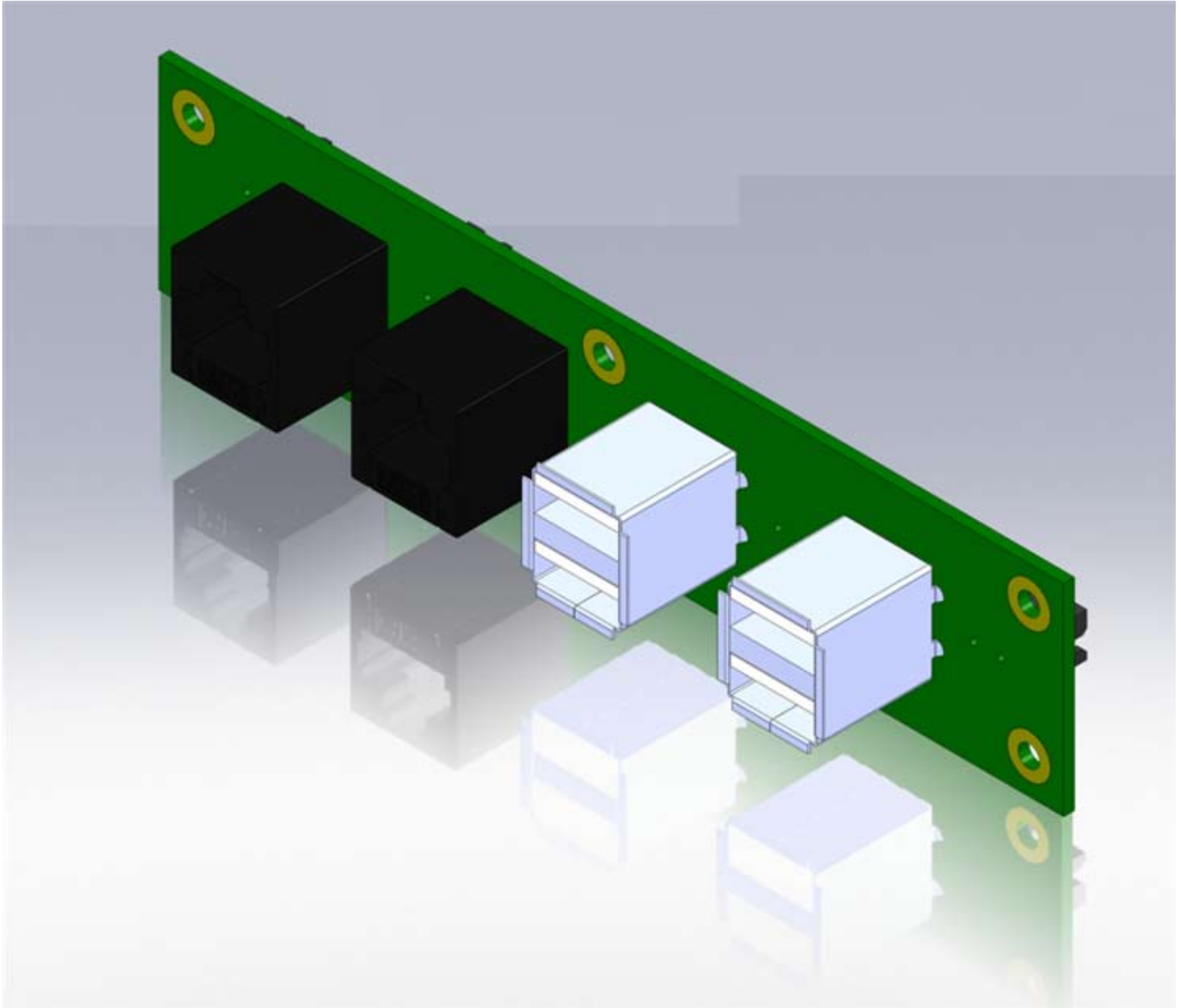


# ADP-IO-G-EBC0364



### FEATURES

- 3.6V batteries with plug-in connector
- Easy to install and replace
- Stainless steel container
- Hermetic glass-to-metal sealing
- High energy density
- Very low self-discharge rate
- Wide operating temperature range: -40°C to +85°C
- For use on WinSystems' industrial SBCs

WinSystems offers off-board batteries for our industrial, extended temperature, single board computers (SBCs). They are designed to provide standby power for real time clock and CMOS setup RAM functions.

WinSystems selected Lithium Thionyl Chloride (LTC) batteries as this technology offers higher energy density by weight and volume as compared to alkaline battery technology. Plus these batteries operate in temperatures ranging from -40°C to +85°C. LTC batteries are better suited for applications with low continuous current and moderate pulse current requirements. Their long service life and low self-discharge rate make them ideally suited for use in harsh or inaccessible environments like utilities, transportation, oil and gas monitoring, and data logging.

The off-board battery is wired to a 3-pin Molex connector that plugs directly into the WinSystems' SBC. A protection diode is on the negative lead to prevent accidental charging. A metal clamp is also included to securely mount the battery in an enclosure or mounting plate.

