SkyWrap® In-line Bypass—Ground Wire

SkyWrap cable is passed around the tower top using a specially designed bypass accessory known as a ‘balehanger’. The aluminum balehanger is clamped to the ground wire either side of the tower and the SkyWrap cable is secured within the balehanger fitting.

Features
- Shaped aluminum provides secure passage of the SkyWrap cable around the tower top
- Balehangers can be applied to any ground wire tower top fitting arrangement and design
- Meets IEEE standard 1591.3-2011

Key components

- Cable clamp with nylon insert
- Cable balehanger cover
- Cable clamp

Ordering Information

<table>
<thead>
<tr>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
</tr>
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<tbody>
<tr>
<td>TCD-909A, B, C</td>
<td>0.354-0.866 (9-22)</td>
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<tr>
<td></td>
<td>0.787-1.221 (20-31)</td>
</tr>
<tr>
<td></td>
<td>1.181-1.693 (30-43)</td>
</tr>
</tbody>
</table>

Example: TCD-909B
Cable is passed down the tower to a cable joint enclosure in a protective conduit. It then passes back up to the ground wire via a conduit for the continued SkyWrap connection.

The joint enclosure is mounted on lattice towers, wood, steel or concrete poles for easy access to the fiber.

**Features**

- All tower fittings are available for a range of tower or pole designs
- Enclosures boxes are 830 x 380 x 260 mm
- Convenient cable storage and easy access to joint
- Robust weather proof design
- Available for up to 192 fibers
- Joint enclosure can be locked for added security
- Made to BS EN 50411-3-2002 standard
- Meets IEEE standard 1591.3-2011

**Key components**

- Tower mounted joint enclosure
- Ground to ground clamp
- Cable clamp with nylon insert
- Conduit clamp

### Ordering Information

<table>
<thead>
<tr>
<th>TOWER HEIGHT FEET (M)</th>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
<th>FIBER COUNT</th>
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</thead>
<tbody>
<tr>
<td>&lt; 82 (&lt; 25)</td>
<td>Lattice Tower</td>
<td>0.354-0.866 (9-22)</td>
<td>12-192</td>
</tr>
<tr>
<td>&lt; 115 (&lt; 35)</td>
<td>Steel/Concrete Pole</td>
<td>0.787-1.221 (20-31)</td>
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<tr>
<td>&lt; 197 (&lt; 60)</td>
<td>Wood Pole</td>
<td>1.181-1.693 (30-43)</td>
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</tbody>
</table>

| TCD | L | M | H | 901 | 905 | 961 | A | B | C | mnF |

Example: TCD-L901B48F
SkyWrap® Termination Joint—Ground Wire

Cable is passed down the tower to a cable joint enclosure in a protective conduit to provide a link between the SkyWrap cable and the onward fiber optic cable connection, including options for OPGW, ADSS or underground fiber optic cables. The joint enclosure is mounted on lattice towers, wood, steel or concrete poles for easy access to the fiber.

Features
- All tower fittings are available for a range of tower or pole designs
- Enclosures boxes are 830 x 380 x 260 mm
- Convenient cable storage and easy access to joint
- Robust weather proof design
- Available for up to 192 fibers
- Joint enclosure can be locked for added security
- Made to BS EN 50411-3-2002 standard
- Meets IEEE standard 1591.3-2011

Key components
- Tower mounted joint enclosure
- Ground to ground clamp
- Cable clamp with nylon insert
- Conduit clamp

Typical configuration for a lattice tower

Ordering Information

<table>
<thead>
<tr>
<th>TOWER HEIGHT FEET (M)</th>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
<th>FIBER COUNT</th>
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<tbody>
<tr>
<td>&lt; 82 (&lt; 25)</td>
<td>Lattice Tower</td>
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<td>12-192</td>
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<tr>
<td>&lt; 115 (&lt; 35)</td>
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<tr>
<td>&lt; 197 (&lt; 60)</td>
<td>Wood Pole</td>
<td>1.181-1.693 (30-43)</td>
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</tr>
</tbody>
</table>

Example: TCD-L906B48F

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SkyWrap® In-line Bypass—Phase Wire

SkyWrap cable is passed around the tower top conductor fittings using a specially designed bypass accessory known as a ‘balehanger’. The aluminum balehanger is clamped to the conductor either side of the conductor fittings and the SkyWrap cable is secured within a channel holding it in position away from the conductor fittings.

Features
- Shaped aluminum provides secure passage of the SkyWrap cable around the conductor fittings
- Aluminum balehangers are held at the same electric potential as the conductor
- Balehangers can be applied to any conductor suspension fitting arrangement and design
- Also designed for post and cantilever insulators
- Meets IEEE standard 1591.3-2011

Key components

<table>
<thead>
<tr>
<th>Cable clamp with nylon insert</th>
<th>Cable balehanger cover</th>
<th>Cable clamp</th>
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Ordering Information

<table>
<thead>
<tr>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
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<td>C</td>
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</table>

Example: TCD-926B
SkyWrap® Tension Bypass—Phase Wire

SkyWrap cable is passed around the tower conductor tension fittings using a combination of specially designed bypass accessories known as ‘balehangers’. The SkyWrap cable is clamped to the conductor and passed around the tension fittings using balehangers to keep the SkyWrap cable away from the conductor fittings.

