

HARWIN

Datamate®

Panel Mount with Datamate



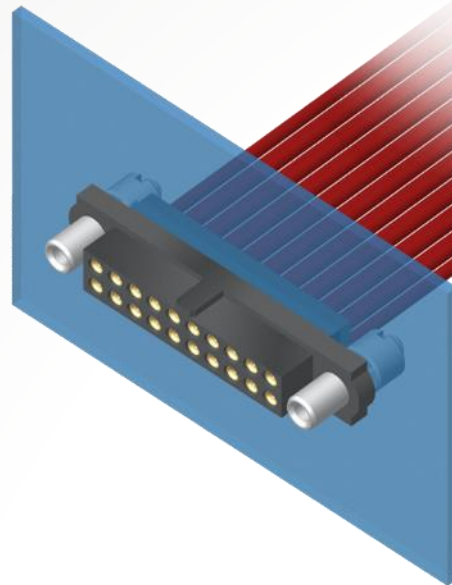
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WHAT IS PANEL MOUNT?

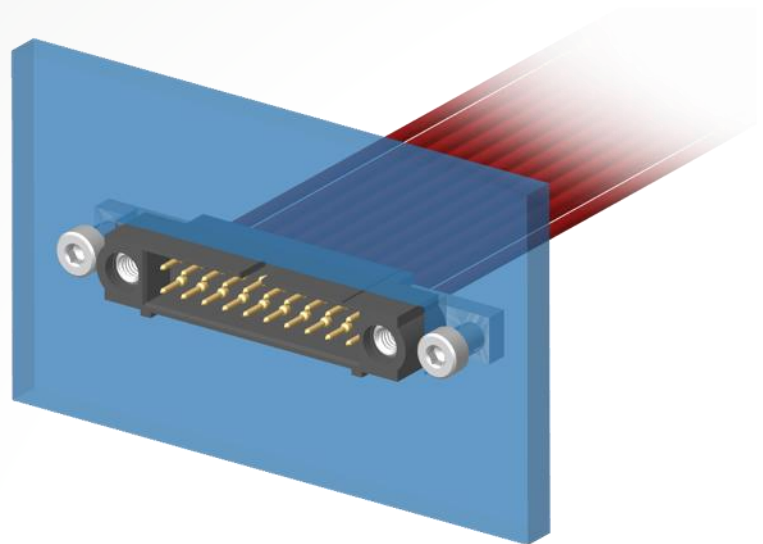


Panel Mount is a mechanical feature or features built into the design of a connector half. It allows the connector to be secured to an equipment panel, external case or enclosure. Often (but not always), connectors fitted with panel mount features will be cable connectors.

Read more information about panel mount on our [training blog post](#).

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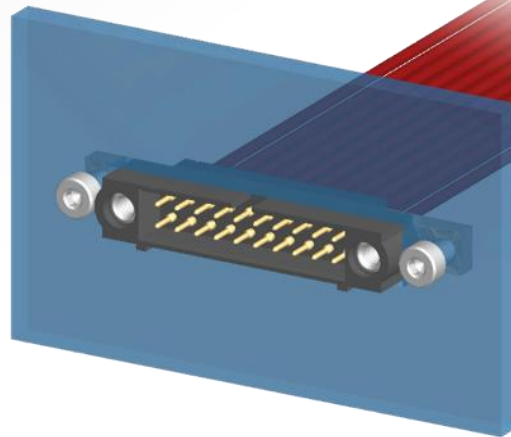
CAN I ACHIEVE PANEL MOUNT WITH DATAMATE?

YES 

Yes, you can achieve both Front panel mounted and Rear panel mounted with [Datamate](#). This Training Module gives details and part numbers to help you choose the right combination for signal-only [Datamate J-Tek](#) connectors.

By choosing the same jackscrew configurations, these cable-to-panel connections can also be achieved with power, coax or mixed connections ([Datamate Mix-Tek](#)).

MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER

Rear Panel
Mount Male Plug

Rear Panel Mount for the Male Plug cable connector uses standard gender jackscrews with extended lugs, giving additional M2 threaded fixings:

- Male Plug Kit (with contacts for 24-28AWG) = [M80-5C1XX05MU](#)
- XX = Number of contacts: 04 to 50 (even numbers)
- Contact Finish is gold

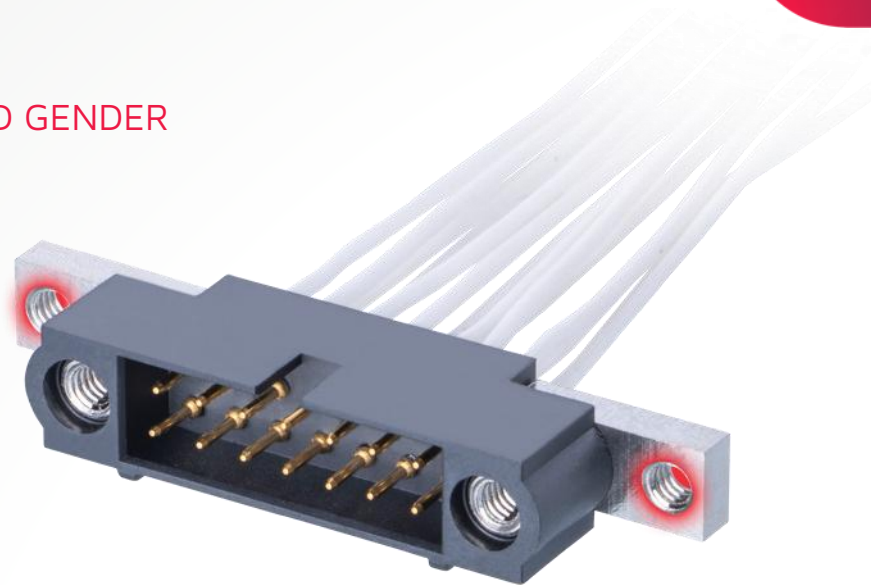
MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER



M80-2320000B



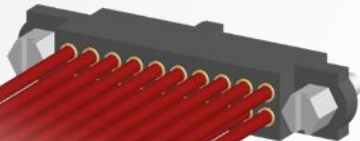
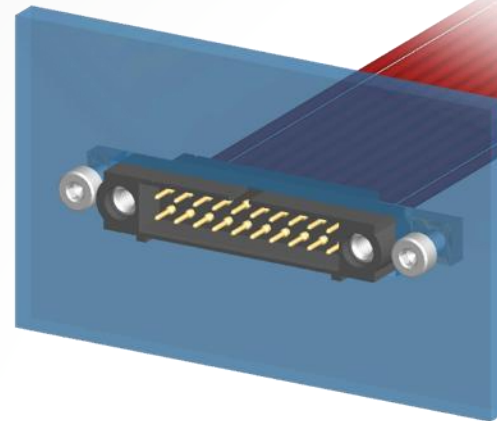
M80-2270000B



To fix these connectors to your panel, the extended lugs already have internal threads. Just add M2 threaded bolts at the front of the panel.

- Ensure you specify adequate thread length on the bolt to pass through the panel and fasten to the jackscrew lug.
- For thinner panels (less than 3mm), our 5mm bolts will be suitable: [M80-2320000B](#) (hex socket head) or [M80-2270000B](#) (slotted head).
- Any bolt with a M2 x 0.4 thread can be used for thicker panels.

MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER

Mating Cable
Female ReceptacleRear Panel
Mount Male Plug

The mating Female Receptacle connector requires standard gender floating jackscrews:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-460XXYY](#) (hex slotted jackscrews) or [M80-480XXYY](#) (hex socket)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-461XXYY](#) (hex slotted jackscrews) or [M80-481XXYY](#) (hex socket)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER



Mating Cable Female
Receptacle
with T-Contact

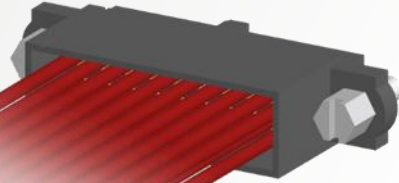
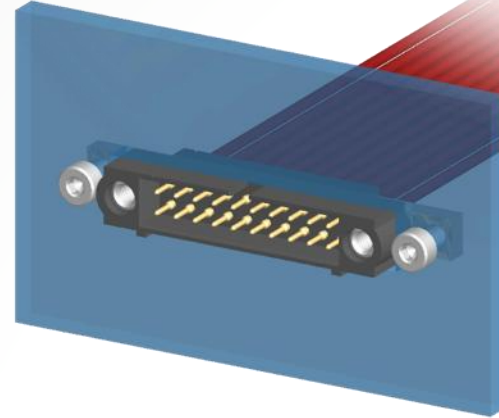


