

# SUBSYSTEM DESIGN

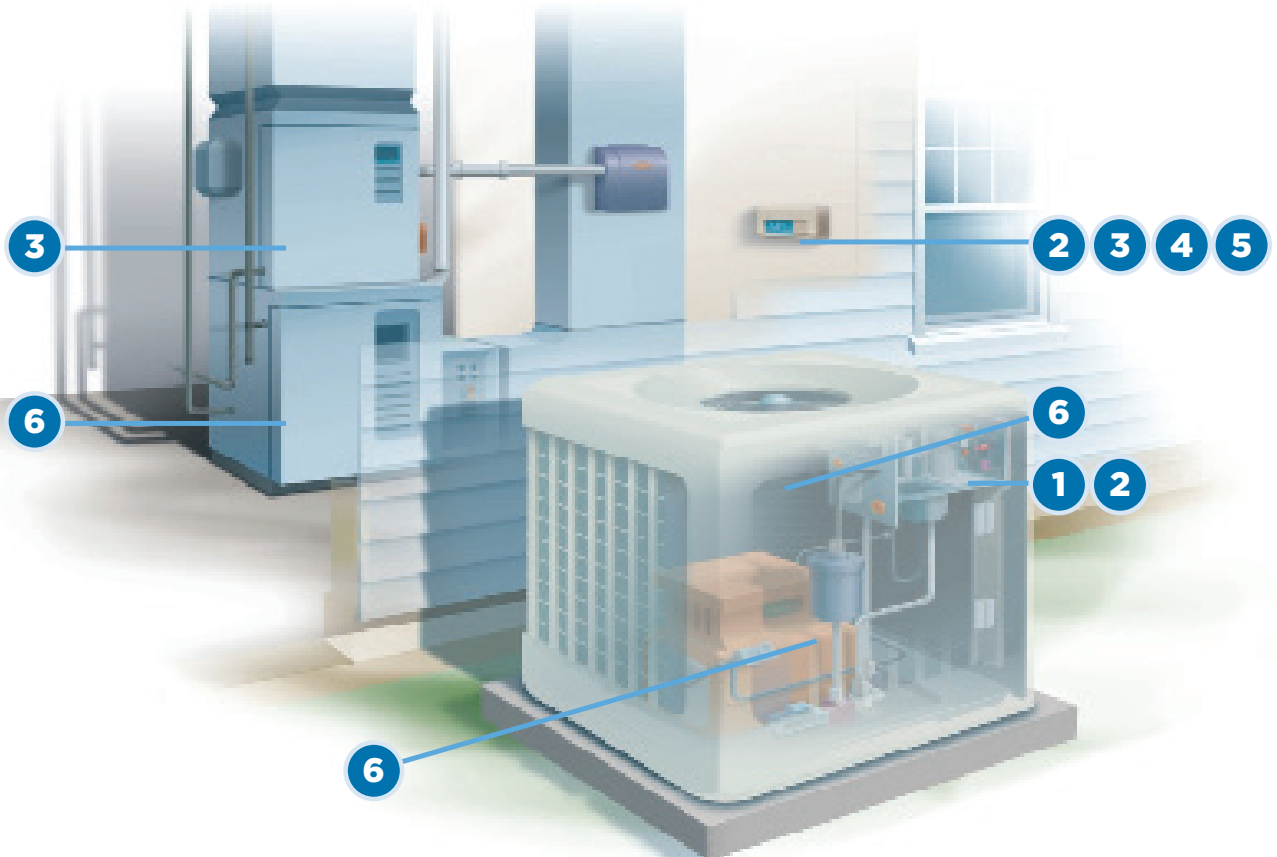
INNOVATIVE SOLUTIONS

Control boards, power systems, cable assemblies, controllers, timers and sensors that support end products or systems

# TE offers solutions for your subsystem design needs.



- 1 Main Control/ Inverter/ Power Board
- 2 Cable Assembly/ Interconnect
- 3 Sensors/ Switches/ Timers
- 4 Display
- 5 Wireless
- 6 Compressor/ Motor/ Timers