### SPECIFICATIONS

#### Electrical

- Nominal Voltage: 3.6V, for cells stored at +20°C for 12 months or less
- Nominal Capacity: 1650 mAh, BAT-LTC-E-36-16-1  
2700 mAh, BAT-LTC-E-36-27-1  
Discharged at 1mA at +25°C,  
2.0V cut-off voltage
- Maximum Recommended Continuous Current: 40mA  
Calculation levels; 50% nominal capacity, +25°C temperature, 2.0V cut-off voltage
- Protection Diode, Negative Lead: RoHS BAT 48 or equivalent



#### UL Certification

- BAT-LTC-E-36-16-1:  
Model ER14335, File Number MH45994
- BAT-LTC-E-36-27-1:  
Model ER14505, File Number MH45994

#### Mechanical

- BAT-LTC-E-36-16-1:  
Cell Diameter: 16 mm  
Cell Height: 35 mm  
Weight: 13 grams
- BAT-LTC-E-36-27-1:  
Cell Diameter: 16 mm  
Cell Height: 52 mm  
Weight: 19 grams

#### Diode Connector

Battery is supplied with 3-pin in-line Molex cable

#### Temperature

- Operating: -40°C to +85°C  
Storage Recommended Maximum: +30°C

### ORDERING INFORMATION

- BAT-LTC-E-36-16-1 External 3.6V, 1650 mAh battery with plug-in connector
- BAT-LTC-E-36-27-1 External 3.6V, 2700 mAh battery with plug-in connector

WinSystems reserves the right to make changes to products and/or documentation without further notification. Any presentation in this data sheet concerning performance is for informational purposes only and not warranties, either expressed or implied, of future performance.

Product names of other companies may be trademarks of their respective companies.

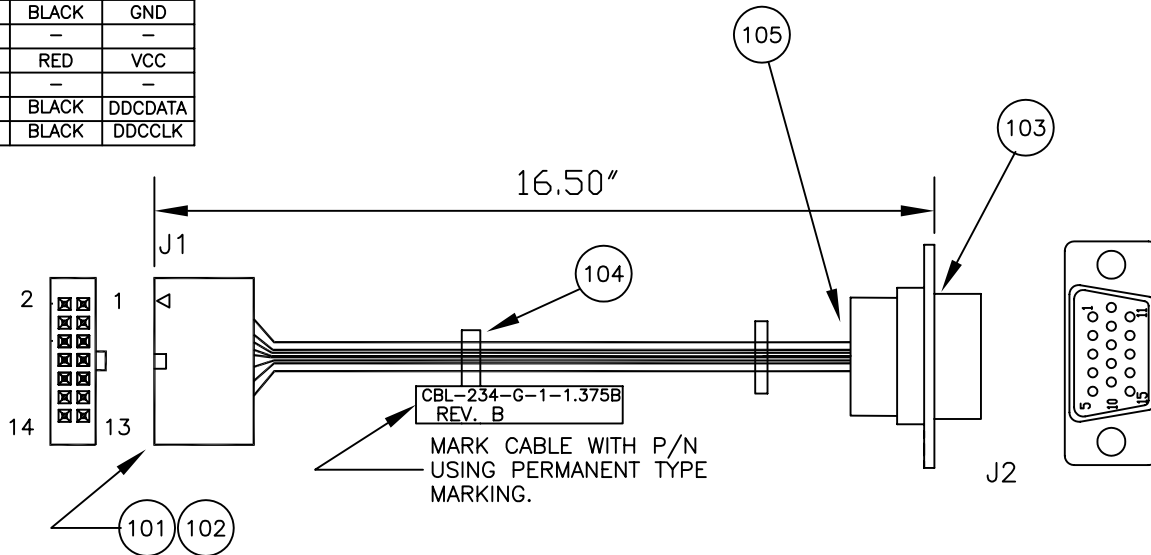


WIRE LIST			
J1	J2	COLOR	SIGNAL
1	1	RED	R
2	6	BLACK	GND
3	2	GREEN	G
4	7	BLACK	GND
5	3	BLUE	B
6	8	BLACK	GND
7	13	VIOLET	SYNC
8	5	BLACK	GND
9	14	YELLOW	SYNC
10	10	BLACK	GND
-	4	-	-
14	9	RED	VCC
-	11	-	-
11	12	BLACK	DDCDATA
13	15	BLACK	DDCCLK

**\*ALL ALTERNATES MUST BE ELECTRICAL and MECHANICAL EQUIVALENTS to SPECIFIED PARTS, and must be RoHS COMPLIANT.**

**RoHS Compliance Notice: All Vendors providing quotations and/or materials to WinSystems, Inc., must supply a RoHS Directive "Certificate of Compliance", referencing the part number(s) of delivered items.**

\*NOTE: HEAT SHRINK AT SOLDER CONNECTIONS.

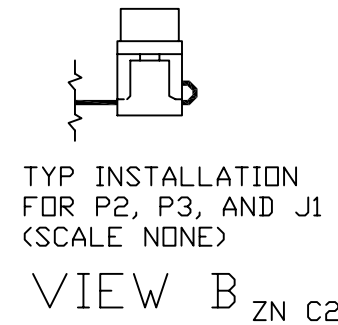
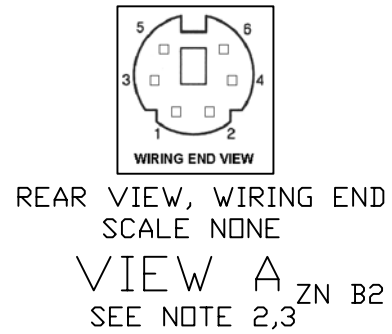
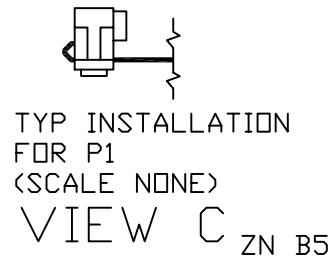


