



Moving  
Mobility  
Forward



# Building your future network

As wireless migrates from 3G to 4G/LTE, the future is fiber. And 3M offers more solutions at every step of the way. Not only do we have a 30-year history of proven performance in field-mounted fiber connectivity, our robust portfolio of Tower Solutions also includes reliable weatherproofing and cable management technologies. In short, 3M Tower Solutions enable fast and easy installs with considerable savings on labor, inventory, operating expenses and maintenance costs.

When it comes to **reliably connecting** and **protecting** your Tower network, 3M is the right partner at every level.

## Weatherproofing

Reliable weather protection that installs in seconds



## Terminals

Connect and protect tower and roof-top infrastructure



## Fiber Connectivity

Easy and quick field install



# Weatherproofing

Weather causes more cell-site issues than anything else. And when it comes to weatherproofing, 3M offers a full range of reliable weather protection products. In other words, we make it easy to get all the protection you need, all in one place.



## 3M™ Slim Lock Closure

The 3M™ Slim Lock Closure is a reliable, compact closure that protects high-density DIN 716 connections at the antenna and Remote Radio Unit at the cell site.

This innovative, one-handed closure is tool-less and installs in under a minute, making it a time-saving, cost-effective, easy-to-install solution.

Closure may be installed and re-installed up to 10 total times allowing for periodic PIM testing and re-use resulting in lower maintenance spending.



## 3M™ Cold Shrink Tubing (Pull 'N' Shrink)

3M™ Cold Shrink Tubing, first developed by 3M, keeps moisture out and cables in, all without heat, special tools or time-consuming procedures.

Cold shrink tubing consists of a factory-expanded, open-ended rubber sleeve with a removable plastic core perforated in a spiral pattern. The core is removed by hand after the tube has been positioned over the connection. When the plastic core is pulled away, the sleeve collapses to form a tight, waterproof seal around the connection.



## 3M™ Weatherproofing Tapes

Whether it's 0 or 100 degrees, rain or shine, ice or snow, you can count on 3M vinyl and mastic tapes to get the job done, and keep it done.

# Terminals

Our reliable 3M™ Tower Dome Terminals for Fiber-to-the-Antenna (Power and Fiber) are easy and quick to install, modular and re-enterable. The terminals can be deployed in most environments (includes tower, roof-top). Because when it comes to spending time on the tower, less is always more.

## Reliable Sealing System

Designed with performance and signal integrity in mind, the terminals provide for appropriate power and fiber separation and cable bend specifications. Fixed O-ring reduces potential for craft error during closure sealing. Tested to highest reliability standards (meets Telcordia GR 771 specifications, IP68)



## Plug and Play, Fast and Easy Install

The plug-and-play External Cable Assembly Module (ECAM) system allows technician to prepare sealing on the ground and plug into terminals at the top of the tower; innovative snap ring technology eliminates loose parts while providing 100 pound pull-out strength.



ECAM conduit adapter allows easy connection to conduit on roof-top installations.



## Low Profile

Dome shape, compact size and small but sturdy mounting bracket allows for a reduced wind-load footprint. Easy latching mechanism allows for quick sealing and easy re-entry at the top of the tower.



## Modularity

DIN rail system allows ability to add surge protectors and/or power terminal blocks for future growth.

| Features  | Benefits   |
|---|--|
| Compact dome terminal; small mounting bracket           | Minimal tower loading, reduced wind-load footprint     |
| No special tools required to install; Fixed O-ring seal | Easy, effective closure sealing, install and re-entry  |
| Innovative cable management                             | Copper and fiber cable separation with storage         |
| Constructed of durable thermoplastic alloy              | Can be deployed in most environments (tower, roof-top) |
| Integrated DIN rail for power                           | Modularity - Permits easy addition of power components |



### 3M™ Tower Dome Terminal TDT-F-18-9R

- Fiber-only terminal for connecting fiber feeder cable to fiber jumpers
- Up to 24 simplex LC fiber connections
- Accommodates up to 9 separate Remote Radio Units (RRUs)
- One cable entry port for fiber feeder (max OD 18 mm)
- Nine ECAM cable exit ports for fiber jumper cables (max OD 12 mm)



### 3M™ Tower Dome Terminal TDT-P-25-3R-S

- Power-only terminal for connecting power feeder cable to power jumpers
- Accommodates up to 3 separate RRUs
- One cable entry port for power feeder cable (max OD 25 mm)
- Three ECAM cable exit ports for power jumper cables (max OD 18 mm)



### 3M™ Tower Dome Terminal TDT-T-25-6R-S

- Terminal supports separate trunked fiber and power feeder cables
- Up to 18 duplex LC fiber connections
- Optional power connections and surge protection for up to 6 RRUs
- Two cable entry ports for power feeder and fiber feeder cables (max OD 25 mm)
- Six ECAM cable exit ports for power and fiber jumpers (max OD 27 mm)



