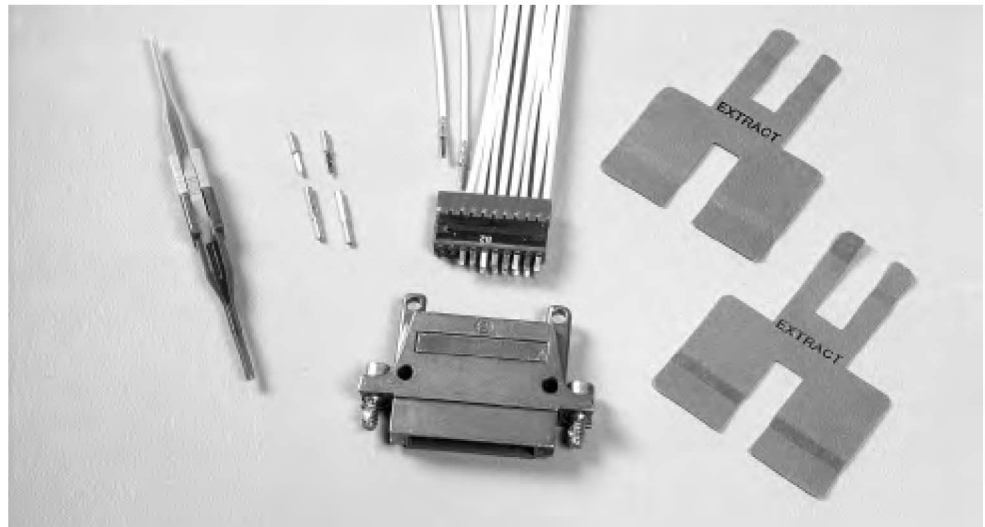


Product Facts

- Low-profile rectangular design for high packaging density
- Environmental sealing for aerospace applications
- Modular components for design versatility and logistics savings
- Lightweight materials for weight savings
- Quick-disconnect mating hardware



METRIC
Dimensions in this section are millimeters over inches

System

The Raychem MTC product line is a complete modular connector system consisting of lightweight, environmentally sealed miniature rectangular connectors (shell housings with removable inserts) and individually removable rear-release contacts.

Components

MTC connectors are now available with quick-disconnect mating hardware, EME shielding accessories, and modular inserts that can accommodate a mix of signal and power crimp contacts and coaxial contacts. The need for special termination tooling has

been minimized, while the ease of manufacturing and maintenance has been improved.

Configurations

MTC rectangular connectors using jack screws or quick-disconnect hardware can be stacked or panel-mounted next to each other without any provision for grip space, a feature that can save significant panel area.

MTC connectors are available in 1-inch and 2-inch configurations. Modular removable inserts with size 22 and/or size 16 contact cavities can be combined into the 1-inch and 2-inch MTC housings.

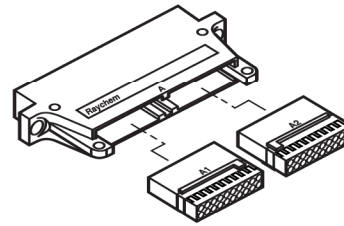
Inserts

MTC inserts are available in 20-cavity and 5-cavity versions. The 20-cavity insert accepts size 20-22 (24 AWG to 20 AWG wire) crimp contacts. The 5-cavity insert accepts size 16-14 crimp contacts. Insertion/extraction of the contacts is rear release.

