

## Quick Reference Guide

### AMP-LATCH Ribbon Cable Interconnect Solutions

AMP-LATCH connectors are ribbon cable-to-board devices used to make the transition between ribbon cable and pc board circuitry. They find heavy use within equipment to connect one board to another or one subsystem to another.

This guide illustrates the recommended range of IDC connectors available through the TE Connectivity brands. While this selector guide includes the more commonly used products which terminate to a 0.050" [1.27mm] ribbon cable pitch, TE Connectivity also offers connectors which terminate to 0.025" [0.64mm] and 0.39" [1.0mm] ribbon cable.

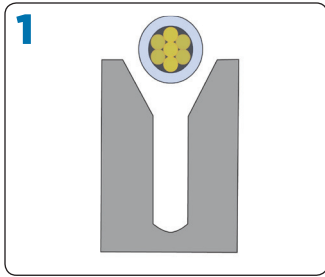
#### FEATURES AND BENEFITS

- Mass termination capabilities
- No need to strip or prepare wire
- Labor savings

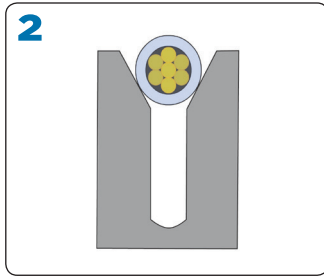
#### PRODUCT APPLICATIONS

- Computers/Electronics
- Business Equipment
- Medical Equipment

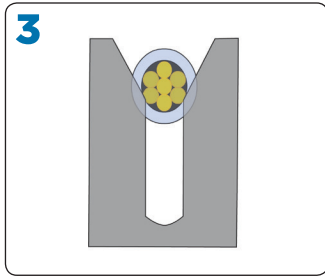
**IDC Termination**



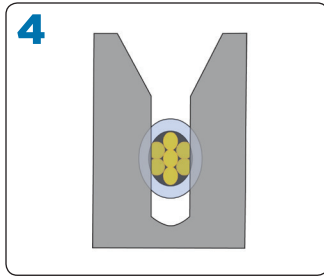
The wire must be aligned with the IDC slot



As insertion begins, the wire insulation is displaced.



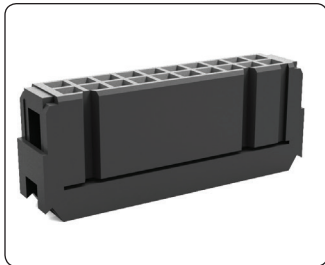
Insulation displacement is completed and conductor strands begin to deform.



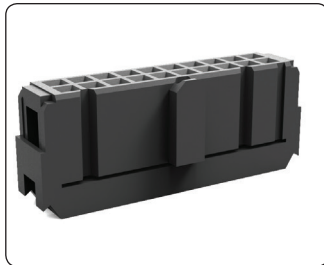
As the conductor is pushed further into the slot, strand deformation is completed and beam deflection occurs. The connection is established and maintained by high residual beam force.

