

What is Datamate?

Datamate is a brand name used by Harwin for their first and most extensive high-reliability connector range. It has been on sale since 1980, and has proven to be very popular in all applications that demand a higher level of performance. But what exactly is this type of connector, and what does it achieve?

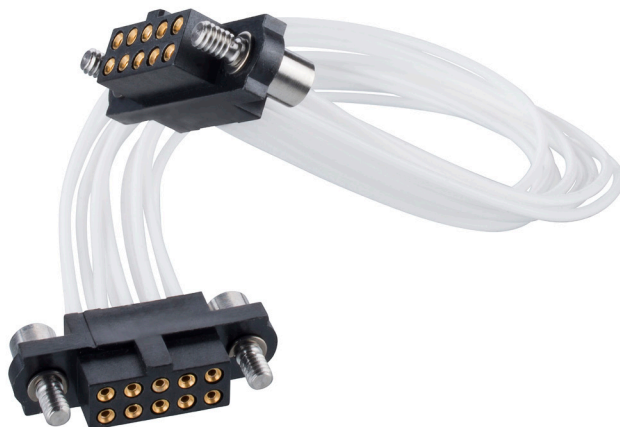
What is a High-Reliability Connector?

Connectors that are classed as “High-Reliability” (also shortened to high-rel or hi-rel) are designed to withstand some extremes of environment and handling problems. For the Datamate range, these include the following features:

- Operating Temperature Range – better than the +85°C or +105°C that is often seen on conventional pin headers and sockets, the Datamate range withstands -55 to +125°C.
- Vibration and Shock – Datamate has been tested to 10G and 20G vibration tests, and 100G shock (sudden stop). This makes it suitable for airplanes, race cars and space launch conditions.
- Number of mating cycles – with over 500 cycles possible, Datamate is suitable for testing and maintenance cycles, and module replacements.
- Connector-to-connector fixings – with added screws or latches, these mated products avoid unplanned disconnection, give

strain relief on cable tension, and keep the connectors together through the worst of the vibration.

- Shrouded contacts – by making sure both male and female contacts are protected from the side, accidental damage is prevented when the connectors are not mated.



What are the added benefits of Datamate?

Datamate is small. At just 2mm pitch, with a particularly compact height profile, it fits into spaces other connectors in this class would struggle to accommodate.

It is also lightweight but strong. The choice of materials and design means there is no added bulk.

The product choice is wide-ranging. Original Datamate (now known as Datamate L-Tek) used latches to join the connectors together. This product style has been overtaken by Datamate J-Tek, which is fitted with stainless steel jackscrews for improved connection strength and easier un-mating. Datamate Mix-Tek was then developed using the same housing style, which added power and coax contact options without increasing the product size.

Other features include:

- Surface Mount and Throughboard connections to the PCB, with vertical and horizontal options.

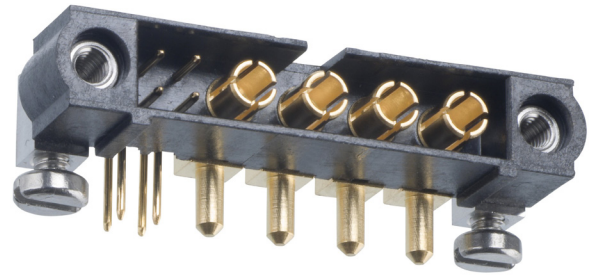
- Cable connectors for 10 to 32AWG wires or miniature coax cables (RG178 and similar). These cable options include both do-it-yourself kits and ready-made cable assemblies, designed to save on tooling and expertise.
- A selection of all-power, all-coax or power+signal mixed connectors off-the shelf, no production lead-time.
- In-depth product stocks both at Harwin and available from authorized distributors globally.



Why choose Datamate?

There are other connectors on the market with comparable performance. However, the price premium on these products is significantly higher. Datamate meets the ideal balance of very strong performance characteristics, with cost levels lower than generally expected on a premium product.

The Datamate range has been the connector of choice in many aviation and space applications, harsh environment vehicles and motorsport teams. Some connectors have been in service for many years, and still continue to provide reliable, robust performance.



Explore the Datamate connector range to find your best choice of rugged compact connectors.