### 3M™ Tower Dome Terminal TDT-H-25-6R-S

- Terminal supports hybrid (fiber and power) feeder cable
- Up to 12 duplex LC fiber connections
- Optional power connections and surge protection for up to 6 RRUs
- One cable entry port for hybrid feeder cable (max OD 25 mm)
- Six ECAM cable exit ports for power and fiber jumpers (max OD 12 mm)

# Fiber Connectivity

With over 10 million installed worldwide, our mechanical connectors have proven reliability. They're also field-mountable, which eliminates the issues tied to factory-terminated cables. Issues like stocking multiple lengths, managing slack, carrying spares for inevitable field failures—and the expenses that come with them.

## 3M™ No Polish LC Connectors & Kits

3M No Polish Connectors help enable fast, on-site installation of 250  $\mu\text{m}$  and 900  $\mu\text{m}$  singlemode and multimode fiber. For jacketed bend-insensitive fiber cable, the LC No Polish Connectors can be installed without an assembly tool.

A twist-on boot clamps onto the cable jacket and aramid yarn to provide excellent strain relief. With a factory-polished ferrule assembly and a mechanical splice, the connector can be quickly installed without electrical power.

3M™ No Polish Connector Kits provide the tools and materials needed to terminate 3M No Polish Connectors.



3M™ No Polish LC Connector for 250  $\mu\text{m}$ /900  $\mu\text{m}$  (left) and jacketed cable 1.6-2.0 mm (right)



