

HARWIN

 **Datamate**[®]

Datamate Mix-Tek Cable Housings



HOW ARE DATAMATE MIX-TEK CABLE CONNECTORS CURRENTLY SUPPLIED?



Datamate Mix-Tek connectors for cable are already available from Harwin in stocked variations. The available options are listed on the website, but generally consist of the following elements:

- Housings fitted with only hex slotted jackscrews – all other jackscrews are made-to-order
- Only Female Receptacle connector kits are available – Male Plug connector kits are made-to-order
- The stocked kits include only the [325](#) (12AWG) or [PF5](#) (10AWG) power contacts, and [M80-0130005](#) signal contact (24-28AWG)

WHY DO WE NEED SEPARATE HOUSINGS?



By choosing to purchase Datamate Mix-Tek housings and contacts separately, many more configurations are possible – the equivalent of 1,034 connectors and rising!

- Many more choices of jackscrew and both Male Plug and Female Receptacle connectors are available from stock, no waiting for lead-time.
- Any contact from the full range of power, high power, coax and signal can be chosen to accompany the housing.

HOUSINGS - POWER/COAX + STANDARD GENDER JACKSCREWS



Female Receptacle
Hex Slotted Jackscrews
2, 3, 4, 6, 8 or 10 contacts



Female Receptacle
Hex Socket Jackscrews
2, 3, 4, 6 or 8 contacts



Male Plug
Internal Thread Jackscrews
2, 3, 4, 6 or 8 contacts

Standard Gender jackscrews are often used when the Male Plug connector is on the PCB. Male Plug connectors are fitted with an internally threaded jackscrew, and the female jackscrew is externally threaded and the jacking half (usually called floating). The female floating jackscrews are free to move and screw into the male jackscrew. The choice of heads gives the option for screwdrivers or hex drives (such as Allen keys).

All contact locations are compatible with the full range of power, high power and coax contacts, and these can be mixed within the same housing.

HOUSINGS – POWER/COAX + GUIDE PIN/FRONT PANEL MOUNT



2, 3, 4, 6 or 8 contacts

The [guide pin jackscrew](#) is mounted to Female Receptacle housings, and is designed to mate with a standard gender internally threaded jackscrew on the Male Plug connector.

The 5mm threaded stud at the rear of the connector gives the added option of an [external panel mounting](#). Nuts for panel mount are available separately – [M80-2130000B](#) for slotted circular, [M80-2430000B](#) for hexagonal.

HOUSINGS – POWER/COAX + REAR PANEL MOUNT



2, 3, 4, 6 or 8 contacts

The [rear panel mount jack screw](#) is mounted to Male Plug housings, and mate with standard gender floating jackscrews on the Female Receptacle connector.

The extended lugs on the jackscrews allow the connector to be mounted inside the enclosure one on the rear of a panel. Harwin 5mm bolts are suitable for panels up to 3mm thick – [M80-2270000B](#) for slotted circular, [M80-2320000B](#) for hexagonal socket. Use longer M2 bolts for thicker panels.

HOUSINGS – POWER/COAX + REVERSE FIX



Male Plug
Slotted Jackscrews
2, 3, 4, 6 or 8 contacts



Female Receptacle
Internal Thread, Front Panel Mount
2, 3, 4, 6 or 8 contacts

Reverse fix flips the floating jackscrew onto the Male Plug connector, and the Female Receptacle connector now has the internal thread.

The 5mm threaded stud at the rear of the Female Receptacle connector gives the option of [external panel mounting](#). Nuts for panel mount are available separately – [M80-2130000B](#) for slotted circular, [M80-2430000B](#) for hexagonal.

HOUSINGS – POWER/COAX + 101LOK



Female Receptacle 101Lok
2, 3, 4, 6 or 8 contacts



Male Plug 101Lok receptacle
2, 3, 4, 6 or 8 contacts

By using a bayonet fixing instead of a threaded jackscrew design, mating time is significantly reduced. The [101Lok style](#) allows the connectors to be fully mated, then each fixing is engaged with a simple push-and-turn action. The bayonet fixing is fitted to the Female Receptacle connector, with the receptacle fitted to the Male Plug.

