

# THE FUTURE OF CONNECTIVITY



**OPTICAL FIBER CABLES**  
PRODUCT CATALOGUE





## ABOUT APAR

### POWERING A SMARTER WORLD SINCE 1958

We are a technology-driven, customer-focused company that delivers - innovative, cost-effective, quality products & services. We believe that with an innovation-first mindset, we can find impactful solutions for our customers. Trusted by major power generation, transmission, distribution, renewables, automotive, telecom, railways and defence companies globally.

**Group Revenue**  
~1.73 billion USD

**65 Years**  
of experience

**Footprint in over**  
140+ countries

**Over 1500+**  
employees

**Around 49%**  
of exports

**9 Manufacturing**  
units

Founded by Late Mr. Dharmsinh D. Desai in 1958, APAR Industries Limited is ~2 billion-dollar company that holds a leadership position in its several principal business segments. Today we have emerged as one of the world's most respected and successful business conglomerates operating in diversified portfolios like speciality oils, conductors, cables, lubricants, Telecom, speciality automotive and polymers.

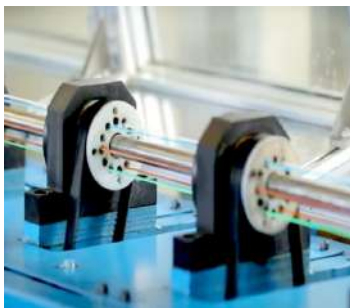
Today, we are ranked as the **world's largest Conductor manufacturer** and **3<sup>rd</sup> largest Transformer Oil manufacturer**. Trusted by major transformer OEMs, Power Utilities, Global EPC Majors, Automotive OEMs and Telecom companies for over six decades, we have been leading the innovation curve in our industry segments in over **140 countries**.

After acquiring Uniflex Cables in 2008, APAR entered the telecommunications industry with a focus on fiber optic solutions. From roughly **\$1.53 USD million in 2008–09 to roughly \$39.27 USD million in FY 22–23**, the company has consistently grown. Our two state-of-the-art facilities, located 150 km from Mumbai in South Gujarat at Umbergaon and Khatalwada, are outfitted with advanced production and testing equipment. **The largest Electron Beam (E-Beam) facility in India is located at the Khatalwada facility**. It has four E-Beam irradiation machines: two 2.5 MeV, one 3 MeV, and one 1.5 MeV. We supply a range of industries as the top producer of special application cables in India. Nonetheless, our main goal is to provide the telecommunications sector with fiber optic solutions; we also serve other industries with our selection of flexible wires and cables, LV, MV, and XLPE cables.



# WORLD CLASS PRODUCTION FACILITIES

APAR offers extensive ranges of fiber optic cable used for Outdoor, Indoor and Aerial Applications ranging from 1F to 576F, up to 1152F in ribbon design, with an installed capacity of 65000 km of cable per annum. We are also equipped to manufacture and deliver customized cables for special applications like Micro cable for FTTX, drop cable with G 657 Multi-mode bend insensitive fiber for last mile connectivity, ADSS (All Dielectric Self-supporting) Aerial cables to string alongside the power lines. We have cutting edge machinery to manufacture all types of fiber optic cables. We have a highly equipped quality system having an accreditation for ISO 9001:2015, ISO 14001:2015, ISO 45001:2018, ISO 27001:2013 & TL9000 from BSI and IRCLASS. Over the last 25 years, we have been supplying all types of fiber optic cables to various sectors.



World Class Fiber Optic Cables Manufacturing Facilities.

## CATALOGUE CABLE CODING SYSTEM

1	2	3	4	5	6	7	8	9	10
D	X	N	L	012	1	W	X	0	144

### 1 | Installation

A = Aerial Self Support  
 B = Direct Buried  
 D = Duct  
 M = Figure8  
 P = Drop/Rise

### 2 | Fire Rating

R = Flame Retardant  
 S = Fire Survival  
 X = No Fire Rating

### 3 | Construction

M = Metallic  
 N = Non-metallic

### 4 | Buffer Type

L = Loose Tube  
 R = Ribbon Tube  
 T = Tight Buffer  
 M = Micro Module

### 5 | Fiber/Tube Or Buffer

001 to 144

### 6 | Number Of Jackets

0 = No Jacket  
 1 = Single Jacket  
 2 = Double Jacket  
 3 = Triple Jacket

### 7 | Water Protect Type

W = Wet Tube - Wet Core  
 R = Wet Tube - Dry Core  
 Y = Dry Tube - Dry Core

### 8 | Type Of Armour

C = Glass Yarn  
 F = Steel Tape  
 W = Steel Wire  
 P = FRP  
 A = Aluminum Tape  
 X = No Armour  
 B = Wire Braided  
 U = ACSR Wire  
 M = Copper Wire

### 9 | Fiber Type

0 = G652D  
 1 = G654  
 2 = G655  
 3 = G656  
 4 = G657A1  
 5 = G657A2  
 6 = G657B1  
 7 = G657B2  
 9 = G657B3  
 10 = OM1  
 11 = OM2  
 12 = OM3  
 13 = OM4




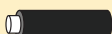

### 10 | Fiber Count

0001 to 1152



















### Example: Standard 44F Duct cable

Code = DXNL0121YX0144

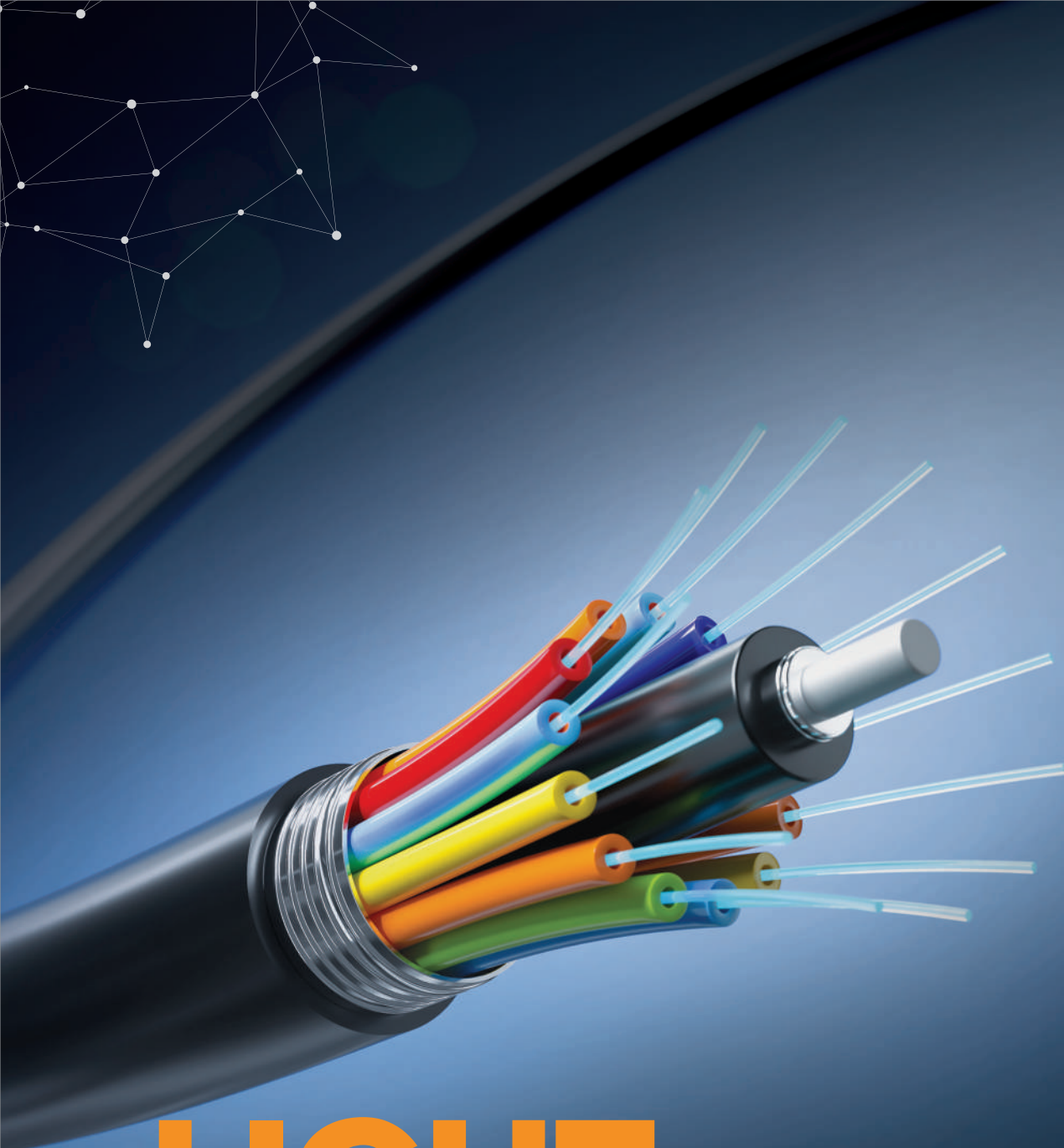
## OPTICAL FIBER COLOUR CODING

FIBER OPTIC COLOUR CODING AS PER EIA/TIA 598 INTERNATIONAL STANDARD					
1	Blue		13	Blue with Black Ring	
2	Orange		14	Orange- with Black Ring	
3	Green		15	Green- with Black Ring	
4	Brown		16	Brown- with Black Ring	
5	Grey		17	Grey- with Black Ring	
6	White		18	White- with Black Ring	
7	Red		19	Red- with Black Ring	
8	Black		20	Natural with Black Ring	
9	Yellow		21	Yellow- with Black Ring	
10	Violet		22	Violet- with Black Ring	
11	Pink		23	Pink- with Black Ring	
12	Aqua		24	Aqua- with Black Ring	

\* "-" Marked are ring marked fiber.

FIBER OPTIC BUFFER COLOUR CODING AS PER EIA/TIA 598 INTERNATIONAL STANDARD					
1	Blue		13	Blue with Black Strip	
2	Orange		14	Orange- with Black Strip	
3	Green		15	Green- with Black Strip	
4	Brown		16	Brown- with Black Strip	
5	Grey		17	Grey- with Black Strip	
6	White		18	White- with Black Strip	
7	Red		19	Red- with Black Strip	
8	Black		20	Black with Yellow Strip	
9	Yellow		21	Yellow- with Black Strip	
10	Violet		22	Violet- with Black Strip	
11	Pink		23	Pink- with Black Strip	
12	Aqua		24	Aqua- with Black Strip	





# LIGHT WEIGHT AND COMPACT

Optical fiber cables offer a hassle-free alternative to traditional copper cables. Their sleek and slim design, combined with their lightweight and compact construction, make them a breeze to install and manage.

## FIBER OPTIC CABLE PRODUCT VARIETY

### **DuctoFib**

**Product: Duct Fiber Optic Cables** : Application: In new or existing Ducts

SR. NO.	PRODUCT DESCRIPTION	FIBER RANGE	CABLE CODE
01	Uni Tube Single Jacket Dielectric Duct Cable	1F-48F	DXNL###1#X0###
02	Uni Tube Double Jacket Dielectric Duct Cable	1F-48F	DXNL###2#X0###
03	Uni Tube Ribbon Fiber Single Jacket Dielectric Duct Cable	48F-144F	DXNR###1#X0###
04	Loose Tube Single Jacket Dielectric Duct Cable	1F-864F	DXNL###1#X0###
05	Loose Tube Double Jacket Dielectric Duct Cable	1F-864F	DXNL###2#X0###
06	Loose Tube Ribbon Fiber Single Jacket Dielectric Duct Cable	48F-1152F	DXNR###1#X0###
07	Loose Tube Ribbon Fiber Double Jacket Dielectric Duct Cable	48F-1152F	DXNR###2#X0###

### **ArmoFib**

**Product: Armoured Fiber Optic Cables** : Application: Direct Burial

08	Uni Tube Single Jacket Steel Tape Armoured Cable	1F-24F	BXML###1#FO###
09	Uni Tube Double Jacket Steel Tape Armoured Cable	1F-24F	BXML###2#FO###
10	Uni Tube Double Jacket Steel Wire Armoured Cable	1F-24F	BXML###2#W0###
11	Uni Tube Double Jacket Braided Armoured Cable	1F-24F	BXML###2#B0###
12	Uni Tube Ribbon Fiber Single Jacket Steel Tape Armoured Cable	48F-144F	BXMR###1#FO###
13	Uni Tube Ribbon Fiber Double Jacket Steel Tape Armoured Cable	48F-144F	BXMR###2#FO###
14	Uni Tube Ribbon Fiber Double Jacket Steel Wire Armoured Cable	48F-144F	BXMR###2#W0###
15	Uni Tube Ribbon Fiber Double Jacket Braided Armoured Cable	48F-144F	BXMR###2#B0###
16	Loose Tube Single Jacket Steel Tape Armoured Cable	1F-864F	BXML###1#FO###
17	Loose Tube Double Jacket Steel Tape Armoured Cable	1F-864F	BXML###2#FO###
18	Loose Tube Double Jacket Steel Wire Armoured Cable	1F-864F	BXML###2#W0###
19	Loose Tube Double Jacket Braided Armoured Cable	1F-864F	BXML###2#B0###
20	Loose Tube Ribbon Fiber Single Jacket Steel Tape Armoured Cable	48F-1152F	BXMR###1#FO###