**Polarization**

**Receptacles**



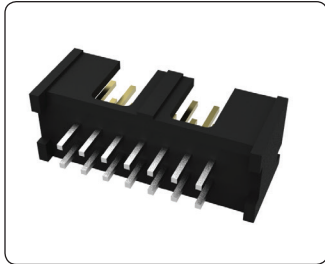
**1658620-4**  
Military



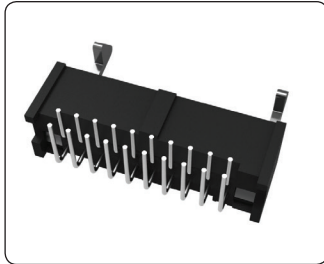
**1658621-4**  
Center and Military



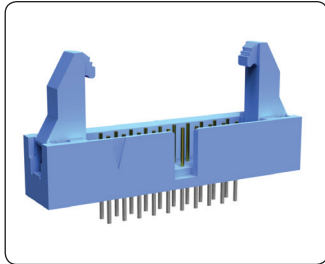
**1658624-4**  
Dual



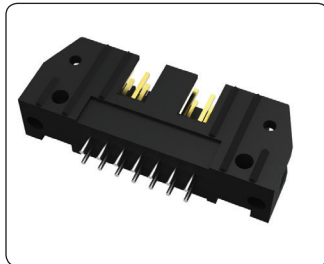
**5103308-2**  
Center and Dual



**1761607-7**  
Military and Center



**1761688-7**  
Center



**5102153-2**  
Military, Center and Dual

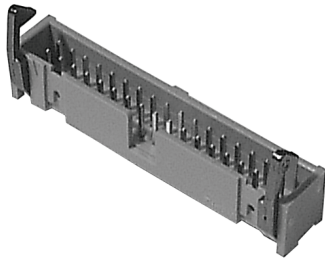
**Application Tooling**

AMP-LATCH HEADER TOOLING	
<b>Press-Fit Universal Header Tooling</b>	
Seating Tool	91085-2
<b>PCB Transition Connectors/DIP Plugs Tooling</b>	
Universal Hand Tool Kit	768340-1
Connector Specific Kit	768347-1

AMP-LATCH RECEPTACLE TOOLING	
<b>Manual Tooling</b>	
Arbor Frame Assembly	91085-2
Connector Specific Kit	768341-1
Universal Base Assembly	768338-1
<b>Pneumatic Tooling</b>	
Pneumatic Arbor Press	91112-2
Connector Specific Kit	768341-1
Universal Base Assembly	768338-1
<b>Hand Tooling</b>	
Universal Hand Tool Kit	768340-1

**AMP-LATCH .050" [1.27MM] STANDARD PRODUCT OFFERING**

**AMP-LATCH Low Profile Headers**



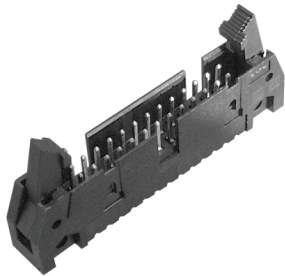
- **Contact material:** Brass / Phosphor Bronze\*
- **Contact area plating:** 0.38um, Au flash over PdNi plating  
0.76um, Au over PdNi underplating\*
- **Color:** Black
- **Insulation material:** Glass Filled Nylon / PBT\*
- **Flammability:** UL 94V-0
- **Current rating:** 1A
- **Insulation resistance:** 5000 MΩ Minimum
- **Dielectric strength:** 1,000 V rms
- **Temperature rating:** -65 to +105C

WITHOUT LATCHES		
No of Positions	Vertical	Right Angle
10	5103308-1	5103310-1
14	5103308-2	5103310-2
16	5103308-3	5103310-3
20	5103308-5	5103310-5
26	5103308-6	5103310-6
34	5103308-7	5103310-7
40	5103308-8	5103310-8
50	1-5103308-0	1-5103310-0
60	Inquire for availability	

WITH SHORT LATCHES		
No of Positions	Vertical	Right Angle
10	1761608-3	1761609-3
14	1761608-5	1761609-5
16	1761608-6	1761609-6
20	1761608-7	1761609-7
26	1761608-9	1761609-9
34	1-1761608-1	1-1761609-1
40	1-1761608-3	1-1761609-3
50	1-1761608-5	1-1761609-5
60	1-1761608-6	1-1761609-6

WITH LONG LATCHES		
No of Positions	Vertical	Right Angle
10	1761606-3	1761607-3
14	1761606-5	1761607-5
16	1761606-6	1761607-6
20	1761606-7	1761607-7
26	1761606-9	1761607-9
34	1-1761606-1	1-1761607-1
40	1-1761606-3	1-1761607-3
50	1-1761606-5	1-1761607-5
60	1-1761606-6	1-1761607-6

**AMP-LATCH Universal Election Style Pin Headers**



- **Contact material:** Brass
- **Contact area plating:** 0.38um, Au flash over PdNi plating
- **Color:** Black
- **Insulation material:** Glass Filled Nylon or Polyester
- **Flammability:** UL 94V-0
- **Current rating:** 1A
- **Insulation resistance:**  $1 \times 10^9 \Omega$
- **Dielectric strength:** 1,000 V rms
- **Temperature rating:** -55 to +105C

