NTI

3M™ Electrical Markets Division

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Today 3M is:
The adhesive holding your plane together …
The respirator helping you breathe easier …
The sterile bandage used by your surgeon …
The reflective traffic sign guiding you home at night …
And yes, the Post-it® Note keeping you organized.

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How can 3M™ support my training efforts?

Available Training

Product & Application Training

Learn about what new and proven products 3M™ has to offer.

With 50 sales representatives covering the US, 3M™ can meet your in-person training needs. Please contact us for training support.

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Product Training

Material Science	Termination Theory	Samples
Installation Techniques	Product Selection	Industry Trends
Cable Theory	Applications + Industries	Standards & Regulatory
Splice Theory	Features & Benefits	BIM Objects

Product Categories

Premium & GU Vinyl, Rubber Mastic & Other Tapes

LV Resins, Cold-Shrink and Heat-Shrink

MV & HV Cable Accessories

Locating and Marking

Electrical Supplies

Fire Protection

Hearing Protection

Head & Face Protection

Respiratory Protection

Fall Protection
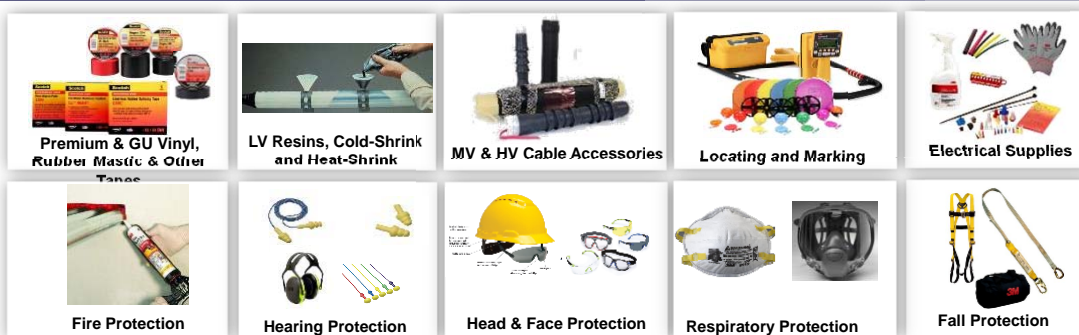
3M Scotchlite™ Reflective Material **Speedglas™** **3M PELTOR** **E·A·R** **SCOTCHGARD**

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3M™ Electrical Training Resources

999

1250+

Projected Trainings and Demonstrations

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How can I find my rep and contact them?

Step 1:   www.3m.com/electrical

Email mjmurphy2@mmm.com (Mark Murphy).

Find a 3M sales representative in your area that can assist you.

Step 3: Enter your Zip Code

Market Segment	Contact Name	Cell Phone	Email Address
Commercial & Industrial	Phil Dinuzzo	518-414-6912	pddinuzzo@mmm.com
Commercial & Industrial	Mark Simms	214-207-8277	mssimms@mmm.com
Commercial & Industrial	Dawn Heagren	972-520-2282	dheagren@mmm.com
Commercial & Industrial	John Schilling	713-253-4818	john.schilling@mmm.com

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How can 3M™ support my training efforts?

Available Training

Product Training

Tools

Learn about what new and proven products 3M™ has to offer.

With over 50 sales representatives covering the US, 3M™ can meet your in-person training needs. Please contact us for training support.

Learn what tools 3M™ has to offer for training support.

3M™ has developed a number of tools to help train installers on products and applications. These products have been developed to help ease product selection & installation.
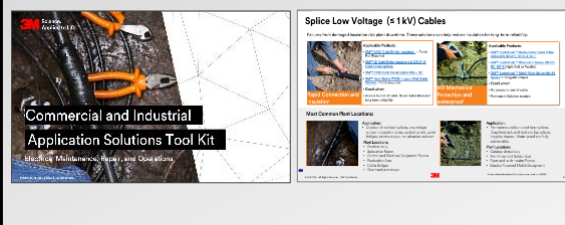
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Available Tools

Commercial & Industrial Applications Guide:

Energy Academy:
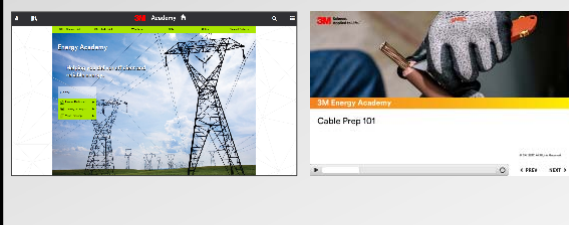
Product Selectors:

MV Terminations

Product App:

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Commercial and Industrial Application Solutions Tool Kit

Electrical Maintenance, Repair, and Operations
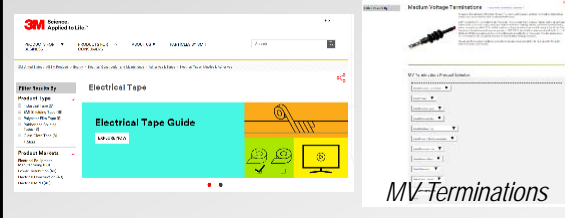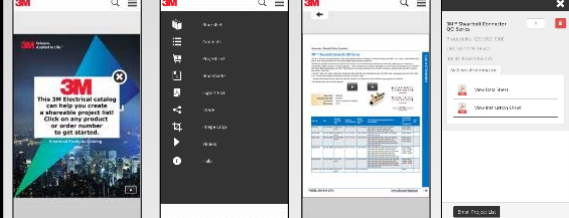
Target Applications for 3M™ EMRO Products

Keep your Facility Running and Reduce Downtime with 3M Professional Grade Solutions

1 Insulate & repair low voltage (≤ 1 kV) wires and cables (1)	**9** Repair bus bar insulation
2 Insulate low voltage (≤ 1 kV) wires and cables (2)	**10** Help protect cables from water and corrosion
3 Splice low voltage (≤ 1 kV) cables	**11** Help protect cables from abrasion and metals from corrosion
4 Connect low voltage (≤ 1 kV) wires and cables	**12** Help protect cables from fire and arcing
5 Rejacket and protect medium voltage (5 kV – 35 kV) cables	**13** General maintenance
6 Terminate medium voltage (5 kV – 35 kV) cables	**14** Be safe on the job (1)
7 Splice medium voltage (5 kV – 35 kV) cables	**15** Be safe on the job (2)
8 Motors and electrical equipment splice connections	**16** Help protect your facility from fire, smoke and toxic gases

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Splice Low Voltage (≤ 1 kV) Cables

Failures from damaged insulation risk plant downtime. These solutions can help restore insulation for long-term reliability**.**

Rapid Connection and Insulation

Applicable Products:
- 3M™ 8420 Cold Shrink Insulators   – Torch Not Required
- 3M™ QI Cold Shrink Insulators & QSLV-M Cold Shrink Splices
- 3M™ 5730 Cold Shrink Splice Kits – 3C
- 3M™ Heat Shrink ITCSN Heavy-Wall Cable Sleeves - Torch required
- **Good when:**
- Access to end of cable, Rapid Installation and long term reliability

HD Mechanical Protection and waterproof

Applicable Products:
- 3M™ Scotchcast™ Resin power cable inline splice kits 82-AN, 72-N, & 82-F
- 3M™ Scotchcast™ Wye Resin Splice kits 82-BN, 90-B1 (Split Bolt or Parallel)
- 3M™ Scotchcast™ Multi-Mold Splice kits 85 Series for irregular shapes
- **Good when:**
- No access to end of cable
- Permanent Solution needed

Most Common Plant Locations:

Application:
- Outdoor direct bury splices, low voltage splices in junction boxes, control panels, cable bridges, service drops, non abrasion resistant

Plant Locations:
- Outdoor bury
- Substation Room
- Control and Electrical Equipment Rooms
- Production Area
- Cable Bridges
- Overhead pole drops

Application:
- Permanent outdoor direct bury splices. Drag Resistant, split bolt and tap splices, irregular shapes. Water proof and fully submersible.

