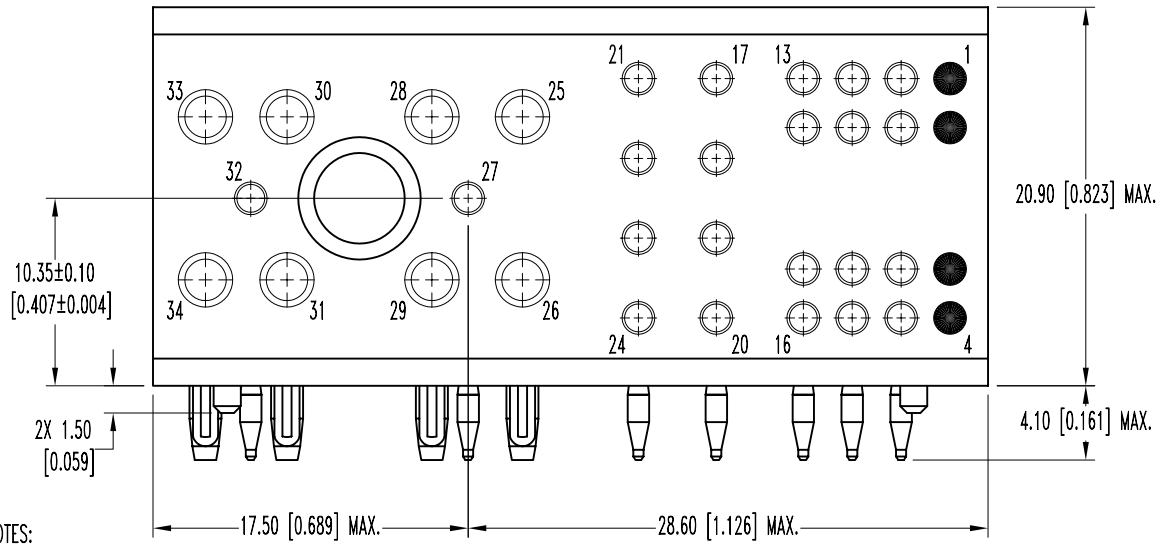
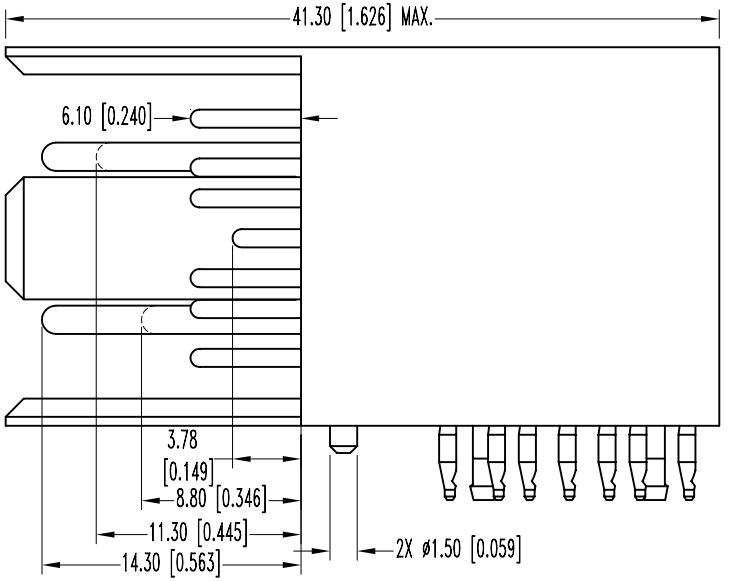
DATE	REV	REVISION RECORD	APP	DR	CK
7-27-05	C	ECO 24419	RCW	LO	TK
10-7-05	D	ECO 24813	COLE	TH	TK
2-24-06	E	ECO 25553	RCW	ME	YK
11-27-06	F	ECO 27079		YK	





NOTES:

