



# THE POWER THAT CONNECTS

Lawn Tool Product Solutions

# ENABLING CUTTING EDGE TECHNOLOGY FOR YOUR LAWN

Whether you are engineering a self-driving lawn mower or using a battery-operated weed trimmer or blower, TE Connectivity (TE) builds connectors, sensors, terminals, and splices that are durable and can withstand the harsh weather conditions. We can help take the work out of yard work and provide energy-efficient solutions that power your lawn and garden tools. Your ideal lawn is closer than you think.



## TE PRODUCT VALUE



### SEALING

Ingress protection (IP) rating for water, dust, and debris in harsh environments



### RELIABILITY

High power and operating temperatures, locking mechanisms, and vibration resistance



### MINIATURIZATION

Compact centerline and smaller construction size



### SIMPLIFICATION

Insulation displacement (IDC) technology, ease of installation, and simplified assembly processes



### SAFETY

Flame retardant material, ergonomic design, and insulation protection



## LAWN TOOL PRODUCT SOLUTIONS

Let us do the dirty work and bring powerful solutions to your next tool design. When it comes to safety and reliability TE Connectivity (TE) delivers robust, durable, and cost-saving solutions that protect what matters most. Our products can help keep your tools running efficiently with sustainable solutions that power through the most demanding projects.

## PRODUCT SOLUTIONS

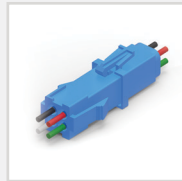
### POWER CONNECTORS



[Economy Power Connectors](#)



[Micro MATE-N-LOK Connectors](#)



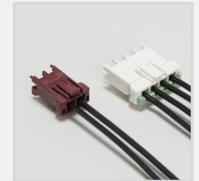
[Mini Universal MATE-N-LOK Connectors](#)



[Universal MATE-N-LOK Connectors](#)



[MTA 156 Connectors](#)



[Power Key Connectors](#)



[VAL-U-LOK Connectors](#)



[POWER TRIPLE LOCK Connectors](#)



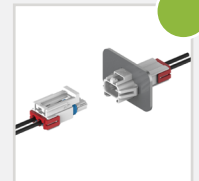
[Power Double Lock Connectors](#)



[Dynamic Series Connectors](#)



[Micro Motor Connectors](#)



[Power Versa-Lock Connectors](#)

### SIGNAL CONNECTORS



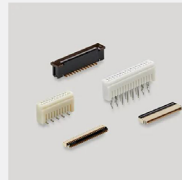
[Signal Double Lock Connectors](#)



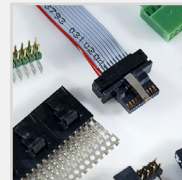
[Signal GRACE INERTIA Connectors](#)



[AMP CT Connectors](#)



[Flexible Printed Circuit \(FPC\) Connectors](#)



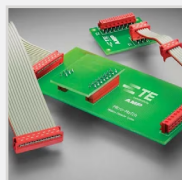
[AMP MODU Connectors](#)



[High Performance Interconnects \(HPI\)](#)



[Mini I/O Connectors](#)



[Micro-MaTch Connector](#)



[Dynamic Series Connectors](#)



[USB 3.0 Connectors](#)



[AMP Micro CT Connectors](#)



[MTA 100 Connectors](#)

New product



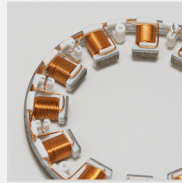
TERMINAL & SPLICES



[MAG-MATE Terminals](#)



[Ultra-Fast Terminals](#)



[SIAMEZE Terminals](#)



[AMPLIVAR Terminals](#)



[FASTON Terminals](#)



[Ring Terminals & Spade Lugs](#)

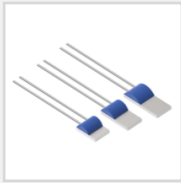


[Wire Splices](#)



[Positive Lock Terminals](#)

SENSORS



[RTD Platinum Sensors](#)



[Magnetic Sensors](#)



[KMXR Sensors](#)

RESISTORS



[NTC Thermistors Resistors](#)

SWITCHES



[Tactile Switches](#)

TUBING



[ATUM Tubing](#)



[CGPT Tubing](#)



[HTAT Tubing](#)

## SOLUTIONS FOR SENSIFICATION



TE Connectivity (TE) sits at the heart of enabling sensification within lawn and garden applications. Our broad product portfolio of connectors, sensors, tubing, terminals, and splices create innovative solutions for pumps, motors, lawn and garden equipment and power tools.