DET.	REF.	DESCRIPTION	MANUFACTURER	MPART NO.	WIN. NO.	-1	100		
100	EI	CBL 14P, 2mm TO 15 FEMALE D-SUB				1			
101		HOUSING 2.00MM, 14 POS	MOLEX	51110-1451	201-0014-001		1	RoHS	
102		CRIMP TERMINAL 50394	MOLEX	50394-8051	201-0014-002		14	RoHS	
103		15 POSITION HIGH DENSITY (VGA) SOCKET(FEMALE) D-SUB SOLDER	KELTRON	DNH-15SYCSSG			1	RoHS	
104	*	WIRE TIE 4"	PANDUIT (MOUSER)	PLT1M-M			2	RoHS	
105		SHRINKABLE TUBING 3:1 HIGH SHRINK RATIO POLYOLEFIN	ALPHA WIRE	FIT-321-1/8			8"	RoHS	
W1	*	WIRE 26 AWG PVC BLACK	ALPHA	7053/2			80"	RoHS	
W2	*	WIRE 26 AWG PVC RED	ALPHA	7053/3			16"	RoHS	
W3	*	WIRE 26 AWG PVC YELLOW	ALPHA	7053/5			16"	RoHS	
W4	*	WIRE 26 AWG PVC GREEN	ALPHA	7053/4			16"	RoHS	
W5	*	WIRE 26 AWG PVC BLUE	ALPHA	7053/6			16"	RoHS	
W6	*	WIRE 26 AWG PVC VIOLET	ALPHA	7053/10			16"	RoHS	
	*								
	*								
*		ALT WIRE MAY BE USED MUST BE UL STYLE 1429.							

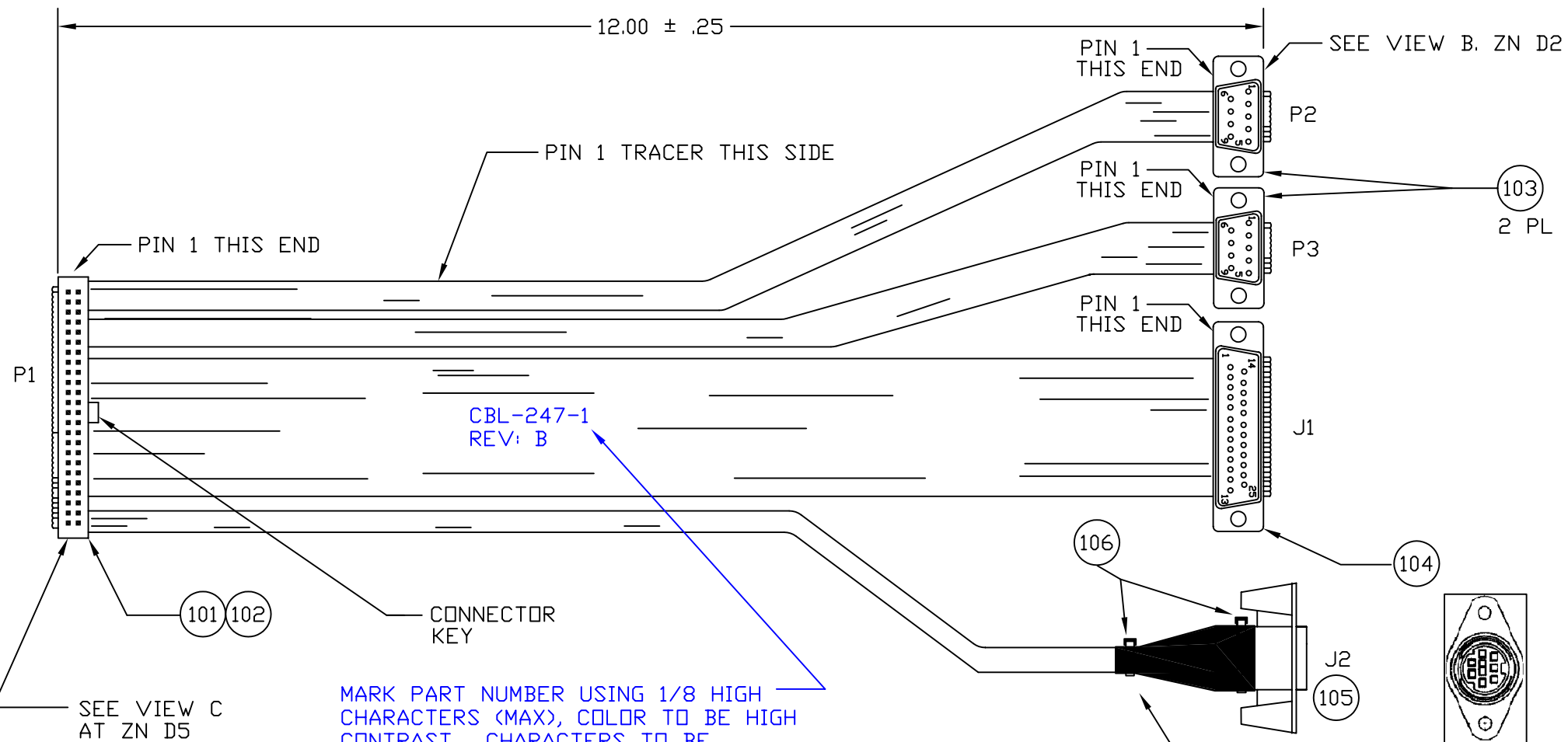
NOTE: CABLE ASSY MUST BE ELECTRICALLY TESTED.