## AerioFib

**Product: Aerial Fiber Optic Cables** : Application: Over Head Aerial

SR. NO.	PRODUCT DESCRIPTION	FIBER RANGE	CABLE CODE
21	Uni Tube Single Jacket ADSS Cable	1F-24F	AXNL###1#X0###
22	Uni Tube Double Jacket ADSS Cable	1F-24F	AXNL###2#X0###
25	Loose Tube Single Jacket ADSS Cable	1F-432F	AXNL###1#X0###
26	Loose Tube Double Jacket ADSS Cable	1F-432F	AXNL###2#X0###
27	Loose Tube Ribbon Fiber Single Jacket ADSS Cable	48F-864F	AXNR###1#X0###
28	Uni Tube Single Jacket Figure-8 Cable	1F-24F	AXML###1#W0###
29	Uni Tube Ribbon Fiber Single Jacket Figure- 8 Cable	48F-144F	AXMR###1#W0###
30	Loose Tube Single Jacket Figure-8 Cable	1F-432F	AXML###1#W0###

## MicroFib

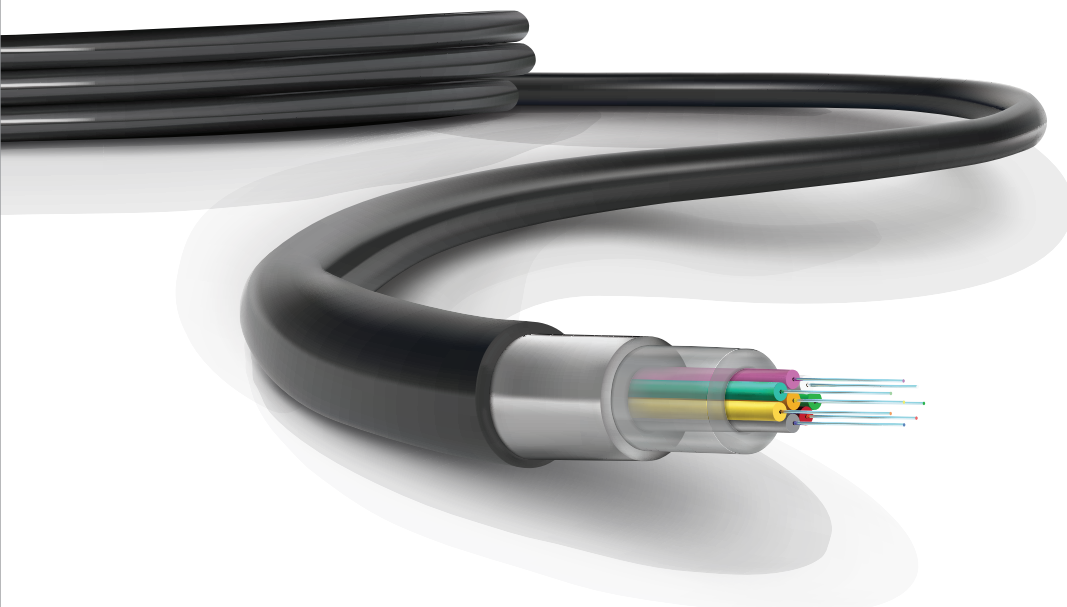
**Product: Microduct Fiber Optic Cables** : Application: In new or existing Micro Ducts

31	Uni Tube Single Jacket Microduct Cable	1F-24F	DXNL###1#X0###
32	Loose Tube Single Jacket Microduct Cable	1F-288F	DXNL###1#X0###

## Acessofast

**Product: Micromodule Fiber Optic Cables** : Application: Backbone Access and Distribution

33	Single Jacket Dielectric Micro Module Cable	72F-288F	DXNM###1#X0###
34	Single Jacket Armoured Micro Module Cable	72F-288F	BXMM###1#FO###



## Fireproof

### Product: Fire Resistant/Flame Retardant Fiber Optic Cables

Application: Oil and Gas sector, Metro Railway and other special sectors.

Flame Retardant, Oil Resistance, High Mechanical Protection, and Harsh Environment compliant.

SR. NO.	PRODUCT DESCRIPTION	FIBER RANGE	CABLE CODE
35	Uni Tube Double Jacket Steel Wire Armoured Cable	1F-24F	BRML###2#W0###
36	Uni Tube Double Jacket Braided Armoured Cable	1F-24F	BRML###2#B0###
37	Loose Tube Double Jacket Steel Wire Armoured Cable	1F-144F	BRML###2#W0###
38	Loose Tube Double Jacket Braided Armoured Cable	1F-144F	BRML###2#B0###
39	Loose Tube Triple Jacket FRP Armoured Cable	1F-144F	BRML###2#P0###
40	Tight Buffered Triple Jacket FRP Armoured Cable	1F-24F	BRNT###3#P0###
41	Tight Buffered Triple Jacket FRP Armoured Cable	8F-144F	BRNT###3#P0###

Fire Resistant, Flame Retardant, Oil Resistance, High Mechanical Protection, and Harsh Environment compliant.  
(750°C up to 90 minutes.)

42	Uni Tube Double Jacket Steel Wire Armoured Cable	1F-24F	BSML###2#W0###
43	Uni Tube Double Jacket Braided Armoured Cable	1F-24F	BSML###2#B0###
44	Loose Tube Double Jacket Steel Wire Armoured Cable	1F-144F	BSML###2#W0###
45	Loose Tube Double Jacket Braided Armoured Cable	1F-144 F	BSML###2#B0###
46	Loose Tube Triple Jacket FRP Armoured Cable	1F-144F	BSML###2#P0###
47	Tight Buffered Triple Jacket FRP Armoured Cable	1F-24F	BRNT###3#P0###
48	Tight Buffered Triple Jacket FRP Armoured Cable	8F-144F	BRNT###3#P0###

## LMConnect

Product: FTTX : Application: Last mile connectivity.

49	Flat Drop Cable	1F-24F	PXNL###1X4###
50	Flat Indoor Drop Cable	1F-4F	PRNT###1X4###
51	Flat Indoor Drop Cable (Fig-8)	1F-4F	MRMT###1W4###
52	Air Blown cable	1F-24F	DXNL###1X1###
53	Simplex Cable	1F	PRNT0011X4001
54	Duplex Cable	2F	PRNT0021X4002
55	Breakout Cable	1F-24F	DRNT###1X0###

# UNI TUBE SINGLE JACKET DIELECTRIC DUCT CABLE

**DXNL###1#X0###**

**1F-48F**



## PRODUCT INFORMATION

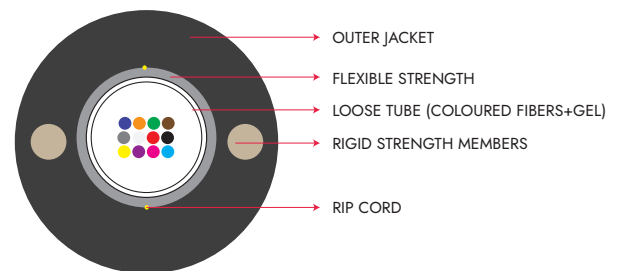
APAR's Single jacket dielectric duct cable is suitable for duct application. The cable is mono tube design. The cable consists of optical fibers in jelly filled loose tube. The loose tube is peripherally covered by glass fiber reinforcement. This core is covered by strong thermoplastic material, this gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

These cables can be installed in ducts with either pulling or blowing techniques and in aerial applications with traditional lashing methods.

## PRODUCT FEATURES

- ◆ Micro size. Light weight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ UL Listed OFNR (Available with)
- ◆ Euro classification to CPR Dca



## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, EN 50575, UL 1651 and Customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	7.2	60	500
4F	4	7.2	60	500
6F	6	7.2	60	500
12F	12	7.2	60	500
24F	24	7.5	65	500
48F	48	11.0	136	500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	1000N		
Impact strength (N.m)	IEC-60794-1-21-E4	5		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI-TUBE DOUBLE JACKET DIELECTRIC DUCT CABLE

**DXNL###2#X0###  
(1F-48F)**



## PRODUCT INFORMATION

APAR's Double jacket dielectric duct cable is suitable for duct application. The cable is mono tube design. The cable consist of optical fibers in jelly filled loose tube. The Inner Sheath is peripherally covered by glass fiber reinforcement. This core is covered by strong thermoplastic material, this gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

These cables can be installed in ducts with either pulling or blowing techniques and in aerial applications with traditional lashing methods.

## PRODUCT FEATURES

- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20 and Customer specifications



Duct Laying



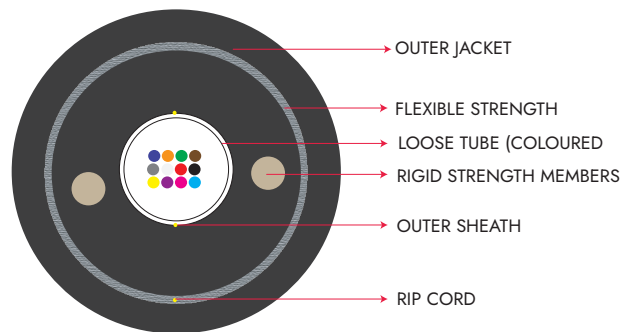
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	9.5	70	1200
4F	4	9.5	70	1200
6F	6	9.5	70	1200
12F	12	9.5	70	1200
24F	24	10.0	80	1200
48F	48	11.5	100	1200

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C    Operation -20°C to +70°C    Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser  
Symbol~ Telephone Symbol~ Year of  
Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI-TUBE RIBBON FIBER SINGLE JACKET DIELECTRIC DUCT CABLE

DXNR###1#X0###

48F-144F



## PRODUCT INFORMATION

APAR's Single jacket ribbon cable is suitable for duct application. The cable is mono tube design. The cable consists of optical fiber ribbons in jelly filled loose tube. The loose tube is peripherally covered by glass fiber reinforcement.

This core is covered by strong thermoplastic material, two FRP rods are embedded in jacket to give cable extra tensile strength. The jacket gives the cable a strong and smooth. This product is available in various fiber counts.

## PRODUCT APPLICATION

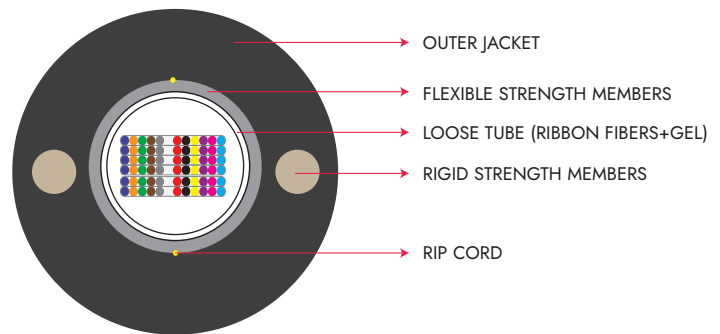
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High-density communication.
- ◆ Premise network application.

## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20 and customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / RIBBON	NO. OF RIBBONS	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	12	4	11.6	130 ±20%	2000
72F	12	6	12.4	145 ±20%	2000
72F	12	8	12.8	150 ±20%	2000
72F	12	12	14.0	175 ±25%	2000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	1000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C    Operation -20°C to +70°C    Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



# LOOSE TUBE SINGLE JACKET DIELECTRIC DUCT CABLE

**DXNL###1#X0###**  
**1F-864F**

## **DuctoFib**

### PRODUCT INFORMATION

APAR's Single jacket dielectric duct cable is suitable for duct application. The cable consists of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by strong thermoplastic material, this gives the cable a strong and smooth finish. This product is available in various fiber counts finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

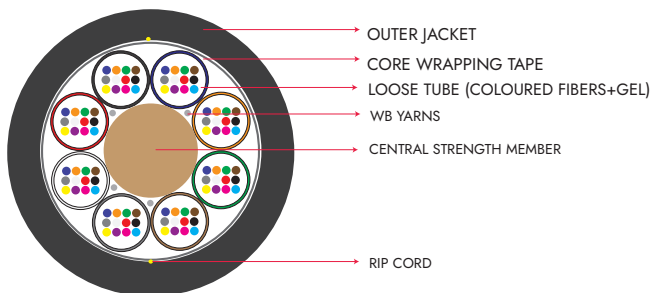
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-864F, in both single-mode and multi-mode fiber variants.
  - ◆ Excellent design gives rapid midspan excess.
  - ◆ Tensile and crush resistance, UV protection.
  - ◆ Lightweight, flexible and easy to install.
  - ◆ Also available in customized options as per customer requirements.
- Also available with Euro classification to CPR Dca

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20 and Customer specifications  
EN 187000, EN 5.575



Duct Laying



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	9.0	60 ± 10%	1500
96F	12	8	10.5	85 ± 15%	1500
144F	12	12	13.5	125 ± 15%	2000
288F	12	24	17.5	175 ± 20%	2000
576F	24	24	23.5	315 ± 25%	2000
864F	24	36	23.0	410 ± 25%	2200

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET DIELECTRIC DUCT CABLE

**DXNL###1#X0###**  
**1F-864F**



## PRODUCT INFORMATION

APAR's Double jacket dielectric duct cable is suitable for duct application. The cable consists of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by strong thermoplastic material as inner sheath. The layer of Flexible strength member is applied over inner sheath which is covered by strong thermoplastic material. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts. This product is available in various fiber counts

