

HARWIN

Datamate®

T-Contact



Datamate®

THE EXISTING SIGNAL CONTACT



The current signal contact used on all [Datamate](#) variations is constructed from a 4-fingered Beryllium Copper female receptacle contact clip, housed inside a brass turned shell. The contact system gives superb performance, for both electrical and mechanical specifications, with environmental resistance to shock and vibration, and a temperature range up to 125°C.

However, the contact is limited to 3.3A max (25°C ambient) individually, or 3A max when all contacts are electrically loaded.



T-CONTACT - IMPROVED CURRENT RATING



The T-Contact is an advanced design, based on the research around the Gecko connector system. By using a single piece of Beryllium Copper in a turned design, the current-carrying capacity of the contact is improved, due to additional mass of metal. Beryllium Copper is used as the base metal to ensure the spring qualities of the contact area are maintained.

This design enables a current rating of 8.5A max (25°C ambient) individually, or 3.5A max when all contacts are electrically loaded.

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THE HEART OF THE CONNECTOR



The contact design uses 6 fingers to increase the amount of contact with the mating male plug pin. The pattern of the 6 fingers has been likened to a Turtle shell hexagonal pattern – hence T-Contact.

This design gives a 60% increase in surface wipe, which improves the self-cleaning action of the contact, and therefore helps reduce surface contamination.

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AVIONICS STANDARD FINISH



The T-Contact is available in a gold-plated finish. To maximize durability, the gold is applied at 0.76-1.00 μ m (30-40 μ ”) thickness, over nickel & copper undercoats. Durability is increased from the existing 500 mating cycles to 1,000 mating cycles without degradation. This meets the more demanding standards of the military and aerospace requirements.

WITH/WITHOUT CABLE - HOW TO ORDER

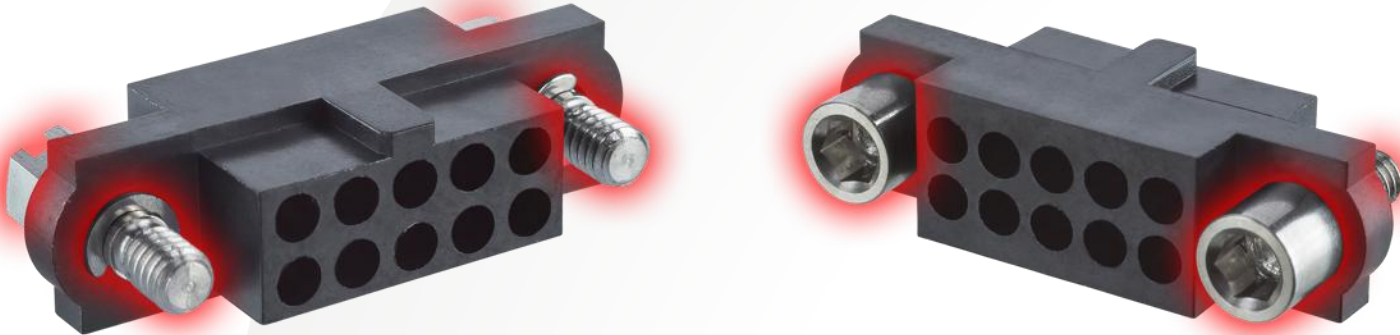


Contacts and Housings are sold separately. The contact is available as a crimp contact, for 22AWG wire/cable, with a maximum insulation diameter of Ø1.10mm.

The part number for this contact is [M80-2060005](#). It will work as a replacement contact in female receptacle Datamate J-Tek crimp housings.

Individual contacts with 22AWG white PTFE equipment wire already assembled can also be supplied – [contact Technical](#) for further information.

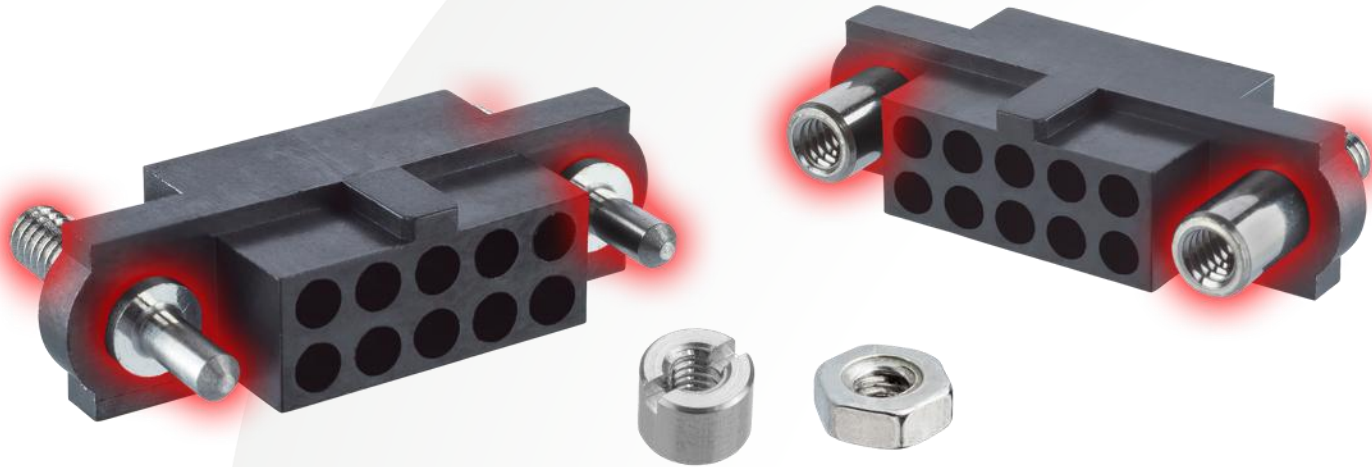
HOUSINGS - HOW TO ORDER



The cable housings are available without contacts in 5 different designs. Two of these are floating jackscrews and can be mated with the majority of the male plug connectors with 2mm threaded jackscrews. For a complete part number, replace the "xx" with the total number of contacts required – from 04 to 50.