THIS DRAWING IS CAD GENERATED. COORDINATE REVISIONS WITH DOCUMENTATION CONTROL

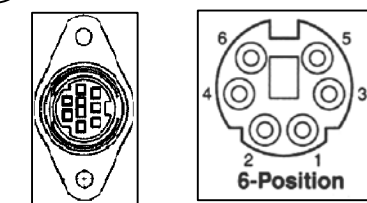
<b>WinSystems, Inc.</b> "THE STD BUS AUTHORITY"				SCALE 1 TO 1		TOL NOTED	
				DRAWING NO. CBL-234-G-1-1.375B		*RoHS*	
TITLE 14 POS., 2.0 MM TO 15 FEMALE D-SUB				SHEET NO. 1 OF 1			
DRAWN	M.BROWNING	DATE	10.12.06	APPRV	DATE		
CHKD		DATE		REV: B	DATE		



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED
B4	A	INITIATED	05/16/00	M.BROWNING
	B	ILLUSTRATE HEAT SHRINK PLACEMENT	06/14/00	M.BROWNING



MARK PART NUMBER USING 1/8 HIGH CHARACTERS (MAX), COLOR TO BE HIGH CONTRAST. CHARACTERS TO BE PERMANENT. METHOD OF MARKING OPTIONAL. METHOD OF MARKING SHALL NOT DEGRADE CABLE. LOCATE APPROX AS SHOWN.



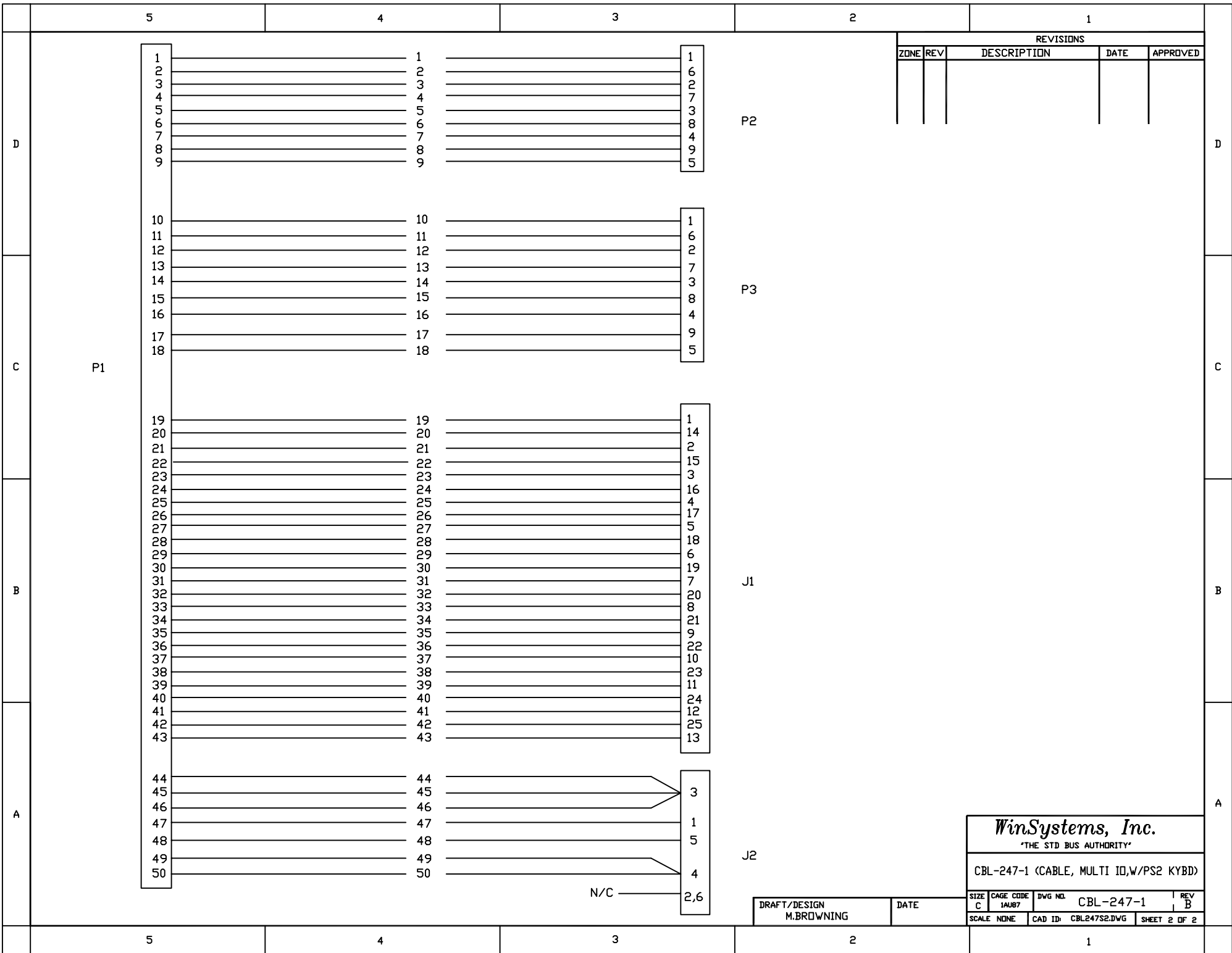
- NOTES:**
1. INSTALL P1 PRIOR TO SPLITTING RIBBON CABLE. SPLIT TO BE FLUSH TO WITHIN .20 INCHES OF P1. SPLIT RIBBON CABLE IN SUCH MANDOR AS NOT TO DEGRADE ADJACENT WIRES. METHOD OF SPLITTING CABLE OPTIONAL.
  2. INSTALL 1/8" DIA. HEAT SHRINK TUBING OVER SOLDERED, SPLICE CONNECTIONS.
  3. INSTALL 3/16" I.D. HEAT SHRINK TUBING OVER AREA OF RIBBON CABLE THAT IS SPLICED, SOLDERED, "JACKETING" CONNECTOR HOUSING AS SHOWN AT J2. ADD WIRE TIES(2) OVER HEAT SHRINK FOR STRAIN RELIEF.

