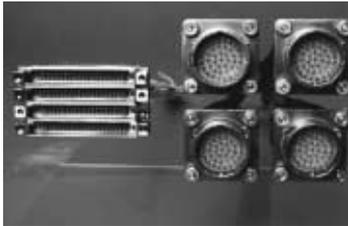


## MTC Crimp Connectors

*High-performance modular rectangular connectors with removable contacts*



### Description

#### 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.

**Available in:**

Americas

Europe

Asia Pacific



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## **Features**

Features include:

- 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.

## **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.

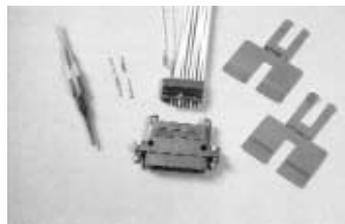
MTC connectors are available in 1-inch and 2-inch configurations. Modular removable inserts with size 22 and/or size 16 contact cavities can be combined into the 1-inch and 2-inch MTC housings.

## **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.

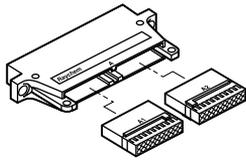
## **Note:**

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



# MTC Crimp Connectors (cont'd.)

High-performance modular rectangular connectors with removable contacts



2-inch shell with inserts

### 20-cavity 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)

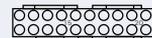
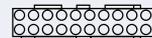
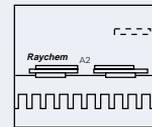
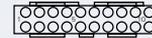
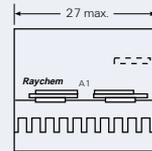
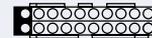
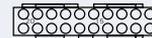
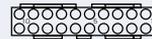
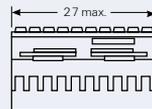
### 2 x 20 cavity inserts (size 20-22)—2-inch shell

#### Pin insert

- MTCP-122-20P1
- MTCP-122-20P2

#### Socket insert

- MTCP-122-20S1
- MTCP-122-20S2



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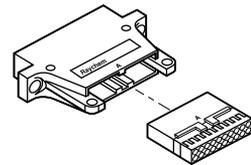
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1 x 20 cavity inserts (size 20–22)—1-inch shell

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



1-inch shell with insert

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	Socket contact
CTA-0166	CTA-0165
<b>Tools</b>	<b>Tools</b>
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

Users should independently evaluate the suitability of the product for their application. Before ordering check with factory for most current data.

# MTC Crimp Connectors (cont'd.)

High-performance modular rectangular connectors with removable contacts

## 5-cavity inserts (size 16)

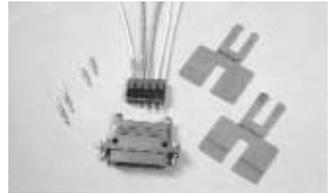
MTCP-116-05 inserts are used with MTC100 1-inch and 2-inch shells.

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)

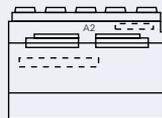
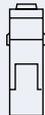
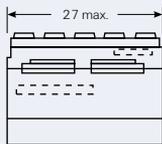


### 5-cavity inserts (size 16)

#### Pin insert

MTCP-116-05P1

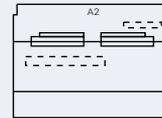
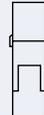
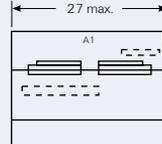
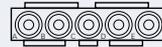
MTCP-116-05P2



#### Socket insert

MTCP-116-05S1

MTCP-116-05S2



### Contacts for 5-cavity inserts

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

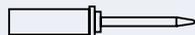
- CTA-0079 - pin contact (MS 27493-16) (MIL-C-39029/58 intermateable)
- CTA-0078 - socket contact (MS 27491-16) (MIL-C-39029/57 intermateable)
- D-602-0140 - coaxial pin contact (MIL-C-39029/76 intermateable)
- D-602-0171 - coaxial socket contact (MIL-C-39029/78 intermateable)

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

#### Pin contact

D-602-0140 (coaxial)

CTA-0079 (power)



#### Socket contact

D-602-0171 (coaxial)

CTA-0078 (power)



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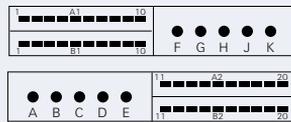
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**Hybrids**

