



NICOMATIC



Assembly upgrade: molded insulator & back resin (2020/10/21 03:16:12pm)

Nicomatic connectors, **especially the MIL-DTL-83513G DMM® connector range**, have to be more and more compatible with high & harsh requirements. To reach this target and in a continuous spirit of improvement we have decided **to upgrade our assembly process**.

First using our unique know-how about **molding technology acquired for several years**. The last stage is the integration of this main activity in our head quarter at Bons-en-Chablais, France. **The full DMM range benefits from of such a know-how**. Actually Nicomatic has invested in an innovative and accurate modular tooling realized by watch makers coming from the Mont-Blanc Valley. Tolerances are ± 0.01 for diameter and ± 0.02 for overall dimension. **Thanks to the modular structure Nicomatic can offer the entire range of configurations in standard**. A *Design For Assembly* process improved the design in order to be able to switch configurations and **produce a new series in less than 2 hours, which definitely contributes to keep a 97% On Time Delivery**.

Secondly innovating with **the way to assemble the shell and the insulator taking inspiration from mechanical keying**

Epoxy resin is dispensed from the back of the connector filling a concave area formed by a 70° surface on the insert and a "T" groove in the shell.

After polymerization the epoxy acts as a mechanical key thanks to both its rigidity and its adherence power.

The result is spectacular insert retention FIVE times higher than the Mil-83513 requirements

Third upgrading the assembly process by co-developing a high technology 2 axis automatic machine. This one embedding a dispenser which settles epoxy resin from the back of the connector. A dash code onto the Bill Of Material allows to compute automatically the XY trajectory data and calculate the resin volume. The fixed temperature of the room allows keeping constant viscosity parameters of the resin **insuring a perfect repeatability**.