



Harwin Test Report Summary

HT00601

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

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 Plug (Male) contacts within L-Tek and J-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. The design of the rear crimp section of the M80-040 and M80-041 contacts is identical to the M80-194 and M80-195 crimps, and therefore the crimp integrity results are applicable for both L-Tek and J-Tek crimps.

2. Test Method, Requirements and Results.

2.1. List of Test Samples.

- a) M80-1940005 – male J-Tek Large Bore contact
- b) M80-1950005 – male J-Tek Small Bore contact
- c) M80-0410005 – male L-Tek Small Bore contact
- d) M80-1221098 – male L-Tek crimp housing

2.2. Specification Parameters.

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

Contact part number	M80-1940005 M80-0400005	M80-1950005 M80-0410005
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 C38/00 and 463.

Contact Retention Results:

Sample	M80-0410005
1	40.7N
2	35.1N
3	33.1N
4	34.4N
5	31.4N
6	35.9N
7	33.5N
8	36.0N
9	24.3N
10	39.9N
Average force	34.3N

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

Sample	M80-1940005 (22AWG wire)	M80-1950005 (24AWG wire)	M80-1950005 (26AWG wire)	M80-1950005 (28AWG wire)
Minimum	53.4N	45.9N	28.2N	17.3N
Maximum	86.4N	53.9N	34.1N	20.2N
Average	69.48N	49.23N	30.70N	18.99N

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.