No additional tooling is required, although the Female Receptacle 101Lok head has a slot for optionally using a screwdriver due to the small size.

HOUSINGS – POWER/COAX + SIGNAL

2 power/coax	6 signal or 8 signal
3 power/coax	8 signal
4 power/coax	2 signal, 4 signal or 12 signal
6 power/coax	2 signal



[These connectors](#) are the ultimate choice in connector flexibility, offering cavities for both signal and for power/coax/high-power. All Female Receptacle cable contacts are compatible with this range of housings. They come fitted with the hex slotted floating jackscrew, standard gender compatible with internally threaded male jackscrews.

If you require an alternative combination from the Technical Drawing, you can also [contact our Experts](#) for advice on other designs.

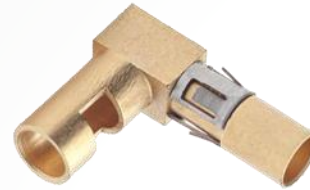
COMPATIBLE FEMALE RECEPTACLE POWER CONTACTS



Solder
 12, 14, 16 AWG



Crimp
 18, 20 AWG



90° Solder
 12, 14, 16 AWG



Solder
 10 AWG

For the Female Receptacle connector a full range of power contacts are available, capable of carrying 5A at 20AWG to 40A at 10AWG:

Straight Solder:

- [M80-325](#) – 12 AWG
- [M80-326](#) – 14 AWG
- [M80-327](#) – 16 AWG

Straight Crimp:

- [M80-328](#) – 18 AWG
- [M80-329](#) – 20 AWG

Right Angle Solder:

- [M80-32A](#) – 12 AWG
- [M80-32B](#) – 14 AWG
- [M80-32C](#) – 16 AWG

Straight Solder, High Power:

- [M80-PF5](#) – 10 AWG

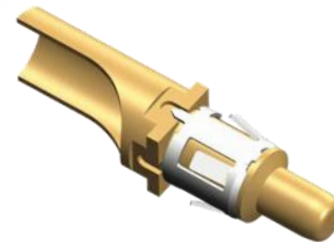
COMPATIBLE MALE PLUG POWER CONTACTS



Solder
12, 14, 16 AWG



Crimp
18, 20 AWG



Solder
10 AWG

For the Male Plug connector a full range of straight power contacts are available, capable of carrying 5A at 20AWG to 40A at 10AWG:

Straight Solder:

- [M80-335](#) – 12 AWG
- [M80-336](#) – 14 AWG
- [M80-337](#) – 16 AWG

Straight Crimp:

- [M80-338](#) – 18 AWG
- [M80-339](#) – 20 AWG

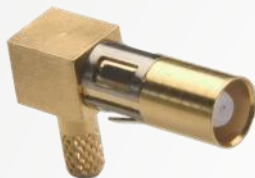
Straight Solder, High Power:

- [M80-PM5](#) – 10 AWG

COMPATIBLE COAX CONTACTS



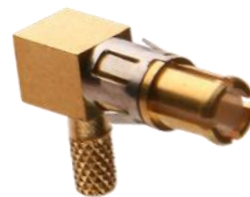
Female Receptacle
Ø2mm, Ø2.7mm



90°Female Receptacle
Ø2mm, Ø2.7mm,
Semi-Rigid



Male
Ø2mm, Ø2.7mm



90°Male
Ø2mm, Ø2.7mm

Coax contacts come in two sizes - Ø2mm are compatible with RG178 coax cables, Ø2.7mm with RG174/RG179/RG316, and Semi-rigid with UT047:

Straight Female Receptacle:

- [M80-305](#) - Ø2mm
- [M80-307](#) - Ø2.7mm

Right Angle Female Receptacle:

- [M80-308](#) - Ø2mm
- [M80-309](#) - Ø2.7mm
- [M80-310](#) - Semi-Rigid

Straight Male:

- [M80-315](#) - Ø2mm
- [M80-317](#) - Ø2.7mm

Right Angle Male:

- [M80-318](#) - Ø2mm
- [M80-319](#) - Ø2.7mm

COMPATIBLE FEMALE RECEPTACLE SIGNAL CONTACTS



Large Bore
22 AWG



Small Bore
24-28 AWG



Extra Small Bore
28-32 AWG

Contact faces for signal crimps are always gold – however, on the Female Receptacle contacts there is a choice of outer shell finish, either gold or tin. The tin is 100% tin over a nickel undercoat to avoid tin whisker issues.