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

**2-inch shell—hybrid assembly**

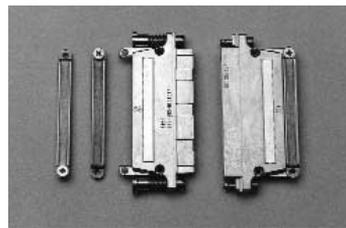
Power and signal



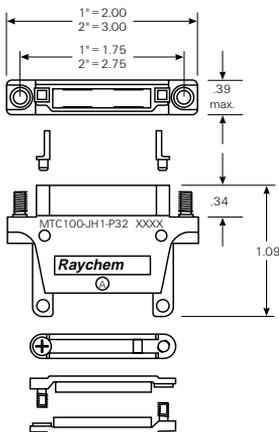
**Shells**

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

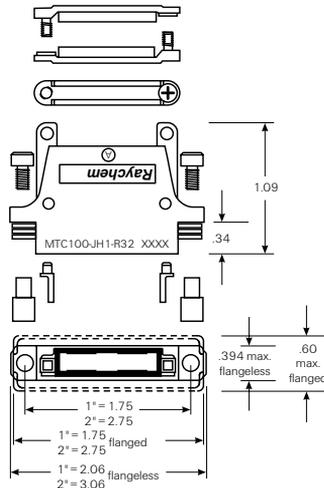
MTC connector housings are offered with quick-disconnect or jack-screw mating hardware. Each connector shell is polarized and has 64 user-defined keying combinations. Lightweight, low-profile EME backshells are also available for increased shielding effectiveness of the connector.



**Plug**



**Receptacle**



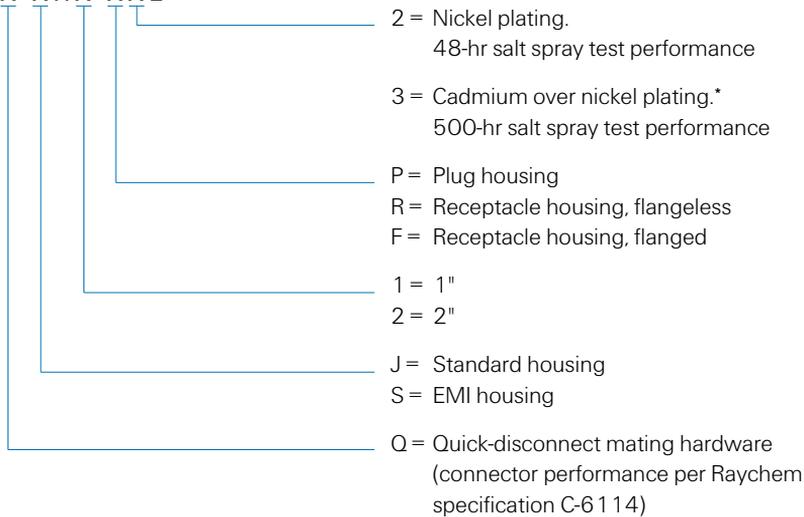
Users should independently evaluate the suitability of the product for their application. Before ordering check with factory for most current data.

# MTC Crimp Connectors (cont'd.)

High-performance modular rectangular connectors with removable contacts

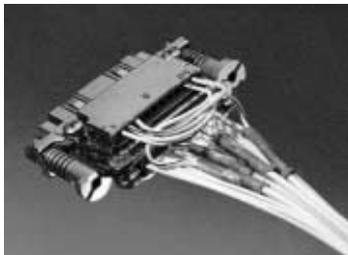
## MTC shells ordering information

MTC 100X-XHX-XX2



Blank = Jack-screw mating hardware  
(connector performance per Raychem specification C-6115)

\*Some combinations of shells, mating hardware and EME shielding accessories are not available. Please check with your Tyco Electronics product representative.



## 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

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### **Low-profile EME backshells**

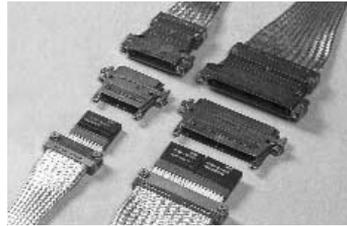
Lightweight rectangular EME backshells connect the overall bundle shield to the MTC connector housing. Individual cable shields can also be terminated to the backshell braid by using Raychem SolderSleeve devices.

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)

