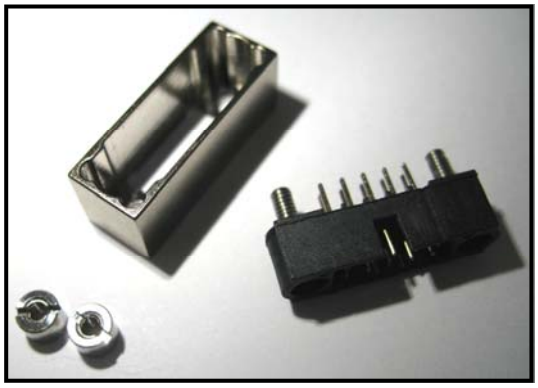
COMPONENT SPECIFICATION

HARWiN

Datamate S-Tek

EMI/RFI Shielded M80 Datamate Series Rectangular Connectors

November 2011



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Datamate S-Tek

1.0 DESCRIPTION OF CONNECTOR AND INTENDED APPLICATION.

EMI/RFI shielded Datamate connectors from Harwin

The S-Tek Datamate is available with single-piece, machined metal backshells that provide electrical screening against RFI and EMI interference. Manufactured in aluminium alloy and nickel plated for electrical performance and corrosion resistance, when used in conjunction with the relevant J-Tek Datamate connectors and metal braid, these backshells ensure full 360 degree electrical shielding.

Designed to attach to a wide variety of standard metallic braids using industry standard tools, the backshells enable the shield braid to be connected through the backshell to the PCB ground plane. Available in female cable-to-PCB-mount and female cable-to-panel-mount configurations in a range of sizes including 6, 10, 14, 20 and 26 positions, the backshells also provide excellent design flexibility.

2.1 MARKING OF THE FEMALE CRIMP CONNECTOR AND/OR PACKAGE (ORDER CODE).

The marking (order code) shall appear on the package and shall be of the following style:

M80 - 4X1 XX XX S1

Product Range
- M80 = Datamate

Style
- 4C1 = Small Bore Female Crimp
- 4D1 = Large Bore Female Crimp

Number of Ways
- 06, 10, 14, 20, 26

Contact Finish
- 05 = Gold Clip, Gold Shell
- 42 = Gold Clip, 100% Tin over Nickel Shell

Jackscrew Variant
- S1 = Metal Backshell with male slotted jackscrews

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2.2 MARKING OF THE MALE CRIMP CONNECTOR AND/OR PACKAGE (ORDER CODE).

The marking (order code) shall appear on the package and shall be of the following style:

M80 - 5X1 XX XX B1

Product Range
M80 = Datamate

Style
5C1 = Small Bore Male Crimp
5D1 = Large Bore Male Crimp

Number of Ways
06, 10, 14, 20, 26

Contact Finish
05 = All over Gold

Jackscrew Variant
B1 = Metal Backshell with Panel Mount jackscrews

2.3 MARKING OF THE MALE PC TAIL CONNECTOR AND/OR PACKAGE (ORDER CODE).

The marking (order code) shall appear on the package and shall be of the following style:

M80 - 5XX XX XX B1

Product Range
M80 = Datamate

Style
5T1 = 2.7mm PC Tail
5T2 = 3.8mm PC Tail

Number of Ways
06, 10, 14, 20, 26

Contact Finish
05 = All over Gold
22 = Gold on Contact Area / Tin/lead on Tails
42 = Gold on Contact Area / 100% Tin on Tails

Jackscrew Variant
B1 = Metal Backshell with Board Mount jackscrews

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3.0 RATINGS.

3.1 CONNECTOR CHARACTERISTICS.

See Component Specification C005XX (latest Issue).
All materials are listed on individual drawings.

3.1.1 MATERIALS.

Backshell	Aluminium Alloy, Electrolysis Nickel Plate
Jackscrews and Nuts	Stainless Steel
'E'-Clips	Stainless Steel
Bandit Tie-dex band	Stainless Steel
Connector	Refer to Component Specification C005XX (latest Issue)

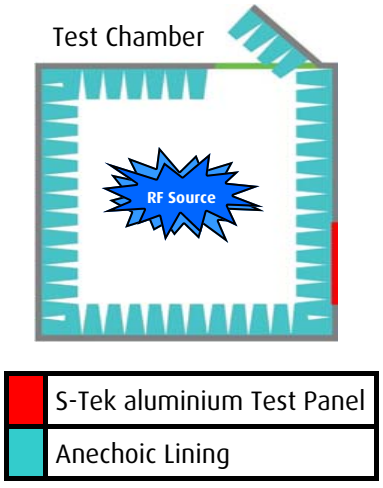
3.2 ENVIRONMENTAL CHARACTERISTICS.