Large Bore:

- [M80-0110005](#) – Gold shell
- [M80-0110001](#) – Tin shell

Female Receptacle Small Bore:

- [M80-0130005](#) – Gold shell
- [M80-0130001](#) – Tin shell

Female Receptacle Extra Small Bore:

- [M80-0190005](#) – Gold shell
- [M80-0190001](#) – Tin shell

PERFORMANCE SPECIFICATIONS

Durability	500 operations / mating cycles
Temperature Range	-55°C to +125°C
Vibration	10g for 6 hours, 20g for 2 hours
Shock	100g

All specifications are in line with the existing connector ranges, and electrical performance will depend on the types of contacts fitted. The full specification for the Datamate Mix-Tek connector is [Component Specification C005XX](#).

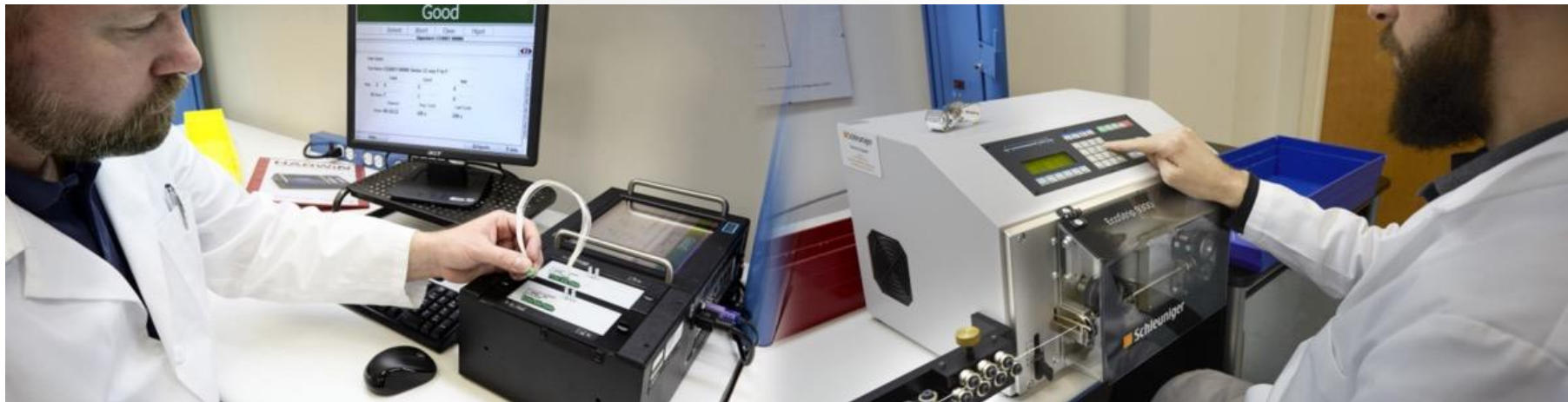
MARKETS



Rugged, high-reliability connectors continue to be in strong demand in many varied environments. Small enough to be used in handheld and portable applications, yet high-powered enough to meet the demands of large-scale equipment, Datamate continues to find new applications and new product uses in existing and new customers.

- Aerospace
- Autosport
- Military
- Robotics
- Oil & Gas

FULL CABLE ASSEMBLY SERVICE AVAILABLE



If you would like Harwin to take the strain of manufacturing your shielded cable assemblies, our [Cable Assembly Service](#) is available to fulfil your requirements. Based in the USA, the facility offers small orders for low runs and prototyping, as well as full production volumes. All cables are 100% continuity tested, and can be supplied with full braiding, as well as backpotting or heatshrink application.



FULL CABLE ASSEMBLY SERVICE AVAILABLE



Our team can offer advice on your custom cable assembly requirements, and any Harwin cable connection products. [Contact our Experts today](#) for further assistance with your requirements.

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PERFORMANCE



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