## PRODUCT APPLICATION

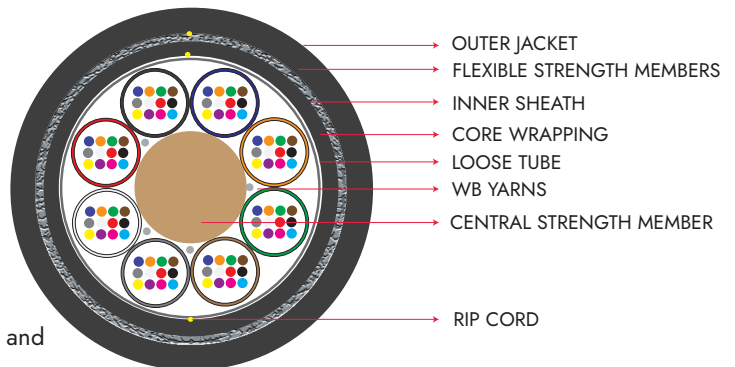
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

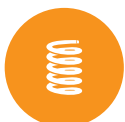
- ◆ Available in wide range of 48F-1152F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.
- ◆ Termite and Rodent resistance

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20  
and Customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected



Rodent Resistant



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	12.0	110±10%	2700
96F	12	8	13.5	135±10%	2700
144F	12	12	15.5	190±10%	2700
288F	12	24	18.0	245±20%	3000
576F	24	24	23.5	400±25%	3000
864F	24	32	26.0	490±25%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N
Impact strength (N.m)	IEC-60794-1-21-E4	25
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE RIBBON FIBER SINGLE JACKET DIELECTRIC DUCT CABLE

**DXNR###1#X0###**  
**48F-1152F**

## PRODUCT INFORMATION

APAR's Single Jacket ribbon duct cable is suitable for duct application. The cable consists of optical fiber ribbons in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by a strong thermoplastic material, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High Density Communication.
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 48F-1152F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ Tensile and crush resistance, UV protection.\
- ◆ Lightweight, flexible and easy to install.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20 and Customer specifications



Duct Laying



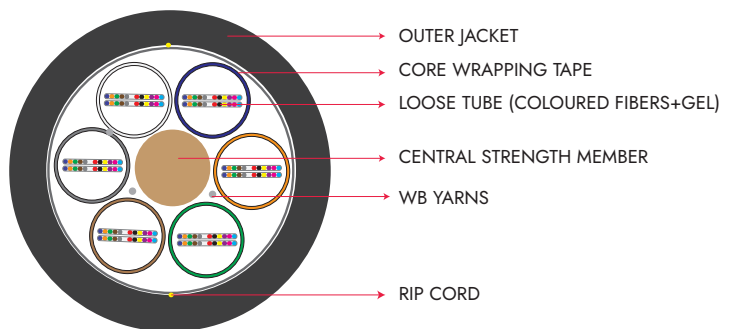
Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / RIBBON	RIBBON / TUBE	FIBERS / TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	6	2	12 (4)	12.5	120 ±20%	2000
72F	6	4	24 (3)	14.0	145 ±20%	2500
96F	6	4	24 (4)	14.0	145 ±20%	2500
144F	6	6	36 (4)	16.5	180 ±25%	2500
288F	6	6	36 (8)	18.5	275 ±25%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	25		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER DOUBLE JACKET STEEL WIRE ARMoured CABLE

**BXMR###2#W0###**

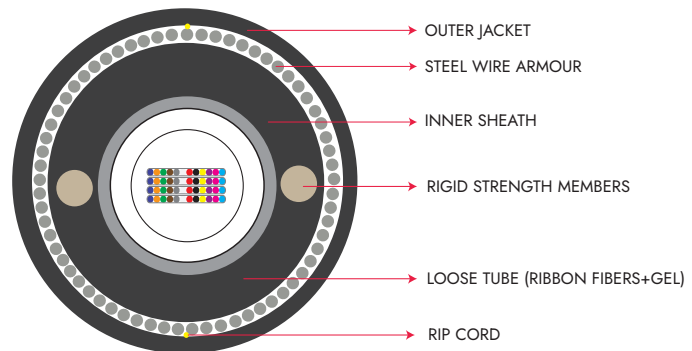
**48F-1152F**

## PRODUCT INFORMATION

APAR's Double jacket ribbon duct cable is suitable for duct application. The cable consists of optical fiber ribbons in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by strong thermoplastic material as inner sheath. The inner sheath is covered by strong polyamide material jacket. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High Density Communication
- ◆ LAN/WAN/SCADA/telemetry systems.



## PRODUCT FEATURES

- ◆ Available in wide range of 48F-1152F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Rodent and termite proof
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20 and Customer specifications



Underground



Rodent Resistant



High Compressive  
Strength



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / RIBBON	RIBBON /TUBE	FIBERS/ TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	2	2	24	22.0	350	5000
72F	2	2	24	22.0	350	5000
96F	2	2	24	22.0	355	5000
144F	2	2	24	22.0	365	5000
288F	4	4	48	23.0	400	5000
432F	6	6	72	24.5	450	6500
864F	12	12	24	30.0	725	6500
48F	2	2	24	35.5	990	7000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE SINGLE JACKET STEEL TAPE ARMoured CABLE

**BXML###1#FO###  
1F-48F**



## PRODUCT INFORMATION

APAR's Single jacket steel tape armoured cable is suitable for duct or direct burial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is peripherally covered by corrugated steel tape, which gives cable excellent mechanical protection. Two steel wires are embedded in jacket to give cable extra tensile strength. The strong thermoplastic material jacket is provided over the corrugated steel tape armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

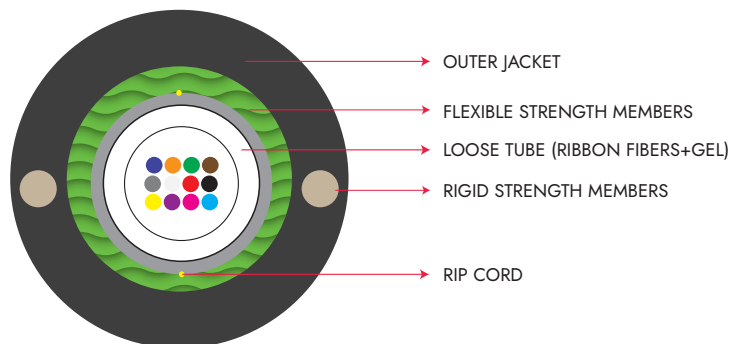
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High Density Communication
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size. lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	8.5	80 ± 10%	1500
4F	4	8.5	80 ± 10%	1500
6F	6	8.5	80 ± 10%	1500
12F	12	8.5	80 ± 10%	1500
24F	24	8.7	85 ± 10%	1500
48F	48	10.0	105 ± 10%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C      -20°C to +70°C      -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser  
Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE SINGLE DOUBLE STEEL TAPE ARMoured CABLE

BXML###2#FO###  
1F-48F



## PRODUCT INFORMATION

APAR's Double jacket steel tape armoured cable is suitable for duct or direct burial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two steel wires are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by corrugated steel tape, which gives the cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the corrugated steel tape armour, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

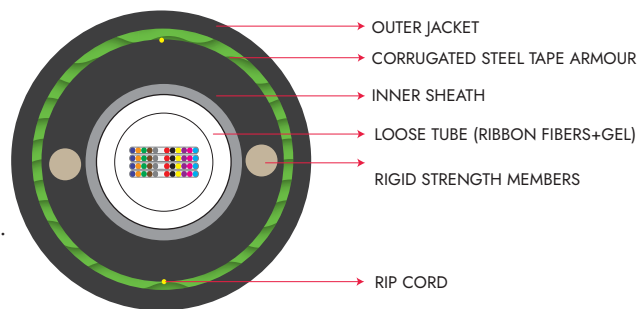
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ Last mile connectivity application.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



High Compressive  
Strength



Rodent Resistant



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER / TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.2	130 ± 10%	1500
4F	4	11.2	130 ± 10%	1500
6F	6	11.2	130 ± 10%	1500
12F	12	11.2	130 ± 10%	1500
24F	24	11.5	135 ± 10%	1500
48F	48	12.5	160 ± 10%	2000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET STEEL WIRE ARMoured CABLE

**BXML###2#W0###  
1F-48F**



## PRODUCT INFORMATION

APAR's Double jacket steel tape Armoured cable is suitable for duct or direct burial application. The cable is monotube design cable. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two rigid strength Member are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire armouring, which gives cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the steel wire armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ Last mile connectivity application.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and  
Customer specifications



Underground



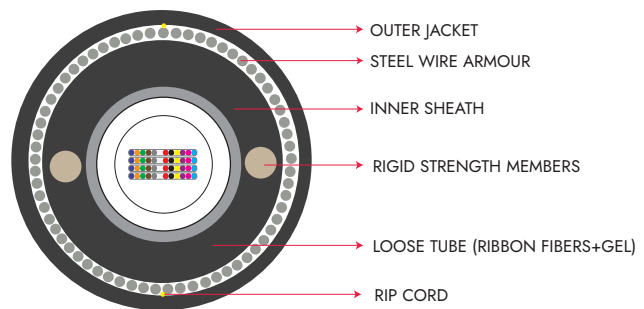
High Compressive  
Strength



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.4	200±10%	2500
4F	4	11.4	200±10%	2500
6F	6	11.4	200±10%	2500
12F	12	11.4	200±10%	2500
24F	24	11.7	220±10%	2500
48F	48	13.0	250±10%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET BRAIDED ARMOURED CABLE

**BXML###2#B0###  
1F-48F**



## PRODUCT INFORMATION

APAR's Double jacket braided armoured cable is suitable for duct or direct burial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two Rigid Strength Members are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire braiding, which gives cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the steel wire braiding armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ Last mile connectivity application.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



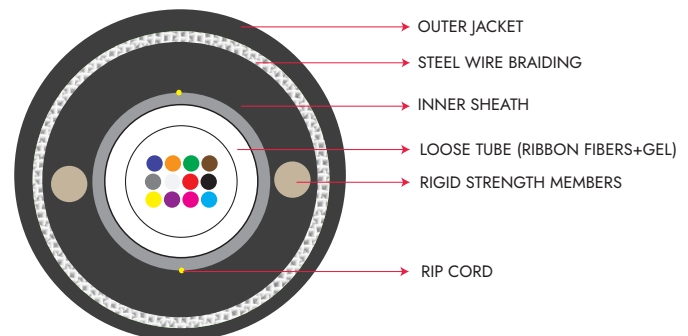
Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.0	145±10%	2000
4F	4	11.0	145±10%	2000
6F	6	11.0	145±10%	2000
12F	12	11.0	145±10%	2000
24F	24	11.5	158±10%	2000
48F	48	13.0	195±10%	2500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER SINGLE JACKET STEEL TAPE ARMoured CABLE [ARMOFIB]

**BXML###2#B0###**

**48F - 144F**



## PRODUCT INFORMATION

APAR's Single jacket ribbon steel tape Armoured cable is suitable for duct or direct burial application. The cable is monotube design. The cable consists of optical fiber ribbons in jelly-filled loose tube. The loose tube is peripherally covered by corrugated steel tape, which gives the cable excellent mechanical protection. Two Rigid Strength Members are embedded in jacket to give cable extra tensile strength. The strong thermoplastic material jacket is provided over the corrugated steel tape armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High density communication
- ◆ Premise network application

## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



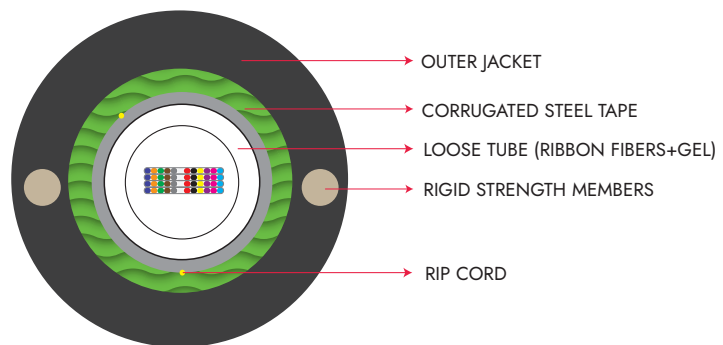
Rodent Resistant



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER COUNT	RIBBON FIBER/ TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48	12	4	13.5	145±10%	1500
72F	12	6	13.8	150±10	1500
96F	12	8	14.2	160±10%	1500
144F	12	12	15.5	185±10%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER DOUBLE JACKET STEEL TAPE ARMoured CABLE

**BXMR###2#FO###  
48F-144F**



## PRODUCT INFORMATION

APAR's Double jacket ribbon steel tape Armoured cable is suitable for duct or direct burial application. The cable is monotube design cable. The cable consists of optical fiber ribbons in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two Rigid Strength Members are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire armouring, which gives cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the steel wire armour, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High density communication.
- ◆ Premise network application.

## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



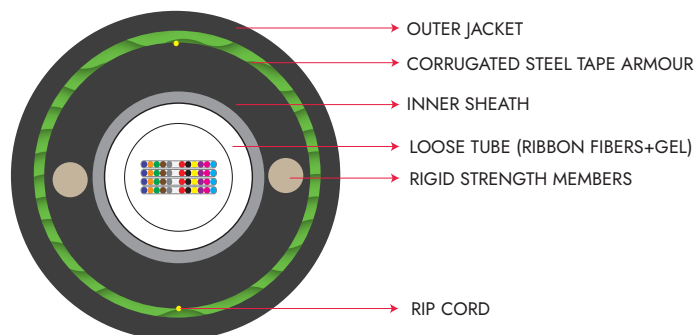
Rodent Resistant



Water Resistant



UV Protected



OUTER JACKET

CORRUGATED STEEL TAPE ARMOUR

INNER SHEATH

LOOSE TUBE (RIBBON FIBERS+GEL)

RIGID STRENGTH MEMBERS

RIP CORD

## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	4	13.2	170±15%	1000
72F	6	13.7	185±15%	1000
96F	8	14.3	195±15%	1000
144F	12	15.8	235±15%	1000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking

- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER DOUBLE JACKET STEEL WIRE ARMoured CABLE

**BXMR###2#W0###  
48F-144F**



## PRODUCT INFORMATION

APAR's Double jacket ribbon steel wire armoured cable is suitable for duct or direct burial application. The cable is monotube design cable. The cable consists of optical fiber ribbons in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two Rigid Strength Members are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire armouring, which gives cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the steel wire armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

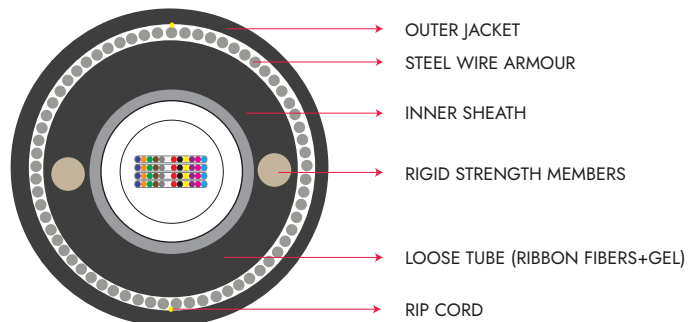
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High density communication.
- ◆ Premise network application.

## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	4	13.5	270±15%	3000
72F	6	14.0	285±15%	3000
96F	8	14.6	290±15%	3000
144F	12	16.1	335±15%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	4000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking

- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER DOUBLE JACKET BRAIDED ARMoured CABLE

**BXMR###2#B0###  
48F-144F**



## PRODUCT INFORMATION

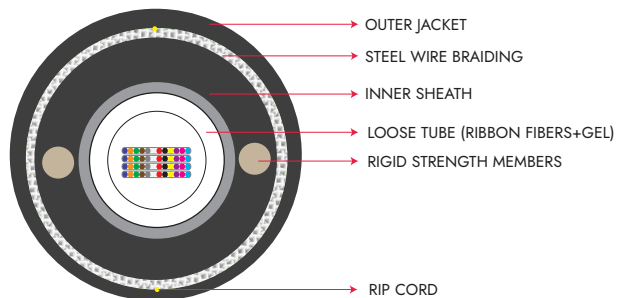
APAR's Double jacket ribbon braided armoured cable is suitable for duct or direct burial application. The cable is monotube design. The cable consists of optical fiber ribbons in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two steel wires are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire braiding, which gives cable excellent mechanical protection. The strong thermoplastic material jacket is provided over the steel wire braiding armour. which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High density communication.
- ◆ Premise network application.

## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Best Rodent and Termite resistant
- ◆ Also available in customized options as per customer requirements.



## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



Rodent Resistant



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	4	13.6	200±15%	1500
72F	6	14.1	215±15%	1500
96F	8	14.7	220±15%	1500
144F	12	16.2	265±15%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE SINGLE JACKET STEEL TAPE ARMoured CABLE

**BXML###1#FO###  
1F-864F**



## PRODUCT INFORMATION

APAR's Single jacket steel tape Armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water-blocking compound surrounded with suitable tape to avoid water penetration. Glass yarns are provided to gain necessary tensile strength. This core is covered by corrugated steel tape, which gives the cable excellent mechanical protection. The layer of strong thermoplastic material is covered as a jacket over steel tape armour. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-864F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Best Rodent and Termite resistant
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



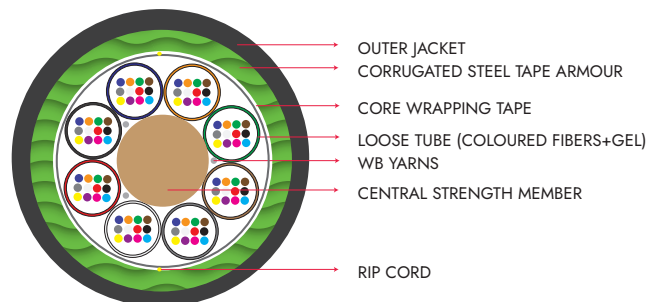
Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	10.5	130±10%	1800
96F	12	8	11.5	125±10%	1800
144F	12	12	14.0	190±15%	2000
288F	12	24	15.0	230±20%	2000
576F	24	24	21.5	410±20%	2000
864F	24	36	24.0	510±20%	2000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET STEEL TAPE ARMoured CABLE

**BXML###2#FO###  
1F-864F**

**ArmoFib**

## PRODUCT INFORMATION

Apar's Double jacket steel tape Armoured cable is suitable for direct burial application. The cable consist of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. Glass yarns are provided to gain necessary tensile strength. This core is covered by thermoplastic material as inner sheath. This inner sheath is covered by corrugated steel tape, which gives cable excellent mechanical protection. The layer of strong thermoplastic material is covered as jacket over steel tape armour. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

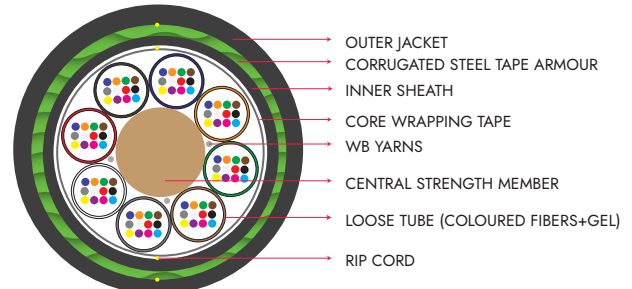
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-576F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess
- ◆ Tensile and crush resistance, UV protection.
- ◆ Best Rodent and Termite resistant
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



High Compressive  
Strength



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	12.5	145±10%	2000
96F	12	8	13.5	180±15%	2000
144F	12	12	16.0	240±15%	2700
288F	12	24	18.0	305±20%	2700
576F	24	24	24.0	480±25%	2700
864F	24	36	26.5	590±25%	2700

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	4000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET STEEL TAPE ARMoured CABLE

**BXML###2#W0###  
1F-864F**

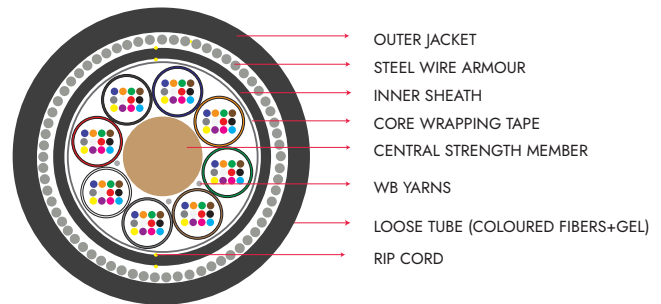
## **ArmoFib**

### PRODUCT INFORMATION

Apar's Double jacket steel wire armoured cable is suitable for direct burial application. The cable consist of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by thermoplastic material as inner sheath. This inner sheath is covered by steel wires, which gives cable excellent mechanical protection. The layer of strong thermoplastic material is covered as jacket over steel wire armour. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ High tensile resistance, UV protection.
- ◆ Lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



High Compressive  
Strength



Rodent Resistant



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	13.0	265±15%	4000
96F	12	8	14.5	310±15%	5000
144F	12	12	16.8	400±20%	5000
288F	12	24	19.2	500±20%	5000
576F	24	24	24.5	785 ± 20%	5000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	5000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET BRAIDED ARMoured CABLE

**BXML###2#B0###  
1F-576F**



## PRODUCT INFORMATION

APAR's Double jacket braided armoured cable is suitable for direct burial application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by thermoplastic material as an inner sheath. This inner sheath is covered by steel wire braiding, which gives cable excellent mechanical protection. The layer of strong thermoplastic material is covered as a jacket over steel wire braiding. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ LAN/WAN/SCADA/telemetry systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



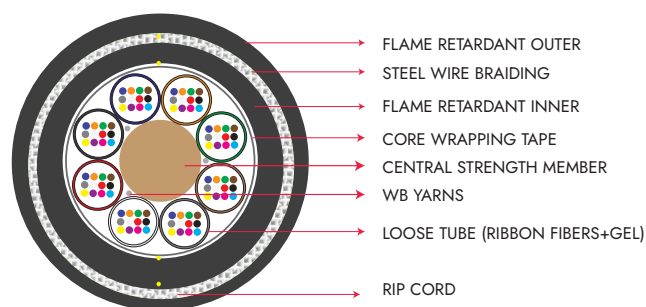
Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	12.7	175±15%	2000
96F	12	8	14.0	215±15%	2500
144F	12	12	16.3	288±20%	2500
288F	12	24	20.5	430±20%	2500
576F	24	24	23.5	560±20%	2500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE RIBBON FIBER SINGLE JACKET STEEL TAPE ARMoured CABLE

**BXMR###1#FO###  
48F-1152F**



## PRODUCT INFORMATION

APAR's Single jacket steel tape Armoured Ribbon cable is suitable for direct burial or duct application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by corrugated steel tape, which gives cable excellent mechanical protection. The layer of strong thermoplastic material is covered as jacket over steel tape armour. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High Density communication.
- ◆ Premise network application.

## PRODUCT FEATURES

- ◆ Available in wide range of 48F-1152F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Underground



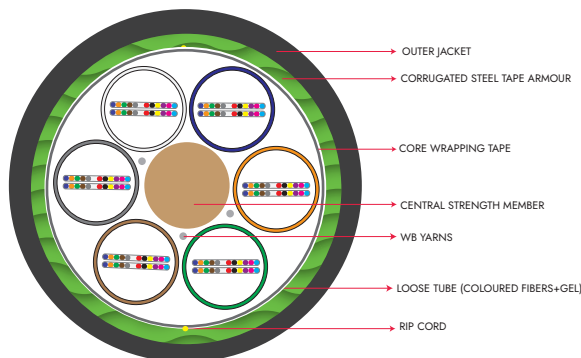
Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	NUMBER OF FIBER (RIBBON)	RIBBONS / TUBE	FIBRE'S / TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
48F	6	2	12 (4)	13.7	165 ±20%	2500
72F	6	4	24 (3)	15.5	210 ±20%	2700
96F	6	4	24 (4)	15.5	210 ±20%	2700
144F	6	6	36 (4)	17.7	265 ±25%	2700
288F	6	6	36 (8)	20.5	365 ±25%	3500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE SINGLE JACKET ADSS CABLE

AXNL###1#X0###  
1F-48F

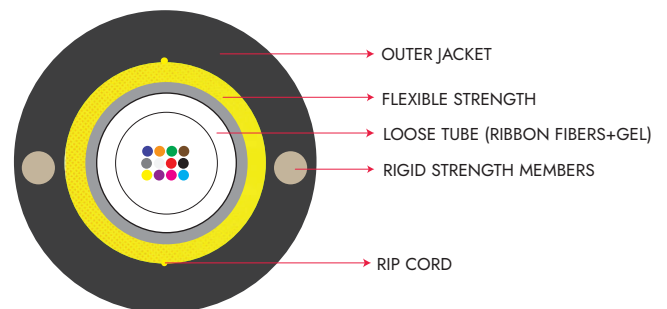


## PRODUCT INFORMATION

APAR's Single jacket ADSS cable is suitable for aerial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is peripherally covered by aramid yarn reinforcement. Two FRP rods are embedded in jacket to give cable extra tensile strength. This core is covered by a strong thermoplastic material, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data transmission.
- ◆ Last mile connectivity application.