Rear Panel
Mount Male Plug

You can also specify the higher power T-Contact on the mating half, capable of up to 8.5A per contact:

- Female Receptacle Housing = [M80-413XX98](#) (hex slotted jackscrews) or [M80-414XX98](#) (hex socket)
- XX = Number of contacts: 04 to 50 (even numbers)
- Female Receptacle T-Contact (for 22AWG) = [M80-2060005](#) (gold), sold separately

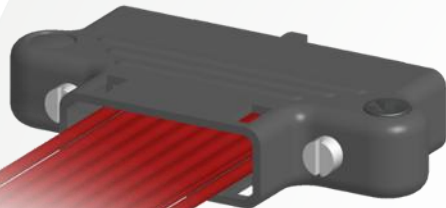
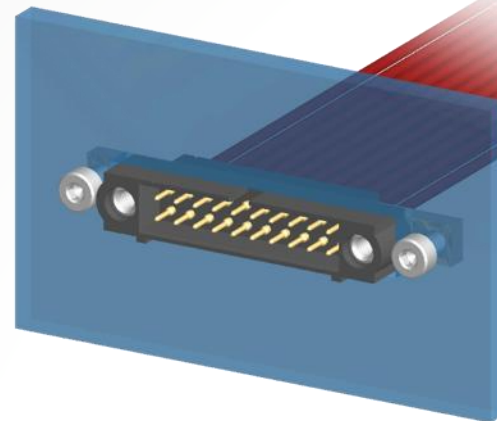
MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER

Mating Cable Female
Receptacle with
Extended WallsRear Panel
Mount Male Plug

The mating Female Receptacle connector with standard gender floating jackscrews can also have extended walls at the rear, for backpotting:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-465XXYY](#) (hex slotted jackscrews) or [M80-485XXYY](#) (hex socket)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-466XXYY](#) (hex slotted jackscrews) or [M80-486XXYY](#) (hex socket)
- XX = Number of contacts: 06, 10, 12, 14, 18, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

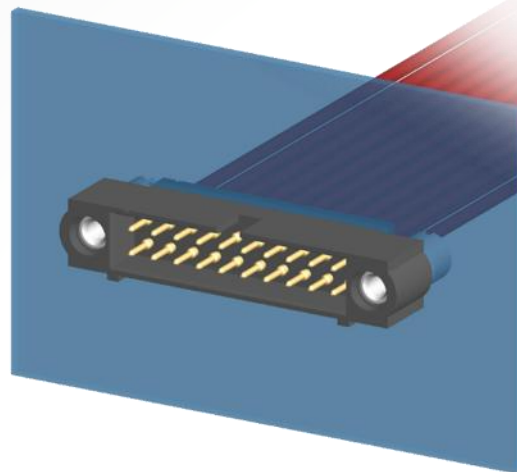
MALE PLUG REAR PANEL MOUNT – USING STANDARD GENDER

Mating Cable Female
Receptacle
with Plastic HoodsRear Panel
Mount Male Plug

The full kit with Plastic Hoods is also compatible as a mating connector, and comes with slotted floating jackscrews:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-941XXYY](#)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-940XXYY](#)
- XX = Number of contacts: 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER

Front Panel
Mount Male Plug

Front Panel Mount for the Male Plug cable connector uses the same standard gender jackscrews as board mount for PCB connectors:

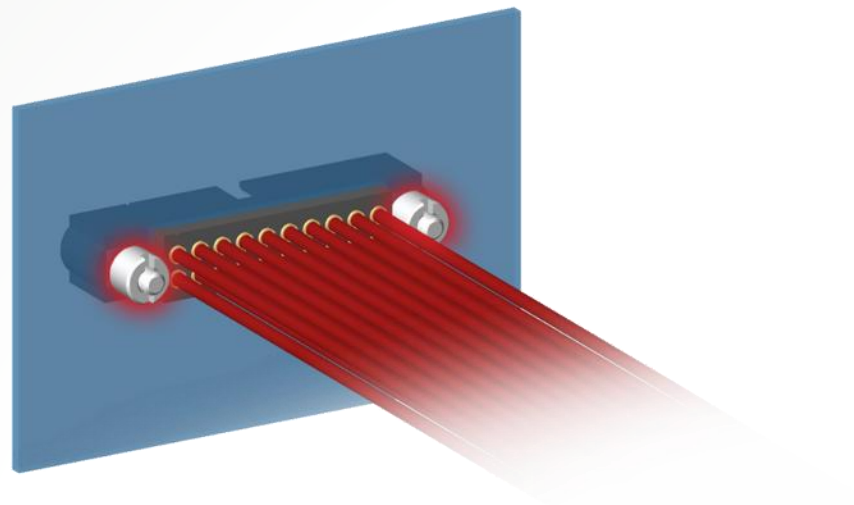
- Male Plug Kit (with contacts for 22AWG) = [M80-5D1XX05M2 \(for 3.5mm panel mount studs\)](#) or [M80-5D1XX05M3 \(5mm\)](#)
- Male Plug Kit (with contacts for 24-28AWG) = [M80-5C1XX05M2 \(for 3.5mm panel mount studs\)](#) or [M80-5C1XX05M3 \(5mm\)](#)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- Contact Finish is gold

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MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER



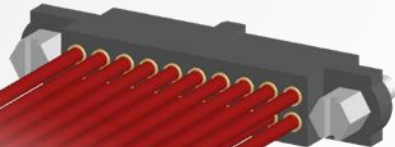
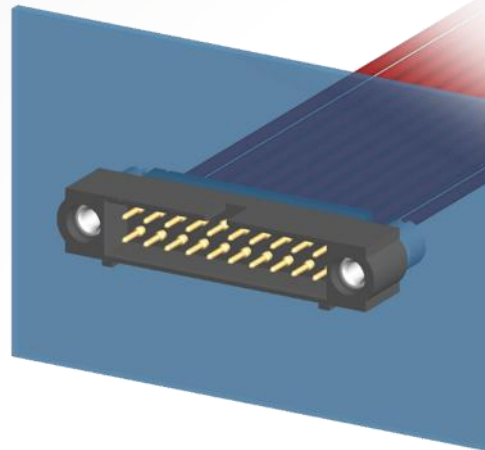
M80-2130000B
(included)



To fix these connectors to your panel, the connector has rear studs, externally threaded to M2 x 0.4. These pass through the panel and are secured with nuts at the rear face of the panel.

These M2 slotted nuts are included with the connector kits listed on the previous page. Spares can be ordered – part number [M80-2130000B](#).

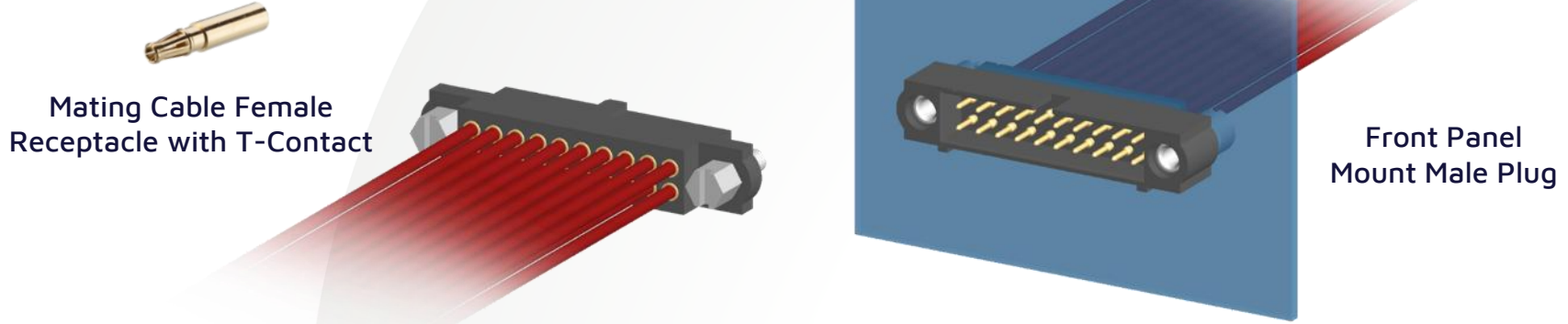
MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER

Mating Cable
Female ReceptacleFront Panel
Mount Male Plug

The mating Female Receptacle connector is the same as mating with the Rear Panel Mount, requiring standard gender floating jackscrews:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-460XXYY](#) (hex slotted jackscrews) or [M80-480XXYY](#) (hex socket)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-461XXYY](#) (hex slotted jackscrews) or [M80-481XXYY](#) (hex socket)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

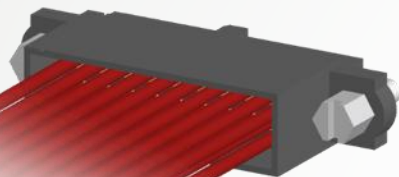
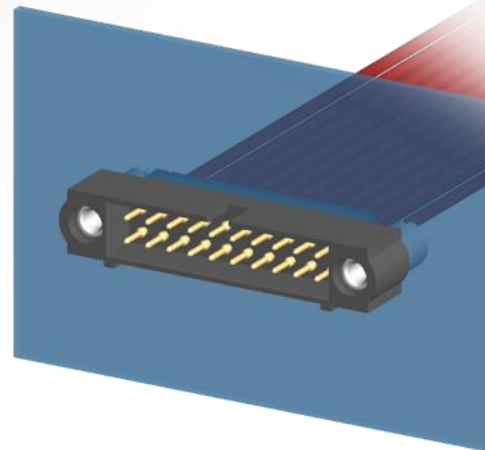
MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER



You can also specify the higher power T-Contact on the mating half, capable of up to 8.5A per contact:

- Female Receptacle Housing = [M80-413XX98](#) (hex slotted jackscrews) or [M80-414XX98](#) (hex socket)
- XX = Number of contacts: 04 to 50 (even numbers)
- Female Receptacle T-Contact (for 22AWG) = [M80-2060005](#) (gold), sold separately

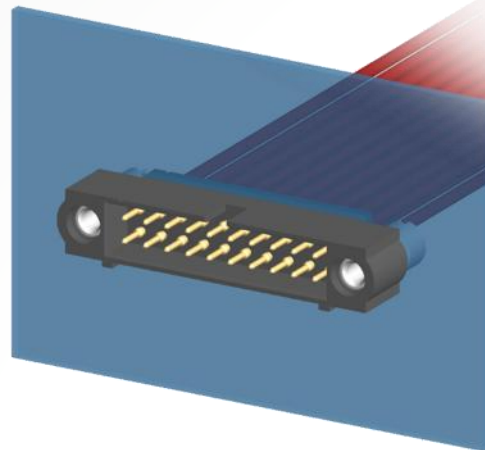
MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER

Mating Cable Female
Receptacle with
Extended WallsFront Panel
Mount Male Plug

The mating Female Receptacle connector with standard gender floating jackscrews can also have extended walls at the rear, for backpotting:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-465XXYY](#) (hex slotted jackscrews) or [M80-485XXYY](#) (hex socket)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-466XXYY](#) (hex slotted jackscrews) or [M80-486XXYY](#) (hex socket)
- XX = Number of contacts: 06, 10, 12, 14, 18, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

MALE PLUG FRONT PANEL MOUNT – USING STANDARD GENDER

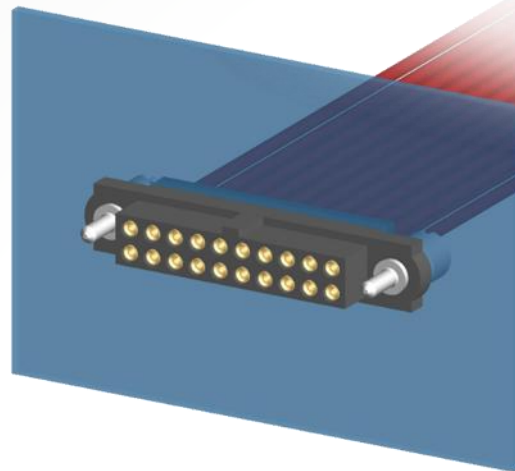
Mating Cable Female
Receptacle with
Plastic HoodsFront Panel
Mount Male Plug