Features

- Shaped aluminum provides secure passage of the SkyWrap cable around the conductor fittings
- Aluminum balehangers are held at the same electric potential as the conductor
- Balehangers can be applied to any conductor tension arrangement and design
- Meets IEEE standard 1591.3-2011

Key components

Cable clamp with nylon insert
Cable balehanger cover
Cable clamp
Aluminum Balehanger

Ordering Information

<table>
<thead>
<tr>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
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<tbody>
<tr>
<td>Any Tension structure</td>
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<td>1.181-1.693 (30-43)</td>
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</tbody>
</table>

| TCD        | 927 | A | B | C |

Example: TCD-927B

www.AFLglobal.com or 44 (0)1793 647200
SkyWrap® In-line Joint—Phase Wire

Specially designed system for providing electrical isolation and mechanical support for joining the SkyWrap cable along the phase conductor via a tower mounted joint enclosure.

The system includes two Phase-to-Ground transitions that attach to the phase conductor and the steel, wood or concrete support structure providing corona discharge protection.

A cable joint enclosure is used to provide a tower mounted joint for the continued SkyWrap fiber optic cable connection.

Features

• Optimum corona discharge protection
• Track resistance for high voltage or polluted environments
• Suitable up to 300 kV system voltage (173 kV Phase-to-Ground)
• Range of designs to suit environmental conditions
• PTG complies with IEC 60 and IEC 1109 standards
• All tower fittings are available for a range of tower or pole designs
• Available for up to 192 fibers
• Joint enclosures made to BS EN 50411-3-2002 standard
• Meets IEEE standard 1591.3-2011

Key components

Typical configuration for a lattice tower

<table>
<thead>
<tr>
<th>TOWER HEIGHT FEET (M)</th>
<th>STRUCTURE TYPE</th>
<th>CONDUCTOR SIZE INCHES (MM)</th>
<th>FIBER COUNT</th>
</tr>
</thead>
<tbody>
<tr>
<td>&lt; 82 (&lt; 25)</td>
<td>Lattice Tower</td>
<td>0.354-0.866 (9-22)</td>
<td>12-192</td>
</tr>
<tr>
<td>&lt; 115 (&lt; 35)</td>
<td>Steel/Concrete Pole</td>
<td>0.787-1.221 (20-31)</td>
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<td>&lt; 197 (&lt; 60)</td>
<td>Wood Pole</td>
<td>1.181-1.693 (30-43)</td>
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</tbody>
</table>

Example: TCD-L916B48F

www.AFLglobal.com or 44 (0)1793 647200

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SkyWrap® Conductor-Mounted Joint

Conductor-mounted joint enclosures or ‘donuts’ have been developed by AFL for all SkyWrap applications. Cable is spliced at ground level and then raised up to the line with downlead cable coiled within the enclosure.

The aluminum enclosure is held at the same electric potential as the conductor and the fiber optic joint is protected within the case by the Faraday Effect. Enclosures do not require insulators to provide isolation between the optical joint and the system voltage.

Features
- Robust and weather proof
- Ground wire or phase conductor installations
- Up to 192 fiber splice capacity, 2, 3 or 4 SkyWrap cables
- Can be used for conductors up to 60 mm diameter
- Meets IEEE standard 1591.3-2011

Key components

Ordering Information

<table>
<thead>
<tr>
<th>TOWER HEIGHT FEET (M)</th>
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<th>CONDUCTOR SIZE INCHES (MM)</th>
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<tr>
<td>L</td>
<td>M</td>
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Example: TCD-L924B48F
SkyWrap® Termination Joint—Phase Wire

Specially designed system for providing electrical isolation and mechanical support to transition the SkyWrap cable from the phase conductor to a tower mounted splice enclosure.

The system includes a Phase-to-Ground transition that attaches to the phase conductor and the steel, wood or concrete support structure providing corona discharge protection.

A termination joint enclosure is used to provide a link between the SkyWrap cable and the continued fiber optic cable connection, including options for OPGW, ADSS or underground fiber optic cables.

Features

- Optimum corona discharge protection
- Track resistance for high voltage or polluted environments
- Suitable for up to 300 kV system voltage (173 kV Phase-to-Ground)
- Range of designs to suit environmental conditions
- Phase-to-Ground complies with IEC 60 and IEC 1109 standards
- All tower fittings are available for a range of tower or pole designs
- Available for up to 192 fibers
- Joint enclosures made to BS EN 50411-3-2002 standard
- Meets IEEE standard 1591.3-2011

Key components

- Phase-to-Ground insulator
- Cable clamp with nylon insert
- Tower mounted joint enclosure

Ordering Information

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Example: TCD-L921B48F