### CONNECTORS



#### [Micro MATE-N-LOK Connectors](#)

- Low profile design
- Dual beam receptacle contact design
- Right angle surface mount headers with surface mount hold-downs
- Utilizes standard Micro MATE-N-LOK contacts



#### [Economy Power 2.5 Connectors](#)

- Achieve easy mating and unmating with positive audible latch
- Prevent post misalignment with polarization tabs



#### [GRACE INERTIA 2.5 Connectors](#)

- Design assures proper insertion, preventing header pin deformation
- Inertia locking mechanism helps prevent unintended disconnection
- Lanceless contacts prevent snagging or entanglement



#### [HPI Connectors](#)

- Provides design flexibility
- Cost effective wire-to-board
- Ensures proper compatibility of both the header and the housing
- Prevents stubbing contacts



#### [Dynamic Series Connectors](#)

- Offers both wire-to-board and wire-to-wire applications
- Provide efficient and reliable device connector solution for multiple systems
- Covers a wide range of expanding connector types



#### [Micro-MaTch Cable Assemblies](#)

- Full range of application tooling from hand tool to fully automated equipment
- One of the smallest systems available at 1.27mm



#### [M8/M12 Connectors](#)

- Field-installable connectors for high-speed communication
- Environment protection IP67 & IP68
- X-coded connectors support higher bandwidth needs of up to 10 Gb/s

### TERMINALS & SPLICES



#### [AMPLIVAR Terminals and Splices](#)

- Up to three magnet wires plus a lead wire in the same crimp
- Cu and Al magnet wire can be combined. Penetrates the magnet wire insulation while simultaneously terminating wire



#### [MAG-MATE Terminals](#)

- High speed, fully automated integrated systems provide uniform magnet wire terminations reliably at the lowest possible applied cost
- Accommodates single or double wire termination 30-40 AWG



#### [Ring and Spade Terminals](#)

- Versatile mating options support solid or stranded single wire connections
- Offer a range of sizes, materials, configurations and platings to meet specific requirements

### TUBING



#### [SWFR Heat Shrink Tubing](#)

- Highly flame-retardant with UL VW-1 and CSA OFT flammability rating
- Environmentally friendly formula is essentially free of halogens, permitting use in enclosed areas where emission of toxic gasses from burning materials



## SENSORS



### [AmbiMate Sensor Module](#)

- Sense motion, light, temperature, humidity, VOCs, eCO2, sound on one assembly
- One footprint with multiple attachment methods accommodates varying needs



### [FX29 Force Sensor](#)

- Compact compression load cell features robust packaging, fast response time and low output noise
- Offers millivolt, amplified analog or digital output signal



### [TRICAN HTD 2800 Sensor](#)

- Provides digital output signals for relative humidity, temperature and pressure from a single device
- Rugged sensor is optimized for high humidity, high temperature harsh environments



### [KMX9 Linear Position Sensor](#)

- Able to withstand a multitude of harsh environments
- Magneto resistive technology delivers contactless measurement with precise, high resolution
- Packages support multiple orientations



### [Humidity Temperature Sensor](#)

- Full interchangeability with no calibration required in standard conditions
- Instantaneous desaturation after long periods in saturation phase
- Compatible with automatized assembly processes



### [DOG2 MEMS-Series inclinometer](#)

- Features digital signal processing to include temperature compensation
- Integrated filter improves performance
- Adjustable sensor to fit different environments can yield an optimized performance



### [NTC Thermistors](#)

- Discrete Negative Temperature Coefficient thermistors, probes and assemblies meet a range of temperature sensing needs
- While miniature in size, they offer long term stability, accuracy and precision



## SOLUTIONS FOR USER INTERFACE

Our broad portfolio of connectors, sensors, relays, and tubing allow optimization within user interface systems. With proven quality, reliability and efficiency, our products will help meet innovative design requirements. Whether designing a display or control system for a lawn mower, power tool, pump, motor or other application, TE's solutions help simplify your process and improve designs for the next generation of lawn and garden applications.

