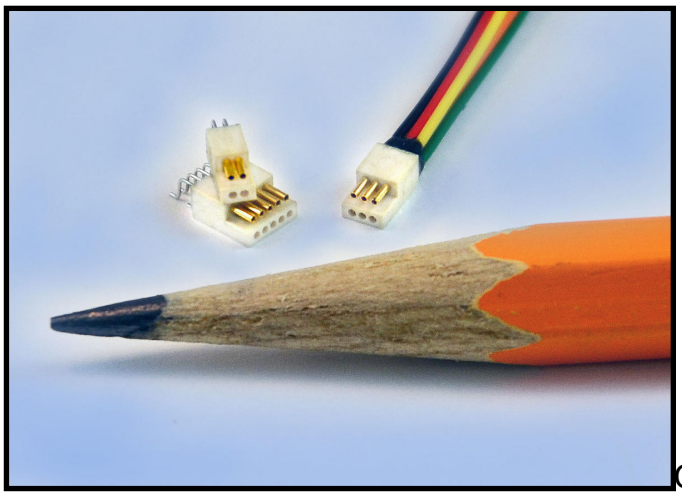
Ruggedized Nano Connectors Minimize Space Requirements



Omnetics' new Polarized Nano connector line, the PZN series, continues to add pin counts in response to customer demand. These ultra-miniature connectors feature Omnetics' military style pin and socket designs to provide uninterrupted electrical connections for portable applications that are exposed to high shock and vibration environments.

PZN connector contact spacing is set at 25 one thousandths of an inch and the design uses both male and female contacts in the same polarized insulator. The contacts are beryllium-copper flex pin systems plated with nickel and gold to assure long-range performance. Teflon® insulated 32 gauge twisted copper wire offers maximum flexibility of the interconnect system. Interface mating and alignment is assisted by the design of the insulator shell. Most applications include surface or through-hole board mounted designs mated to fine wire plug sets. Contact counts currently range from 4 to 12 positions and can be configured in a number of standard tail types as well as modified to meet custom requirements. The newest design has been increased to 24 positions to accommodate unique high-signal count circuitry in portable miniature circuits.

Current applications that benefit from the extreme miniaturization include; Military Surveillance Camera Circuits (for portable and remote weapon systems), Portable Computers (for remote mission systems), Robotic Hands, Retracting Arms, and even Ground Controlled Robotics benefit from their rugged space saving design. One unique design, in particular, is aimed at down-hole electronic measurement technology. Modern medical designers are increasingly using the PZN format to squeeze more electronics into smaller devices used to monitor and provide patient services. Other possible applications using the PZN connectors include; Drive Circuits for Hand-held Laser and Orthopedic tools. Custom connector design and solid models are available upon request. Miniature cabling is custom designed by Omnetics, or selected by the customer to meet the electrical requirements and fit the small size of the connectors.

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