

Quick Reference Guide
AMP CT Connector Series

The AMP CT connectors are a miniature wire-to-board and wire-to-wire interconnect solution. The AMP CT connector series has proven performance in its harness making capability. A variety of harness-making machines are available ranging from hand tools for low volume production to high-speed automatic crimping machines for medium to high volume productions. AMP high-speed automatic crimping machines are easy to operate, eliminating the need for tedious work of changing parts inside the equipment to adapt to changes in harness styles. Two types of housings are available, including Crimp and Mass Terminated (MT), which are preloaded with insulation displacement contacts. The box or shrouded headers are highly resistant to scooping at mating/unmating.

FEATURES AND BENEFITS

- 2 kinds of termination method: IDC, Crimp
- Discrete wire interconnect
- Circuits range from 2-15 single row, 8-30 dual row
- AWG 22-30
- Kinks for self-retention on boards
- RoHS compliant
- Many components are recognized under the component program of Underwriters Laboratories Inc., file No. E28476
- Certified by Canadian Standards Association, File No. LR 7189

PRODUCT APPLICATIONS

- Business Equipment
- Industrial Machines
- PC
- Printer
- Fax
- C-TV
- Audio
- Air conditioner
- Anywhere where signals or power are routed

How to select an AMP CT connector part number

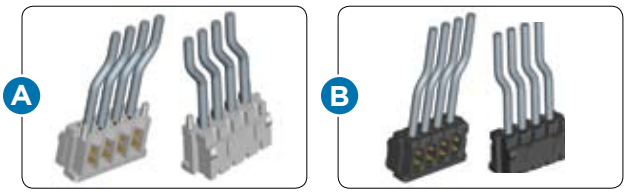
The charts on this page highlight the relationship between the number of contacts (positions) to the part number. Please see the sample chart below that was designed to help you select the correct part number for your needs. For single digit position to dash numbers, attach the digit to the end base number. For double digit position to dash numbers, attach the first digit to the front of the part number, add a dash and the base part number, then follow the base part number with a dash and the second digit.

Example Base Part Number	Your Criteria	Example Position to Dash Selection						End Part Number Based on Criteria
		Position	8	9	10	11	12	
173977	You require and 8 position MT housing	Dash Number	-8	-9	-10	-11	-12	173977-8
173977	You require and 12 position MT housing	Dash Number	-8	-9	-10	-11	-12	1-173977-2

Cable Side Connectors

Mass Termination (MT) vs. Crimp Poke

MT AMP CT Housing



Shows unstripped wires inserted into an MT housing.

Crimp AMP CT Contact **Crimp AMP CT Housing**



Shows a contact crimped onto a stripped wire to be inserted into a crimp housing.

CRIMP TYPE CONNECTORS : Contacts

Description	PN	Photo	Specifications
Receptacle Contact - Strip - AWG : 26-30	179609-1	C	D,Y
Receptacle Contact - Loose Piece - AWG : 26-30	179610-1	C	D,Y
Receptacle Contact - Strip - AWG : 22-26	179227-1	D	D,Y
Receptacle Contact - Strip - AWG : 22-26 - Gold plated	179227-4	D	D,Y
Receptacle Contact - Loose Piece - AWG : 22-26 - receptacle	179518-1	D	D,Y

CRIMP TYPE CONNECTORS : Housing

Description	PN	Photo	Position to Dash													
			2	3	4	5	6	7	8	9	10	11	12	13	14	15
Receptacle Housing	179228	E	-2	-3	-4	-5	-4	-7	-8	-9	-10	-11	-12	-13	-14	-15
Mating PNS : 292253; 292161; 292250; 292164; 292133; 292132; 292165; 292173; 292171; 292172; 292134; 176394; 292138; 292252; 292141; 292254; 292156; 292204; 292177; 292178; 292185; 292182; 292181													**Specifications :** D,Y			

MASS TERMINATION (MT) CONNECTORS : Pre-Loaded Receptacle Housing

Description	PN	Photo	Position to Dash													
			2	3	4	5	6	7	8	9	10	11	12	13	14	15
MT receptacle housing (wire application) = AWG : 26-28	173977	A	-2	-3	-4	-5	-4	-7	-8	-9	-10	-11	-12	-13	-14	-15
Mating PNS : 292253; 292161; 292250; 292164; 292133; 292132; 292165; 292173; 292171; 292172; 292138; 292252; 292141; 292254; 292156; 292204; 292178; 292182; 175133; 179608													**Specifications :** C,X			
MT Receptacle Housing - Au Plated (Wire Application) = AWG: 26~28	176392	A	-2	-3	-4	-5	-4	-7	-8	-9	-10	-11	-12	-13	-14	-15
Mating PNS: 292134; 176394													**Specifications :** C,X			

