

OptoBolt



Hardened SC/APC Connectorised Round Drop Cable

STL OptoBolt Factory Terminated Single Fibre Drop Cables

STL OptoBolt factory-terminated single fibre drop cables are designed to significantly reduce installation time and overall subscriber connection costs. These cables feature IP68-rated connectors, ensuring superior durability and consistent connectivity. The round cables with three integral ARP rods, offering excellent crush resistance and support for both aerial and microduct deployments.

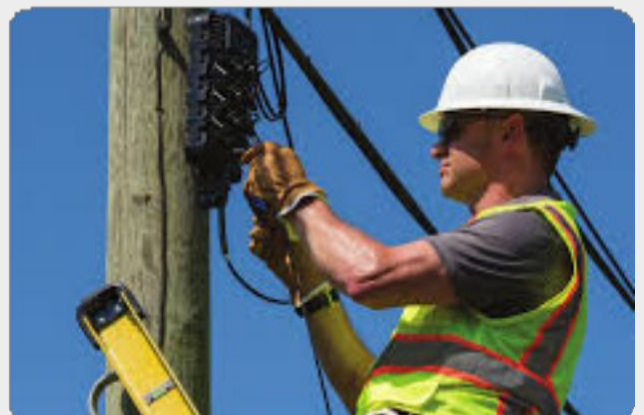
Additional drop cable configurations are available upon request.

Technical Features

- IP68 2m IEC 60529 rated products tested for 2 meters depth of water for 7 days
- UV stabilized & crush resistant jacket
- Toolless installation
- Further reduces the skill and training requirements.
- Operating Temp: -40 °C to 65 °C
- RoHS Compliant
- Low loss connectivity intermatable with legacy installations and material.

Installations

- Underground chambers, manholes and handholes
- Aerial, overhead
- Facade



Technical Specifications

Parameter	Specification
Connector Type	OptoBolt SC/APC
Insertion Loss	$\leq 0.30\text{dB}$
Return Loss	$\geq 55\text{dB}$

Reasons To Use Hardened Connectivity

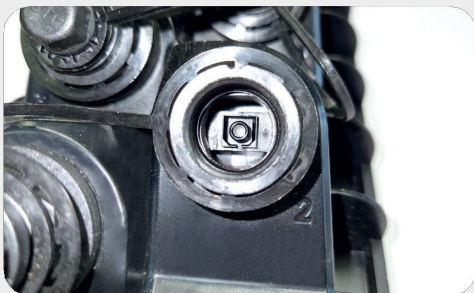
- Expedites the homes passed build rates as terminals come pre-installed from the factory. As it increases speed of deployment, the lead to cash accelerates.
- Minimizes the technical skills required of labor force
- Saves time at the drop installation when connecting homes
- Is an accurate and severe tested system ensuring reliability of each installed terminal
- Can be used as demarcation point
- Simple, ruggedized, no installation failures in the last mile network (where faults >80% of the whole network)



Using Hardened Connectors And Adapters

Hardened connectors and adapters provide sealed environmental protection for the subscriber drop cable connector and the SC adapter mounted within the OptoBlaze optical port.

OptoBlaze coupling mechanism



OptoBolt coupling mechanism



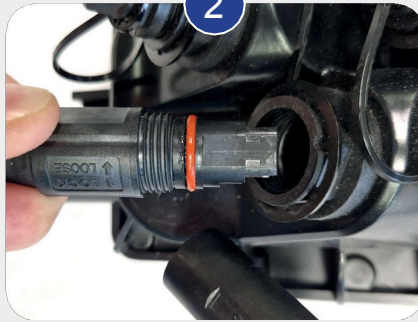
Connecting OptoBolt Drop Cable to OptoBlaze Connectorised Block Terminal

1



Unscrew the dust cap from the OptoBolt drop cable connector.

2



Identify the right port to be connected. Use the 216B key tool (accessory) to unscrew the dust cap from the OptoBlaze optical port.

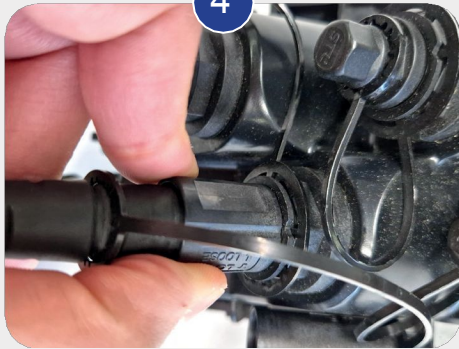
Align the drop cable connector with the optical port. **The pointer on the drop cable connector should line up with the notch on the optical port.**

3



Insert the drop cable connector into the optical port. If the drop cable connector does not insert all the way to the bottom of the port, rotate drop cable connector slightly to either side until it slides freely into place.

4



Thread the drop cable connector coupling nut into the optical port and tighten coupling nut until finger tight.