# DESIGN NAVIGATOR

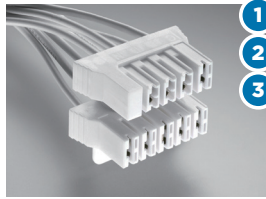
	Max Current Rating (A)	Ease of Assembly	High Vibration Performance	Space Saving Design	Particle and Liquid Sealing	Thermal Performance	Protection Against Mechanical Shock	Quick Connect/ Disconnect	Standards
<b>(1) Main Control/ Inverter/ Power Board</b>									
AMPMODU Board-to-Board & Wire-to-Board Connector	1 to 3	*	*	*			*	*	UL, CSA
AMP-IN Terminals	5	*		*			*	*	UL, CSA
Circuit Protection Devices (CPD)	Refer below for product details								
DIP Switches	0.4	*		*					N/A
Economy Power (EP) Wire-to-Board Connectors	4.5	*		*			*	*	UL, CSA, IEC-GWIT
FASTON Terminals/ Positive Lock Receptacles	24	*	*			*	*	*	UL, CSA, IEC
Grace Inertia Wire-Applied Connectors	3.5	*	*	*			*	*	UL, CSA
Mass Termination Assembly (MTA), SL & CST Connectors	5	*	*				*	*	UL, CSA
PCB Connector for RAST Standard	16/10	*	*	*			*	*	UL, CSA, IEC-GWIT
PCB Relays	35	*		*					RU, CSA, UL, TUV, SEMCO, CQC, Industry*
Power Triple Lock (PTL) Wire-Applied Connectors	20	*	*	*			*	*	UL, CSA, GWIT
Power & Signal Double Lock Wire-Applied Connectors	5/3	*	*	*			*	*	UL, CSA, IEC, VDE
Precision Resistors	N/A	*		*		*	*	*	N/A
Universal MATE-N-LOK Wire-Applied Connectors	19	*	*	*	*		*	*	RU, UL, CSA, IEC, VDE
<b>(2) Cable Assembly/ Interconnect</b>									
AMPMODU Board-to-Board & Wire-to-Board Connectors	1 to 3	*	*	*			*	*	UL, CSA
AMP CT & Mini CT Wire-to-Board Connectors	3	*		*			*	*	UL, CSA
Economy Power (EP) Wire-to-Board Connectors	4.5	*		*			*	*	UL, CSA
FASTON Terminals/ Positive Lock Receptacles	24	*	*			*	*	*	UL, CSA, IEC
Grace Inertia Wire-Applied Connectors	3.5	*	*	*			*	*	UL, CSA, IEC-GWIT
Heat Shrink Tubing	N/A	*			*	*			UL
Labels & Identification	N/A	*				*			UL
Mass Termination Assembly (MTA), SL & CST Connectors	5	*	*				*	*	UL, CSA
Multi 6 pos. Power Double Lock (PDL) Wire-Applied Connectors	9	*	*	*			*	*	cURus, CQC
PCB Connector for RAST Standard	16/10	*	*	*			*	*	UL, CSA, IEC-GWIT
Power Triple Lock (PTL) Wire-Applied Connectors	20	*		*			*	*	UL, CSA, GWIT
Power & Signal Double Lock Wire-Applied Connectors	5/3	*	*	*			*	*	UL, CSA, IEC, VDE
Terminals & Splices	30	*	*			*	*	*	UL, CSA, Industry*
Universal MATE-N-LOK Wire-Applied Connectors	19	*	*	*	*		*	*	UL, CSA, IEC, VDE
<b>(3) Sensor/ Switches/ Timers</b>									
AMP CT & Mini CT Wire-to-Board Connectors	3	*		*			*	*	UL, CSA
FASTON Terminals/ Positive Lock Receptacles	24	*	*			*	*	*	UL, CSA, IEC
PCB Connector for RAST Standard	16/10	*	*	*			*	*	UL, CSA, IEC-GWIT
PCB & Signal Relays	35/2	*		*					RU, VDE, UL, TUV, CQC, Industry*
Tactile Switches	50mA	*		*					N/A
Terminals & Splices	0	*	*			*	*	*	UL, CSA, Industry*
<b>(4) Display</b>									
Circuit Protection Devices (CPD)	Refer below for product details								
Flexible Printed Circuit (FPC) Connectors	0.5	*	*	*			*	*	N/A
LCD Coaxial Embedded Display Interface (LCEDI) Connector	1	*	*	*			*	*	VESA
<b>(5) Wireless</b>									
Antennas	N/A	*		*					N/A
Coax Connectors	0.5	*	*	*			*	*	ETSI
<b>(6) Compressor/ Motor/ Transformer</b>									
AMPLIVAR Magnet Wire Terminals & Splices	N/A	*	*	*					N/A
Cluster Blocks	N/A	*	*	*				*	UL
Magnet Wire Termination MAG-MATE Connectors	N/A	*	*	*					UL
Circuit Protection Devices	Refer below for product details								