## PRODUCT FEATURES

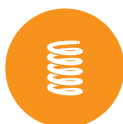
- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer



Aerial Cable



Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH (#)
2F	2	7.3	45±10%	1500	50 METER
4F	4	7.3	45±10%	1500	50 METER
6F	6	7.3	45±10%	1500	50 METER
12F	12	7.3	45±10%	1500	50 METER
24F	24	7.6	45±10%	1500	50 METER

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	1500N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET ADSS CABLE [AEROFIB]

AXNL###2#X0###  
1F-48F



## PRODUCT INFORMATION

APAR's Double jacket ADSS cable is suitable for aerial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. Two FRP rods are embedded in inner sheath to give cable extra tensile strength. The inner sheath is peripherally covered by aramid yarn reinforcement. The strong thermoplastic material jacket is provided over the aramid yarn layer, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Short Span Aerial application
- ◆ Last mile connectivity application.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



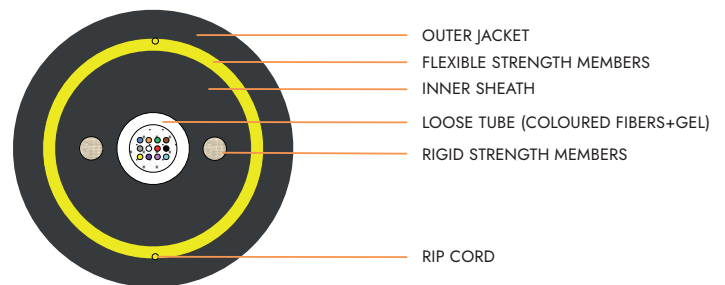
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH
2F	2	10.0	75±10%	2000	80 METER
4F	4	10.0	75±10%	2000	80 METER
6F	6	10.0	75±10%	2000	80 METER
12F	12	10.0	75±10%	2000	80 METER
24F	24	10.3	82±10%	2000	80 METER

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE SINGLE JACKET ADSS CABLE [AEROFIB]

AXNL###1#X0###  
1F-288F



## PRODUCT INFORMATION

APAR's Single jacket ADSS cable is suitable for aerial application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by evenly distributed high-tensile aramid yarns. Aramid yarns give cable high tensile strength, which is required during aerial application. The layer of strong thermoplastic material is covered as a jacket over aramid yarns. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Installation with high voltage power lines.
- ◆ Subscriber network system.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



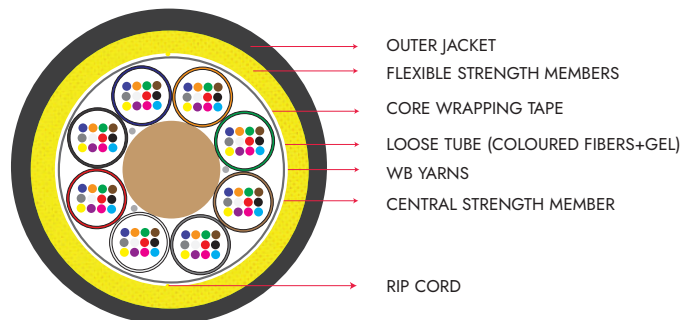
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH #
6F-72F	6F~12F	1~6	12	75 ± 10%	3000	100 Meter
96F	12	8	13.5	105 ± 15%	3000	100 Meter
144F	12	12	16.0	150 ± 15%	3000	100 Meter
288F	12	24	18	200 ± 20%	3500	100 Meter

# MULTIPLE SPAN OPTIONS AVAILABLE ON REQUEST.

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET ADSS CABLE [AEROFIB]

AXNL###1#X0###  
1F-288F

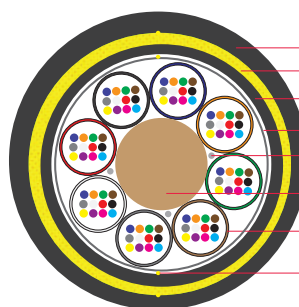


## PRODUCT INFORMATION

APAR's Double jacket ADSS cable is suitable for aerial application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by a strong thermoplastic material as an inner sheath. This inner sheath is covered by evenly distributed high tensile aramid yarns. Aramid yarns give cables high tensile strength, which is required during aerial applications. The layer of strong thermoplastic material is covered as a jacket over aramid yarns. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Installation with high voltage power lines.
- ◆ Subscriber network system.



- OUTER JACKET
- FLEXIBLE STRENGTH MEMBERS
- INNER SHEATH
- CORE WRAPPING TAPE
- WB YARNS
- CENTRAL STRENGTH MEMBER
- LOOSE TUBE (COLOURED FIBERS+GEL)
- RIP CORD

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-864F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/ TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH #
6F-72F	6F~12F	1~6	9.5	110±10%	3000	100 Meter
96F	12	8	11.5	140±10%	3000	100 Meter
144F	12	12	14.0	188±10%	3000	100 Meter
288F	12	24	16.0	250±10%	3500	100 Meter

# MULTIPLE SPAN OPTIONS AVAILABLE ON REQUEST.

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N		
Impact strength (N.m)	IEC-60794-1-21-E4	25		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

FIBRE STANDARD COLOUR CODE



◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

FIBRE STANDARD COLOUR CODE



◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE RIBBON FIBER SINGLE JACKET ADSS CABLE [AEROFIB]

AXNR###1#X0###  
48F-864F



## PRODUCT INFORMATION

APAR's Single jacket ribbon ADSS cable is suitable for aerial application. The cable consists of optical fiber ribbons in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by evenly distributed high tensile aramid yarns. Aramid yarns give cables high tensile strength, which is required during aerial application. The layer of strong thermoplastic material is covered as a jacket over aramid yarns. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

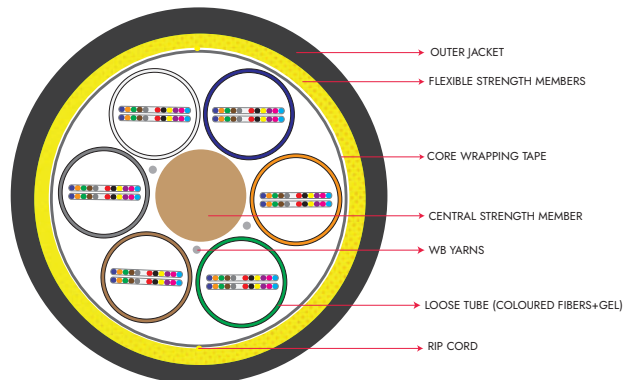
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High density Communication
- ◆ Installation with high voltage power lines.
- ◆ Subscriber network system

## PRODUCT FEATURES

- ◆ Available in wide range of 16F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ High tensile resistance, UV protection.
- ◆ Lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/ RIBBON)	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH #
48F	2	24 (2)	17.5	241 ±10%	3500	100 Meter
72F	2	24 (3)	17.5	246 ±10%	3500	100 Meter
96F	2	24 (4)	17.5	252 ±10%	3500	100 Meter
144F	2	24 (6)	20.3	339 ±10%	3500	100 Meter
288F	4	48 (6)	21.0	390 ±10%	3500	100 Meter

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C    Operation -20°C to +70°C    Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE SINGLE JACKET FIGURE-8 CABLE [AEROFIB]

AXML###1#W0###  
2F-48F



## PRODUCT INFORMATION

APAR's Single jacket figure-8 cable is suitable for aerial application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is peripherally covered by glass fiber reinforcement. The layer of strong thermoplastic material is covered as a jacket over core, along with messenger stranded steel wire. The messenger stranded steel wire is arranged in a way that gives the cable a figure-8 layout. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Aerial for short to medium span.
- ◆ Last mile connectivity application.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ High tensile resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



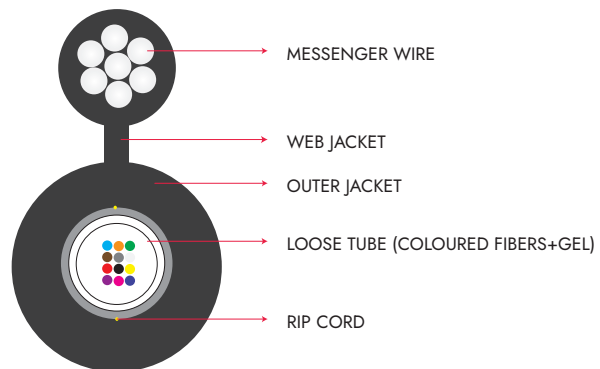
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH
2F	2	7.0 X 13.0	82±10%	1500	70 Meter
4F	4	7.0 X 13.0	82±10%	1500	70 Meter
6F	6	7.0 X 13.0	82±10%	1500	70 Meter
12F	12	7.0 X 13.0	82±10%	1500	70 Meter
24F	24	7.0 X 13.0	86±10%	1500	70 Meter
48F	48	8.0 X 14.5	90±10%	1500	70 Meter

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation: -20°C to +70°C Operation: -20°C to +70°C Storage: -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

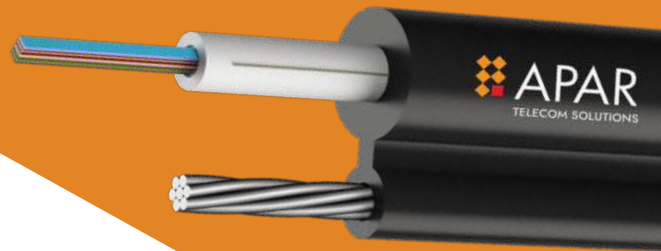
# UNI TUBE RIBBON FIBER SINGLE JACKET FIGURE- 8 CABLE [AEROFIB]

**AXMR###1#W0###  
48F-144F**



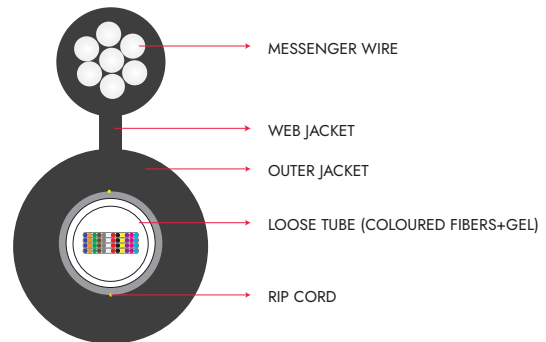
## PRODUCT INFORMATION

APAR's Single jacket ribbon figure-8 cable is suitable for aerial application. The cable is monotube design. The cable consists of optical fiber ribbons in jelly-filled loose tube. The loose tube is peripherally covered by glass fiber reinforcement. The layer of strong thermoplastic material is covered as a jacket over the core, along with messenger stranded steel wire. The messenger stranded steel wire is arranged in a way that gives the cable a figure-8 layout. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.



## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ High Density Communication.
- ◆ Premise network application.



## PRODUCT FEATURES

- ◆ Available in wide range of 4F-144F, in both single-mode and multi-mode fiber variants.
- ◆ High tensile resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH
48F	4	9.3 X 15.3	128±10%	1500	70 Meter
72F	6	9.3 X 15.3	136±10%	1500	70 Meter
96F	8	10.7 X 16.7	165±10%	1500	70 Meter
144F	12	10.7 X 16.7	181±10%	1500	70 Meter

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C    Operation -20°C to +70°C    Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER SINGLE JACKET FIGURE- 8 CABLE [AEROFIB]

AXMR###1#W0###  
6F-288F



## PRODUCT INFORMATION

APAR's Single jacket figure-8 cable is suitable for aerial application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. The layer of strong thermoplastic material is covered as a jacket over the core, along with messenger stranded steel wire. The messenger stranded steel wire is arranged in a way that gives the cable a figure-8 layout. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ Aerial for short to medium span
- ◆ Subscriber network system

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-432F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess
- ◆ High tensile resistance, UV protection.
- ◆ Lightweight, flexible and easy to install for aerial application.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Aerial Cable



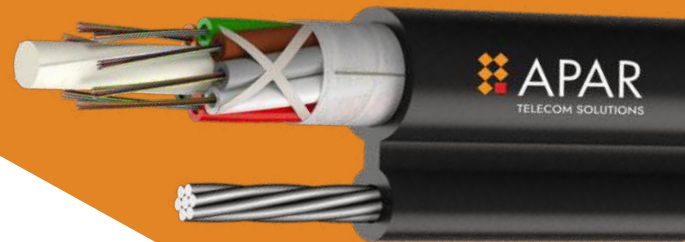
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)	SPAN LENGTH #
48F	6F~12F	1~6	10.0 X 16.3	115±10%	2500	80 Meter
72F	12	8	11.1 X 17.5	140±10%	2500	80 Meter
96F	12	12	13.8 X 20.2	193±10%	2500	80 Meter
144F	12	24	17.9 X 24.3	300±15%	2500	80 Meter

# MULTIPLE SPAN OPTIONS AVAILABLE ON REQUEST.

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C      Operation -20°C to +70°C      Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

FIBRE STANDARD COLOUR CODE



◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

FIBRE STANDARD COLOUR CODE



◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE RIBBON FIBER SINGLE JACKET FIGURE- 8 CABLE [AEROFIB]

**AXMR###1#W0###  
48F-144F**



## PRODUCT INFORMATION

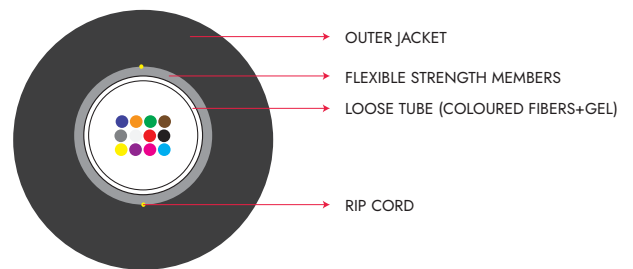
APAR's Single jacket dielectric Mico duct cable is suitable for duct application. The cable is monotube design. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is peripherally covered by Flexible Strength member reinforcement. This core is covered by a strong thermoplastic material, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ LAN Systems & WAN Systems

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Also available in customized options as per customer requirements.



## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	2.5	7	100
4F	4	2.5	7	100
6F	6	2.5	7	100
12F	12	2.5	7	100
24F	24	3.2	10	100
48F	48	5.0	21	100

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

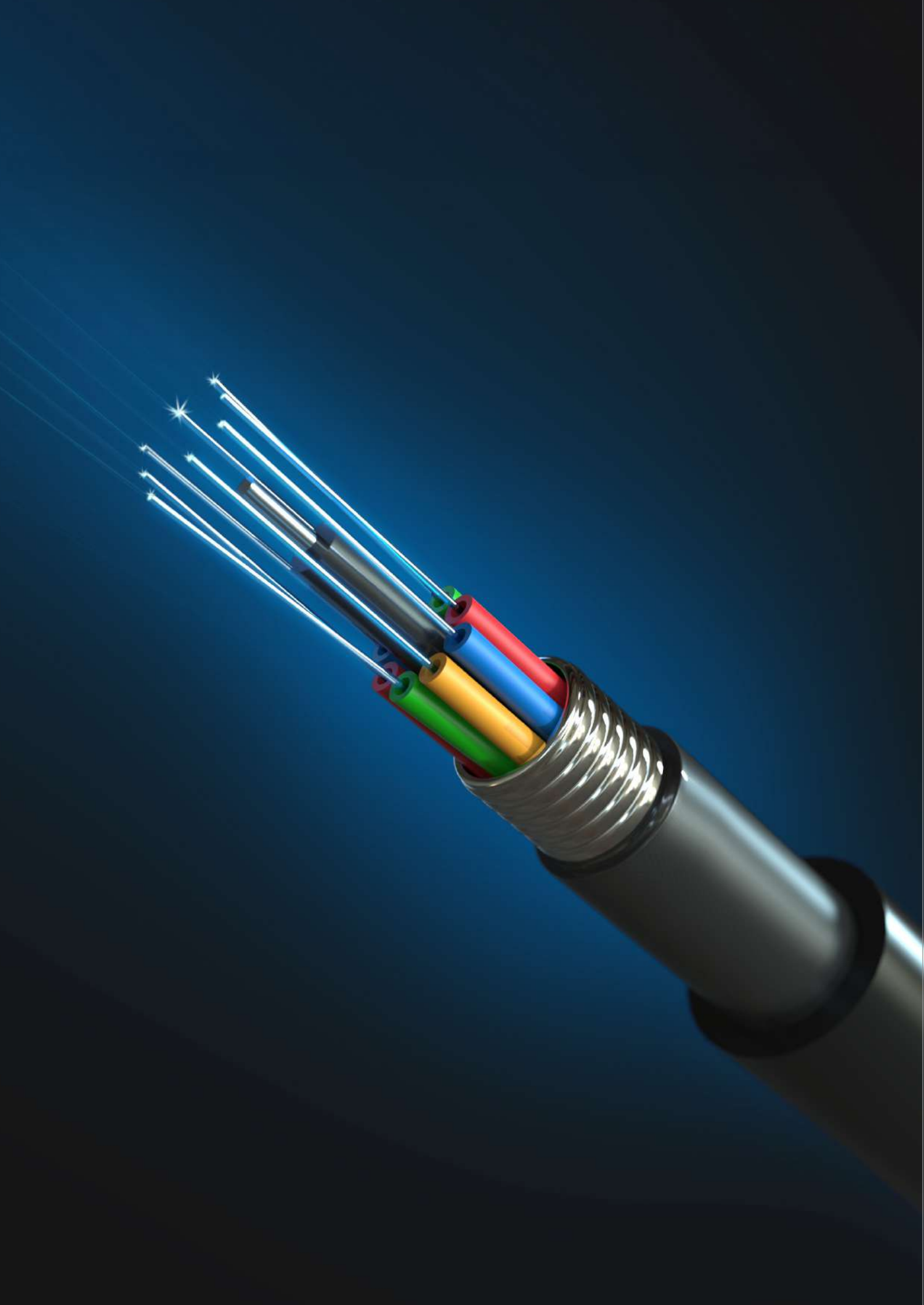
NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	500N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	$\pm 180^\circ$
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C    Operation -20°C to +70°C    Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.





# DURABLE ENOUGH FOR OUTDOOR USE

Optical fiber cables are renowned for their unparalleled durability and resistance to environmental factors. They have the ability to withstand moisture, temperature fluctuations, and corrosion with ease, making them an excellent choice for use in harsh outdoor environments

# SINGLE JACKET DIELECTRIC MICRO MODULE CABLE

**DXNM###1#X0###**  
**72F-288F**



## PRODUCT INFORMATION

APAR's Dielectric micro module cable is suitable for duct application. The cable consists of optical fibers in jelly-filled flexible thermoplastic micro modules. These micro modules are encapsulated with water-swellaable element over which the layer of high tensile aramid yarns are applied. The layer of strong thermoplastic material is covered as a jacket over it, which gives the cable a strong and smooth finish. This product is available in various fiber counts.

## PRODUCT APPLICATION

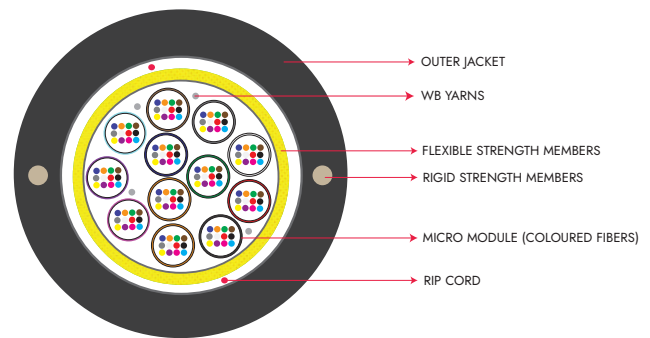
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ LAN Systems & WAN Systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 12F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ High tensile and crush resistance, UV protection.
- ◆ Lightweight, flexible, compact and easy to install in ducts.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected



Easy Strippable



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
72F	12	11.0	75±10%	2000
96F	12	12.2	90±10%	2000
144F	12	13.2	105±10%	2200
288F	12	15.5	145±10%	2500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# DOUBLE JACKET ARMoured MICRO MODULE CABLE

**BXMM###1#F0###  
72F-288F**

## PRODUCT INFORMATION

APAR's Dielectric micro module cable is suitable for duct application. The cable consists of optical fibers in jelly- filled flexible thermoplastic micro modules. These micro modules are encapsulated with water-swellable elements over which the layer of high tensile aramid yarns is applied. The layer of strong thermoplastic material is covered as an inner sheath. This inner sheath is covered by corrugated steel tape, which gives the cable excellent mechanical protection. The layer of strong thermoplastic material is covered as a jacket over steel tape armour. This product is available in various fiber counts.

## PRODUCT APPLICATION

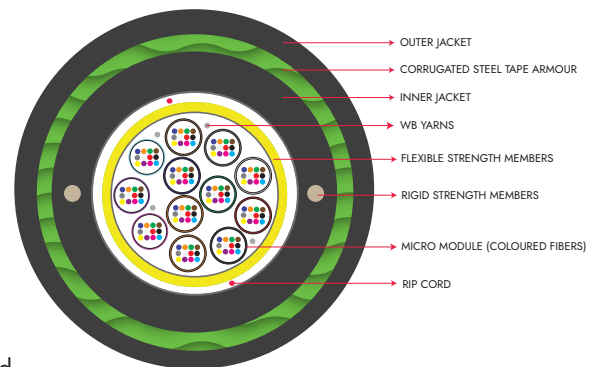
- ◆ Long haul communication system.
- ◆ Junction communication system.
- ◆ LAN Systems & WAN Systems.

## PRODUCT FEATURES

- ◆ Available in wide range of 12F-288F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent design gives rapid midspan excess.
- ◆ High tensile and crush resistance, UV protection.
- ◆ Lightweight, flexible, compact and easy to install in ducts.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Duct Laying



Best Flexibility



Water Resistant



UV Protected



Easy Strippable



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
72F	12	15.2	200±10%	2500
96F	12	16.5	225±10%	2500
144F	12	17.5	250±10%	2700
288F	12	20.0	310±10%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	4000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



**FIRE  
RESISTANT/  
FLAME  
RETARDANT**

**FIBER OPTIC  
CABLES**



# UNI TUBE DOUBLE JACKET STEEL WIRE ARMoured CABLE [FIREPROOF]

BRML###2#WO###  
1F-48F

## Fireproof

### PRODUCT INFORMATION

APAR's FLAME RETARDANT Double jacket steel wire Armoured cable is suitable for duct or direct burial applications. The cable is monotube design cable. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is covered by a strong thermoplastic material inner sheath. Two rigid strength Members are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire armouring, which gives cable excellent mechanical protection. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000.



Flame Retardant



Low Smoke



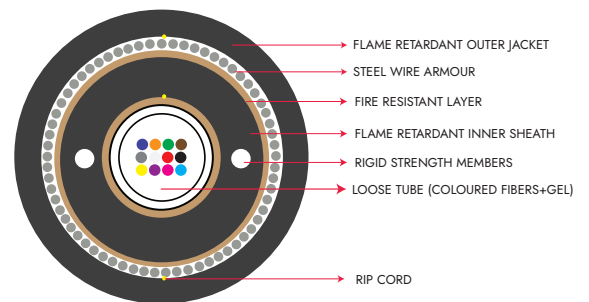
Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.4	245±10%	3000
4F	4	11.4	245±10%	3000
6F	6	11.4	245±10%	3000
12F	12	11.4	245±10%	3000
24F	24	11.7	255±10%	3000
48F	48	12.5	305±10%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	15		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET BRAIDED ARMoured CABLE

BSML###2#W0###  
1F-48F

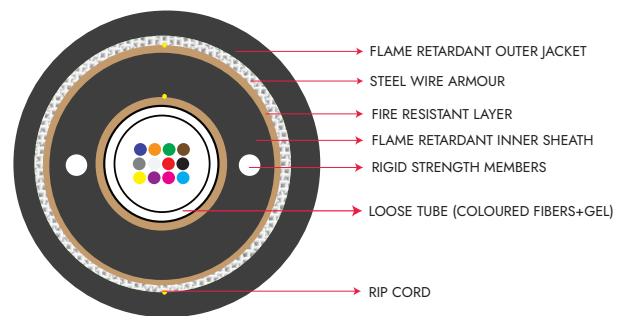
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RETARDANT Double jacket steel wire armoured cable is suitable for duct or direct burial applications. The cable is monotube design cable. The cable consists of optical fibers in jelly-filled loose tube. The loose tube is covered by strong thermoplastic material inner sheath. Two rigid strength Members are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire braiding, which gives the cable excellent mechanical protection. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754  
EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/ TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.0	190±10%	1500
4F	4	11.0	190±10%	1500
6F	6	11.0	190±10%	1500
12F	12	11.0	190±10%	1500
24F	24	11.5	200±10%	1500
48F	48	13.0	250±10%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET STEEL WIRE ARMoured CABLE

BSML###2#W0###  
1F-144F

## Fireproof

### PRODUCT INFORMATION

APAR's Fire survival steel wire armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with special water-blocking compound surrounded with suitable tape to avoid water penetration. The cable is sheathed with special fire retardant material. The high tensile wire armouring is provided over the inner sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

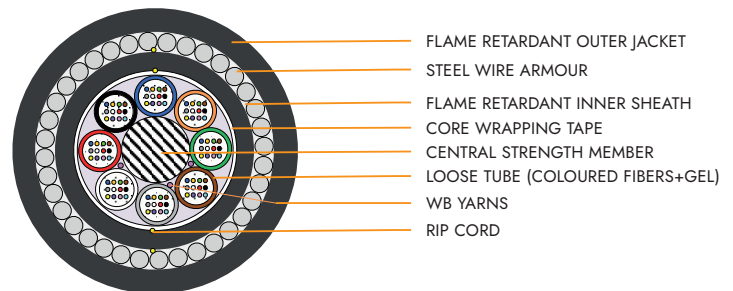
- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	13.5	315 ±25%	4000
96F	12	8	14.5	365 ±25%	4000
144F	12	12	17.0	470 ±30%	4000
288F	12	24	19.2	575 ±30%	5000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	5000N		
Impact strength (N.m)	IEC-60794-1-21-E4	25		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



# LOOSE TUBE DOUBLE JACKET STEEL BRAIDED ARMoured CABLE

BSML###2#W0###  
1F-144F

## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RETARDANT braided armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with special water-blocking compound surrounded with suitable tape to avoid water penetration. The cable is sheathed with special fire retardant material. The braided wire armouring is provided over the inner sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

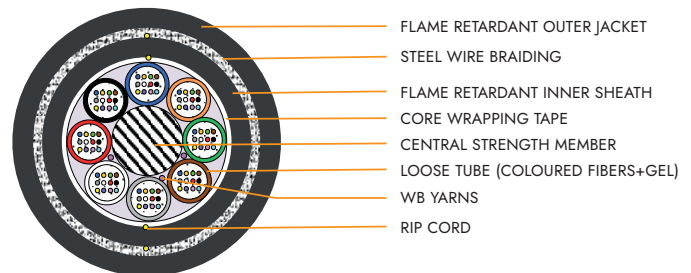
- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	13.0	230 ±10%	1500
96F	12	8	14.0	270 ±10%	1500
144F	12	12	16.5	360 ±10%	2000
288F	12	24	18.7	430 ±10%	2000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N		
Impact strength (N.m)	IEC-60794-1-21-E4	25		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET STEEL BRAIDED ARMoured CABLE [FIREPROOF]

BSML###2#W0###  
1F-144F

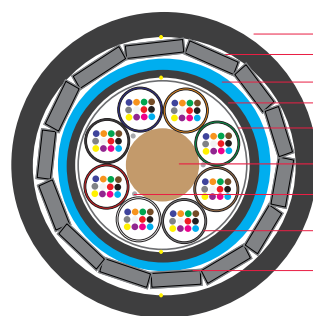
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RETARDANT FRP armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in jelly-filled loose tubes, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with special water-blocking compound surrounded with suitable tape to avoid water penetration. The cable is sheathed with special fire retardant material. The FRP armoring is provided over the inner sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.