DET	REF	DESCRIPTION	MANUFACTURER	MPART NO.	WIN. NO.	-1	100
100	EI	CABLE, MULTI ID, W/PS2 KYBD			CBL-247-1	1	
101	*	RIBBON CONN. 50 PIN	PANDUIT	050-050-455	270-0050-455	1	
102		STRAIN RELIEF, 50 PIN	PANDUIT	050-000-050	271-0050-500	1	
103	**	DSUB, 9PIN MALE	ALPHA	FCC-282-9	272-0009-200	2	
104	**	DSUB, 25 SOCKET FEMALE	ALPHA	FCC-283-25	272-0025-100	1	
105		6 PIN MINI-DIN FEMALE (PS/2 STYLE)	GOLDEN PACIFIC ELECTRONICS	MDC-166		1	
106		WIRE TIE 4'	MOUSER			2	
W1	***	28AWG, RIBBON CABLE	PANDUIT	050F28V10-C	269-0010-000	14'	
*		ALT. IDC CONN. MAY BE USED, MUST MEET MIL-C-83503.					
**		ALT. D-SUB MAY BE USED, MUST MEET MIL-C-24308					
***		ALT. WIRE MAY BE USED, MUST BE STYLE UL2651.					

**CAD MODEL FIND CHART**

SHEET NO.	REV. LTR	CAD MODEL ID NO.
1	B	CBL247S1.DWG
2		CBL247S2.DWG

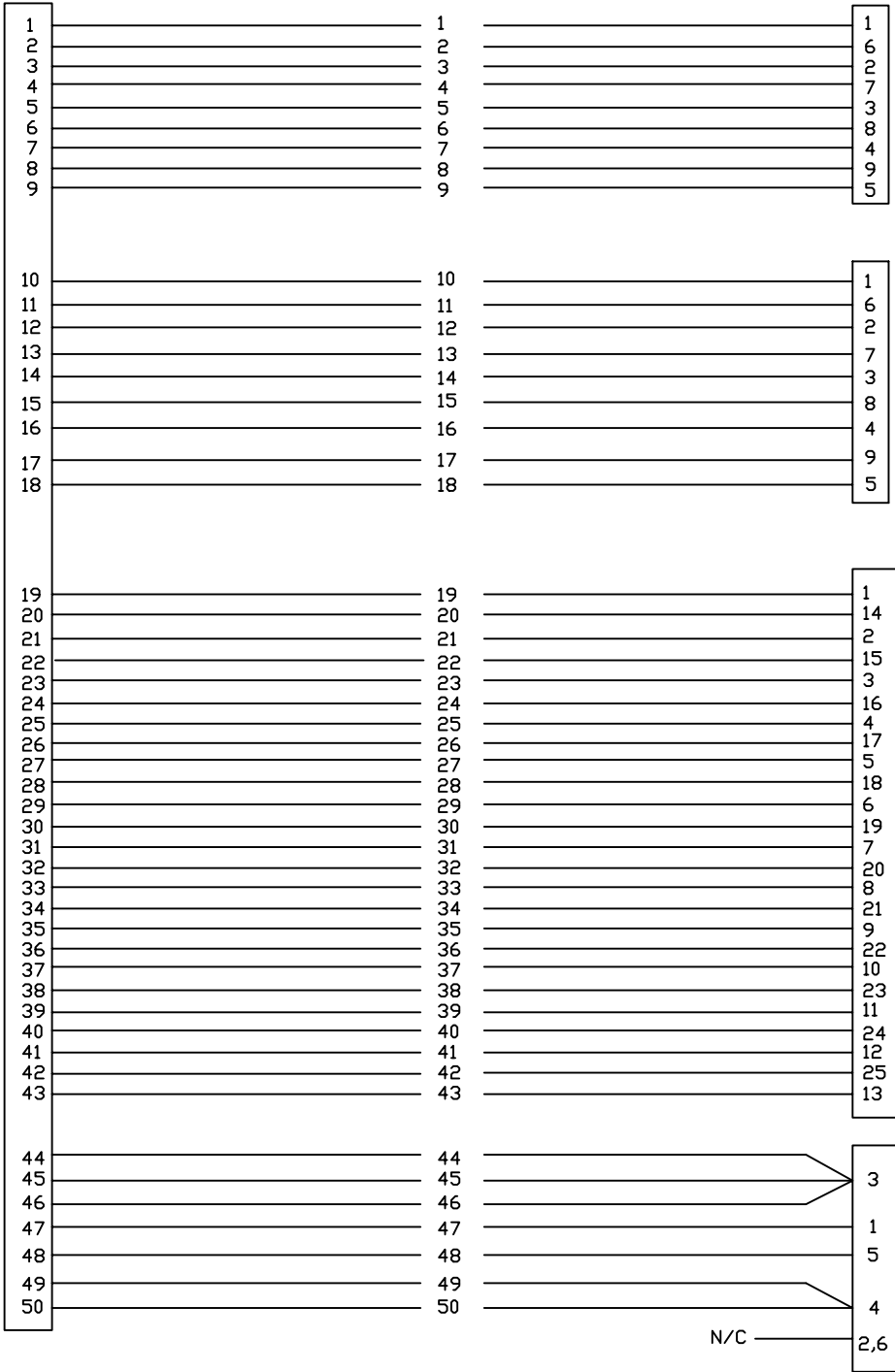
UNLESS OTHERWISE SPECIFIED DIMENSIONS ARE IN INCHES. TOLERANCE FRACTIONS: ANGELES: ± 1/2" DECIMALS: .XX ± .03 .XXX ± .010	CUSTOMER APPROVAL	DATE	<b>WinSystems, Inc.</b> "THE STD BUS AUTHORITY" CBL-247-1 (CABLE, MULTI ID, W/PS2 KYBD)
	APPROVAL	DATE	
	CHECKER	DATE	
	DRAFT/DESIGN	DATE	
	M.BROWNING	05/16/00	SIZE C CAGE CODE 1A087 DWG NO. CBL-247-1 REV B SCALE 1/1 CAD ID: CBL247S1.DWG SHEET 1 OF 2