<sup>1</sup> May vary based on application and product selection

	Circuit Protection Devices (CPD)											
	Polyswitch Devices	Overcurrent Protection				2410 Very Fast Acting Fuses	Overvoltage Protection			Overtemperature Protection	Hybrid Protection	
		Pulse Tolerant	O603 Very Fast Acting	Fast Acting	Slow Blow		GDT	GDT	PESD	RTP Devices	2Pro Devices	PolyZen Devices
Compressor	*											
Motor	*											
Transformer	*								*	*		
Power Supply	*	*	*	*	*	*	*	*	*	*	*	
Display	*	*	*	*	*	*	*	*				

UL -UL Listed  
 RU -Recognize Under  
 CSA -Canadian Standards Association  
 \* Industry - Meets product specific industry standards (see product page on te.com for more detail)

## Featured Products

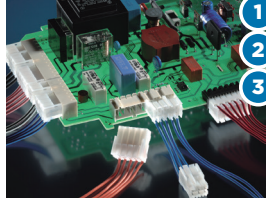


1  
2  
3

### Positive Lock Connectors

- Maintain greater mating retention with locking mechanism and built-in dimple
- Maximize mating cycles and contact retention with low insertion force design
- Meet flame retardant safety requirements with glow wire capable or VO products also available

“Positive Lock”  
82004

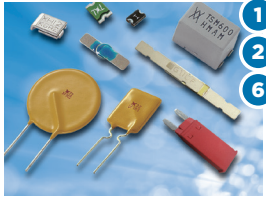


1  
2  
3

### PCB Connector for RAST Standard

- Fulfill UL, VDE and CQC requirements for global acceptance
- Achieve high vibration performance and reliability with polarized latching receptacle
- Reduce termination time with insulation displacement option

“RAST Connector”  
1654742  
7-1773465-5



1  
2  
6

### Circuit Protection Devices (CPD)

- Protect sensitive electronics from overcurrent and overvoltage events
- Meet protection requirements and equipment compliance with regulatory safety standard certifications such as UL, IEC, TIA and ITU-T
- Protect against thermal runaway damage caused by component failure

“Circuit Protection Device”  
2-1773463-7



2

### Heat Shrink Tubing

- Provide dependable insulation, mechanical protection and strain relief with aesthetic appeal
- Design for extreme high or low temperature environments
- Meet industry standards with halogen-free and flame retardant features materials

“Heat Shrink Tubing”  
9-1773447-9

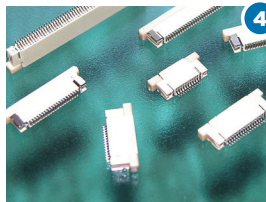


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### Tactile Switches

- Achieve system longevity with extended lifecycle design
- Prevent potential liquid or particle contamination with IP67 sealed design
- Meet design needs with broad product portfolio including a variety of sizes and configurations

“Tactile Switches”  
1308111  
8-1773450-9

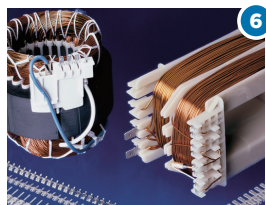


4

### Flexible Printed Circuit (FPC) Wire-to-Board Connectors

- Maximize mating cycles and retention with zero insertion force (ZIF) option
- Support flexible printed circuit orientation with top or bottom contact versions
- Achieve greater printed circuit retention with flip lock or stuffer actuators