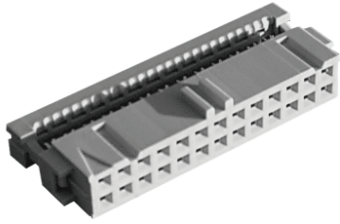
WITHOUT LATCHES		
No of Positions	Vertical	Right Angle
10	5102153-1	5102159-1
14	5102154-2	5102159-2
16	5102153-3	5102159-3
20	5102153-4	5102159-4
26	5102153-6	5102159-6
34	5102153-8	5102159-8
40	5102153-9	5102159-9
50	1-5102153-0	1-5102159-0
60	Inquire for availability	

WITH SHORT LATCHES		
No of Positions	Vertical	Right Angle
10	5499910-1	5499913-1
14	5499910-2	5499913-2
16	5499910-3	5499913-3
20	5499910-4	5499913-4
26	5499910-6	5499913-6
34	5499910-8	5499913-8
40	5499910-9	5499913-9
50	1-5499910-0	1-5499913-0
60	-	1-5499913-1

WITH LONG LATCHES		
No of Positions	Vertical	Right Angle
10	5499922-1	5499786-1
14	5499922-2	5499786-2
16	5499922-3	-
20	5499206-4	5499786-4
26	5499922-6	5499786-6
34	5499922-8	5499786-8
40	5499922-9	5499786-9
50	1-5499922-0	1-5499786-0
60	1-5499922-1	1-5499786-1

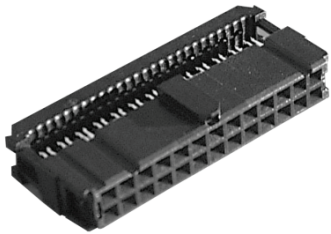
AMP-LATCH .050" [1.27MM] STANDARD PRODUCT OFFERING CONTINUED

AMP-LATCH Headers



- **Contact material:** Phosphor Bronze
- **Contact area plating:** 0.8um Au
- **Color:** Grey
- **Insulation material:** Thermoplastic Polyester
- **Flammability:** UL 94V-0
- **Current rating:** 1A
- **Insulation resistance:**  $1 \times 10^9 \Omega$
- **Dielectric strength:** 500V
- **Temperature rating:** -65 to +105C

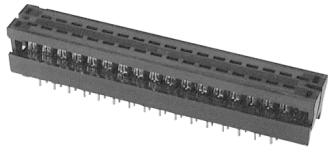
GREY, 0.8UM GOLD PLATING		
No of Positions	Vertical	Strain Relief
10	1761608-3	1761609-3
14	1761608-5	1761609-5
16	1761608-6	1761609-6
20	1761608-7	1761609-7
26	1761608-9	1761609-9
34	1-1761608-1	1-1761609-1
40	1-1761608-3	1-1761609-3
50	1-1761608-5	1-1761609-5
60	1-1761608-6	1-1761609-6



- **Contact material:** Phosphor Bronze
- **Contact area plating:** 0.4um Au
- **Color:** Black
- **Insulation material:** Thermoplastic
- **Flammability:** UL 94V-0
- **Current rating:** 1A
- **Insulation resistance:**  $1 \times 10^9 \Omega$
- **Dielectric strength:** 1000V
- **Temperature rating:** -65 to +105C

BLACK, 0.4UM GOLD PLATING		
No of Positions	Vertical	Strain Relief
10	5102153-1	5102159-1
14	5102154-2	5102159-2
16	5102153-3	5102159-3
20	5102153-4	5102159-4
26	5102153-6	5102159-6
34	5102153-8	5102159-8
40	5102153-9	5102159-9
50	1-5102153-0	1-5102159-0

AMP-LATCH PCB Transition Connectors / DIP Plugs



- **Contact material:** Phosphor Bronze
- **Contact area plating:** Sn
- **Color:** Black
- **Insulation material:** Thermoplastic
- **Flammability:** UL 94V-0
- **Current rating:** 1A
- **Insulation resistance:**  $1 \times 10^9 \Omega$
- **Dielectric strength:** 500VAC
- **Temperature rating:** -65 to +105C

DIP PLUGS	
No of Positions	Vertical
10	2-746610-1
14	2-746610-2
16	1-746610-4
20	1-746610-5
26	1-746610-6
34	1-746610-8
40	1-746610-9
50	2-746610-0
60	2-746610-4