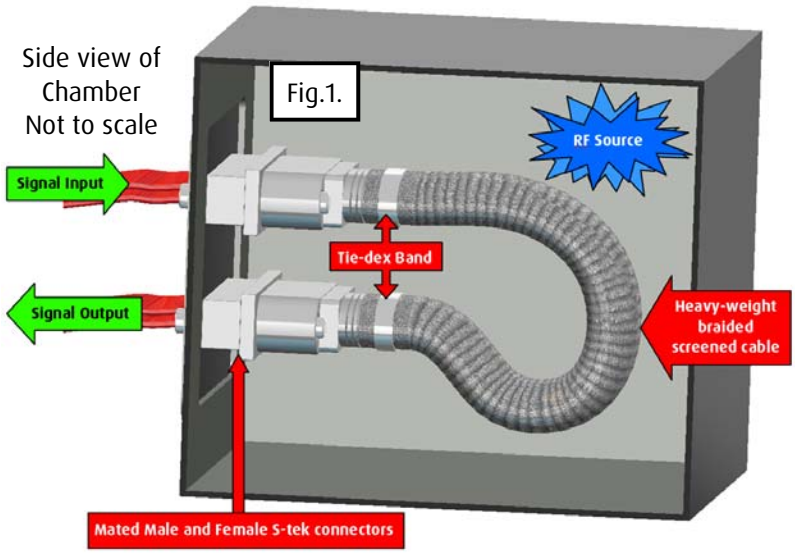
RF Attenuation Measurements performed in general accordance with MIL STD 1377 (1971) Screened Cable / Connector Method. 10kHz to 400MHz @ >30dBs RF Attenuation

Please note: This test was performed with the S-Tek Datamate correctly terminated to a heavy-weight Braided Screened Cable. Overall RF Screening performance of any screened cable assembly is reliant upon both the Connector and Cable used and the termination therein.

3.2.1 ATTENUATION TEST SETUP.

The following information has been summarised from Harwin Test report 360.
Below is the S-tek test setup used to measure the RF Attenuation provided by the metal backshells and heavy-weight Braided Screened Cable.