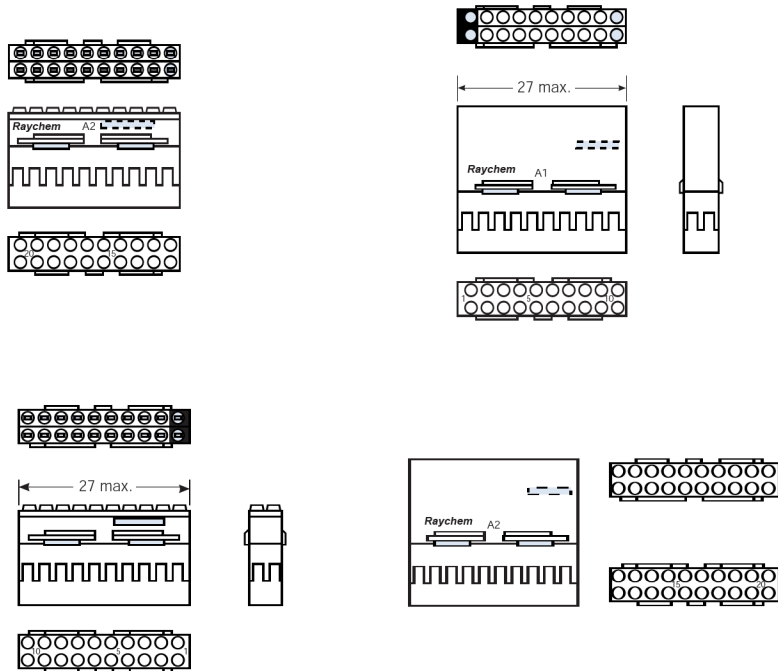
Note:

Other configurations are available in the MTC family (size 12 contacts; 50 mil spacing for double density; accessories). Please contact Tyco Electronics.

20-Cavity Inserts



2-inch Shell with Inserts



MTCP-122-20 inserts are used with MTC100 1-inch and 2-inch shells. The 1-inch shell takes:

- One MTCP-122-20P (pin contact) **or**
- One MTCP-122-20S (socket contact)

The 2-inch shell takes:

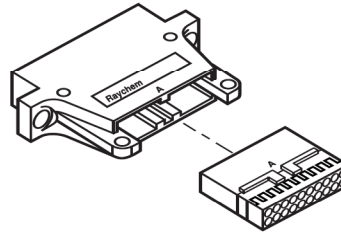
- One MTCP-122-20P1 and one MTCP-122-20P2 (pin contact) **or**
- One MTCP-122-20S1 and one MTCP-122-20S2 (socket contact)

2 x 20 Cavity Inserts
(Size 20-22) — 2-Inch Shell

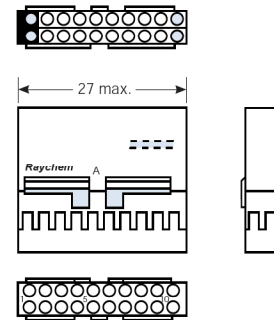
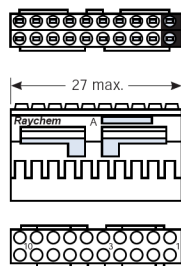
Pin Insert	Socket Insert
MTCP-122-20P1	MTCP-122-20S1
MTCP-122-20P2	MTCP-122-20S2

20-Cavity Inserts (Continued)

1 x 20 Cavity Inserts
(Size 20-22) — 1-Inch Shell



1-inch Shell with Insert



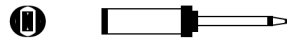
Pin Insert	Socket Insert
MTCP-122-20P	MTCP-122-20S

Contacts for 20-Cavity Inserts

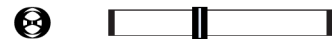
The contacts for 20-cavity inserts must be ordered separately. They are:

- CTA-0166—pin contact
- CTA-0165—socket contact

Contacts accept 24 AWG to 20 AWG wires.



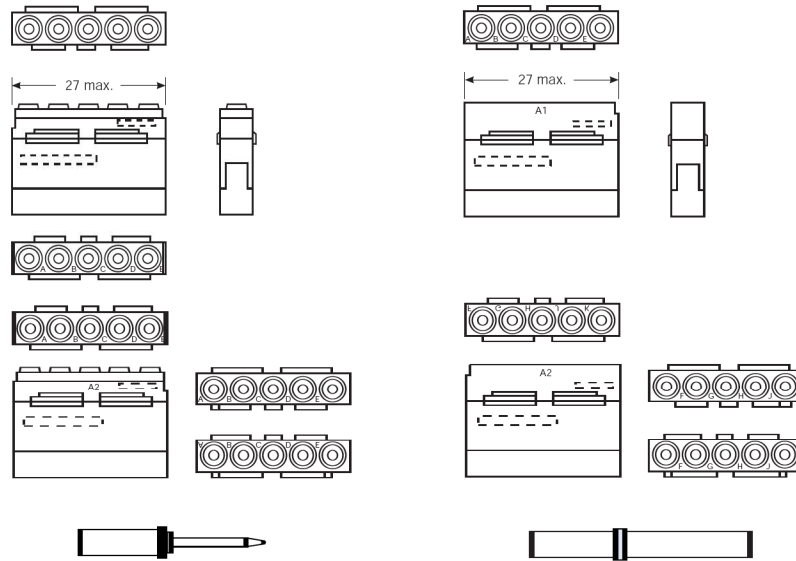
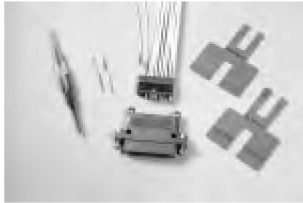
Pin Contact
CTA-0166