**RIBBON CABLE CONNECTOR SELECTION GUIDE BY CENTERLINE**

**RIBBON CABLE CONNECTOR SOLUTIONS**

Ribbon Cable Centerline (P)	Mating FootPrint		Product Family	Contact Rows	Positions	Wire AWG	Termination Style	Operating Temp	Polarization	Mates to
	X	Y								
0.025	0.050	0.100	System 50 Receptacles	Double	select 10-100	30-32	IDC	-65°C - +105°C	Center only	System 50 Shrouded Headers
	See Drawing 5111595 or 111595		System 50 Paddleboard	4 row staggered	select 10-100		IDC	-65°C - +105°C	n/a	PCB
1mm	2mm	2mm	2mm Recept	Double	select 8-50	28	IDC	-65°C - +105°C	Center or none	2mm Modu
0.050	0.050	0.050	Micro-MaTch	Double	select 4-24	20-28	IDC	-40°C - +105°C	Yes, except MOB SMD	Micro-MaTch
	0.100	0.100	AMP-LATCH Receptacles	Double	select 10-64	28-26	IDC	-65°C - +105°C	Military, Military & Center, Dual	Universal & Low Pro Headers, Universal I/O
	0.100	0.100	Female Socket Connectors	Double	select 6-64	30-26	IDC	-55°C - +125°C	Military, Military & Center	Universal & Low Pro Headers, Universal I/O
	0.100	0.100	Universal I/O	Double	select 10-64	26-28	IDC	-65°C - +105°C	--	Novo Receptacles or Female Socket Connectors w/ mil or mil & center polarization
	0.100	0.100	Dip Plugs	Double	select 6-64	30-26	IDC	-65°C - +105°C	--	Dip sockets
	0.100	0.300	Dip Plugs	Double	select 6-64		IDC	-65°C - +105°C	--	Dip sockets
	0.100	0.600	Dip Plugs	Double	select 6-64		IDC	-65°C - +105°C	--	Dip sockets
	See Drawing 746603		EUROLATCH Receptacles	Three row hsg - Two rows loaded	64	30-26	IDC	-65°C - +105°C	--	Eurocard R/A & Vertical Pin Headers

**RIBBON CABLE CONNECTOR SOLUTIONS**

Ribbon Cable Centerline (P)	Mating FootPrint		Product Family	Contact Rows	Positions	Wire AWG	Termination Style	Operating Temp	Polarization	Mates to
	X	Y								
0.025	0.050	0.100	System 50 Shrouded Headers	Double	select 10-100	--	SMT, Thru-Hole	-65°C - +105°C	Center, Dual or none	System 50 Receptacles
1mm	2mm	2mm	2mm Modu Headers	Double	select 8-120	--	SMT, Thru-Hole	-65°C - +105°C	Center or none	2mm Receptacles
0.050	0.100	0.100	Low Pro Headers	Double	select 10-60	--	PCB, Solder Thru-Hole	-65°C - +105°C	Center & Dual, Military & Center, Center only	AMPMODU Board Mount Receptacle, Mod IV Receptacle w/ Center, Polarization, Novo Receptacles, Female Socket Connectors
	0.100	0.100	Universal Headers	Double	select 10-64	--	PCB, Solder Thru Hole & Action Pin	-65°C - +105°C	Military, Military & Center, Dual	AMPMODU Board Mount Receptacles, Novo Receptacles, Female Socket Connectors
	0.100	0.100	Dip Sockets	Double	select 6-64	--	PCB, Solder Thru Hole & Action Pin	-55°C - +105°C (Tin) -55°C - +105°C (Gold)	--	Dip Plugs
	0.100	0.300	Dip Sockets	Double	select 6-64	--	PCB, Solder Thru Hole & Action Pin	-55°C - +105°C (Tin) -55°C - +105°C (Gold)	--	Dip Plugs
	0.100	0.600	Dip Sockets	Double	select 6-64	--	PCB, Solder Thru Hole & Action Pin	-55°C - +105°C (Tin) -55°C - +105°C (Gold)	--	Dip Plugs
	0.100	0.100	Eurocard Pin Headers	Three row hsg - Two rows loaded	64	--	PCB, Solder Thru Hole & Action Pin	-55°C - +125°C	--	Eurocard Receptacles

## FOR MORE INFORMATION

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\*as defined [www.te.com/leadfree](http://www.te.com/leadfree)

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