

Mercury™ Encoders: Design Guidelines for Customer Supplied Interface Cables

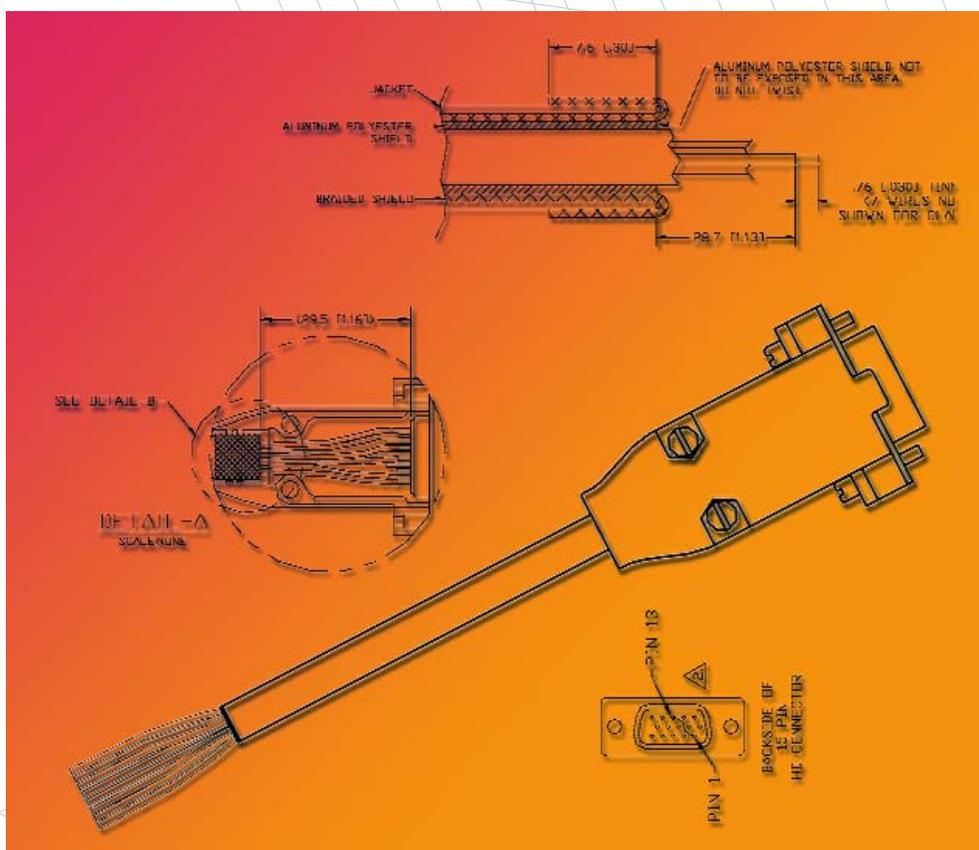


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Precautions

Do not connect pins labeled "Reserved" on the interpolator interface drawing

Ground connects from the extension cable connector the the extension cable must be properly mated to ensure proper EMI immunity of encoder systems

Design Specifications

1. DESCRIPTION

Tinned copper, 4 twisted pair cable suitable for EIA RS-422 and RS232 Application. Belden Cable number 9831 or equivalent

2. ELECTRICAL CHARACTERISTICS

- 2.1 Voltage rating: 30V minimum
- 2.2 Temperature rating: 80°C
- 2.3 UL AWM Style 2919
- 2.4 Nominal Impedance 100 ohms
- 2.5 Velocity of Propagation 66%
- 2.6 Nominal Capacitance 50.9pF/m

3. CONDUCTORS

- 3.1 Material: tinned copper
- 3.2 8 conductors (4 twisted pairs), color coded
- 3.3 24AWG (7/32)
- 3.4 24 Ohms/km
- 3.5 Nominal Impedance 100 ohms
- 3.6 Conductor Color pairing are as follows:

Twisted Pair No.1

White/Blue Stripe
Blue/White Stripe

Twisted Pair No.2

White/Orange Stripe
Orange /White Stripe

Twisted Pair No.3

White/Green Stripe
Green/White Stripe

Twisted Pair No.4

White/Brown Stripe
Brown/White Stripe

4. INSULATION

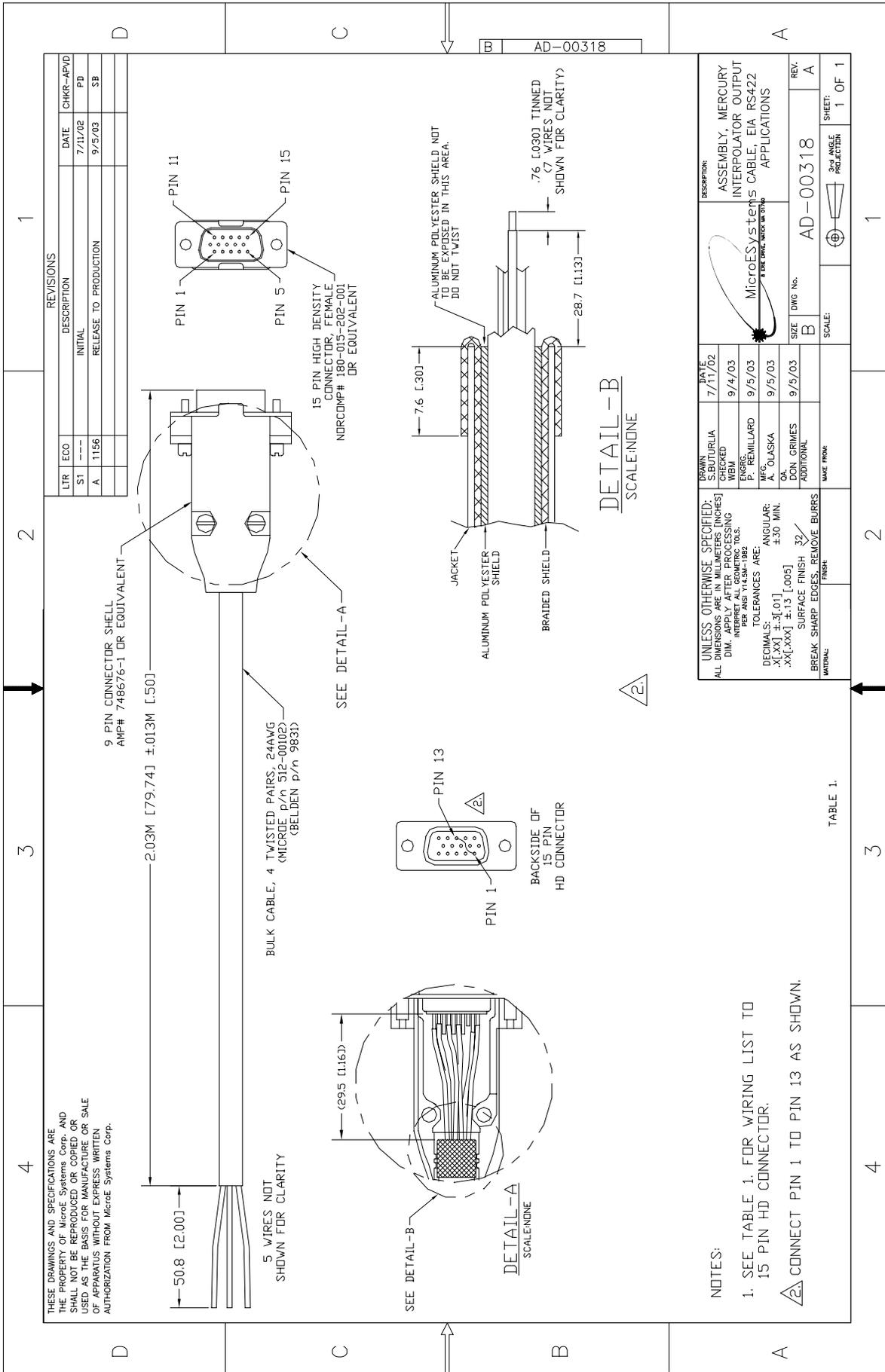
- 4.1 Conductor Material: Polyethylene or equivalent
- 4.2 Overall Jacket Material PVC

5. SHIELDING

- 5.1 Overall Two shield system
- 5.2 Shield one, made of Aluminum Polyester
- 5.3 Shield two, made of tinned copper braid (65% coverage)
- 5.4 Overall shield resistance:14.4 ohms/km

6. MECHANICAL

- 6.1 Overall Cable Diameter .330
- 6.2 Color: Chrome



LTR		ECO	REVISIONS		DATE	CHKR-APVD
ST	---	---	DESCRIPTION	INITIAL	7/11/02	PD
A	1156		RELEASE TO PRODUCTION		9/5/03	SB

UNLESS OTHERWISE SPECIFIED:
 ALL DIMENSIONS ARE IN MILLIMETERS (INCHES)
 DIM. TOLERANCES ARE:
 PER ANSI Y14.5M-1987
 DECIMALS: ±.3[.01]
 ANGULAR: ±30 MIN.
 .XX[.XXX] ±.13 [.005]
 SURFACE FINISH: 32
 BREAK SHARP EDGES, REMOVE BURRS
 FINISH: 32

DESIGNED	SUBUTURIA	DATE	7/11/02
CHECKED	WBM		
ENGR.	REMILLARD		9/4/03
APP.	A. OLASKA		9/5/03
QA	DON GRIMES		9/5/03
ADDITIONAL			
MAKE FROM:			

DESCRIPTION: ASSEMBLY, MERCURY INTERPOLATOR OUTPUT CABLE, EIA RS422 APPLICATIONS
 MicroE Systems
 15 Pin Cable, 24 AWG

SIZE	DWG No.	REV.	A
B	AD-00318		

SCALE: 3/4" ANGLE PROJECTION
 SHEET: 1 OF 1

NOTES:
 1. SEE TABLE 1. FOR WIRING LIST TO 15 PIN HD CONNECTOR.
 2. CONNECT PIN 1 TO PIN 13 AS SHOWN.

TABLE 1.

Contact MicroE Systems

Thank you for purchasing a MicroE product. You should expect the highest level of quality and support from MicroE. If you want to download the Mercury Encoder Installation Manual, Data Sheet or Interface Drawing, or have any questions, browse www.microesys.com to find the information you need. Refer to the Mercury Data Sheets and User's Guide sections.

