



## Harwin Test Report Summary

**HT01702**

Contact Resistance after Aging of  
Datamate (M80 Series) Connectors

Datamate

A decorative graphic consisting of numerous thin, red, wavy lines that flow across the bottom half of the page, creating a sense of motion and depth.

## 1. **Introduction.**

### 1.1. **Description and Purpose.**

The Harwin Datamate (M80 Series) connector is manufactured to the requirements of BS9525-F0033. The following tests were carried out to test Datamate connector assemblies for contact resistance before and after artificial aging, with periods of 3 years and 15 years.

### 1.2. **Conclusion.**

The following data has been collated from Harwin test reports 404 and 452. All nine connector samples show that they are performing within the BS9525-F0033 contact resistance requirements. The contacts artificially aged by three years also show good resistance levels and perform well within the 20mΩ requirement. The final test, using samples aged up to fifteen years, produced very low resistance ratings; also remaining within specification.

## 2. **Test Method, Requirements and Results.**

### 2.1. **List of Test Samples.**

- a) Samples number 1-6 = M80-8911205 Female assembly with through-board termination mated with M80-8691222 Male assembly with through-board termination.
- b) Samples number 7 = M80-4100642 Female assembly with through-board termination mated with M80-5010642 Male assembly with through-board termination.
- c) Samples number 8 = M80-4101442 Female assembly with through-board termination mated with M80-5011442 Male assembly with through-board termination.
- d) Samples number 9 = M80-4102042 Female assembly with through-board termination mated with M80-5012042 Male assembly with through-board termination.

### 2.2. **Specification Parameters.**

The Initial Contact Resistance requirement as specified in BS9525-F0033 is 20mΩ, irrespective of age.

### 2.3. **Test Method and Results.**

Samples were mated and measured for contact resistance. They were then separated, aged for one cycle to IEC 326-2, the equivalent to three years normal storage. They were then re-mated and contact resistance was measured.

Aging	Sample 1	Sample 2	Sample 3	Sample 4	Sample 5	Sample 6
Initial	7.5mΩ	6.9mΩ	6.2mΩ	7.5mΩ	7.0mΩ	7.1mΩ
3 years	7.9mΩ	9.1mΩ	7.2mΩ	7.8mΩ	8.2mΩ	7.5mΩ

As above, but aged for a total of 15 years, contact resistance was measured every 3 years.

Aging	Sample 7	Sample 8	Sample 9
Initial	6.5mΩ	5.8mΩ	5.9mΩ
3 years	9.6mΩ	9.8mΩ	9.9mΩ
6 years	10.5mΩ	10.2mΩ	10.1mΩ
9 years	10.5mΩ	10.0mΩ	10.2mΩ
12 years	10.1mΩ	9.9mΩ	9.8mΩ
15 years	10.9mΩ	10.3mΩ	10.2mΩ