1. MATERIALS AND FINISHES:
   INSULATOR: GLASS FILLED POLYESTER, UL 94V-0. COLOR: BLUE.
   SIZE 16 CONTACTS: PRECISION MACHINED COPPER ALLOY WITH GOLD FLASH OVER NICKEL.
   SIZE 22 CONTACTS: PRECISION MACHINED COPPER ALLOY WITH GOLD FLASH OVER NICKEL.
   OPTIONAL CONTACT PLATING C1: 0.80µ [0.000030 INCH] GOLD OVER NICKEL.
2. ELECTRICAL CHARACTERISTICS:
   CONTACT CURRENT RATING, PER UL 1977. SEE TEMPERATURE RISE CURVE IN CATALOG FOR DETAILS.
   SIZE 16 POWER CONTACTS: 30 AMPERES CONTINUOUS ALL CONTACTS UNDER LOAD.
   SIZE 22 SIGNAL CONTACTS: 2 AMPERES NOMINAL RATING.
   INITIAL CONTACT RESISTANCE; TERMINATION TO TERMINATION.
   SIZE 16 CONTACT: 0.0022 OHMS MAXIMUM.
   SIZE 22 CONTACT: 0.0085 OHMS MAXIMUM.
   PER IEC 512-2, TEST 2b.
   INSULATOR RESISTANCE: 5 G OHMS PER IEC 512-2, TEST 3a.
   PROOF VOLTAGE:
   CONTACTS 5-16: 1,000 V r.m.s.
   CONTACTS 17-34: 2,000 V r.m.s.
   CREEPAGE AND CLEARANCE DISTANCE; MINIMUM:
   CONTACTS POSITIONS 5-16 TO ANY OTHER CONTACT WITHIN THIS GROUP: 0.7mm [0.028 inch]
   CONTACTS POSITIONS 17-24 TO ANY OTHER CONTACT WITHIN THIS GROUP: 2.5mm [0.098 inch]
   CONTACTS POSITIONS 25-34 TO ANY OTHER CONTACT WITHIN THIS GROUP: 1.4mm [0.055 inch]
   CONTACTS POSITIONS 13-16 TO 17-20: 3.0 mm [0.055 inch].
   CONTACTS POSITIONS 21-24 TO 25,26: 4.0 mm [0.157 inch].
   CONTACTS POSITIONS 25, 26 TO 27-29: 2.0mm [0.079 inch].
3. WORKING TEMPERATURE: -55°C TO +125°C.
4. USES 2X PHILLIPS PAN HEAD SELF-TAPPING SCREW, 2-28 TRIPLASK II TRILOBULAR THREADS OR EQUIVALENT. INSTALL SCREWS TO A DEPTH OF 3.5mm MINIMUM, 5.0mm MAXIMUM.
5. POSITIONS 1, 2, 3, 4 ARE NOT POPULATED AND RESERVED FOR FUTURE USE.
6. CONNECTOR CAN BE SUPPLIED WITH POSITIONS 17-24 UNPOPULATED WHEN ANALOG TESTS CIRCUITS ARE NOT USED. THIS WILL PROVIDE A COST SAVINGS. PART NUMBER VPB22W8M6200A1.
7. DIMENSIONS ARE IN MILLIMETERS [INCHES].

CONTACT NUMBER	CIRCUIT	SEQUENTIAL MATING
1-16	HARDWARE MANAGEMENT	BEFORE ENABLE
17-24	ANALOG TEST	BEFORE ENABLE
26	LOGIC GROUND	FIRST
25	EMI CHASSIS GROUND	FIRST
29	VRTN_B	FIRST
28	VRTN_A	FIRST
27	ENABLE B	LAST
32	ENABLE A	LAST
31	-48V_EARLY_B	FIRST
30	-48V_EARLY_A	FIRST
34	-48V_B	THIRD (2.5mm MINIMUM TO ENABLE)
33	-48V_A	SECOND
ALL FIRST MATE CONTACTS ENGAGE PRIOR TO SHEILDS OF ZD CONNECTOR		

POSITRONIC INDUSTRIES INC.
www.connectpositronic.com

DECIMAL TOL. ±0.38 [0.015]
ANGULAR TOL. ±5°

VP SERIES

SCALE N.T.S.