REVISIONS				
ZONE	REV	DESCRIPTION	DATE	APPROVED

<b>WinSystems, Inc.</b>			
"THE STD BUS AUTHORITY"			
CBL-247-1 (CABLE, MULTI IO,W/PS2 KYBD)			
SIZE C	CAGE CODE 1AUB7	DWG NO. CBL-247-1	REV B
SCALE NONE	CAD ID CBL247S2.DWG	SHEET 2 OF 2	

DRAFT/DESIGN M.BROWNING	DATE
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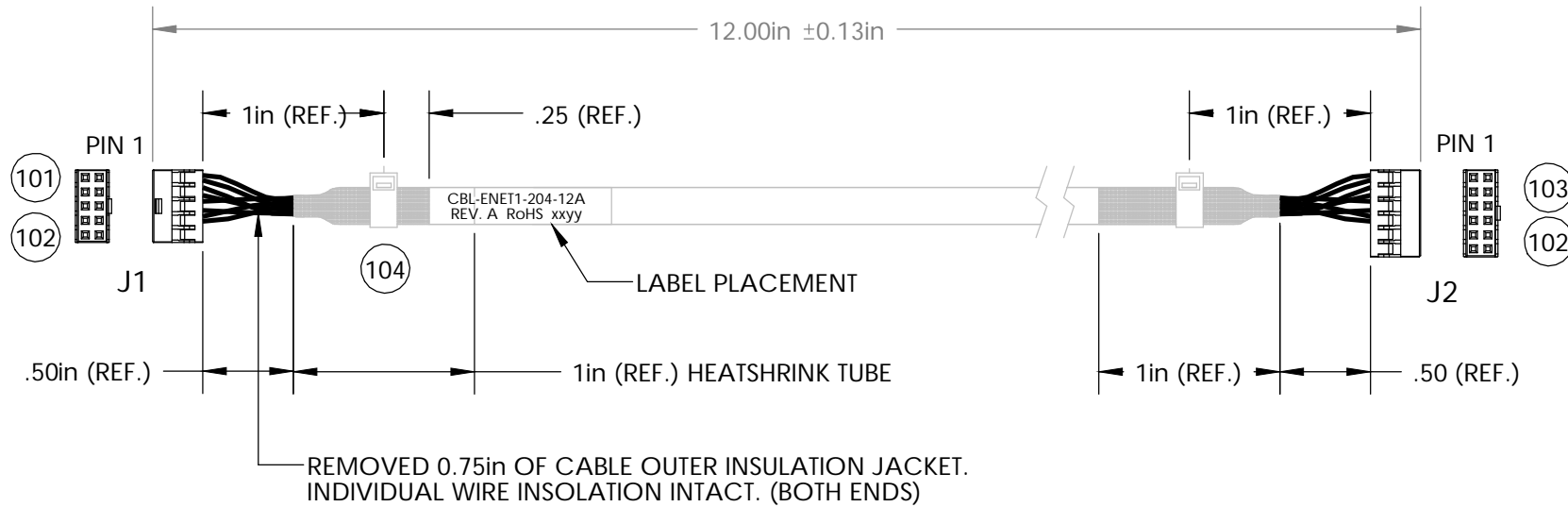
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REVISION INFORMATION

REV.	DESCRIPTION	DATE	NAME
A	NEW DRAWING	10/07/2010	V. TRAN

NOTE:

- ASSEMBLY MUST COMPLY WITH SPECIFICATIONS OF MANUFACTURE AND ACCEPTANCE (RoHS M&A) OF RoHS COMPLIANCE CABLE AND CABLE ASSEMBLY FOR WINSYSTEMS INC.



DET.	REF.	DESCRIPTION	MANUFACTURER	MFG. PART NUMBER	QUANTITY
101	J1	HOUSING, 2.00mm PITCH MILLI-GRID, 10-PIN	MOLEX	51110-1060	1
102	J1, J2	TERMINAL, 2.00mm PITCH MILLI-GRID	MOLEX	50394-8051 or 050394-8100	16
103	J2	HOUSING, 2.00mm PITCH MILLI-GRID, 12-PIN	MOLEX	51110-1260	1
104		4" WIRE TIE	PANDUIT	PLT1M-M	2
105		HEATSHRINK TUBING, 3:1 HIGH SHRINK RATIO POLYOLEFIN	ALPHA WIRE	FIT-321-1/4	2"
W1		CABLE, CAT-5e 350MHz STP TYPE CM(UL) C(UL), GIGABIT	QUABBIN	2902	12"
W1*	ATL	CABLE, CAT 5e 350MHz STP TYPE CM(UL) C(UL), GIGABIT	SHAXON INDUSTRIES	UL626S-8GY	12"

