



## Harwin Test Report Summary

**HT01101**

Mechanical Testing of High Temperature  
Plastic Housings for Datamate  
(M80 Series) Crimp Sockets

Datamate

A decorative graphic at the bottom of the page consisting of numerous thin, red, wavy lines that flow from the left side towards the right, creating a sense of motion and depth.

## 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 on M80-844XX42 Datamate crimp socket assemblies, to confirm that the use of the high-temperature moulding material Stanyl TE250F6 would perform to the same standard as the original lower temperature mould material.

### 1.2. Conclusion.

The following data has been collated from Harwin test reports 185, 195, 238 and 239. For all three of the tests performed, the M80-844 connectors met the required standards of BS9525-F0033, and is therefore approved as an acceptable material for use in the Datamate range.

## 2. Test Method, Requirements and Results.

### 2.1. List of Test Samples.

- a) M80-8441042 – 10-way female crimp connector
- b) M80-8441242 – 12-way female crimp connector
- c) M80-8441442 – 14-way female crimp connector
- d) M80-8441642 – 16-way female crimp connector

### 2.2. Specification Parameters.

The requirements of BS9525-F0033 are as follows:

	Insertion Force	Withdrawal Force	Contact Resistance
<b>M80-8441042</b>	28N max, 5N min	18.0N max, 2.0N min	20mΩ max per contact
<b>M80-8441242</b>	33.6N max, 6N min	21.6N max, 2.4N min	
<b>M80-8441442</b>	39.2N max, 7N min	25.2N max, 2.8N min	
<b>M80-8441642</b>	44.8N max, 8N min	28.8N max, 3.2N min	

### 2.3. Test Method and Results.

- a) Insertion Forces (taken from 13 test pairs):

	M80-8441042	M80-8441242	M80-8441442	M80-8441642
<b>Minimum</b>	16.3N	12.8N	18.4N	24.1N
<b>Maximum</b>	19.6N	24.8N	27.3N	30.4N
<b>Average</b>	17.6N	20.5N	23.7N	27.3N

- b) Withdrawal Forces (taken from the same 13 test pairs):

	M80-8441042	M80-8441242	M80-8441442	M80-8441642
<b>Minimum</b>	8.1N	9.5N	11.1N	12.9N
<b>Maximum</b>	13.6N	13.5N	18.8N	19.4N
<b>Average</b>	9.7N	11.5N	13.5N	15.5N

- c) Contact Resistance (taken from the same 13 test pairs):

	M80-8441042	M80-8441242	M80-8441442	M80-8441642
<b>Minimum</b>	6.46mΩ	5.93mΩ	4.78mΩ	5.39mΩ
<b>Maximum</b>	8.73mΩ	8.18mΩ	6.24mΩ	8.23mΩ
<b>Average</b>	7.62mΩ	6.96mΩ	5.66mΩ	6.93mΩ