Plant Locations:
- Outdoor direct bury
- Man Holes and Subsurface
- Pipes and under water Pumps
- Electric Powered Mobile Equipment

Unless otherwise stated all products are rated to ≤1000V

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3M Science. Applied to Life.™

3M Wind Energy Solutions

Electrical Markets Division

Primary EMD Applications and Solutions

1 **Terminate & Splice Cables**

2 **Cable End Seal & Jacket Repair**

3 **Splicing & Insulating of Low Voltage Cables**

4 **Gap & Cabinet Sealing**

5 **Tower & Nacelle Cable Abrasion Resistance**

6 **Cable Identification, Management & Protection**

7 **Worker Safety**
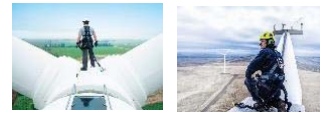
8 **Locating Underground Assets**

9 **Leading Edge Protection**

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Terminate and Splice Medium Voltage Cables **1**

Use 3M Cold Shrink Technology and Separables for your installation and maintenance needs

Application For MV Cable Termination & Splicing:

- 3M™ Cable Accessories are used in a variety of locations on a wind farm for safely terminating and splicing cables. These include:
  - Terminations at main and sub collection grids
  - Splices on cable string from collection grid to wind tower.
  - Terminations at each internal or external transformer cabinet located at an individual power generation tower.

3M™ Termination & Splice Kits:

Please consult your 3M Sales Specialist for proper kitting recommendations

- 3M™ QTIII / QTII Termination Kits (≤45kV)
- 3M™ MV Separable 600 AMP 35kV T-Bodies
- 3M™ QS4 / QS3 Splicing Kits (≤35kV)
- 3M™ Cable Grounding Kits

Note: 3M offers both crimp and shearbolt lugs and connector options.

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www.3M.com/Energy-Academy

3M Tape & MV Term Selector – www.3m.com/electrical

>Terminations
>Tapes

How can 3M™ support my training efforts?

Available Training

Product Training

Tools

New Technology

Learn about what new and proven products 3M™ has to offer.

Learn what tools 3M™ has to offer for training support.

Learn what 3M™ is developing in digital space.

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3M™ has developed a number of tools to help train installers on products and applications. These products have been developed to help ease product selection & installation.

With the global push for digital, 3M™ has developed some a unique App to help installers help reduce installation time and assist with improving install quality.

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3M™ Asset Tracking Application

Helps electrical contractors install products faster and asset owners keep track of and locate assets

Benefits include:

- Helps reduce risk of failure - availability of digital data sheets & installation collateral

- Assists with reducing labor costs - consolidates installation hand-off data

- Aids with reducing downtime costs - helps find assets quickly during an outage

- Free to use - available in iTunes and Google Play

Cloud Storage
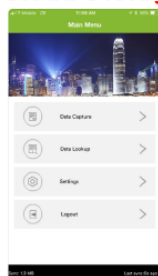
**Scan Products to Access Digital Tools**

GPS Mapping

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3M™ Asset Tracking Application

Additional key features include:

- *Offline data logging capabilities*
- *Ability to record data to your own Microsoft Azure cloud account*
- *Enables data storage in cloud and non-cloud storage environments*
- *Customizable data collection templates*
- *Down to one meter accuracy for GPS marking*
- *Ability to integrate with some handheld GPS units*
- *Capture photos and scan product barcodes*
- *Asset owner determines who can view the asset details, locations*
- *Ability to export data in .kmz file format*
- *Integration with Google Earth to view asset locations*

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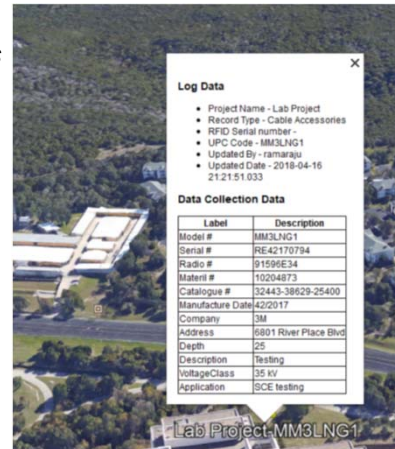
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Thank you!

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