Cable Side Connectors : Tooling Options

APPLICATION TOOLING

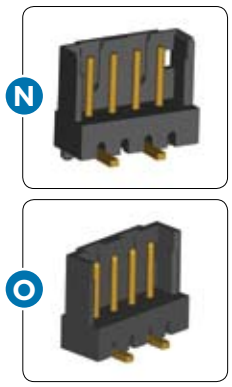
Connector PN	Tooling PN	Description	Application Spec.
1385047-3*	1385047-3*	Applicator	408-8040
1739772-2 thru -15	58074-1	Manual Handle without head	408-6790
	58372-1	2 mm AMP CT (IDC) Head	408-9426
176392-2 thru -15	58473-2	AMP CT MT Mini Air Terminator	-
179610-1	1385047-3*	Applicator	408-8040
179227-1	680216-3*	Applicator	408-8040
179227-4	680216-3*	Applicator	408-8040
179518-1	91572-1**	CERTI-CRIMP Hand Tool	408-8547

* Applicators listed are used in the AMP-O-LECTRIC Model G, AMP 3K/40 and AMP 5K/40 Terminators. Call the Tooling Assistance Center at 800-722-1111 for applicator numbers for Automatic Cut, Strip and Terminate Leadmakers.
** Power tooling options are also available. Call Tooling Sales at 888-777-5917 (717-810-2080) for more information

PCB Side Connectors (Single Row + Dual Row)

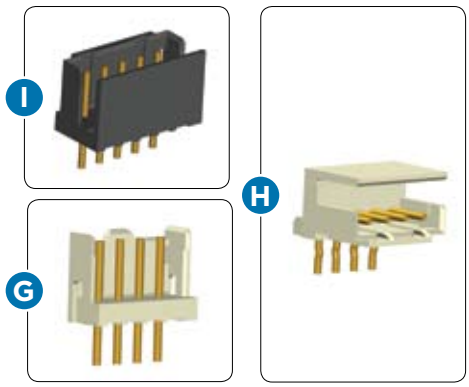
Common AMP CT Terminology

Locating Boss



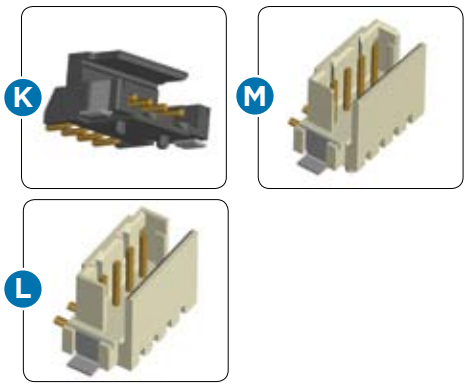
A boss is a mechanical feature that helps orientate the headers onto the PCB.

Without Kinked Leg / With Kinked Leg



Kinked legs are designed to secure the T/H headers onto the PCB.

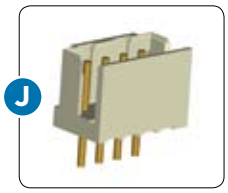
Solder Tabs



Solder tabs are designed to secure the SMT headers onto the PCB.

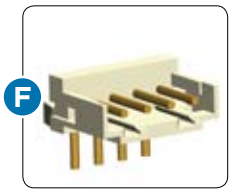
Header Styles

Box



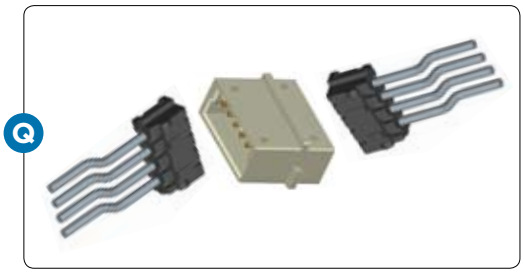
Box headers offer a front and back wall for polarization of the connector.