The full kit with Plastic Hoods is again compatible as a mating connector, and comes with slotted floating jackscrews:

- Female Receptacle Kit (with contacts for 22AWG) = [M80-941XXYY](#)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-940XXYY](#)
- XX = Number of contacts: 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

FEMALE RECEPTACLE FRONT PANEL MOUNT – USING REVERSE FIX

Panel Mount
Female
Receptacle



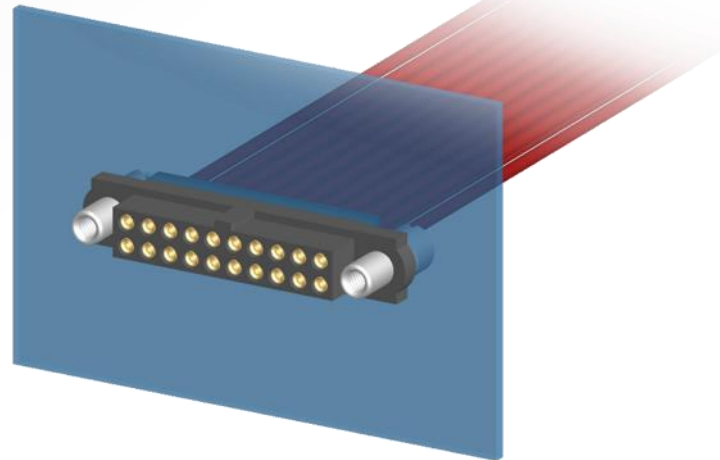
Using the Female Receptacle reverse fix jackscrews, the Female Receptacle connector is mounted using the same method as the front panel Male Plug (see [page 12](#)):

- Female Receptacle Kit (with contacts for 22AWG) = [M80-462XXYY](#) (for 3.5mm panel mount studs) or [M80-4D1XXYYF9 \(5mm\)](#)
- Female Receptacle Kit (with contacts for 24-28AWG) = [M80-463XXYY](#) (for 3.5mm panel mount studs) or [M80-4C1XXYYF9 \(5mm\)](#)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

FEMALE RECEPTACLE FRONT PANEL MOUNT – USING REVERSE FIX



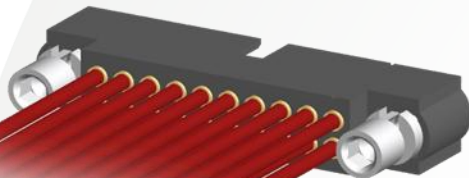
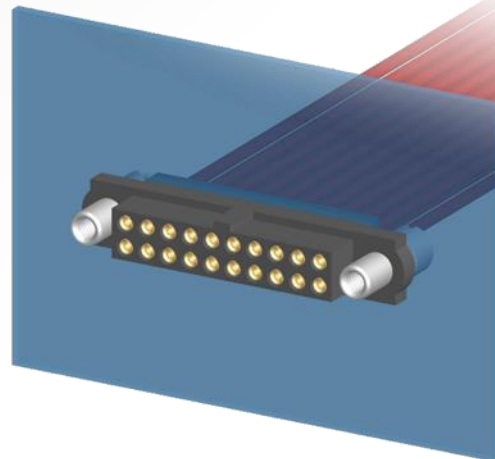
Panel Mount Female
Receptacle with T-Contact



You can also specify the same housing & jackscrew style, and use the T-Contact for higher current capacity (up to 8.5A per contact):

- Female Receptacle Housing = [M80-415XX98](#) (with 3.5mm panel mount studs)
- Female Receptacle T-Contact (for 22AWG) = [M80-2060005](#) (gold), sold separately
- XX = Number of contacts: 04 to 50 (even numbers)