### CONNECTORS



#### AMPMODU MTE Connectors

- Design offers latching and polarization
- Coupling shrouds permit ganging for single or double row latching connectors
- Available in three platings
- wire range 32 - 20 AWG



#### VAL-U-LOK Connectors

- Wire-to-wire and wire-to-board pin and socket connector system
- Centerline pitch .165" [4.20mm]
- Up to 13A max. current rating for new high current types, 9A for legacy types



#### CST II Connectors

- Centerline: 2.54mm, Current Rating: 4A
- Voltage Rating: 250 VAC
- Flammability: UL 94 V-0
- Wire Size: 26-22 AWG
- Position Size: 2-28



#### Signal Double Lock Connectors

- Centerline: 2.5mm
- Current Rating: 3A
- Voltage rating: 250V
- Choice of V-0 rated material or GWT and V-0 rated material



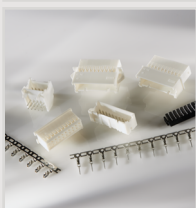
#### AMP-LATCH Connectors

- Offers quick, reliable connections without stripping, prepping wires
- Offer a reliable gas tight connecton between ribbon cable and PCBs
- Mass termination capabilities



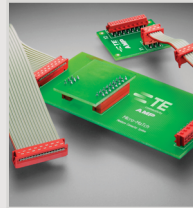
#### Economy Power 2.5 Connectors

- Achieve easy mating and unmating with positive audible latch
- Prevent post misalignment with polarization tab



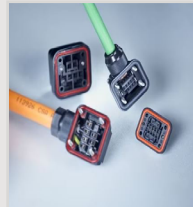
#### Economy Power Connectors

- Positive audible latch designed for easier mating and unmating
- Polarization tabs help prevent post misalignment
- Broad portfolio includes 3.96mm, 5.08mm, 7.92mm centerline families



#### Micro-MaTch Cable Assemblies

- Full range of application tooling from hand tool to fully automated equipment
- One of the smallest systems available at 1.27mm



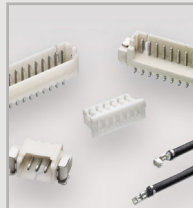
#### Micro Motor Connectors

- Power and brake abilities combined into one connector
- Micro Motor utilizes standard cable sizes
- Meets both European and American standards



#### GRACE INERTIA 2.5 Connectors

- Design assures proper insertion, preventing header pin deformation
- Inertia locking mechanism helps prevent unintended disconnection
- Lanceless contacts prevent snagging or entanglement



#### HPI Connectors

- Provides design flexibility
- Cost effective wire-to-board
- Ensures proper compatibility of both the header and the housing
- Prevents stubbing contacts



#### Mini I/O Connectors

- Increased reliability and vibration resistance
- Up to Cat6A performance when used in Industrial Ethernet applications
- Enables wire-to-wire connections



#### Dynamic Series Connectors

- wire-to-board, wire-to-panel, and wire-to-wire
- Provide efficient and reliable device connector solution for multiple systems
- Covers a wide range of expanding connector types



#### MTA 100 Connectors

- 2-28 positions, shrouded headers 2-14
- Terminates 28-22 AWG discrete wire or notched ribbon cable
- 250V, 5A rating

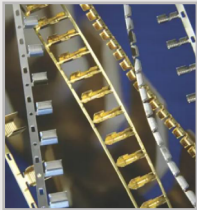


## TERMINALS & SPLICES



### FASTON Terminals

- Insulated and uninsulated, straight and flag configurations
- Stress relieved and non-stress relieved receptacles and various plating options



### Splices

- Broad range of crimp, insulation displacement connection (IDC), or other types of splice technology
- Accommodate solid or stranded wire — copper, aluminum or a combination of both



### Ultra-Fast Terminals

- Fully insulated tabs and receptacles are color coded by wire size
- Terminate 26-10 AWG solid, fused and stranded wire (flags terminate stranded wire only)



### SIAMEZE Terminals

- Insulation displacement connection terminals for magnet wires and solid or stranded lead wires
- Broad range of input/output options