Standard

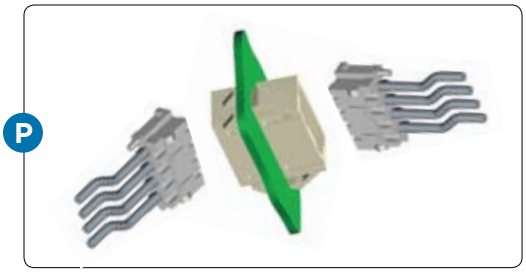


Standard headers offer only a single wall for polarization of the connector.

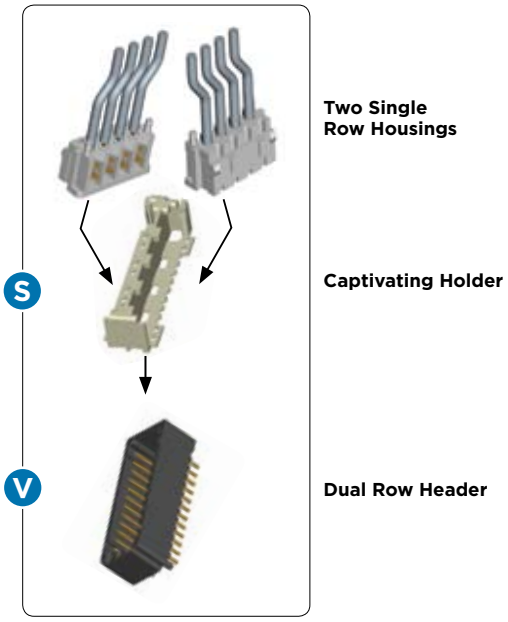
Free Hanging



Panel Mount

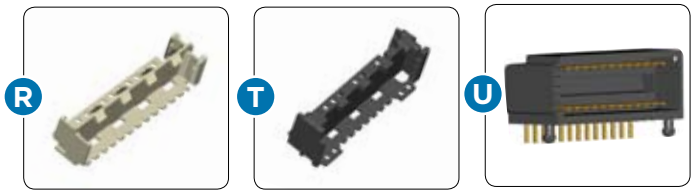


Dual Row Assemblies



Requires a holder to be used along with two single row housings.

Additional Parts



SINGLE ROW POST HEADER ASSEMBLIES BOARD-MOUNT

Description	Plating	PN	Photo	Position to Dash													
				2	3	4	5	6	7	8	9	10	11	12	13	14	15
TH Std Type - Horizontal Mount w/ Kink	TIN	292253	F	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
TH Std Type - Vertical Mount w/ Kink	TIN	292161	G	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
TH Box Type - Horizontal Mount w/ Kink	TIN	292250	H	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
TH Box Type - Vertical Mount w/o Kink	TIN	292133	I	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
TH Box Type - Vertical Mount w/ Kink	TIN	292132	J	-2	-3	-4	-5	-6	-7	-8	-9	-10	-11	-12	-13	-14	-15
SMT Box Type - Horizontal Mount Type w/ Solder Tab, w/o Boss	TIN	292173	K	-22	-23	-24	-25	-26	-27	-28	-29						
SMT Box Type - Horizontal Mount Type w/ Solder Tab, w/ Boss	TIN	292173	K	-2	-3	-4	-5	-6	-7	-8	-9						
SMT Box Type - Vertical Mount Type w/ Solder Tab, w/o Boss	TIN	292175	L	-22	-23	-24	-25	-26	-27	-28	-29						
SMT Box Type - Vertical Mount Type w/ Solder Tab, w/ Boss (Natural)	TIN	292174	M	-2	-3	-4	-5	-6	-7	-8	-9						
SMT Box Type - Vertical Mount Type w/ Solder Tab, w/ Boss (Black)	TIN	292174	M	-22	-23	-24	-25	-26	-27	-28	-29						
SMT Std Type - Vertical Mount w/ Boss	TIN	292171	N	-2	-3	-4	-5	-6	-7	-8	-9						
SMT Std Type - Vertical Mount w/o Boss	TIN	292172	O	-2	-3	-4	-5	-6	-7	-8	-9						
Mating PNS : (MT) 173977; 179694 or (Crimp) 179228 w/ contact **Specifications :** A, D																	
TH Box Type - Vertical Mount w/ Kink	Gold	292134	J	-2	-3	-4	-5	-6			-9	-10		-12			-15
TH Box Type - Horizontal Mount w/ Kink	Gold	176394	H	-2		-4		-6		-8		-10					
Mating PNS : (MT) 173977; 179694 or (Crimp) 179228 w/ 179227-4 **Specifications :** A (292134)/ C (176394), D																	

