



Harwin Test Report Summary

HT00501

Retention and Integrity testing of
Datamate (M80 Series) Crimp Sockets

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 the Datamate Crimp Socket contacts within L-Tek mouldings for retention within the mould, and the integrity of the crimp on the wire (also known as Pull-off force).

1.2. Conclusion.

For both the contact retention test and the crimp integrity test, all contacts passed the minimum requirements specified. The contacts were crimped with no fractures apparent.

2. Test Method, Requirements and Results.

2.1. List of Test Samples.

- a) M80-0100000 – female Large Bore contact body (unplated)
- b) M80-0110005 – female Large Bore contact assembly
- c) M80-1031098 – female L-Tek double row crimp housing
- d) M80-0120000 – female Small Bore contact assembly (unplated)
- e) M80-0130005 – female Small Bore contact assembly

2.2. Specification Parameters.

Minimum contact retention and integrity requirements of BS9525-F0033 are as follows:

Contact part number	M80-0100000 M80-0110005	M80-0120000 M80-0130005	
Contact Retention	10N minimum	10N minimum	
Crimp Integrity	50N minimum	24AWG wire	44N minimum
		26AWG wire	25N minimum
		28AWG wire	12.5N minimum

2.3. Test Method and Results.

The following test data has been taken from Harwin Test Reports T106/06, T30/05, T85/06 and 463.

Contact Retention Results:

Sample	M80-0100000	M80-0110005	M80-0120000
1	41.3N	35.5N	23.2N
2	48.7N	31.9N	31.2N
3	49.9N	32.5N	43.2N
4	48.4N	38.6N	29.8N
5	46.7N	38.5N	36.1N
6	 	35.3N	
7	 	32.9N	
8	 	32.8N	
9	 	40.2N	
10	 	39.7N	
Average force	47.0N	35.8N	32.7N

Contact Integrity Results (from test reports T106/06, T30/05, T85/06):

Sample	M80-0100000	M80-0110005	M80-0120000 (24AWG wire)
1	55.1N	66.8N	44.2N
2	65.1N	70.0N	46.9N
3	67.6N	60.4N	46.6N
4	59.9N	64.6N	44.8N
5	50.1N	65.4N	49.2N
Average force	59.6N	65.4N	46.3N

Contact Integrity Summary Results (from test report 463), 25 samples of each tested:

Sample	M80-0110005 (22AWG wire)	M80-0130005 (24AWG wire)	M80-0130005 (26AWG wire)	M80-0130005 (28AWG wire)
Minimum	50.4N	49.0N	31.3N	16.5N
Maximum	79.9N	62.8N	36.1N	19.8N
Average	65.42N	53.13	33.84N	18.17N

Note: Forces recorded for the 22 and 24AWG wire tests show the force at which the wire fractured, as this occurred before the crimp joint failed.