- Floating Jackscrew with hexagonal slotted head – [M80-413xx98](#)
- Floating Jackscrew with hex socket head (for an allen key or hex driver) – [M80-414xx98](#)

HOUSINGS - HOW TO ORDER

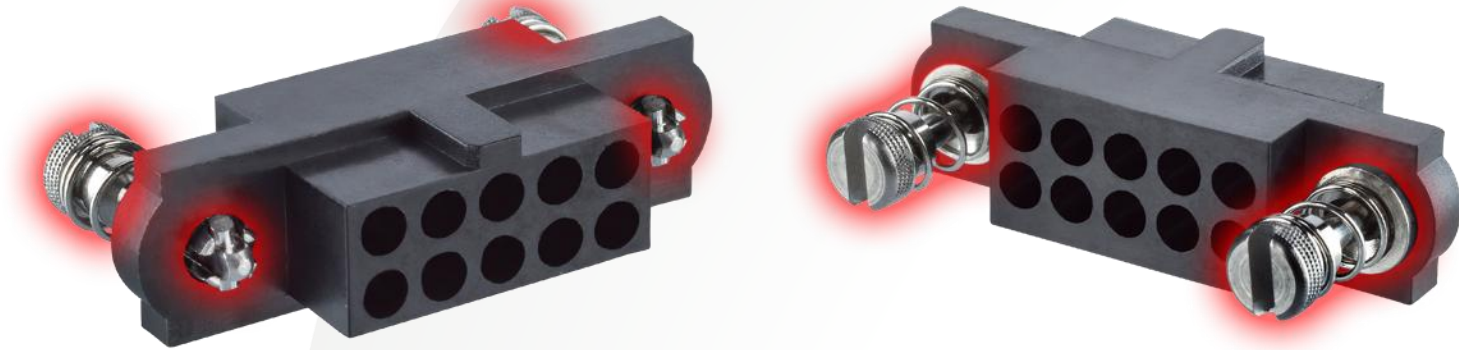


Two cable housing styles are available with panel mount fixings on the rear of the connector. For a complete part number, replace the "xx" with the total number of contacts required – from 04 to 50.

- Reverse Fix Jackscrew (3.5mm stud for front panel mount) – [M80-415xx98](#)
- Guide Pin jackscrew (5mm stud for front panel mount) – [M80-417xx98](#)

Both housings are compatible with fixing nuts [M80-2130000B](#) (round slotted) or [M80-2430000B](#) (hexagonal).

HOUSINGS - HOW TO ORDER



The 101Lok fixing system is a bayonet-style, [fast-acting method](#) of securing mated pairs. Simply mate the connectors together, then push and turn each fixing by 101-degrees (just over a quarter-turn). To disengage: push, rotate in the opposite direction and release. For a complete part number, replace the "xx" with the total number of contacts required – from 04 to 50.

- 101Lok fixing – [M80-418xx98](#)

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CABLE ASSEMBLIES



To get you from design to production faster, Harwin can supply [ready-made cable assemblies](#) incorporating the T-Contact and associated connector housings. Choose one of the standard off-the-shelf single-ended cables, use the online Cable Generator to specify your full requirements, or [contact the Technical Team](#) for further help.

- T-Contact cable assembly with Hex Socket floating jackscrew – M80-FB1xx68F2-0150L
- T-Contact cable assembly with 101Lok fixing – M80-FB1xx68FC-0150L

HAND TOOLS AND ASSOCIATED PRODUCTS



Harwin supply the full set of hand tooling required for your own cable assembly manufacture, as listed below. Alternatively, our [Cable Assembly facility](#) is available to assist and manufacture complete cable assemblies to your specification.

Hand Crimp Tool:

- [M22520/2-01](#)

Positioner:

- [Z80-444](#)

Insertion/Removal Tool:

- [Z80-280](#)

Instruction Sheets:

- [IS-01](#) and [IS-25](#)



ELECTRICAL SPECIFICATIONS

Current Rating	Up to 8.5A max
Contact Resistance	25 milliohms max
Voltage Proof	1,200V DC or AC Peak
Working Voltage	800V DC or AC Peak

Datamate is field-proven in tough terrains and environments, from underground to outer space. The Current rating for this new contact design far exceeds the levels normally expected from a 2mm pitch connector system.

The full [Datamate Component Specification](#) is available to download from the Harwin website.

MECHANICAL & ENVIRONMENTAL SPECIFICATIONS

Vibration	40g for 6 hours
Shock	100g for 6 milliseconds
Durability	1,000 mating cycles
Temperature Range	-55°C to +125°C

The T-Contact has been proven to withstand extreme levels of vibrations at 40g for 6 hours without loss of electrical performance. The mating cycle durability is also improved. T-Contact meets the same high reliability standard consistent throughout the Datamate range. These specifications make Datamate products the ideal choice for demanding applications.

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 T-Contact will be an excellent choice in both existing and new applications.

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

LEARN MORE ABOUT OUR OTHER RANGES



HIGH RELIABILITY
WITH SUPREME
PERFORMANCE



DEPENDABLE
CONNECTIVITY
ACROSS THE BOARD



INNOVATIVE
DESIGNS FOR
EASY ASSEMBLY

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CAD Models and Evaluation Samples also available at www.harwin.com





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