



Harwin Test Report Summary

HT00901

Electrical Testing of
M80-71X Datamate Connectors

Datamate

Test Report for Datamate M80-71X – Electrical Testing

1. Introduction.

1.1. Description and Purpose.

The following tests were carried out to establish the electrical performance of the power contacts in the Harwin Datamate range, specifically the M80-7XX series. The connector ranges covered by this report are:

- | | | | |
|--------------|--------------|--------------|--------------|
| • M80-710XXX | • M80-714XXX | • M80-718XXX | • M80-750XXX |
| • M80-711XXX | • M80-715XXX | • M80-719XXX | |
| • M80-712XXX | • M80-716XXX | • M80-721XXX | |
| • M80-713XXX | • M80-717XXX | • M80-723XXX | |

1.2. Conclusion.

The following data has been collated from Harwin test report T37/04. The mated connectors demonstrated that from starting temperatures of ambient and 53.1 degrees C, in both cases the power contacts were capable of handling current in excess of 15A without an excessive temperature rise (greater than 30 degrees). The connectors are therefore shown to meet the specification requirements.

2. Test Method, Requirements and Results.

2.1. List of Test Samples.

- a) M80-7100622 – male assembly with through-board termination
- b) M80-7160605 – female assembly with through-board termination

2.2. Specification Parameters.

The desired current rating for the power contacts is 15amps at 120volts. In order to meet the current rating requirement, the maximum temperature rise allowable for the power contacts is 30°C.

2.3. Test Method and Results.

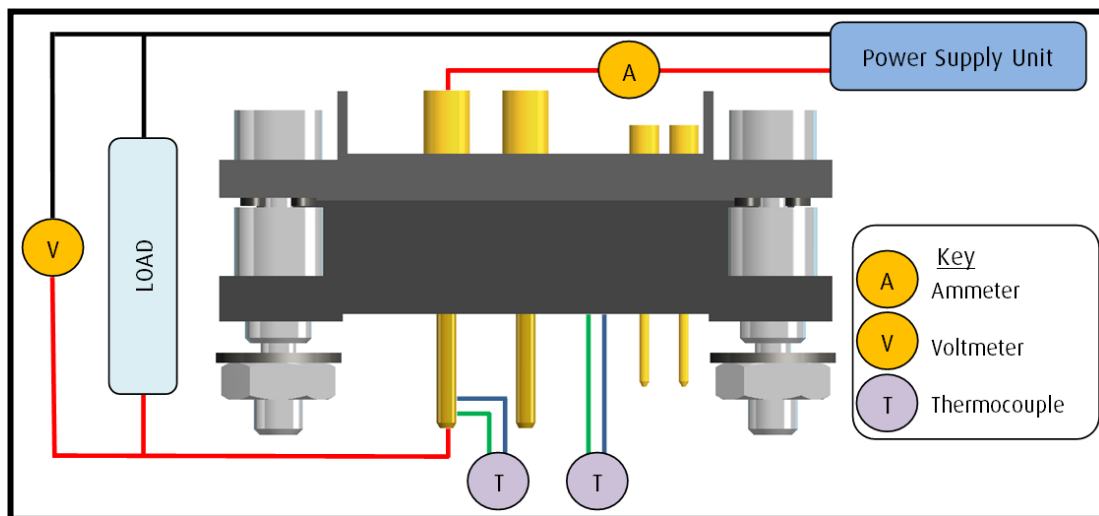
The following tests were all carried out in a mated condition. Initial ambient temperature was measured at 23°C, and was re-measured at 58 minutes at 25°C. Test specimens were placed in a sealed cabinet and monitored over the duration of 1 hour 48 minutes.

The Datamate Connectors tested were initially setup at 123Volts, 16.2Amps. During the first 18 minutes the temperature of the power contact increased from 26°C to 53.8°C with an ambient temperature outside the test enclosure of 22°C. The temperature rise is therefore 27.8°C, lower than the maximum allowable temperature rise of 30°C

Once the voltage and current were brought in-line with specification, the temperature of the power contact was reduced to 53.1°C. This further demonstrates that the maximum Temperature rise for the power contacts tested was below the recommended maximum 30°C.

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Equipment Schematic:



Results Data:

	Mould Temperature	Pin Temperature	Voltage	Current
Maximum	33°C	53.8°C	123V	16.2A
Minimum	23°C	26°C	119.2V	15.5A
Average	30.8°C	46.5°C	119.9V	15.6A