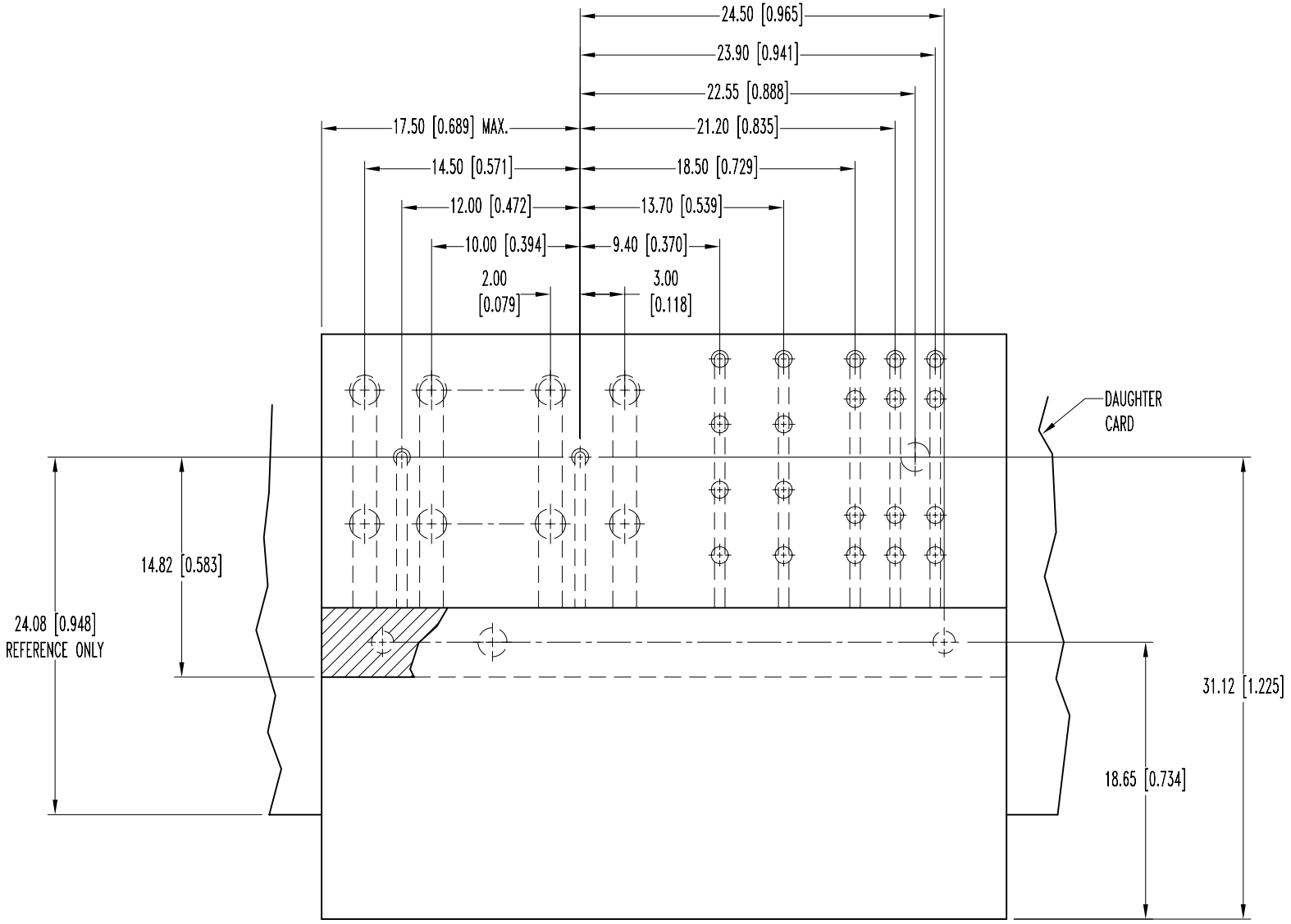
DRAWN BY J. GREEN
APPROVED BY RCW

TITLE
VPB30W8M6200A1

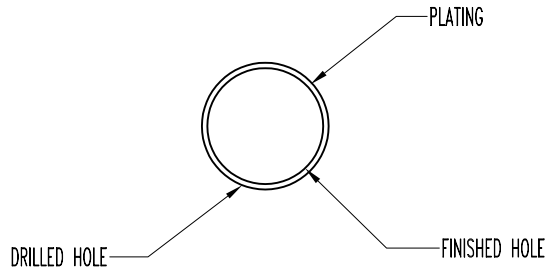
DATE 5-24-02

DRAWING NUMBER SK4340 SHEET 1 OF 3

REV. F

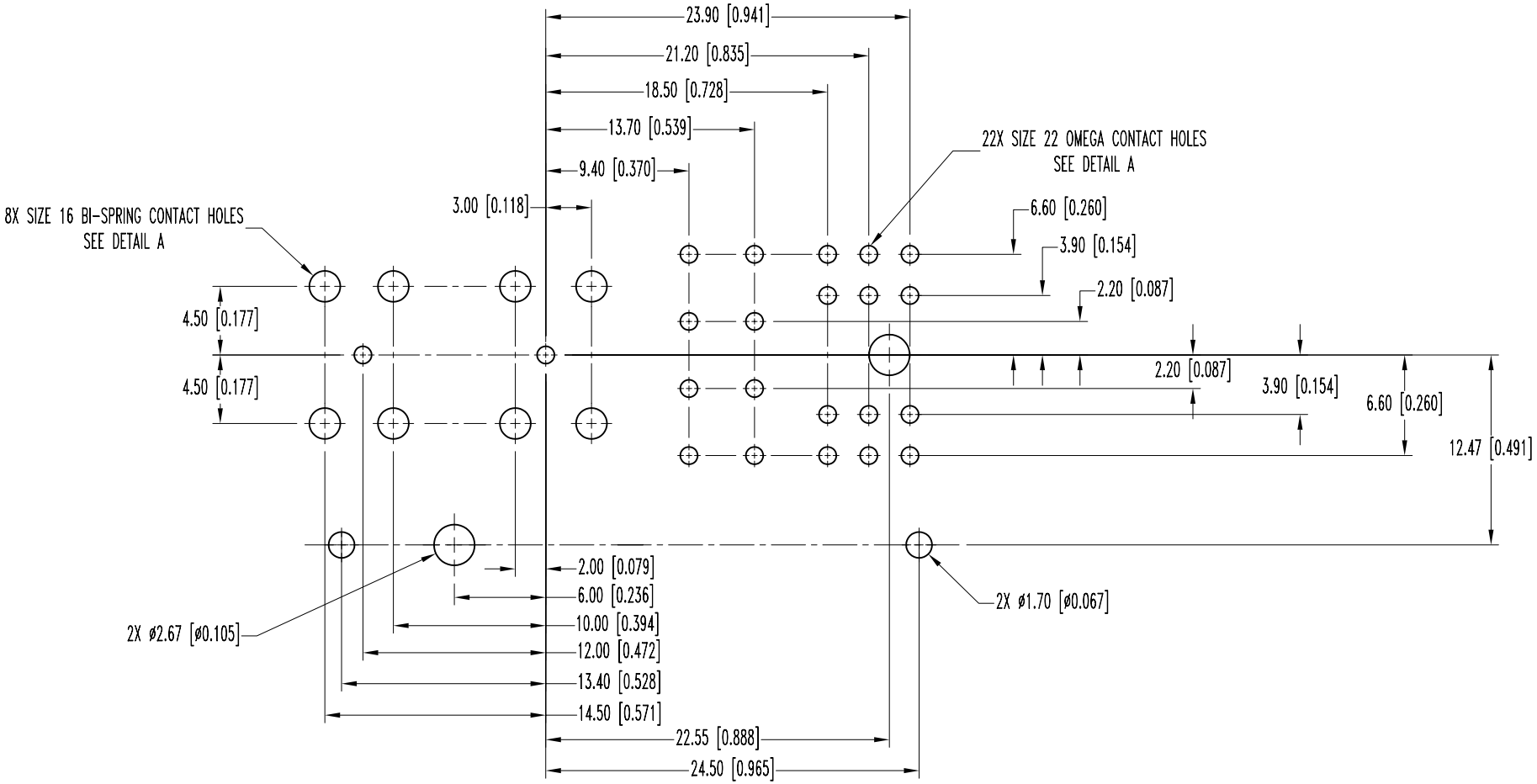


DRAWING NUMBER		REV.
SK4340	SHEET 2 OF 3	F



PRESS-FIT CONTACT HOLE SEE SK6370

DETAIL A



CONTACT HOLE PATTERN

DRAWING NUMBER		REV.
SK4340	SHEET 3 OF 3	F

Positronic Industries

white paper

Positronic's Blue Connectors are Green

Energy is essential to everyone. Often we do not give thought to where energy comes from or how much we consume until energy is not readily available.

Energy has become an area of focus for governments, private industry, and citizens. Enhanced methods of producing energy from traditional sources, development of new energy sources and conservation of energy from all sources have become more crucial than ever before.