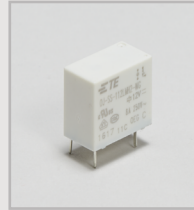
## SWITCHES



### Tactile Switches

- Achieve any design with choice of actuator lengths and styles
- Support mass fabrication with several mounting options

## RELAYS



### OJ/OJE/T77 Series Relays

- 1 form A (NO) contacts in various models support a range of loads, with contact ratings from 3 to 10 amps, plus TV-5
- Both sensitive (200mW) and standard (450mW) coil options accommodate various drive circuits



### RZ Power PCB Relays

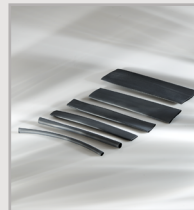
- Weld breaker mechanism overcomes micro welding to help improve life
- Approved at UL, VDE and CQC
- 1 form A and 1 form C contacts with ratings to 16A

## TUBING



### SWFR Heat Shrink Tubing

- Highly flame-retardant with UL VW-1 and CSA OFT flammability rating
- Environmentally friendly formula is essentially free of halogens, permitting use in enclosed areas where emission of toxic gasses from burning materials containing halogens is undesirable



### VERSAFIT Heat Shrink Tubing

- Offers a highly flame-retarded polyolefin heatshrinkable tubing
- Meets stringent requirements of UL 224 VW-1 and CSA and is recommended for use in applications requiring highest level of flame retardance





Whether you are designing power tools, lawn and garden equipment or creating new designs for motors and pumps, TE is committed to providing a broad product portfolio to help optimize lawn and garden applications. Our portfolio of connectors, tubing, terminals and splices provides cost-efficient and reliable solution for the next generation of lawn and garden applications.

## CONNECTORS



### Micro MATE-N-LOK Connectors

- Low profile design
- Dual beam receptacle contact design
- PCB mount pin header assemblies
- Utilizes standard Micro MATE-N-LOK contacts



### Economy Power II Connectors

- .156" [3.96mm] pitch
- Rated 600VAC at up to 11A
- Well-suited for delivering power to the board with up to 12-positions
- Offer two levels of mechanical and electrical reliability



### Economy Power 2.5 Connectors

- 2.5mm compact centerline rated for 250VAC at up to an industry-leading 4.2A
- Achieve easy mating and unmating with positive audible latch
- Prevent post misalignment with polarization tabs



### VAL-U-LOK Connectors

- Wire-to-wire and wire-to-board pin and socket connector system
- Pitch: .165" [4.20mm]
- Up to 13A max. current rating for new high current types, 9A for legacy types



### HPI Connectors

- Provides design flexibility
- Cost effective wire-to-board
- Ensures proper compatibility of both the header and the housing
- Prevents stubbing contacts



### AMP Mini CT Connectors

- Provide design flexibility for wire-to-wire and wire-to-board connections in space limited applications
- 1.5mm centerline
- 2 kinds of termination method: IDC, crimp
- Circuits range from 2-20 single row, 22-40 dual row; AWG 24-28



### Power Double Lock Connectors

- 1-12 position WTW or WTB
- Audible click when contact is fully inserted into the housing
- Board-mounted headers are compatible with resin or conformal coatings



### POWER TRIPLE LOCK Connectors

- 6mm centerline, rated to 20A, 600 VAC/VDC
- Polarization and keying
- Multiple points of contact and anti-fretting lubricant on terminals
- Three way locking



### Micro Motor Connectors

- Power and brake abilities combined into one connector
- Micro Motor utilizes standard cable sizes
- Meets both European and American standards



### Universal MATE-N-LOK Connectors

- Centerline: 6.35mm
- Current Rating: 19A
- 600 VAC or VDC
- Flammability: UL 94 V-0, UL 94 V-2, GWT
- Optional seals available



### Dynamic Series Connectors

- Offers both wire-to-wire and wire-to-board applications
- Provide efficient and reliable device connector solution for multiple systems
- Covers a wide range of expanding connector types



## TERMINALS & SPLICES



### AMPLIVAR Terminals and Splices

- Up to three magnet wires plus a lead wire in the same crimp
- Cu and Al magnet wire can be combined
- Penetrates the magnet wire insulation while simultaneously terminating wire



### FASTON Terminals

- Insulated and uninsulated, straight and flag configurations
- Stress relieved and non-stress relieved receptacles and various plating options