WIRE LIST			SIGNALS	
J1	J2	COLOR	1000 BASE-T	10/100 BASE-T
1	1	ORANGE STRIPE	BI_DA+	TX+
2	2	ORANGE	BI_DA-	TX-
3	3	GREEN STRIPE	BI_DB+	RX+
4	4	BLUE	BI_DC+	
5	5	BLUE STRIPE	BI_DC-	
6	6	GREEN	BI_DB-	RX-
7	7	BROWN STRIPE	BI_DD+	
8	8	BROWN	BI_DD-	
9	9		NC	
10	10		NC	
	11		NC	
	12		NC	

DRAWN: Vincent Tran

CHECKED: B. Alexander

DATE: 10/07/2010

APPROVAL: NAME



715 STADIUM DRIVE.  
ARLINGTON, TX. 76011

TITLE: CABLE, ETHERNET,  
2.00mm 2x5 TO 2mm 2x6 CONNECTOR

SCALE: 1:1

SHEET 1 OF 1

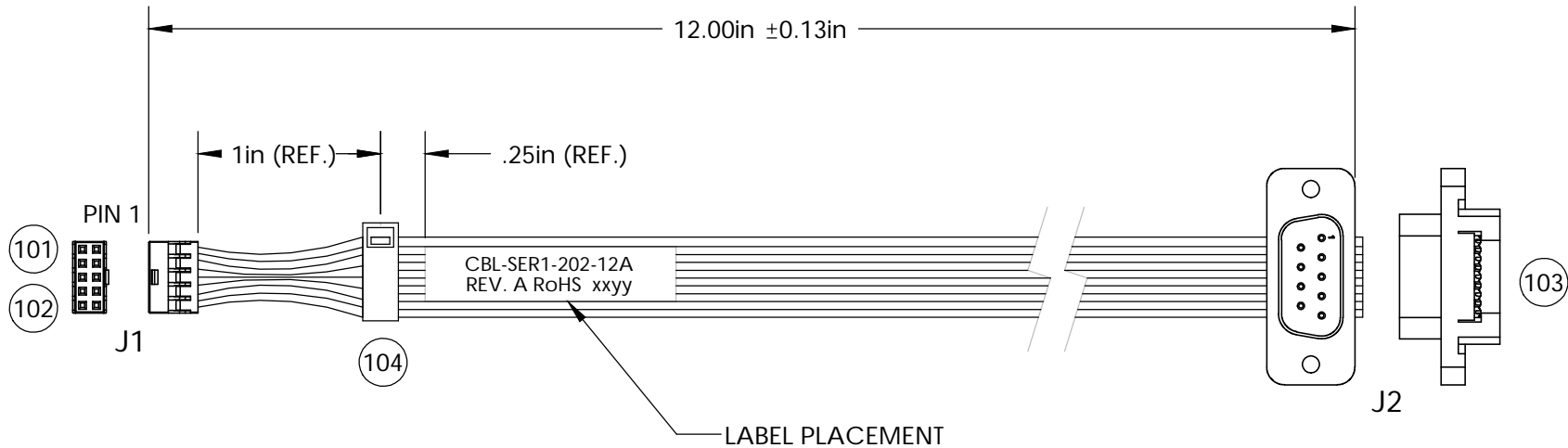


REVISION INFORMATION

REV.	DESCRIPTION	DATE	NAME
A	NEW DRAWING	09/17/2010	V. TRAN

NOTE:

1. ASSEMBLY MUST COMPLY WITH SPECIFICATIONS OF MANUFACTURE AND ACCEPTANCE (RoHS M&A) OF RoHS COMPLIANCE CABLE AND CABLE ASSEMBLY FOR WINSYSTEMS INC.



DET.	REF.	DESCRIPTION	MANUFACTURER	MFG. P/N	QTY.
101	J1	HOUSING, 2.00mm PITCH MILLI-GRID	MOLEX	051110-1060	1
102	J1	TERMINAL, MILLI-GRID	MOLEX	050394-8051 or 050394-8100	10
103	J2	DSUB MALE 9-PIN W/ STRAIN RELIEF #4-40 INSERTS	ITW-PANCON	IDM9PT5 WITH DA009	1
104		4" WIRE TIE	PANDUIT OR EQUIVALENT	PLT1M-M OR EQUIVALENT	1
W1		RIBBON CABLE, 10-CONDUCTOR, 28 AWG	ITW-PANCON	050F28V10CR	12"