5



Thread the optical port dust cap into the drop cable dust cap and then tighten both dust caps finger tight. This ensures that both dust caps will stay clean when not in use.



Danger: Exposure to laser radiation can seriously damage the retina of the eye. Do not look into the ends of any optical fibre. Do not assume the laser power is turned-off or that the fibre is disconnected at the other end.

Ordering Information

Series Name	Connector at End 1 (Inner Side)	Type of Cable	Cable Length ¹	Connector at End 2 (Outer Side)	Standard Packaging ²	Cable Printing
OptoBolt	N - No Connector S - OptoBolt SCA 1 - Standard SCA	RD - Round	XXXX M XXXX F	N - No Connector S - OptoBolt SCA 1 - Standard SCA	1	STL

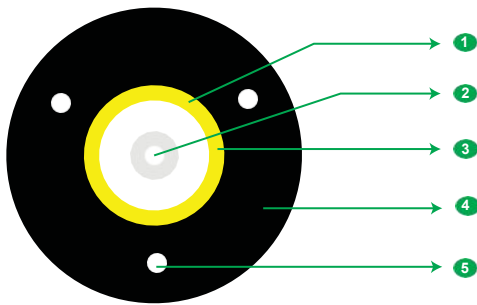
Note

1. Our standard lengths are: 50-100-150-200-250-300-350m. Other lengths on request.

2. Standard packaging is a cardboard coil and multiple coils are packed in a box with a cable length <350m and a drum for the length more than 350m.

Drop-Lite

FTTx External ARP Drop OFC
1F | G.657.A2 Single Mode Fibre



1 **STRENGTH MEMBER (ARAMID YARNS)**

2 **SEMI-TIGHT BUFFER WITH FIBRE**

3 **WATER BLOCKING TAPE**

4 **OUTER SHEATH**

5 **EMBEDDED STRENGTH MEMBER ARP**

** Typical Construction Diagram - Not to Scale*

Specifications

Product Information	
Single Mode Optical Fibres	STL Fibre ITU.T - G.657.A2
Maximum Cabled Fibre Attenuation dB/km	1310nm : ≤0.4 , 1550nm : ≤ 0.3
Bare Fibre	Coating Diameter Uncoloured Fibre 242 ± 7 μm
Semi-Tight Buffer	Semi-tight LSZH buffer (20mm single strip, <10N Strip Force 0.9 ± 0.1 mm)
Water Blocking Element	Water Blocking Tape over the tight buffer
Strength Member	Aramid Yarn distributed over the Water Blocking Tape
Embedded Strength Member	ARP are embedded in equilateral position in outer sheath
Sheathing	UV Stabilized, Black Polyethylene (1.3 mm Nominal thickness)

Loading Condition		
Span Length	Loading condition(Operating Condition -20°C to +60°C)	
55mm	Condition 1	Wind speed: 97 km/hr, 1ce thickness: 0 (zero) mm
	Condition 2	Wind speed: 0 (zero) km/hr, 1ce thickness: 5 mm

Printing Details

OPTO BOLT STL 1F G657A2 DROP CABLE OFC Year of Manufacturing Cable Id Meter Marking Packaging: as per customer requirements.

Specifications

Mechanical & Environmental Characteristics ³ (Test Standard - IEC 60794-1-2)	
Cable Characteristics	Cable Performance
Maximum Breaking Load	1350~2000 N
Installation Tension	150N at $\leq 0.30\%$
Max allowable Tensile	420N at $\leq 0.80\%$
Minimum Bend Radius	12 D
Water Penetration	1m head, 3m samples, 24 hrs
Crush Resistance	2000 N/100mm
Impact	5Nm
Torsion	$\pm 360^\circ$
Temp. Performance ⁴	
Installation	-20°C to +60°C
Operation	-20°C to +60°C
Storage and Transport	-20°C to +60°C

Note

3. Tests shall be carried out as per IEC Standards. Change in attenuation shall be ≤ 0.05 dB/km.

4. Max. change in attenuation shall be ≤ 0.1 dB/km.

Colour Details		
Optical Fibre Colour	Tight Buffer Colour	Sheath Colour
White	Natural	Black

Application & Features	
Applications	Features
Underground in duct	ITU-T G.657.A2 Bend Insensitive Fibre
Aerial Self Supporting Drop	Tight Buffered
Clipped to external wall	Non Metallic
	UV Stabilized & Crush Resistant Jacket
	IEC & ITU-T Standard Complied
	RoHS Compliant

Physical Parameters				
Cable Diameter (mm)	Cable Weight (Kg/km)	Cable Length	Order Tolerance	Short Length
4.9 + 0.3	16 + 2	as per customer requirement	$\pm 5\%$	MAX 5%, Customer Approval.

04/082024

For additional information please contact your sales representative.

You can also visit our website at www.stl.tech

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