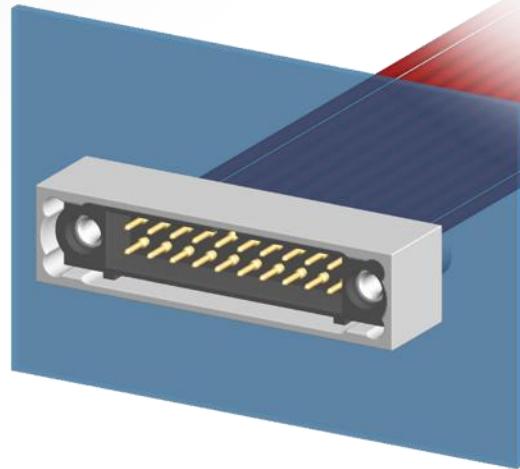
FEMALE RECEPTACLE FRONT PANEL MOUNT – USING REVERSE FIX

Mating Cable
Male PlugPanel Mount
Female
Receptacle

The mating Male Plug connector (compatible with both standard and T-Contact Female Receptacle) also requires reverse fix jackscrews:

- Male Plug Kit (with contacts for 22AWG) = [M80-562XX05](#) (for slotted jackscrews) or [M80-582XX05](#) (for hex socket)
- Male Plug Kit (with contacts for 24-28AWG) = [M80-563XX05](#) (for slotted jackscrews) or [M80-583XX05](#) (for hex socket)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- Contact Finish is gold

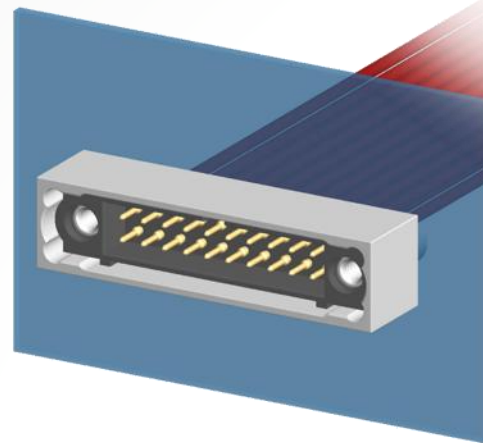
MALE PLUG FRONT PANEL MOUNT – USING METAL BACKSHELLS

Panel Mount Male Plug
with Metal Backshells

You can add metal backshells to the connection, for additional durability or shielding (mounted the same as the [front panel Male Plug](#) on [page 12](#)):

- Male Plug connector Kit = [M80-5D1XX05M3 \(22AWG contacts\)](#) or [M80-5C1XX05M3 \(24-28AWG\)](#)
- Panel Mount backshell = [M80-906XX02](#)
- XX = Number of contacts: 08, 10, 12, 14, 16, 20, 22, 24, 26, 28 or 32
- Contact Finish is gold

MALE PLUG FRONT PANEL MOUNT – USING METAL BACKSHELLS

Mating Cable Female
Receptacle with
Metal BackshellsPanel Mount Male
Plug with
Metal Backshells

The mating cable metal backshell kit comes with the applicable longer jackscrews; use tool [Z80-300](#) to fit the circlips:

- Female Receptacle connector Kit = [M80-470XXYY](#) (22AWG contacts) or [M80-471XXYY](#) (24-28AWG)
- Cable backshell = [M80-945XXO2](#) (slotted jackscrews) or [M80-946XXO2](#) (hex socket)
- XX = Number of contacts: 08, 10, 12, 14, 16, 20, 22, 24, 26, 28 or 32
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

MALE PLUG FRONT PANEL MOUNT – USING METAL BACKSHELLS

Add Metal Braiding
for full shielding

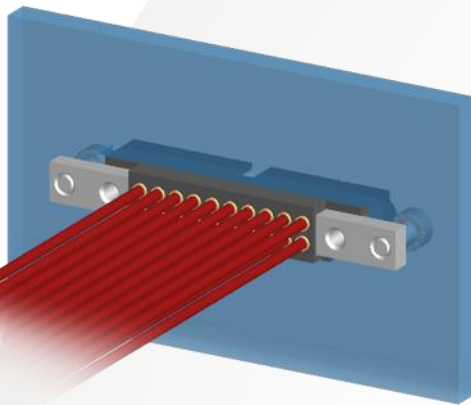
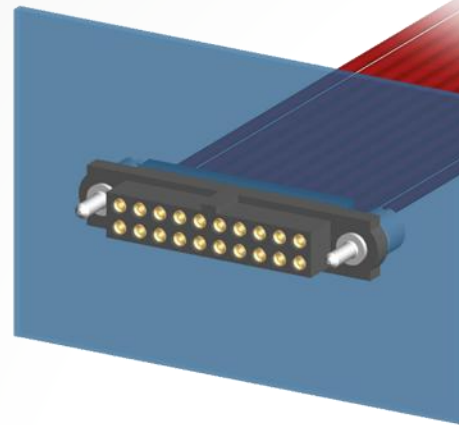