### MAG-MATE Terminals

- High speed, fully automated integrated systems provide uniform magnet wire terminations reliably at the lowest possible applied cost
- Accommodates Cu or Al wire



### Ring and Spade Terminals

- Versatile mating options support solid or stranded single wire connections
- Offer a range of sizes, materials, configurations and platings to meet specific requirements



### Ultra-Fast Terminals

- Fully insulated tabs and receptacles are color coded by wire size
- Terminate 26-10 AWG solid, fused and stranded wire (flags terminate stranded wire only)



### SIAMEZE Terminals

- Insulation displacement connection terminals for magnet wires and solid or stranded lead wires
- Broad range of input/output options



### Positive Lock Receptacles and Housings

- Low insertion force/high retention
- Available for wide range of wire sizes and enhanced reliability to ensure a total solution

## TUBING



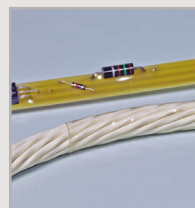
### SWFR Heat Shrink Tubing

- Environmentally friendly formula is essentially free of halogens, permitting use in enclosed areas where emission of toxic gasses from burning materials containing halogens is undesirable
- Highly flame-retardant with UL VW-1 and CSA OFT flammability rating



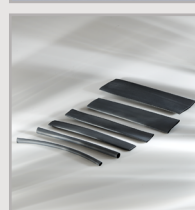
### Specialty Heat Shrink Tubing

- High performance tubing for demanding requirements
- Available in a variety of materials, colors, shrink ratios, and sizes
- Offers alternative high-performance options for wide-reaching applications



### HT-200 Heat Shrink Tubing

- High flame-resistance meets the requirements of AMS-DTL-23053, Test C and ASTM D2671, Procedure C
- High temperature performance meets or exceeds military and industrial standards
- Offers protection from most industrial solvents, fuels and chemicals



### VERSAFIT Heat Shrink Tubing

- Offers a highly flame-retarded polyolefin heatshrinkable tubing
- Meets stringent requirements of UL 224 VW-1 and CSA and is recommended for use in applications requiring highest level of flame retardance.



TE Connectivity's (TE) cost-effective connectivity solutions are enhancing power systems within lawn and garden applications. Our products enable efficient, smarter, and more connected devices. With proven quality and reliability, TE can simplify design processes and help optimize devices with a full product solution.

## CONNECTORS



### Signal Double Lock Connectors

- Centerline: 2.5mm
- Current Rating: 3A
- Voltage rating: 250V
- Choice of V-0 rated material or GWT and V-0 rated material



### Economy Power Connectors

- Positive audible latch designed for easier mating and unmating
- Polarization tabs help prevent post misalignment
- Broad portfolio includes 3.96mm, 5.08mm, 7.92mm centerline families



### Power Double Lock Connectors

- 1-12 position WTW or WTB
- Audible click when contact is fully inserted into the housing
- Board-mounted headers are compatible with resin or conformal coatings



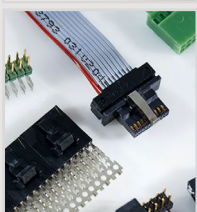
### Micro MATE-N-LOK Connectors

- Low profile design
- Dual beam receptacle contact design
- PCB mount pin header assemblies
- Utilizes standard Micro MATE-N-LOK contacts



### VAL-U-LOK Connectors

- Wire-to-wire and wire-to-board pin and socket connector system
- Centerline pitch .165" [4.20mm]
- Up to 13A max. current rating for new high current types, 9A for legacy types



### AMPMODU MTE Connectors

- Design offer latching and polarization
- Coupling shrouds permit ganging for single or double row latching connectors
- Available in three platings
- Multiple solder tail lengths available to accommodate different PCB thicknesses



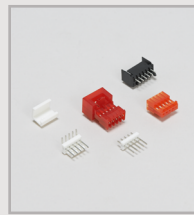
### Signal GRACE INERTIA Connectors

- Design assures proper insertion, preventing header pin deformation
- Inertia locking mechanism assure terminal seating and helps prevent unintended disconnection
- Lanceless contacts prevent snagging