Socket Contact
CTA-0165

Tools		Tools	
Positioner for pin contact	CE-1605900	Positioner for socket contact	CE-1606000
Installation process	ES-61413	Installation process	ES-61413
Contact removal tool (plastic)	CTA-1160	Contact removal tool (plastic)	CTA-1160
Extraction tool for MTCP inserts	CTA-0161	Extraction tool for MTCP inserts	CTA-0161

5-Cavity Inserts (Size 16)



MTCP-116-05 inserts are used with MTC100 1-inch and 2-inch shells.
The 1-inch shell takes:

- One MTCP-116-05-P1 (pin contact) **or**
- One MTCP-116-05-S1 (socket contact)

The 2-inch shell takes:

- One MTCP-116-05P1 and one MTC-116-05P2 (pin contact) **or**
- One MTCP-116-05-S1 and one MTCP-116-05-S2 (socket contact)

5-Cavity Inserts (Size 16)

Pin Insert	Socket Insert
MTCP-116-05P1	MTCP-116-05S1
MTCP-116-05P2	MTCP-116-05S2

Contacts for 5-Cavity Inserts

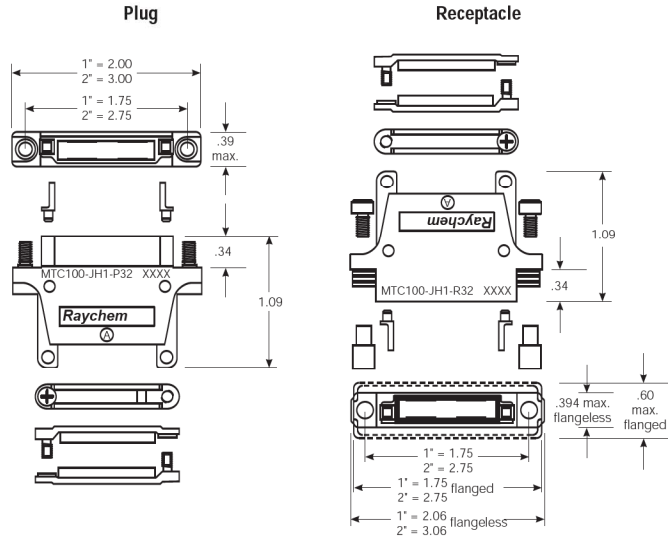
The contacts for 5-cavity inserts must be ordered separately. They include:

- CTA-0079 — pin contact (MS 27493-16) (MIL-C-39029/58 intermateable)
- CTA-0078 — socket contact (MS 27491-16) (MIL-C-39029/57 intermateable)
- D-602-0140 — coaxial pin contact (MIL-C-39029/76 intermateable)
- D-602-0171 — coaxial socket contact (MIL-C-39029/78 intermateable)

Other contacts designed for M38999 Series II connectors can be used.

Pin Contact	Socket Contact
D-602-0140 (coaxial)	D-602-0171 (coaxial)
CTA-0079 (power)	CTA-0078 (power)

Hybrid Inserts



Hybrids

Hybrid insert combinations of size 22 and size 16 contact cavities are also possible.