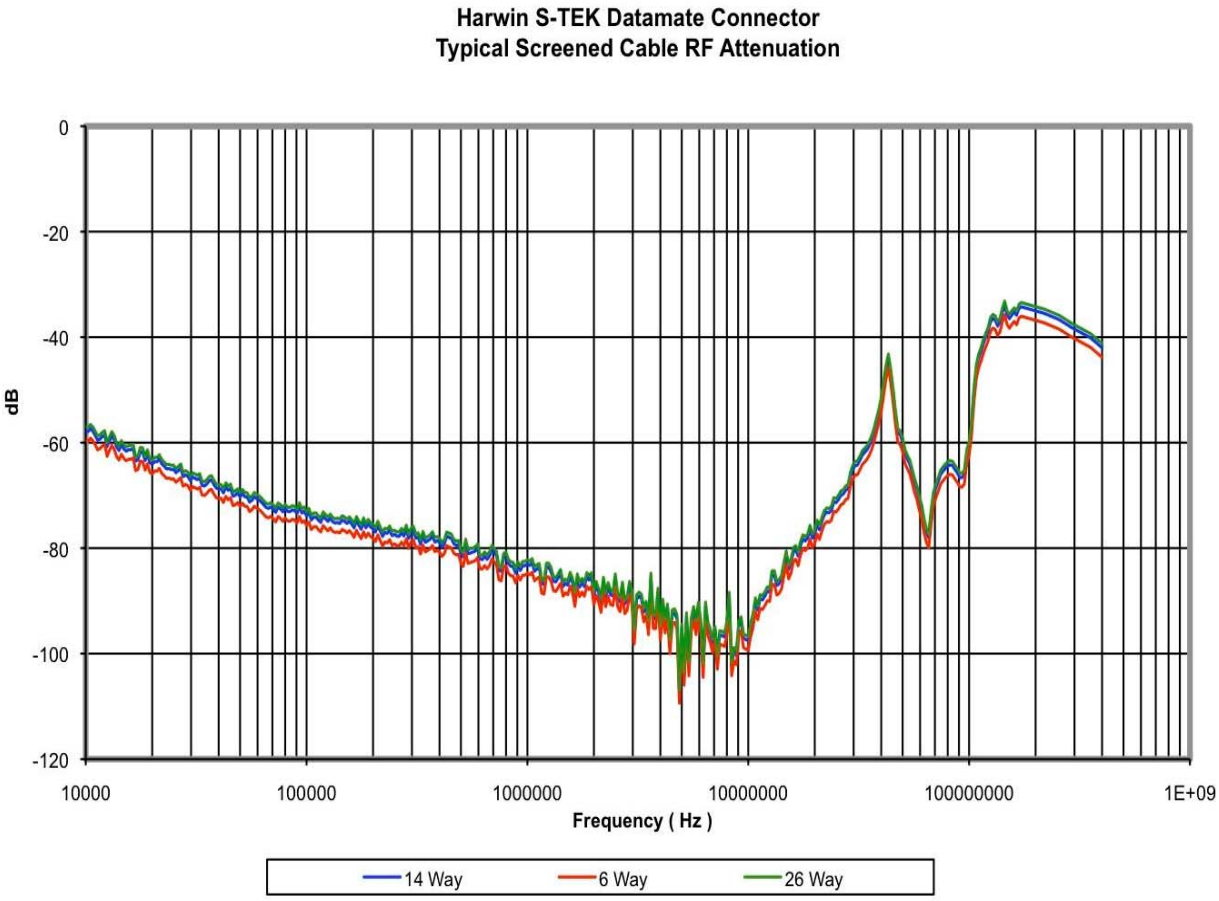


- Two S-tek Male crimp connectors with backshells of each size were secured to an aluminium panel using the panel-mount jackscrews and nuts provided in the standard kit (not all sizes shown above).
- Two S-tek Female crimp connectors with backshells were terminated to 1meter long wires and screened with 1meter of heavy-weight braiding which was secured using the Bandit Tie-dex bands supplied.
- The female cable assembly was mated to the male connectors and secured using the jackscrews provided in the standard kit prior to testing as shown in Fig.1.
- This panel was fitted into an Anechoic lined chamber with an isolated RF generator inside. Attenuation of RF Frequencies between 10kHz and 400Mhz were tested and the results are shown in Appendix A and B.

Appendix B

HARWiN Datamate S-Tek

Performance Graph showing RF Attenuation in dB vs. Frequency in Hz



AQL-EMC Limited
16 Cobham Road
Ferndown Industrial Estate
Wimborne
Dorset BH21 7PG

Telephone: 01202 861175 Fax: 01202 861176
Email: info@aqlemc.co.uk Web: www.aqlemc.co.uk

CERTIFICATE OF TEST

Certificate number : 5153
Date of issue : 13th September 2010
Issue number : 1

ADMINISTRATIVE INFORMATION

Customer : Harwin PLC
Customer address : Fitzherbert Road, Portsmouth, Hampshire, UK.
Customer Representative : Mr. P. Gillam
Control / Test Plan Reference : As per Harwin PO HAR7485
Test specifications : MIL STD 1377 (1971)
Customer Order Number : HAR7485
Test date : 1st to 6th September 2010
Test engineer : Mr. R.J. Hardy
Location of Testing : AQL EMC Ltd. Ferndown, Dorset, UK.

TEST ITEM DETAILS

Item : S-TEK Datamate Connectors
Manufacturer : Harwin PLC
Part Number : 6-Way, 14-Way and 26-Way
Serial Number : Prototype
Condition of Equipment : Good

EMC TEST RESULTS SUMMARY

Test	Result
RF Attenuation Measurements performed in General Accordance with MIL STD 1377 (1971) Screened Cable / Connector Method.	
S-TEK Datamate - 6 Way	10kHz to 400MHz @ >30dBs RF Attenuation
S-TEK Datamate - 14 Way	10kHz to 400MHz @ >30dBs RF Attenuation
S-Tek Datamate - 26 Way	10kHz to 400MHz @ >30dBs RF Attenuation
Please note that this test was performed with the S-TEK Datamate correctly terminated to a heavy-weight Braided Screened Cable. Overall RF Screening performance of any screened cable assembly is reliant upon both the Connector and Cable used and the termination therein.	

IT IS CERTIFIED THAT THE TESTS DETAILED IN THIS CERTIFICATE HAVE BEEN CARRIED OUT AS SPECIFIED.
FULL TEST DETAILS ARE RETAINED IN THE AQL EMC FILE REFERENCE: T5153

Signed: Signed:

Mr. N. Foot
EMC Manager

Mr. R.J. Hardy
EMC Project Engineer