Across the world, a vast amount of energy is consumed by the electronic equipment which we all rely upon in our daily lives. An unavoidable waste of energy occurs when power is distributed throughout electronic equipment. As electrical current flows through conductors and connectors, unwanted heat is generated in proportion to the amount of electrical resistance encountered.

Lowering resistance in connector contacts and conductors will reduce the amount of heat generated, and result in less lost or wasted energy. Additional energy will be saved as cooling systems will have less heat to draw out of the equipment.

In the past, the primary metric for power connectors has been contact current ratings. In the future, contact resistance may become equally important. While it is true that contact resistance and contact current ratings are closely associated, contact current ratings cannot be used to quantify the energy consumed by contacts.

Current ratings are based on the temperature rise of a connector or contact at a specific current level. A connector design or test method allowing relatively rapid heat dissipation may yield a reasonable temperature rise, while a relatively high amount of energy is still being wasted.

Within the connector industry, there are a variety of test methods used to quantify a particular performance metric. Different test methods can yield different values for the same metric. This lack of uniformity can be confusing to connector users who are trying to compare connectors offered by various manufacturers. Third party assessment can give connector users a common point of reference when making connector choices.

Contact resistance is used by UL Environment as the metric to determine the relative efficiency of connector contacts. UL Environment offers independent third party assessment and verification of claims made by manufacturers.

continued on next page

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Once assessments are made, UL Environment issues an Environmental Claims Validated (ECV) Mark, in this case contact resistance. The ECV will aid power connector users in evaluating contact efficiency as it relates to energy consumption. Visit www.ulenvironment.com for more information.

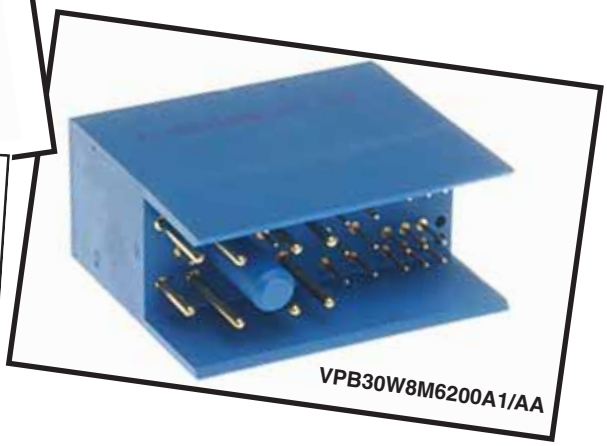
As an example, recently an ECV was presented to Positronic by UL Environment. The ECV lists the average contact resistance for Positronic's VPB series size 16 power contacts at less than one milliohm each. This low contact resistance is achieved by use of high conductivity contact materials. In addition, Positronic's Large Surface Area (LSA) contact system is utilized as the interface between male and female power contacts in VPB series connectors.

The VPB series was designed for use as the Zone 1 power connector in AdvancedTCA (ATCA) telecommunication computing systems. Zone 1 connectors provide power from backplanes to front boards in ATCA chassis. The low contact resistance of Positronic's VPB series provides energy savings opportunities in any application using this connector.

The following formula verifies the energy savings of a lower resistance contact at a given current: *Power Consumption (Watts) = Current Flow^2 (Amperes^2) X Contact Resistance (Ohms)* Contact resistance has a one-to-one effect on power consumption. If, the contact resistance is reduced by half, the power consumption is reduced by half.

Low resistance power contacts also provide benefits in systems sensitive to voltage drop. This is demonstrated in the following formula: *Voltage drop across contact pairs = Current Flow (Amperes) X Contact Resistance (Ohms).* Once again, contact resistance has a one-to-one effect. Reducing the contact resistance by half reduces voltage drop by half.

Higher energy costs and government legislation will cause energy conservation efforts to continue to intensify. If we consider the vast numbers of power contacts in electronic equipment around the world, it is clear how lower contact resistance can play a role in meeting energy conservation goals. Positronic utilizes high conductivity contact materials and unique contact interfaces to provide low contact resistance in our power connector products. To learn more about these products, visit connectpositronic.com.



UL Environment™
ENVIRONMENTAL CLAIMS VALIDATED

- ✓ Average power contact resistance is less than 0.001 ohms
- ✓ Average signal contact resistance is less than 0.005 ohms
- ✓ RoHS compliant

VPB Series ECV Mark

Positronic Industries
white paper

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