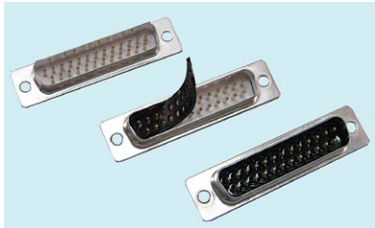


Adhesive Films Provide Consistent Seals



A manufacturer of rugged handheld devices required D-sub connections rated IP67 to withstand exposure to rain, sand, pollen, mud, and other contaminants found in outdoor environments. The company had attempted to seal their connectors with liquid sealants but found the dispensing process difficult to control and repeat, particularly when the assembly was subcontracted overseas. Sealant dripped onto contacts, left voids, or overfilled shells, causing functional failure or interference with mating connectors.

Multi-Seals, Inc. provided a high quality, highly repeatable sealing solution with its Poly-form™ preformed adhesives. Multi-Seals designed custom seals to match their customer's connectors. The device manufacturer loads the preformed seals into their connectors and batch-cures the assemblies in forced-air ovens. During cure, the preforms melt, filling and sealing the interfaces between pins, insulators, and metal shields. As the adhesive continues to cure, the liquid gels and sets, forming a seal that does not reflow when reheated during a subsequent soldering operation.

The pre-shaped Poly-form™ seals prevented the inconsistencies, drips, and waste that the manufacturer had experienced with its liquid adhesive. The seals provided by Poly-forms™ were highly consistent no matter which operators performed the sealing operation or where the assembly occurred. In addition, the flexible and durable Poly-forms™ were easy to handle, allowing significantly higher production rates and reduced labor costs for the device manufacturer.

When the manufacturer expanded its product line, Multi-Seals was able to supply rapid prototypes of new configurations to allow the customer to qualify and adjust preform dimensions for optimum seal results.

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ATI Lateral and Pivoting Compliance Devices



ATI Industrial Automation has developed two new series of compensators (patents pending) that allow compliance in multiple directions. These unique devices allow pieces to be gripped or routed reliably even if the workpiece is severely misaligned. Both of these series are designed for high endurance and high repeatability, and have robust guidance allowing for high moment loads in a compact work envelope.

The L1 Lateral Compensator is for use in automated assembly, loading and unloading machines, and more. The L1 Compensator allows for X-Y lateral compliance of ± 2.6 mm (min), with Z rotational compliance of ± 18 degrees. It also features a compact body that allows for direct mounting to many standard robot wrists using an ISO 63 mm robot flange Pattern. A position hold option allows the unit to be held in the offset state using air pressure to a supplemental set of pistons.

The P1 Pivoting Compensator is for use in automated assembly, bin picking, loading and unloading machines, robotic finishing, and more. Suitable for most 50 kg robots, the P1 Compensator offers rotational compliance of ± 13 degrees (min) in all three directions with no lateral movement. It also allows for direct mounting on many standard robot wrists using an ISO 125 mm robot flange pattern. The P1 Compensator is spring-biased toward the center position and can be adjusted to the desired stiffness by applying variable air pressure to the lock and unlock ports.

ATI Industrial Automation

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