RECEPTACLE CONNECTOR HOLDERS FOR DUAL ROW HEADERS

Description	PN	Photo	Position to Dash													
			8	12	16	18	20	22	24	26	28	30				
Receptacle Housing Captivating Holder (MT)	175133	R	-8	-12	-16	-18	-20	-22	-24	-26	-28	-30				
Receptacle Housing Captivating Holder - Reinforced Retention (MT)	179608	S			-16	-18	-20	-22	-24	-26	-28	-30				
Mating PNS : 2x (MT) 173977, 176392 or 179695 **Specifications** : B																
Receptacle Housing Captivating Holder - Reinforced Retention (Crimp)	179472	T	-8	-12	-16	-18	-20	-22	-24	-26	-28	-30				
Mating PNS: 2 x (Crimp) 179228 w/ contact **Specifications :** B																

DUAL ROW POST HEADER ASSEMBLIES - BOARD-MOUNT

Description	PN	Photo	Position to Dash													
			8	12	16	18	20	22	24	26	28	30				
Horizontal Mount w/ Boardlocks	292138	U	-8	-12	-16	-18	-20	-22	-24	-26	-28	-30				
Vertical Mount w/o Boss	292252	V			-16	-18	-20	-22	-24	-26	-28	-30				
Vertical Mount w/ Boss	292141	V			-16	-18	-20	-22	-24	-26	-28	-30				
Complementary PNS : 175133, 179608 or 179472 w/ 2 x (MT) or 2 x (Crimp) HDRS **Specifications** : B																

SINGLE ROW PANEL-MOUNT HEADERS

Description	PN	Photo	Position to Dash													
			2	3	4	5	6	7	8	9	10	11	12	13	14	15
Panel Mount Header	292254	P	-2	-3	-4	-5	-4	-7	-8	-9	-10	-11	-12	-13	-14	-15
Mating PNS : (MT) 173977; 179694 or (Crimp) 179228 w/ contact **Specifications** : A,D																

SINGLE ROW POST FREE-HANGING WIRE TO WIRE HEADERS

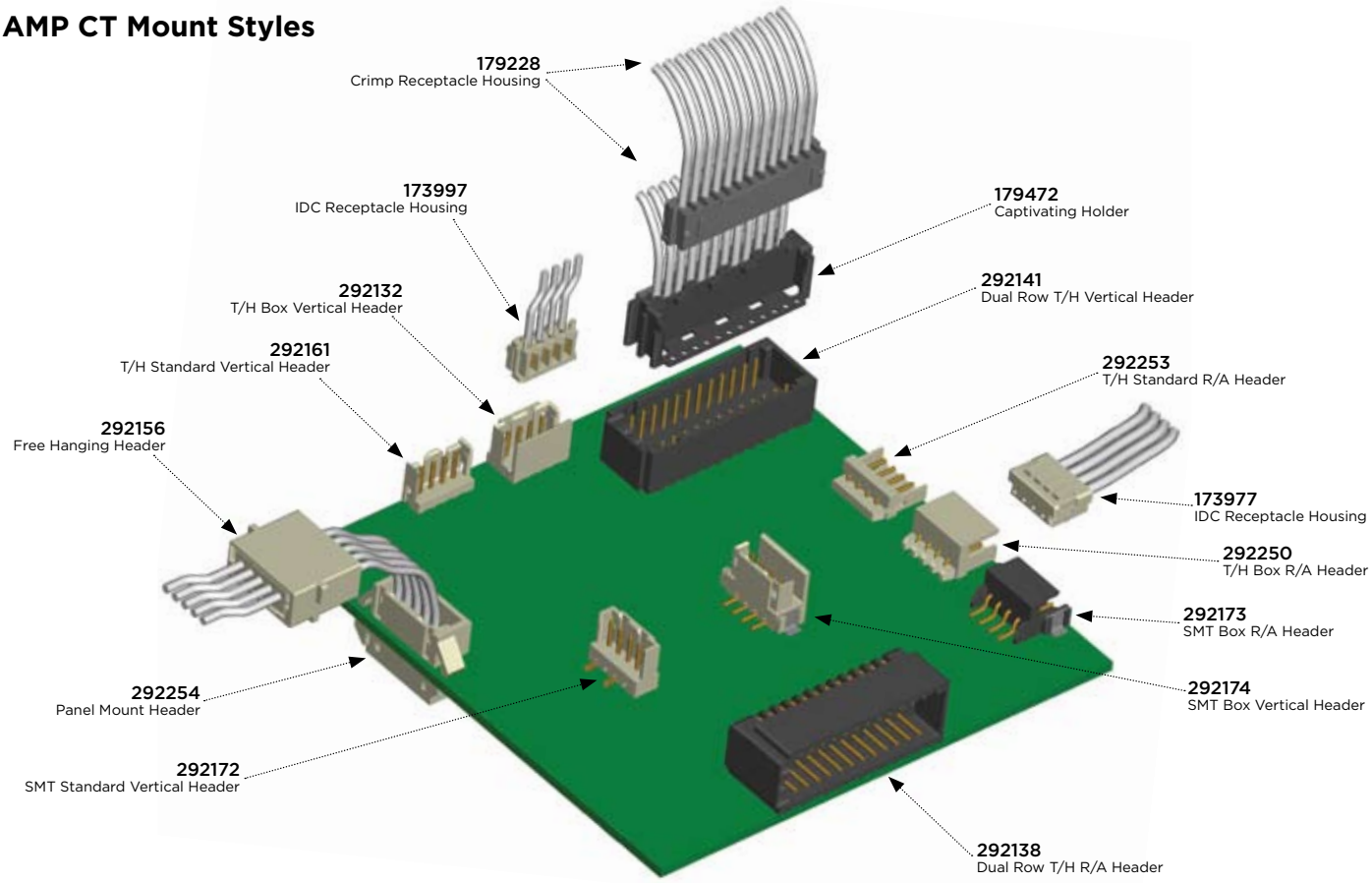
Description	PN	Photo	Position to Dash													
			2	3	4	5	6	7	8	9	10	11	12	13	14	15
Free Hanging Header	292156	Q	-2	-3	-4	-5	-6									
Mating PNS : (MT) 173977; 179694 or (Crimp) 179228 w/ contact **Specifications** : A,D																