2-Inch Shell—Hybrid Assembly

Power and signal

Shells

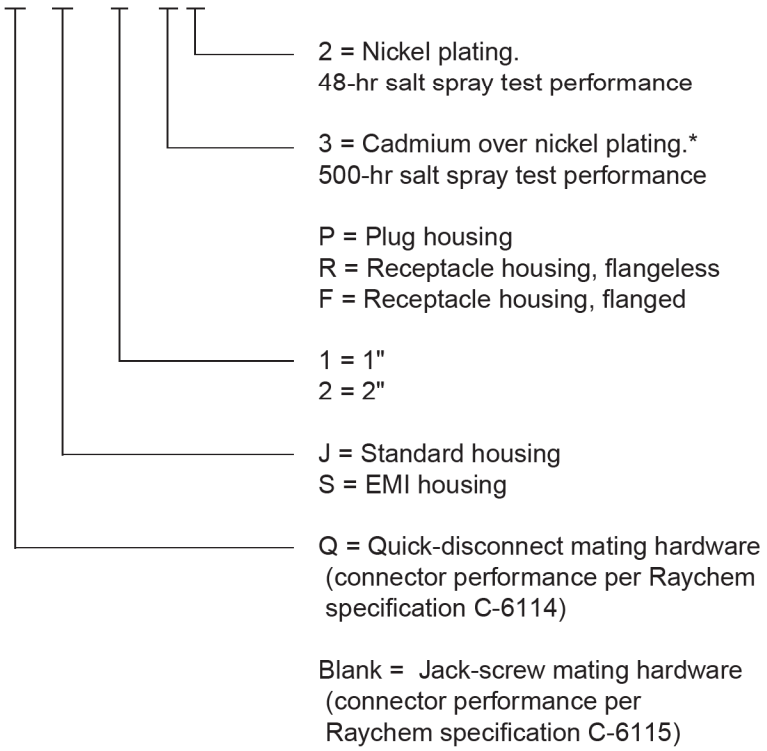
MTC connector housing shells are available with nickel plating (48-hr salt spray performance) or cadmium over nickel plating (500-hr salt spray performance).

MTC connector housings are offered with quick-disconnect or jack-screw mating hardware. Each connector shell is polarized and has 64 user-defined keying combinations. Lightweight, low-profile EME backshells are also available for increased shielding effectiveness of the connector.

MTC Shells Ordering Information

MTC High-Performance Modular Rectangular Connectors with Removable Contacts (Continued)

M T C 1 0 0 X - X H X - X X 2



*Some combinations of shells, mating hardware and EME shielding accessories are not available. Contact Tyco Electronics for product information.

Accessories

Rectangular Connectors

MTC High-Performance Modular Rectangular Connectors with Removable Contacts (Continued)



Low-Profile EME Backshells

Lightweight rectangular EME backshells connect the overall bundle shield to the MTC connector housing. Individual cable shields can also be terminated to the backshell braid by using Raychem SolderSleeve devices.

The backshell is mounted on the MTC housing via the cable clamp screws.

MTC backshell features include a low profile, light weight, and Level II EME performance.

EME Backshell Adapters

- CHA-0275 2-inch adapter (plug or receptacle)
- CHA-0276 1-inch adapter (plug or receptacle)



MTC Shield-Grounding Busbars

Raychem MTC shield-grounding busbars allow for simple, cost-effective termination of cable shielding to MTC aluminum housings.

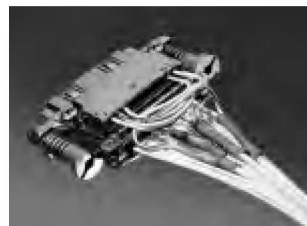
Two-inch shield-grounding busbars terminate up to 20 shielded twisted pairs on a 2-inch MTC connector. The individual shields are terminated to "fingers" on the busbar with Raychem SolderSleeve devices.

The busbar is mounted on the MTC housing via cable clamp screws.

MTC busbar features include a simple termination, cost effectiveness, light weight, and Level I EME performance.

Shield-Grounding Busbars

- CTA-0022 1-inch busbar (with 5 SolderSleeve terminators)
- CTA-0023 2-inch busbar (with 10 SolderSleeve terminators)



EME Shielding Accessories for MTC Connectors

Grounding Block

Allows for cable shield termination grounding on the MTC shell housing via crimp-removable contacts. This grounding scheme allows individual cables to be removed from the connector without cutting a ganged ground connection. Sufficient ground contacts are available to handle shielded twisted-pair cables.

Grounding Block

- CHA-0301 1-inch grounding block receptacle shell
- CHA-0302 2-inch grounding block receptacle shell
- CHA-0303 1-inch grounding block plug shell
- CHA-0304 2-inch grounding block plug shell