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ERNI combines high-performance and reliability with miniature, fine pitch designs for rugged controller applications...

ERNI OPTIMIZES BOARD AND WIRE CONNECTOR SOLUTIONS FOR INDUSTRIAL DRIVES AND CONTROLLERS

ERNI Electronics continues to support industrial automation by taking advantage of decades of electro-mechanical contact design and employing that experience in ruggedized factory applications. Industrial automation requires constant, highly reliable connectivity for high vibration environments. Miniaturization is also challenging interconnect solutions and options, but it does not imply foregoing electro-mechanical reliability and mating integrity in order to achieve density and space saving solutions.

Connectors with a contact pitch of 1.27 mm [.050"] or less are ideal for drive/servo controller applications. As important to connector density is the ability for the chosen solution to accommodate mating boards at different orientations or wire-to-board requirements in the same and proven product family. Polarization features, high temperature (up to 125 degree C) capability, optimal current rating density, forgiving mating tolerances, and long wipe lengths can be realized in a connector design focused on manufacturing, reliability and product life as required in the Industry 4.0 environment.

Proven to meet demanding drive and controller requirements, ERNI offers a wide and growing selection of electrical interconnect solutions. Product offerings include the high-density SMC connector series with board-to-board extenders; a robust and configurable MiniMez stacking connector series; and the newest MicroCon Series available in a high-density 0.8 mm pitch grid. The key to ERNI's proven designs are many, but 50+ years of engineering and manufacturing experience enables a two-sided female contact interface in even the finest pitch connector package.

The expanded SMC 1.27 mm [.050"] pitch connectors offers a board-to-board extender that allows parallel spacing between PCBs from 20 mm to 40 mm [1.57"]. The interposer extenders can be selected based on the tallest component in the controller or accommodate

varying enclosure widths. One side of the extender connector locks into a female connector so that mating and release is always on the opposite end. In addition to mezzanine connectors, the SMC offering also includes coplanar and perpendicular board-to-board solutions with a polarized interface and fully SMT termination with added strain relief features. A ribbon cable assembly rounds out the offering, accommodating high-temperature or halogen free application requirements.

The MiniMez product family is also equipped with a 1.27 mm pitch. This offering is designed around a ruggedized mezzanine orientation with a comprehensive selection of spacing heights and positions. With thick side walls, blind mating, and LCP housing materials, the MiniMez connector is built for demanding drive, servo and stepper applications. Pin counts for this two row connector range from 10 to 100 positions, and stacking heights range from 6.5 mm [.26"] to 20 mm [.79"]. MiniMez is available in solder (through hole) or SMT termination options.

The ERNI MicroCon 0.8 mm [.031"] pitch product family is the newest release and is based on the proven contact design from the SMC product family, but in a much smaller package. The pin-in-socket design utilizes a proven 2-point contact interface in an industry first 0.8 mm pitch offering. MicroCon is utilized for board-to-board stacking and with product extensions for perpendicular applications as well as coplanar. Offering blind mating, polarization and misalignment tolerances of +/-0.7mm, the SMT MicroCon product family is an optimal choice for LVD servo controller applications that require PCB space savings without compromising reliability in a ruggedized interface. A ribbon wire-to-board offering enhances this newest ERNI product family with polarization and reliable latching features without compromising board space.

“ERNI continues to offer and expand connection systems and cable assemblies that support varying board mating configurations in the most challenging of enclosures. The rugged, dual beam design delivers the performance, reliability and efficiency required for industrial automation and control systems. Our proven design and manufacturing capabilities continues to position ERNI in these long-life cycle applications where reliability is required over time,” said Sam Hines, Product Marketing Engineer at ERNI Electronics U.S.

For more information

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About ERNI

ERNI Electronics is a leading global manufacturer and worldwide supplier of a broad line of interconnects for the telecommunications, data communications, computer, industrial, and medical markets. ERNI Electronics GmbH belongs to the international ERNI Group of companies specializing in electrical engineering and electronics. At present, the ERNI Group employs some 650 people, with annual sales of approximately 150 million Euros. ERNI has manufacturing operations in Europe and Asia, as well as sales offices in more than 40 countries. ERNI products are also marketed via a worldwide network of representatives and leading distributors.