“Flexible Printed Circuit”  
“FPC”  
82221  
1308516



6

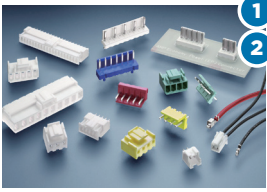
### MAG-MATE & AMPLIVAR Connectors & Cluster Blocks

- Solve magnet and aluminum wire termination challenges through a solderless method
- Reduce assembly time and gain applied cost savings
- Provide uniform termination with fully automated and integrated systems

“MAG-MATE”  
“AMPLIVAR”  
“Cluster Blocks”  
82221

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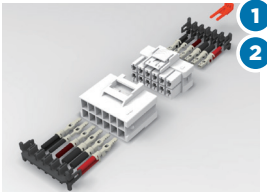
# Featured Products



## Economy Power (EP) Wire-to-Board Connectors

- Prevent mismatching with color coded and keyed housings
- Provide enhanced secure mating with positive locking mechanism
- Support reliability with fully seated contacts and Terminal Position Assurance (TPA)

“Economy Power”  
“EP”  
7-1773458-5  
7-1773461-8



## Power Triple Lock Wire- Applied Connector System

- Ensure contacts are fully seated and provide measures against contact backout with optional Terminal Position Assurance (TPA)
- Achieve connector system engagement in high vibration applications with Connector Position Assurance (CPA) option
- Support a variety of application requirements with three levels of housing materials

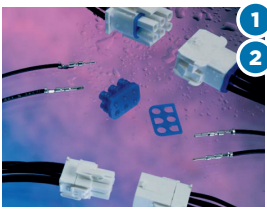
“Power Triple Lock”  
9-1773465-1



## Power & Signal Double Lock Wire-Applied Connectors

- Enhance reliability with double-lock plate ensuring full contact insertion
- Achieve a clean external surface with interior locking feature
- Support high volume manufacturing with polarization pegs and color coded housings

“Signal Double Lock”  
“Power Double Lock”  
82181  
1773458-3  
1773458-5



## Universal MATE-N-LOK Wire-Applied Connectors

- Achieve design flexibility and polarization with interchangeable contacts
- Improve reliability in high moisture environments with splash proof options
- Maintain ultimate safety with egg-crated, finger-proof design

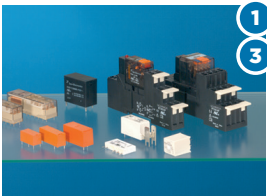
“Universal MATE-N-LOK”  
82181



## FASTON Terminals

- Achieve higher contact spring properties with thermal stress relief process
- Improve productivity and reliability through quick connection design
- Gain design flexibility and ease of maintenance with broad portfolio

“FASTON”  
82004  
1654400-1



## PCB Relays

- Gain design flexibility with various PCB footprint and current rating options
- Support system needs with various options from a single source
- Comply with standards and design requirements

“Relay”  
1308033-1

	PCB Relays													
	Low Power							High Power			General Purpose			
	OJ	EJ	PCHS	DT	PCJ	RT	OZT	OMI	PCFT	T9A	92	EF	OMIHO	RWH
Compressor				•		•	•	•	•	•	•	•	•	
Motor	•	•	•		•			•		•				•
Heating Coil	•		•	•	•	•								
Defroster	•	•			•									
Power Switch	•			•		•								

Search key words and document numbers on te.com

## LET'S CONNECT

TE Connectivity (TE) offers the broadest and most comprehensive component solutions for essentially any subsystem including control boards, power systems, cable assemblies, controllers, timers or sensors that supports end products or systems across many industries. This solutions guide will allow you to select the most ideal components for virtually any subsystem while providing easy access to additional online information through [te.com](http://te.com). TE's design experience in these product portfolios support complete system performance, efficiency and applied cost savings.

### Technical Support

#### [te.com/support-center](http://te.com/support-center)

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