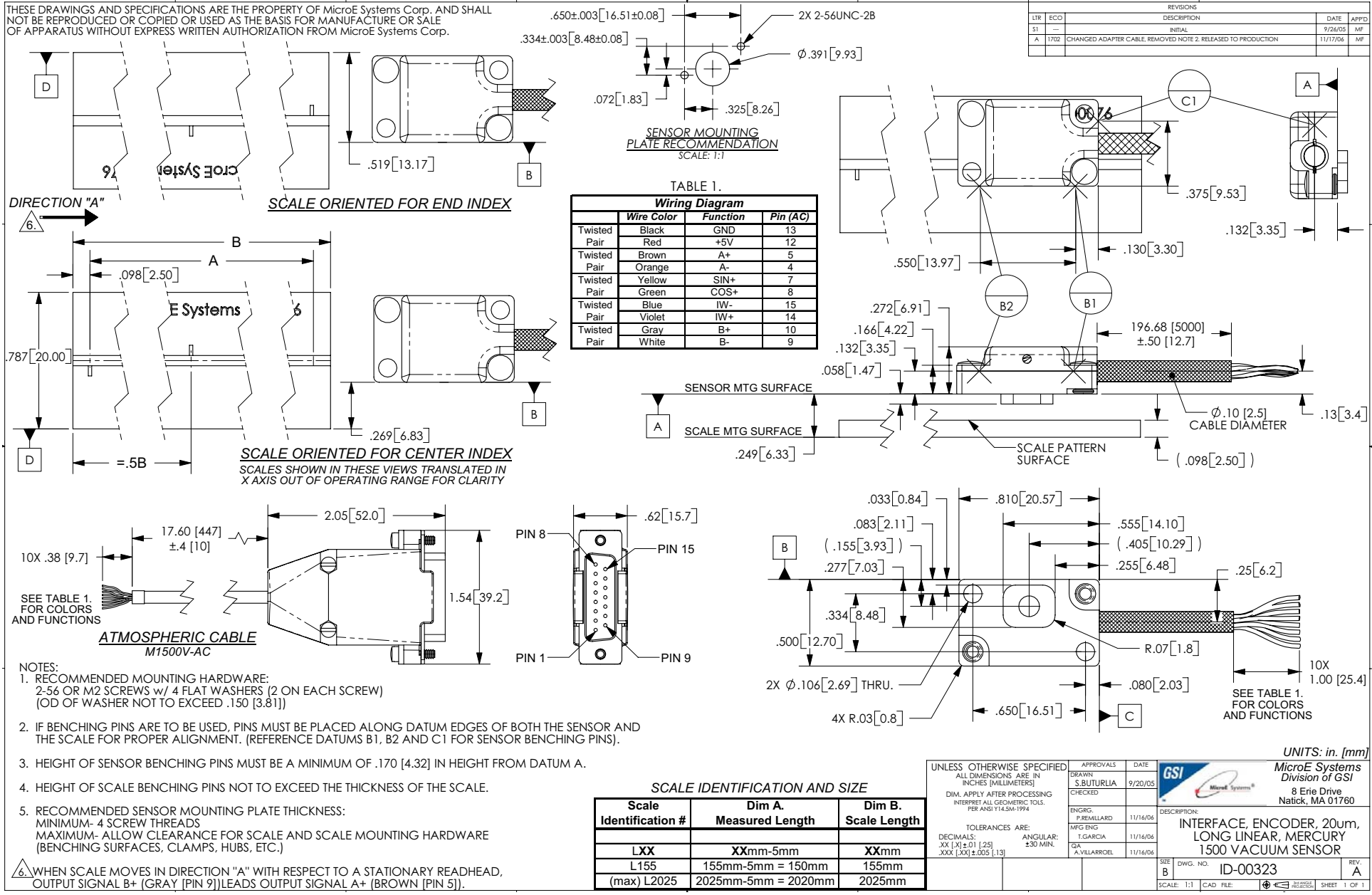


Mercury 1500V Encoder System Interface Drawing: Long Linear Scales

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- NOTES:**
- RECOMMENDED MOUNTING HARDWARE:
2-56 OR M2 SCREWS w/ 4 FLAT WASHERS (2 ON EACH SCREW)
(OD OF WASHER NOT TO EXCEED .150 [3.81])
 - 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 .170 [4.32] IN HEIGHT FROM DATUM A.
 - HEIGHT OF SCALE BENCHING PINS NOT TO EXCEED THE THICKNESS OF THE SCALE.
 - RECOMMENDED SENSOR MOUNTING PLATE THICKNESS:
MINIMUM- 4 SCREW THREADS
MAXIMUM- ALLOW CLEARANCE FOR SCALE AND SCALE MOUNTING HARDWARE
(BENCHING SURFACES, CLAMPS, HUBS, ETC.)
6. WHEN SCALE MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL B+ (GRAY [PIN 9]) LEADS OUTPUT SIGNAL A+ (BROWN [PIN 5]).