Product/Application Specification

RATINGS								
Product Specs		Voltage	Operating Current (Amps)					
			22 AWG	24 AWG	26 AWG	28 AWG	30 AWG	
A	108-60016	125 V (AC/DC)		3	2	1		
B	108-60020	125 V (AC/DC)			1	1		
					2	1		
C	108-5218	125 V AC		3	2	1		
D	108-60029	125 V AC	4	3	2.5	1.5	1	
E	108-60024	125 V AC			1			
F	108-60021	125 V AC			1			

Application Specs	
X	114-5014
Y	114-5179
Z	114-5103

AMP CT Mount Styles



AMP CT Design Kits*

Design Kits	
PN	Description
2110829-1	AMP CT Deluxe Kit
2110829-2	AMP CT R/A Header
2110829-3	AMP CT Vertical Header
2110829-4	AMP CT R/A Box Header
2110829-5	AMP CT Box Vertical Header
2110829-6	AMP CT Panel Mount
2110829-7	AMP CT Dual Row R/A Header
2110829-8	AMP CT Dual Row Vertical Header

*Design kits are designed and assembled by Waldom and are available for purchase through your local distribution channel.

Frequently Asked Questions

What wire guage will you be using?
More flexibility with AWG when using Crimp vs. MT. Crimp housings accept 22-30 AWG and MT housings accept 24-28 AWG.

Are the connectors available for IDC?
Yes, we offer a MT version that is preloaded with IDC contacts.

Is your process automated?
MT housings are more suitable for automated processes.

Where can I find information on current rating, voltage and operating temperatures?
Please see Product Specification Information on page 5 of this Quick Reference Guide.

Which is a more standard header, with or without a locating boss?
The most standard headers tend to have a locating boss as it makes it easier for the customer to align the connector onto their board.

What special retention mechanisms are available to help ensure PCB stability?
Most of the T/H headers have kinked legs, and the SMT headers have solder tabs to help ensure PCB stability.

What are my tooling options?
TE offers comprehensive tooling options including Manual Pistol-Grips, manual Mini-Press, Pneumatic Mini-press, Semi-Auto DECAM and an Automatic DECAM tool. For more information, please visit tooling.te.com

What is the benefit of choosing Box over Std type headers?
Box type headers have an extra wall, that is a more reliable connector design intended to prevent stubbing.

FOR MORE INFORMATION

TE Technical Support Center

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*as defined www.te.com/leadfree

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