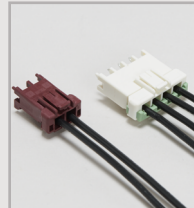
### Universal MATE-N-LOK Connectors

- Centerline: 6.35mm
- Current Rating: 19A
- 600VAC or VDC
- Flammability: UL 94 V-0, UL 94 V-2, GWT
- Optional seals available



### MTA Connectors

- Color coded housing for wire gage
- Tin, 15 and 30 gold plating options for a wider variety of connector options
- Audible latch for wire-to-wire (posted) housings
- Mass termination for low applied cost



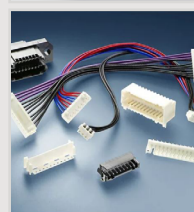
### Power Key Connectors

- 5mm pitch WTB connector system
- R-saped design figure eases working conditions
- Four color and physical keying options help prevent mis-mating



### Economy Power 2.5 Connectors

- 2.5mm centerline with rating to 4.2A
- Achieve easy mating/unmating with positive audible latch
- Prevent post misalignment with polarization tabs



### AMP Mini CT Connectors

- Provide design flexibility for wire-to-wire and wire-to-board connections in space limited applications
- 1.5mm centerline
- Circuits range from 2-20 single row and 20-40 dual row, IDC AWG 26-28 , Crimp AWG 24-28



## TERMINALS & SPLICES



### [Positive Lock Terminals and Housings](#)

- Low insertion force/high retention
- Available for a wide range of wire sizes, offering enhanced reliability in standard and high temperature versions



### [AMPLIVAR Terminals and Splices](#)

- Up to three magnet wires plus a lead wire in the same crimp
- Cu and Al magnet wire can be combined
- Penetrates the magnet wire insulation while simultaneously terminating wire



### [FASTON Terminals](#)

- Insulated and uninsulated, straight and flag configurations
- Stress relieved and non-stress relieved receptacles and various plating options



### [MAG-MATE Terminals](#)

- High speed, fully automated integrated systems provide uniform magnet wire terminations reliably at the lowest possible applied cost
- Accommodates Cu or AL wire



### [Ring and Spade Terminals](#)

- Versatile mating options support solid or stranded single wire connections
- Offer a range of sizes, materials, configurations and platings to meet specific requirements



### [Ultra-Fast Terminals](#)

- Fully insulated tabs and receptacles are color coded by wire size
- Terminate 26-10 AWG solid, fused and stranded wire (flags terminate stranded wire only)

## SWITCHES



### [Tactile Switches](#)

- Achieve any design with choice of actuator lengths and styles
- Support mass fabrication with several mounting options

## TUBING



### [SWFR Heat Shrink Tubing](#)

- Highly flame-retardant with UL VW-1 and CSA OFT flammability rating
- Environmentally friendly formula is essentially free of halogens, permitting use in enclosed areas where emission of toxic gasses from burning materials containing halogens is undesirable



### [Specialty Heat Shrink Tubing](#)

- High performance tubing for demanding requirements
- Available in a variety of materials, colors, shrink ratios, and sizes
- Offers alternative high-performance options for wide-reaching applications



### [DWFR Heat Shrink Tubing](#)

- Able to be easily installed using multiple types of heating tools, ranging from basic heat guns to conveyer-equipped ovens
- Consists of a polyolefin jacket and thermoplastic inner adhesive wall



### [VERSAFIT Heat Shrink Tubing](#)

- Offers a highly flame-retarded polyolefin heatshrinkable tubing
- Meets stringent requirements of UL 224 VW-1 and CSA and is recommended for use in applications requiring highest level of flame retardance

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## te.com

TE, MATE-N-LOK, POWER TRIPLE LOCK, VAL-U-LOK, GRACE INERTIA, Power Versa-Lock, AMP-IN, AMP, AMPMODU, MAG-MATE, SIAMEZE, AMPLIVAR, FASTON, Positive Lock, AMP-LATCH, Micro-MaTch, AmbiMate, TRICAN, KMXR, VERSAFIT, ATUM, MTA, TE Connectivity, TE Connectivity (logo) and TE (logo) are trademarks owned or licensed by the TE Connectivity Ltd. family of companies. All other logos, products and/or company names referred to herein might be trademarks of their respective owners.

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