Mercury 1500V Encoder System Interface Drawing: Rotary Scales

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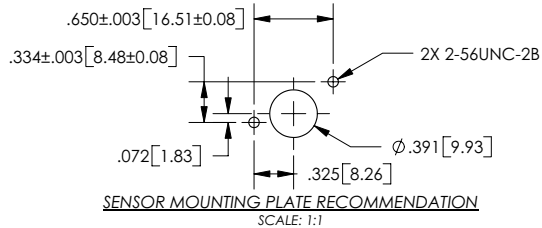
SCALE IDENTIFICATION AND SIZE. DIMENSIONS IN INCHES [MILLIMETERS]

Scale Identification	Counts/Rev	Dim. A Scale O.D.	Dim. B Optical Dia.	Dim. C Mounting Dim.	Dim. D Scale I.D.	Dim. E Scale Thickness
R1206	1,650	0.472 [12.00]	0.413 [10.50]	0.348+/-0.002 [8.84+/-0.05]	.250+/-0.005 [6.35+/-0.13]	.036+/-0.002 [.91+/-0.05]
R1910	2,500	0.750 [19.05]	0.627 [15.92]	0.454+/-0.002 [11.53+/-0.05]	.375+/-0.005 [9.53+/-0.13]	.090+/-0.004 [2.29+/-0.10]
R3213	4,096	1.250 [31.75]	1.027 [26.08]	0.654+/-0.002 [16.62+/-0.05]	.500+/-0.005 [12.70+/-0.13]	.090+/-0.004 [2.29+/-0.10]
R5725	8,192	2.250 [57.15]	2.053 [52.15]	1.168+/-0.002 [29.66+/-0.05]	1.000+/-0.005 [25.40+/-0.13]	.090+/-0.004 [2.29+/-0.10]
R10851	16,384	4.250 [107.95]	4.106 [104.30]	2.194+/-0.002 [55.73+/-0.05]	2.000+/-0.005 [50.80+/-0.13]	.090+/-0.004 [2.29+/-0.10]

TABLE 1.

Wiring Diagram

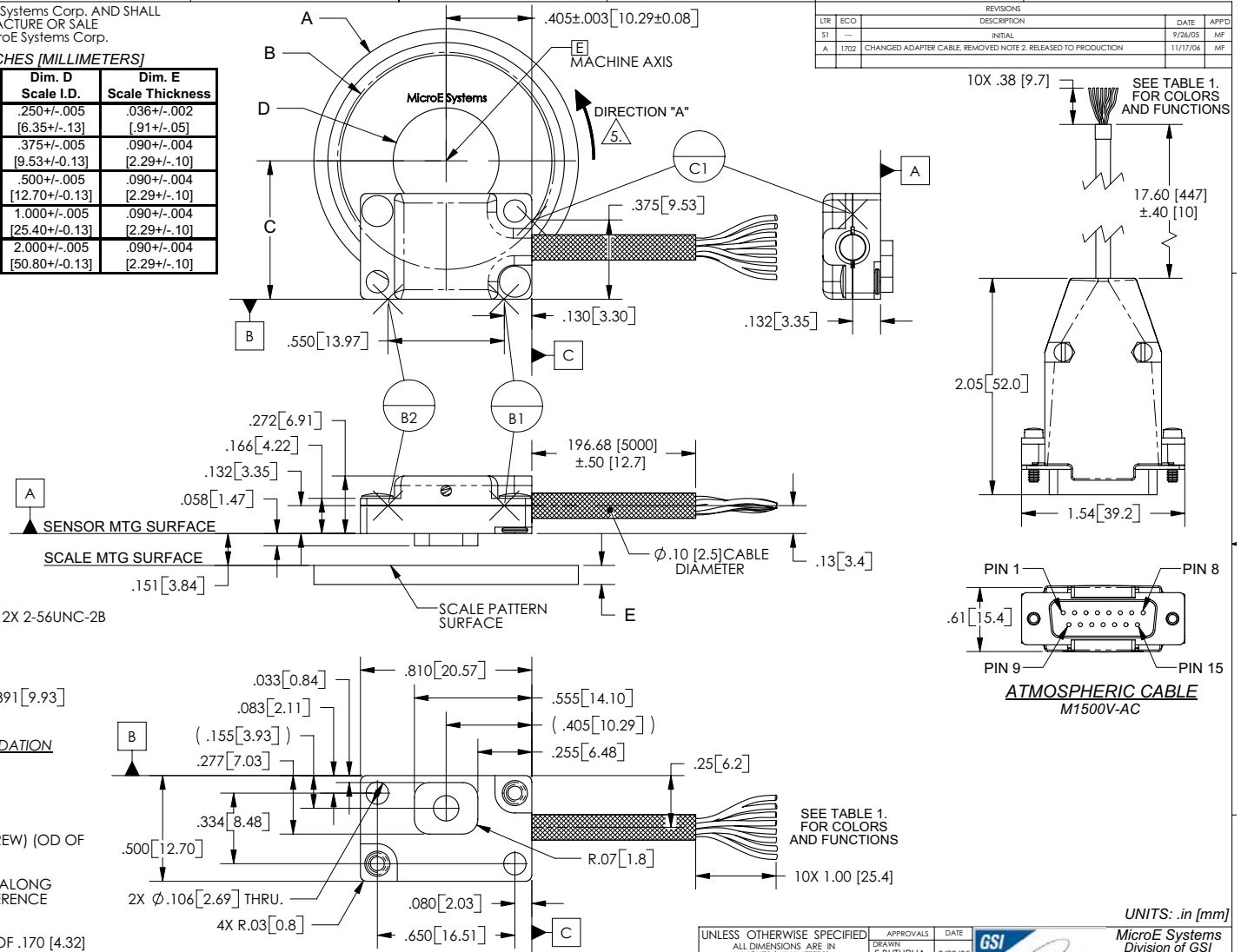
	Wire Color	Function	Pin (AC)
Twisted Pair	Black	GND	13
	Red	+5V	12
Twisted Pair	Brown	A+	5
	Orange	A-	4
Twisted Pair	Yellow	SIN+	7
	Green	COS+	8
Twisted Pair	Blue	IW-	15
	Violet	IW+	14
Twisted Pair	Gray	B+	10
	White	B-	9