Add Plastic Braiding for
durability, protection

To complete the full shielding effect, use braiding on the external cable assembly to shield the wires. The braid can be attached to the rear collar of the cable metal backshell. Alternatively, affix plastic braiding just for added durability and cable protection.

- BAND-IT Ties = [M80-9470000](#) (206.8mm) or [M80-9480000](#) (362mm) – use with applicable BAND-IT tooling
- Plastic Cable ties (not available from Harwin)

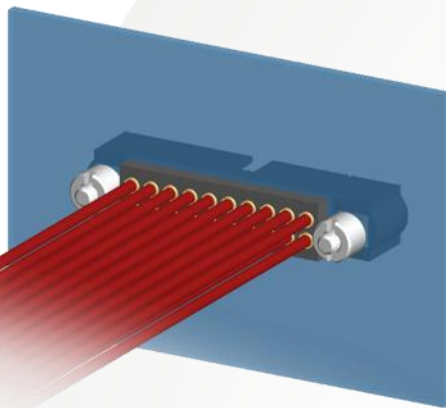
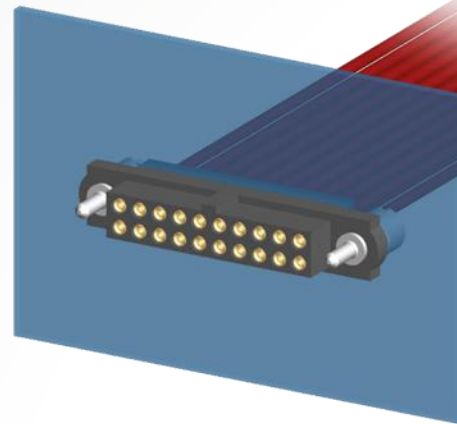
PANEL TO PANEL MOUNT WITH MALE PLUG REAR PANEL

Rear Panel
Mount Male PlugPanel Mount Female
Receptacle with Guide Pins

This combination uses the Male Plug rear panel mount design and a front panel mount Female Receptacle connector with guide pins. There is no screw fixing between the two connectors, as it is unlikely that there would be any access available. Use the Male Plug connector from [page 5](#), and mate to:

- Female Receptacle connector = [M80-417XX98 \(housing only\)](#), M80-4D1XXYYF3 (22AWG contacts) or [M80-4C1XXYYF3 \(24-28AWG\)](#)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

PANEL TO PANEL MOUNT WITH MALE PLUG FRONT PANEL

Front Panel
Mount Male PlugPanel Mount Female
Receptacle with Guide Pins

In this style, both Male Plug and Female Receptacle connectors are front panel mounted. This connection also has no screw fixing between the two connectors, with guide pins on the Female Receptacle. Use the Male Plug connector from [page 11](#), and mate to the same Female Receptacle style as shown on the previous page:

- Female Receptacle connector = [M80-417XX98 \(housing only\)](#), M80-4D1XXYYF3 (22AWG contacts) or [M80-4C1XXYYF3 \(24-28AWG\)](#)
- XX = Number of contacts: 04, 06, 08, 10, 12, 14, 20, 26, 34, 42 or 50
- YY = Contact Finish: 05 for gold outer shells, 42 for tin outer shells (internal contact clip is always gold)

CONSIDERATIONS



When specifying connectors from this Training Module, please consider:

- Not all connector variations will be stocked, some will be made-to-order – please check availability in advance of your production requirements.
- We supply some full cable assemblies as standard, but we can also manufacture a wide range of cable assemblies to order, including braided, labelled, twisted pairs, and a variety of wire insulation colors. [Contact us](#) for help!

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WITH SUPREME
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