WIRE LIST		
J1	J2	SIGNAL
1	1	DCD
2	6	DSR
3	2	RX
4	7	RTS
5	3	TX
6	8	CTS
7	4	DTR
8	9	RI
9	5	GND
10		

DRAWN: Vincent Tran

CHECKED: B. Alexander

DATE: 09/17/2010

APPROVAL: NAME



715 STADIUM DRIVE.  
ARLINGTON, TX. 76011

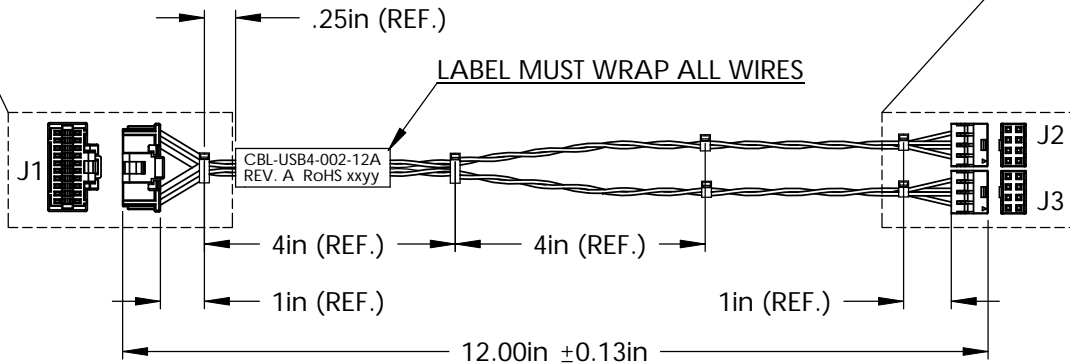
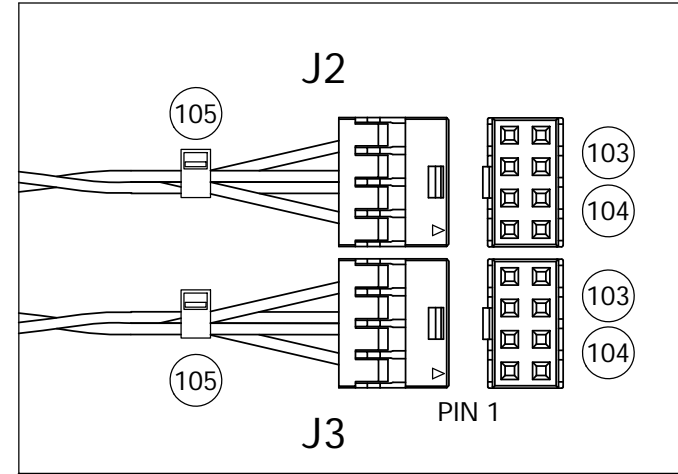
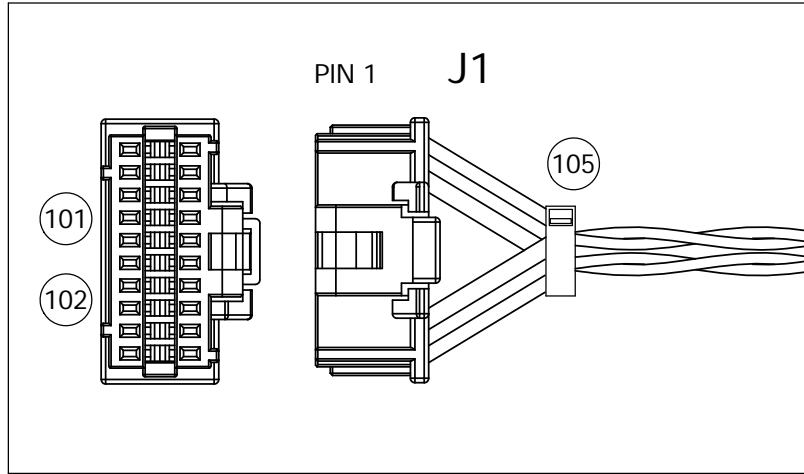
TITLE: CABLE, SERIAL,  
2.00mm PITCH 2x5 TO DSUB 9-PIN MALE

SCALE: 1:1

SHEET 1 OF 1

- NOTE: 1. ASSEMBLY MUST COMPLY WITH SPECIFICATIONS OF MANUFACTURE AND ACCEPTANCE (RoHS M&A) OF RoHS COMPLIANCE CABLE AND CABLE ASSEMBLY FOR WINSYSTEMS INC.  
 2. THREE TWISTS PER INCH TYPICAL FOR TWISTED PAIRS

REVISION INFORMATION			
REV.	DESCRIPTION	DATE	NAME
A	NEW DRAWING	06/22/2010	V. TRAN



WIRE LIST					
J1	J2	J3	TWISTED PAIRS	COLOR	SIGNAL
1	1			RED	VCC
3	3		TWISTED PAIRS	WHITE	D0-
5	5			GREEN	D0+
7	7			BLACK	GND
9					
11					
13	2			RED	VCC
15	4		TWISTED PAIRS	WHITE	D2-
17	6			GREEN	D2+
19	8			BLACK	GND
2		1		RED	VCC
4		3	TWISTED PAIRS	WHITE	D1-
6		5		GREEN	D1+
8		7		BLACK	GND
10					
12					
14		2		RED	VCC
16		4	TWISTED PAIRS	WHITE	D3-
18		6		GREEN	D3+
20		8		BLACK	GND

DET.	REF.	DESCRIPTION	MANUFACTURER	MFG. PART NUMBER	QTY
101	J1	HOUSING, 1.00mm PITCH, PICO-CLASP	MOLEX	501189-2010	1
102	J1	TERMINAL, PICO-CLASP	MOLEX	501193-2000	20
103	J2-J3	HOUSING, 2.00mm PITCH, 8 POS	MOLEX	51110-0860	2
104	J2-J3	TERMINAL, Milli-Grid	MOLEX	50394-8051	16
105		4" WIRE TIE	PANDUIT (OR EQUIVALENT)	PLT1M-M (OR EQUIVALENT)	6
W1		WIRE, 28 AWG, RED	MIL-STD	MIL-W-16878/6-BCB-2	48"
W2		WIRE, 28 AWG, GREEN	MIL-STD	MIL-W-16878/6-BCB-5	48"
W3		WIRE, 28 AWG, WHITE	MIL-STD	MIL-W-16878/6-BCB-9	48"
W4		WIRE, 28 AWG, BLACK	MIL-STD	MIL-W-16878/6-BCB-0	48"

DRAWN: Vincent Tran

CHECKED: B. Alexander



715 STADIUM DRIVE.  
ARLINGTON, TX. 76011

TITLE: CBL-USB4-002-12, TERMINATED  
USB, 2x10 1mm TO 2 OF 2x4 2mm, 12"

SCALE: NONE

DATE: 06/22/2010

APPROVAL: NAME

SHEET 1 OF 1