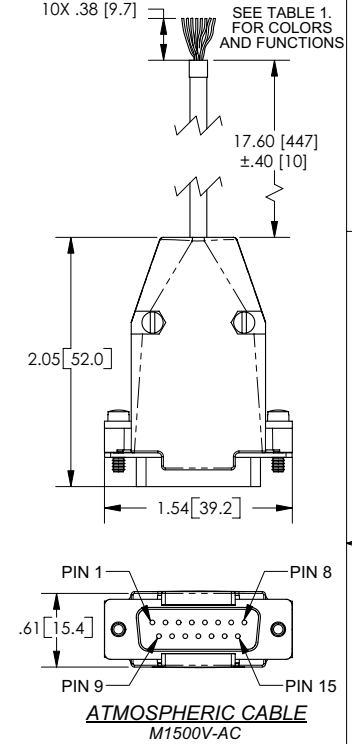
NOTES:

- RECOMMENDED MOUNTING HARDWARE:
2-56 OR M2 SCREWS w/ 4 FLAT WASHERS (2 ON EACH SCREW) (OD OF WASHER NOT TO EXCEED .150 [3.81])
- IF BENCHING PINS ARE TO BE USED, PINS MUST BE PLACED ALONG DATUM EDGES OF SENSOR FOR PROPER ALIGNMENT. (REFERENCE DATUMS B1, B2 AND C1).
- HEIGHT OF SENSOR BENCHING PINS MUST BE A MINIMUM OF .170 [4.32] IN HEIGHT FROM DATUM A.
- RECOMMENDED SENSOR MOUNTING PLATE THICKNESS:
MINIMUM- 4 SCREW THREADS
MAXIMUM- ALLOW CLEARANCE FOR SCALE AND SCALE MOUNTING HARDWARE (BENCHING SURFACES, CLAMPS, HUBS, ETC.)

△ WHEN SCALE MOVES IN DIRECTION "A" WITH RESPECT TO A STATIONARY READHEAD, OUTPUT SIGNAL B+ (GRAY [PIN 9]) LEADS OUTPUT SIGNAL A+ (BROWN [PIN 5]).



REVISONS		DESCRIPTION	DATE	APP'D
S1	---	INITIAL	9/26/05	MF
A	1702	CHANGED ADAPTER CABLE. REMOVED NOTE 2. RELEASED TO PRODUCTION	11/17/06	MF



UNLESS OTHERWISE SPECIFIED		APPROVALS	DATE	GSI MicroE Systems	DESCRIPTION
ALL DIMENSIONS ARE IN INCHES [MILLIMETERS]		DRAWN S.BUTURLIA	9/20/05		
DIM. APPLY AFTER PROCESSING INTERPRET ALL GEOMETRIC TOLS. PER ANSI Y14.5M-1994		CHECKED		INTERFACE, ENCODER, 20um, ROTARY, MERCURY 1500 VACUUM SENSOR	
TOLERANCES ARE:		ENGR. P.REMILLARD	11/16/06	SIZE B	
DECIMALS: .XX [X]±0 [25]		MFG ENGR. T.GARCIA	11/16/06	DWG. NO. ID-00324	
ANGULAR: °30 MIN.		QA A.VILLARROEL	11/16/06	REV. A	
XXX [XX]±0.005 [13]				SCALE 1:1 CAD FILE: SHEET 1 OF 1	