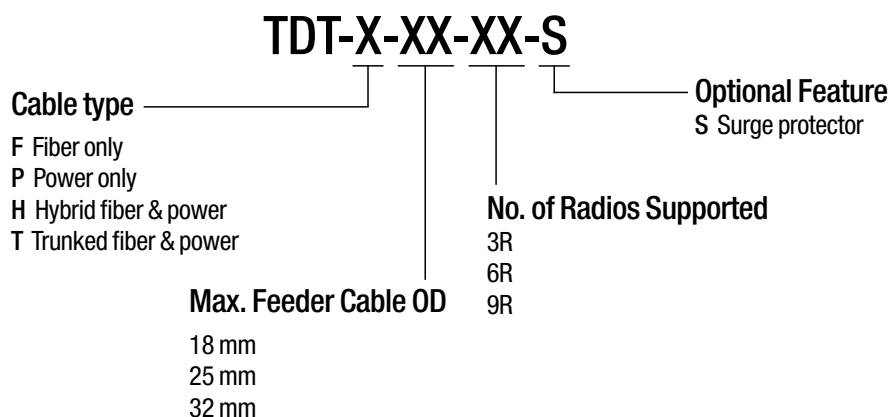
3M™ No Polish Connector Kit 8865-C/PR

# Ordering Information

## 3M Tower Solutions

| Product Number                  | Product Description  | 3M ID          |
|---------------------------------|--|----------------|
| <b>Weatherproofing Products</b> |  |                |
| SLC-716                         | 3M™ Slim Lock Closure for 1/2" DIN 7/16 connector                                    | 80-6113-8755-8 |
| W-PST1                          | 3M™ Pull 'n' Shrink Tubing Kit for 1/2" jumper with DIN connector (2 per kit)        | 80-6113-8592-5 |
| W-PST2                          | 3M Pull 'n' Shrink Tubing Kit for 3/8"-1/2" jumper with Type N connector (2 per kit) | 80-6113-8593-3 |
| W-PST3                          | 3M Pull 'n' Shrink Tubing Kit for 1/2" jumper to 7/8" feeder (5 per kit)             | 80-6113-8594-1 |
| W-PST4                          | 3M Pull 'n' Shrink Tubing Kit for 1/2" jumper to 1-5/8" feeder (5 per kit)           | 80-6113-8595-8 |
| WK-100                          | 3M™ Wireless Weatherproofing Kit for general use                                     | 80-6114-5711-2 |
| WK-101                          | Scotch® Wireless Weatherproofing Kit for cold weather use                            | 80-6114-5712-0 |
| <b>Tower-top Terminals</b>      |  |                |
| TDT-F-18-9R                     | Fiber-only 3M™ Tower Dome Terminal, 18 mm jumper cable max. OD                       | 80-6114-8463-7 |
| TDT-F-25-9R                     | Fiber-only 3M Tower Dome Terminal, 25 mm jumper cable max. OD                        | 80-6114-8464-5 |
| TDT-P-25-3R-S                   | Power-only 3M Tower Dome Terminal with surge protectors                              | 80-6114-8107-0 |
| TDT-T-25-6R-S                   | Trunked fiber and power 3M Tower Dome Terminal                                       | 80-6114-8514-7 |
| TDT-H-25-3R-S                   | Hybrid fiber and power 3M Tower Dome Terminal  | 80-6114-8108-8 |
| <b>Fiber Connectivity</b>       |  |                |
| 6830-50                         | 3M™ No Polish LC Connector multimode 50 µm 1/bag, 60/carton                          | 80-6113-2773-7 |
| 6830-50/LOMMF                   | 3M No Polish LC Connector multimode 50 µm laser optimized 1/bag, 60/carton           | 80-6113-2774-5 |
| 6830-62.5                       | 3M No Polish LC Connector multimode 62.5 µm 1/bag, 60/carton                         | 80-6113-2775-2 |
| 8830                            | 3M No Polish LC/UPC Connector singlemode 1/bag, 60/carton                            | 80-6113-2776-0 |
| 8830-APC/AS                     | 3M No Polish LC/APC Connector singlemode, angle splice 1/bag, 60/carton              | 80-6113-2777-8 |
| 8830-APC/FS                     | 3M No Polish LC/APC Connector singlemode, flat splice 1/bag, 60/carton               | 80-6113-2778-6 |
| 8832-T/1.6-2                    | 3M No Polish LC/UPC Connector singlemode 50 µm, 1.6-2.0 mm jacket 60/package         | 80-6113-9839-9 |
| 6832-T/50/1.6-2                 | 3M No Polish LC/UPC Connector multimode 50 µm, 1.6-2.0 mm jacket 60/package          | 80-6113-9840-7 |
| 6832-T/50/LOMMF/1.6-2           | 3M No Polish LC/UPC Connector multimode 50 µm LOMMF, 1.6-2.0 mm jacket 60/package    | 80-6113-9841-5 |
| 6832-T/62.5/1.6-2               | 3M No Polish LC/UPC Connector multimode 62.5 µm, 1.6-2.0 mm jacket 60/package        | 80-6113-9842-3 |
| 8865                            | No Polish Connector Kit (no cleaver)   | 80-6113-2378-5 |
| 8865-C/PR                       | No Polish Connector Premium Kit with cleaver   | 80-6113-8783-0 |

## 3M™ Tower Dome Terminal Configuration Guide



# The Network of Networks

The 3M Network of Networks is a world leader in communication technology, connecting products, people and companies by harnessing the power of more than 45 technology platforms to create customer-centric innovations. The Network of Networks connects smart grids to smart phones, data centers to desktops, greenfield to brownfield, wireline to wireless and customers to their goals. To get the Network of Networks working for you, visit [3M.com/Telecom](http://3M.com/Telecom).

|                              |                                       |                             |  |                                 |                               |                                     |  |   |                             |
|------------------------------|---------------------------------------|-----------------------------|--|---------------------------------|-------------------------------|-------------------------------------|--|---|-----------------------------|
| Ad<br>Adhesives              | Am<br>Advanced Materials              | Bi<br>Biotech               |  |                                 |                               |                                     |  |   | Rf<br>Recloseable Fasteners |
| Ab<br>Abrasives              | Dd<br>Drug Delivery                   |                             |  |                                 |                               |                                     | Mr<br>Microreplication                 | Pe<br>Predictive Engineering & Modeling | Rp<br>Radiation Processing  |
| Ac<br>Acoustics              | Dm<br>Display Materials               |                             |  |                                 |                               | Nt<br>Nanotech                      | Nm<br>Nonwoven Materials               | Pm<br>Polymer Melt Processing           | Sm<br>Specialty Materials   |
| As<br>Application Software   | Do<br>Dental & Orthodontic Materials  | Fi<br>Films                 | Fs<br>Filtration, Separation, Purification | Ir<br>Immune Response Modifiers | Md<br>Medical Data Management | Mi<br>Microbial Detection & Control | Pc<br>Precision Coating                | Po<br>Porous Materials & Membranes      | Su<br>Surface Modification  |
| Ce<br>Ceramics               | Ep<br>Electronic Packaging            | Fl<br>Fluorinated Materials | Im<br>Imaging                              | Is<br>Integrated Systems Design | Me<br>Metal Matrix Composites | Mo<br>Molding                       | Pd<br>Particle & Dispersion Processing | Pr<br>Process Design & Control          | Wo<br>Wound Management      |
| Cp<br>Chemical Power Sources | Fc<br>Flexible Converting & Packaging | Fo<br>Fiber Optics          | Ip<br>Inks & Pigments                      | Lm<br>Light Management          |                               |                                     | Pp<br>Precision Processing             | Tt<br>Track & Trace                     | Vp<br>Vacuum Processing     |

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