FLAME RETARDANT OUTER JACKET  
FRP ARMOURING  
INSECT & TERMITE RETARDANT SHEATH  
FLAME RETARDANT INNER SHEATH  
CORE WRAPPING TAPE  
CENTRAL STRENGTH MEMBER  
WB YARNS  
LOOSE TUBE (RIBBON FIBERS+GEL)  
RIP CORD

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.
- ◆ Excellent strength and complete protection from rodents.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NUMBER OF TUBE'S	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	6F~12F	1~6	14.5	140 ±10%	3000
96F	12	8	15.5	270 ±10%	3000
144F	12	12	18.0	335 ±10%	4000
288F	12	24	20.5	440 ±10%	4000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	4000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~ Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# TIGHT BUFFERED TRIPLE JACKET FRP ARMoured CABLE

BSML###2#W0###  
1F-24F

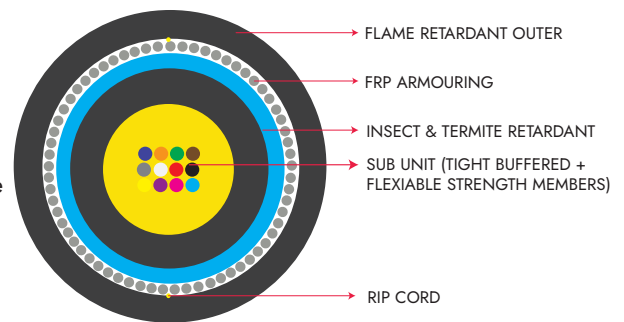
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RETARDANT Double jacket FRP armoured cable is suitable for duct or direct burial applications. The cable is tight buffered fiber design cable. The cable consists of tight buffered optical fibers filled in the module along with flexible strength members. The module is made of a strong thermoplastic material inner sheath. This inner sheath is peripherally covered by FRP armouring, which gives the cable excellent mechanical protection and rodent resistance. The cable is then jacketed flame retardant material. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, in tunnels, metro lines and other places where one need very high degree of fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen free.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
4F	4	13.0	200±10%	4000
6F	6	13.8	220±10%	4000
12F	12	15.0	255±10%	4000
24F	24	16.5	290±10%	4000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		
Flammability Test	IEC 60332-1-2	Comply		
Smoke density	IEC 61034 1-2	Comply		
Conductivity/ PH	IEC 60754-2	Comply		
Acid & Corrosive Gas Emission	IEC 60754-1	Comply		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# TIGHT BUFFERED TRIPLE JACKET FRP ARMoured CABLE

BRNT###3#PO###  
8F-48F

## Fireproof

### PRODUCT INFORMATION

APAR's Fire survival steel wire armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in a tight buffer & Aramid yarn Jacketed by LSZH, which are stranded over FRP (fiber-reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with special water-blocking compound surrounded with suitable tape to avoid water penetration. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

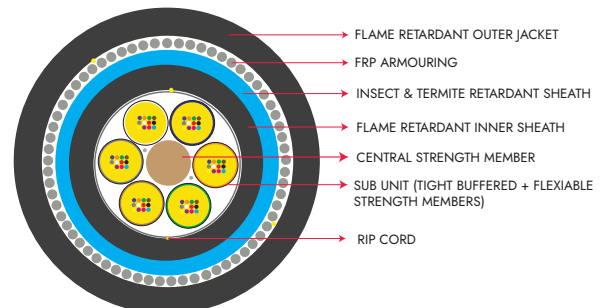
- ◆ Typical installation environment is indoor and indoor/outdoor in and between public buildings, tunnels, metro lines and other places where one needs high fire safety and support for critical communication.
- ◆ Very high degree of fire safety is required as the cable will function during a fire, has limited fire spread, has limited smoke generation and is halogen-free.

### PRODUCT FEATURES

- ◆ Available in wide range of 8F-48F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Flame Retardant



Low Smoke



Rodent Resistant



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
4F	4	21.3	490 ±25%	4000
8F	4	21.3	490 ±25%	4000
12F	4	21.3	490 ±25%	4000
24F	4	21.3	490 ±25%	4000
48F	8	22.5	525 ±25%	4000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.





**FIBRE TO  
THE HOME  
(FTTH)**

**CABLES**

# FLAT DROP INDOOR CABLE

PRNT###1X4###

1F-24F



## PRODUCT INFORMATION

APAR's flat drop cable is suitable for indoor/outdoor applications. The cable is monotube round drop design. The cable consists of optical fibers in jelly filled loose tube. The loose tube is peripherally covered FRP Rods. This core is covered by strong thermoplastic material, which gives the cable a strong and smooth finish. A Toneable copper wire (Optional) for underground traceability. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ FTTx communication system.
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data/internet transmission.
- ◆ Short Span aerial.

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Special low bend sensitive fibers for indoor use.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



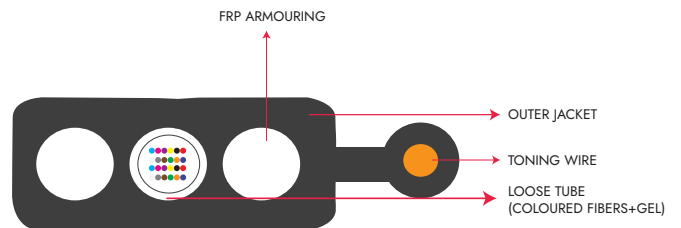
Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/ TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
1F	1	2.0 x 3.0	9.3±3	100
2F	2	2.0 x 3.0	9.3±3	100
4F	4	2.0 x 3.0	9.3±3	100

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	500N		
Impact strength (N.m)	IEC-60794-1-21-E4	5.0		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

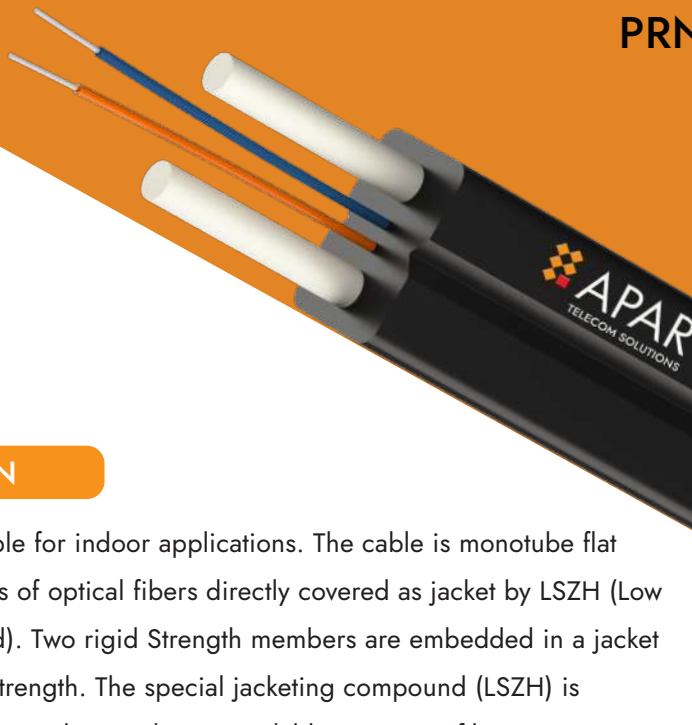
## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# FLAT DROP INDOOR CABLE

PRNT###1X4###

1F-4F



## PRODUCT INFORMATION

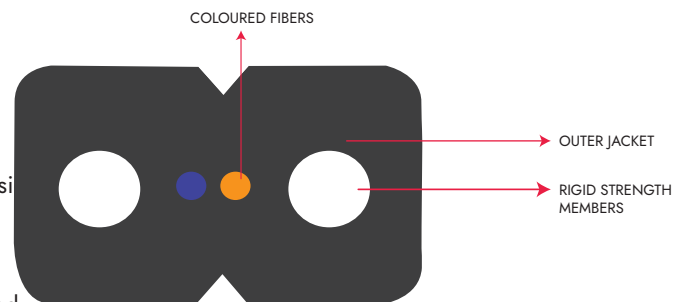
APAR's Flat drop cable is suitable for indoor applications. The cable is monotube flat drop design. The cable consists of optical fibers directly covered as jacket by LSZH (Low smoke zero halogen compound). Two rigid Strength members are embedded in a jacket to give the cable extra tensile strength. The special jacketing compound (LSZH) is completely suitable for indoor use. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ FTTx communication system
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data/internet transmission

## PRODUCT FEATURES

- ◆ Available in wide range of 1F-4F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Special lowbend sensitive fibers for indoor use.
- ◆ Also available in customized options as per customer requirements.



## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications.



Easy Strippable



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
1F	1	2.0 x 3.0	9.3±3	100
2F	2	2.0 x 3.0	9.3±3	100
4F	4	2.0 x 3.0	9.3±3	100

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	500N		
Impact strength (N.m)	IEC-60794-1-21-E4	1.0		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# FLAT INDOOR DROP CABLE (FIG-8)

MRMT###1W4###

1F-4F

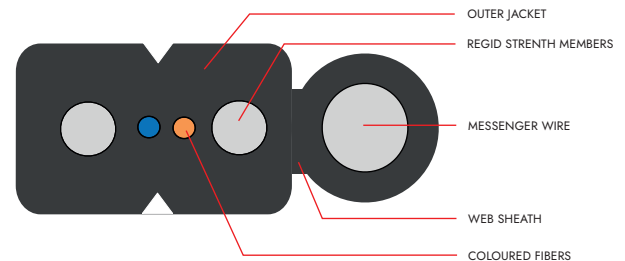


## PRODUCT INFORMATION

APAR's Flat drop cable is suitable for indoor application. The cable is monotube flat drop design. The cable consists of optical fibers directly covered as a jacket by LSZH (Low smoke zero halogen compound). Two rigid Strength members and one steel rod are embedded in the jacket to give the cable extra tensile strength. The messenger steel wire is arranged in a way that gives the cable a figure-8 layout. The special jacketing compound (LSZH) is completely suitable for indoor use. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ FTTx communication system
- ◆ Junction communication system.
- ◆ Inter-office connections for video/data/internet transmission.



## PRODUCT FEATURES

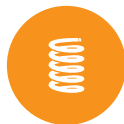
- ◆ Available in wide range of 1F-4F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Micro size, lightweight, flexible and easy to install.
- ◆ Special lowbend sensitive fibers for indoor use.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Easy Strippable



Best Flexibility



Water Resistant



UV Protected





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
1F	1	2.0 x 5.3	22±3	500
2F	2	2.0 x 5.3	22±3	500
4F	4	2.0 x 5.3	22±3	500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	500N
Impact strength (N.m)	IEC-60794-1-21-E4	1. 0
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C              Operation -20°C to +70°C              Storage -20°C to +70°C

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# SIMPLEX CABLE

## PRNT0011X4001

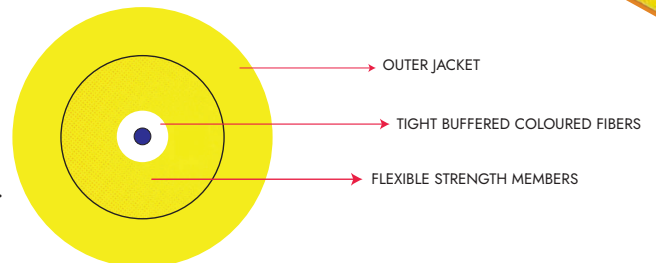
### 1F

#### PRODUCT INFORMATION

APAR's Simplex cable is suitable for indoor application. The cable is mono fiber design. The cable consists of one tight buffered optical covered with aramid yarns covered with jacket by LSZH (Low smoke zero halogen compound). The special jacketing compound (LSZH) is completely suitable for indoor use.

#### PRODUCT APPLICATION

- ◆ Trunking lines direct to telecommunications closet
- ◆ Fiber patch panels.
- ◆ Link between electronic equipment and fiber patch panels.
- ◆ Connectorized to patch cords and pigtails



#### PRODUCT FEATURES

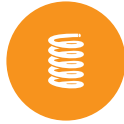
- ◆ Available in both single-mode and multi-mode fiber variants.
- ◆ Easy to strip.
- ◆ Micro size, flexible and easy to install.
- ◆ Special low bend sensitive fibers for indoor use.
- ◆ Also available in customized options as per customer requirements.

#### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



Easy Strippable



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
1F	1	2.0	3.6 ± 10%	100

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	100N		
Impact strength (N.m)	IEC-60794-1-21-E4	1. 0		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# DUPLEX CABLE

## PRNT0021X4002

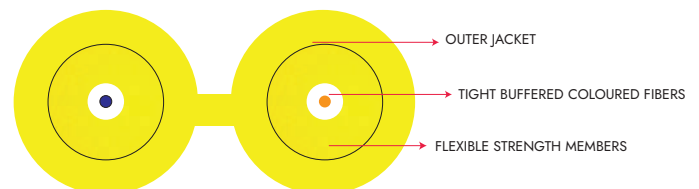
### 2F

#### PRODUCT INFORMATION

APAR's Duplex cable is suitable for indoor application. The cable is dual fiber design. The cable consists of two tight buffered optical covered with aramid yarns covered with jacket by LSZH (Low smoke zero halogen compound). The special jacketing compound (LSZH) is completely suitable for indoor use

#### PRODUCT APPLICATION

- ◆ Trunking lines direct to telecommunications closet
- ◆ Fiber patch panels.
- ◆ Link between electronic equipment and fiber patch panels.
- ◆ Connectorized to patch cords and pigtails



#### PRODUCT FEATURES

- ◆ Available in both single-mode and multi-mode fiber variants.
- ◆ Easy to strip.
- ◆ Micro size, flexible and easy to install.
- ◆ Special lowbend sensitive fibers for indoor use.
- ◆ Also available in customized options as per customer requirements.

#### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Easy Strippable



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
1F	1	2.0 x 4.3	7.3 ± 10%	200

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	100N		
Impact strength (N.m)	IEC-60794-1-21-E4	1. 0		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# BREAKOUT CABLE

DRNT###1X0###

1F-24F

## PRODUCT INFORMATION

APAR's Breakout cable is suitable for indoor and outdoor applications. The cable consists of optical fibers converted to simplex modules which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is an excellent central strength member. This core is covered by strong LSZH (Low smoke zero halogen compound). This product is available in various fiber counts

## PRODUCT APPLICATION

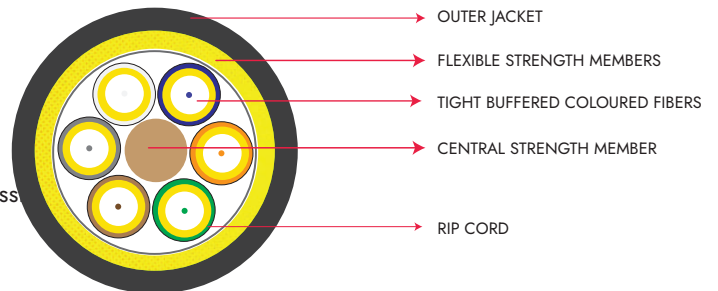
- ◆ Harsh Environment
- ◆ Mining
- ◆ Inter-office connections for video/data/internet transmission

## PRODUCT FEATURES

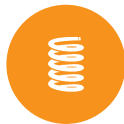
- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Tensile and crush resistance, UV protection.
- ◆ Lightweight, flexible and easy to install.
- ◆ Also available in customized options as per customer requirements.

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Easy Strippable



Best Flexibility



Water Resistant



UV Protected



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/BUFFER	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	1	8.7	50±10%	1000
4F	1	8.7	70±10%	1000
6F	1	8.7	70±10%	1000
12F	1	12.5	145±10%	1500
24F	1	14.5	175±10%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	500N		
Impact strength (N.m)	IEC-60794-1-21-E4	1. 0		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.







# UNI TUBE (AIRBLOWN) MICRO DUCT CABLE

DXNL###1#X0###  
2F-24F



## PRODUCT INFORMATION

APAR's Airblown cables are suitable for micro duct application. These cables are ultra-light weight, small diameter, for FTTx networks. These cables are air blown in microducts. Cables are available in various fiber counts/types.

## PRODUCT APPLICATION

- ◆ The cable is designed for longer blowing distance.
- ◆ The cable can be Airblown in smallest ducts.
- ◆ These cables are installed in dense and congested areas where the duct space is less.

## PRODUCT FEATURES

- ◆ Monotube design giving the product light weight and flexible
- ◆ Smallest size duct installation.
- ◆ Ideal for last mile application.
- ◆ Prime co-efficient of friction for improved blowing performance.
- ◆ Available up to 24 fibre count in either single-mode or multi-mode optical fibres

## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



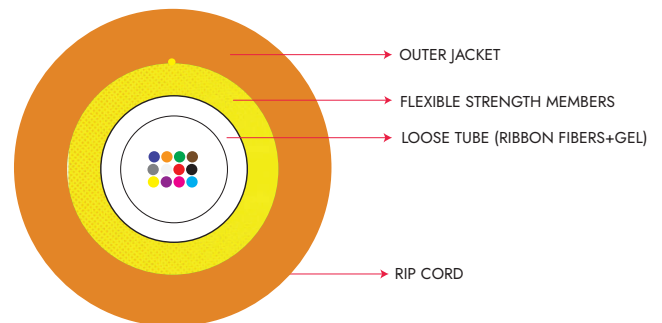
Easy Strippable



Microduct Laying



UV Protected



## PHYSICAL PROPERTIES

JACKET	CABLE DIAMETER (MM)	CABLE WEIGHT (KG/KM)	TYPICAL DUCT SIZE (MM)	FIBER COUNT RANGE	FIBER/TUBE	FIBER SIZE PM	OPERATING TEMPERATURE RANGE	MAXIMUM TENSILE STRENGTH (N)
Nylon	2.0	3.0	5.0/3.5	1-12	1-12	200	-20 ~ +70°C	70
Nylon	2.5	6.7	5.0/3.5	24	24	200	-20 ~ +70°C	70
Nylon	2.6	7.0	5.0/3.5	1-24	1-24	200	-20 ~ +70°C	250
Nylon	3.3	11	8.0/5.0	1-24	1-24	250	-20 ~ +70°C	250
Nylon	3.7	12	8.0/5.0	1-24	1-24	250	-20 ~ +70°C	250

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



# LOOSE TUBE MICRO DUCT CABLE

DXNL###1#X0###



## PRODUCT INFORMATION

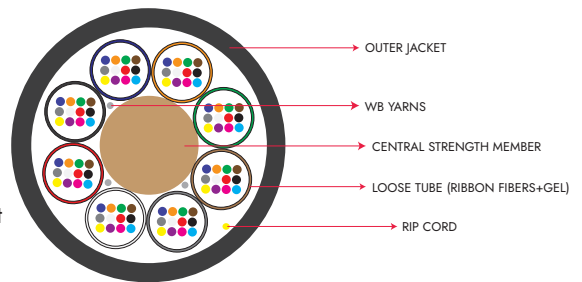
APAR's microduct cables are suitable for micro duct application. These cables are light weight, small diameter, for FTTx networks. These cables are air blown in micro ducts. Cables are available in various fiber counts/types. The cable consists of optical fibers in jelly filled micro loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is an excellent central strength member. The stranded core is filled with water blocking compound surrounded with suitable tape to avoid water penetration. This core is covered by a thin layer of strong polymer material outer jacket. The controlled micro diameters of cables are offered for suitable microduct blowing. This product is available in various fiber counts.

## PRODUCT APPLICATION

- ◆ The cable is designed for longer blowing distance.
- ◆ The cable can be blown in various micro ducts.
- ◆ These cables are installed in dense and congested areas where the duct space is less.

## PRODUCT FEATURES

- ◆ Multiple designs with wide diameter and fiber count range.
- ◆ Prime co-efficient of friction for improved blowing performance.
- ◆ Available up to 288 fibre count in either single-mode or multi-mode optical fibres.
- ◆ Super slim design for optimum blowing performance.
- ◆ APAR Micro cables are characterized by state of the art installation performance when installed by blowing into microducts.



## COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Easy Strippable



Microduct Laying



UV Protected



## PHYSICAL PROPERTIES

JACKET	CABLE DIAMETER (MM)	CABLE WEIGHT (KG/KM)	TYPICAL DUCT SIZE (MM)	FIBER COUNT RANGE	FIBER/TUBE	FIBER SIZE PM	OPERATING TEMPERATURE RANGE	MAXIMUM TENSILE STRENGTH (N)	MAXIMUM CRUSH RESISTANCE (N)
PE/Nylon	3.8	14	8.5/6.0	1-48	1-24	200	-40 ~ +70°C	450	500
PE/Nylon	3.8	15	8.5/6.0	1-48	1-12	200	-40 ~ +70°C	450	500
PE/Nylon	4.3	20	8.5/6.0	1-48	1-12	250	-40 ~ +70°C	450	500
PE/Nylon	5.3	25	10/8	1-72	1-12	250	-40 ~ +70°C	450	500
PE/Nylon	4.5	22	8.5/6.0	1-96	1-24	200	-40 ~ +70°C	450	500
PE/Nylon	5.5	29	10/8	96	12	200	-40 ~ +70°C	450	500
PE/Nylon	6.3	40	14/10	96	12	250	-40 ~ +70°C	450	500
PE/Nylon	5.8	34	10/8	144	24	200	-40 ~ +70°C	450	500
PE/Nylon	7.0	49	14/10	144	12	200	-40 ~ +70°C	700	1000
PE/Nylon	8.0	65	16/12	144	12	250	-40 ~ +70°C	700	1000
PE/Nylon	8.1	65	16/12	288	12	200	-40 ~ +70°C	700	1000
PE/Nylon	8.0	62	16/12	288	24	200	-40 ~ +70°C	700	1000

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE SINGLE JACKET DIELECTRIC ARMOURED CABLE

DSNL###1#X0###  
1F-24F

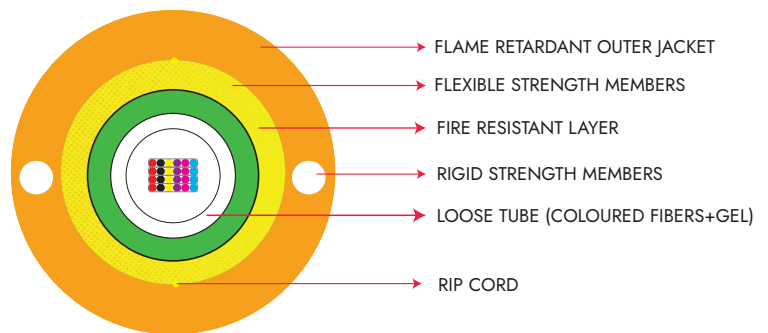
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT single jacket steel dielectric armoured cable is suitable for duct application. The cable is mono tube design cable. The cable consist of optical fibers in jelly filled loose tube. The loose tube is covered by fire resistant layer. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Suitable for indoor/outdoor confined spaces
- ◆ Fire prone areas
- ◆ Hazardous environments
- ◆ Critical systems and signaling applications
- ◆ Warning systems for mine sites.



### PRODUCT FEATURES

- ◆ Micro size. Light weight, flexible and easy to install.
- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.
- ◆ Extended Fire resistance up to 180 Minutes at 750° C

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EC 60331-25 / AS/NZS 60331-25, IEC 60332, AS/NZS 1660-5-2, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Flame Retardant



Low Smoke



Best Flexibility





## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	7.5	70±10%	1200
4F	4	7.5	70±10%	1200
6F	6	7.5	70±10%	1200
12F	12	7.5	70±10%	1200
24F	24	8.5	88±10%	1200

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of  
Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET STEEL WIRE ARMoured CABLE

BRML###2#W0###  
1F-24F

## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT Double jacket steel wire armoured cable is suitable for duct or direct burial application. The cable is mono tube design cable. The cable consist of optical fibers in jelly filled loose tube. The loose tube is covered by strong thermoplastic material inner sheath. Two rigid strength Member are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire armouring, which gives cable excellent mechanical protection. Fire Resistant material layers provided over tube and inner sheath. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

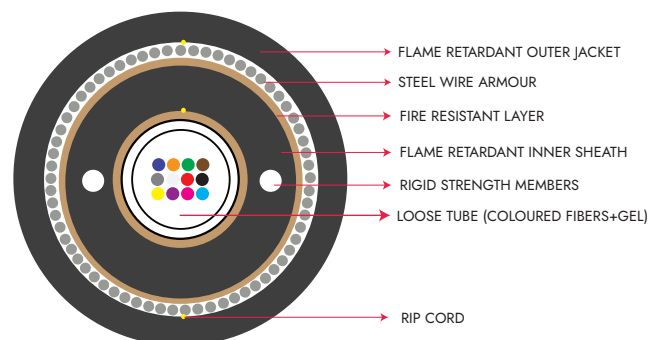
- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection, flame retardant and fire resistant design.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60331, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	12.0	260±10%	3000
4F	4	12.0	260±10%	3000
6F	6	12.0	260±10%	3000
12F	12	12.0	260±10%	3000
24F	24	12.5	280±10%	3000
48F	48	13.8	325±10%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# UNI TUBE DOUBLE JACKET BRAIDED ARMoured CABLE

BSML###2#W0###  
1F-24F

## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT Double jacket steel wire braided Armoured cable is suitable for duct or direct burial application. The cable is mono tube design cable. The cable consist of optical fibers in jelly filled loose tube. The loose tube is covered by strong thermoplastic material inner sheath. Two rigid strength Member are embedded in inner sheath to give cable extra tensile strength. This inner sheath is peripherally covered by steel wire braided armouring, which gives cable excellent mechanical protection. Fire Resistant material layers provided over tube and inner sheath. The cable is sheathed and jacketed with special material for fire protection. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection, flame retardant and fire resistant design.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, EIA/TIA, ITU-T, Telcordia GR-20, EN187000 and Customer specifications



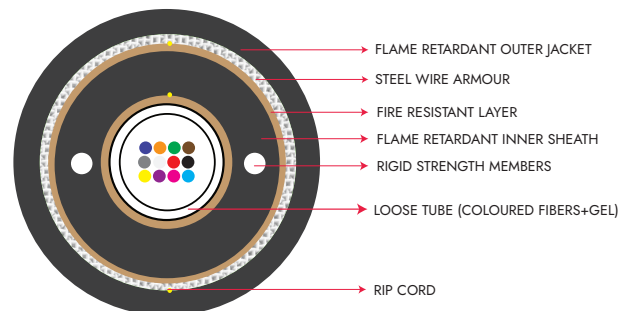
Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	FIBER/TUBE	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	11.8	190±10%	1500
4F	4	11.8	190±10%	1500
6F	6	11.8	190±10%	1500
12F	12	11.8	190±10%	1500
24F	24	12.5	220±10%	1500
48F	48	13.8	270±10%	1500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC  
~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE DOUBLE JACKET STEEL WIRE ARMoured CABLE

BSML###2#W0###  
1F-144F

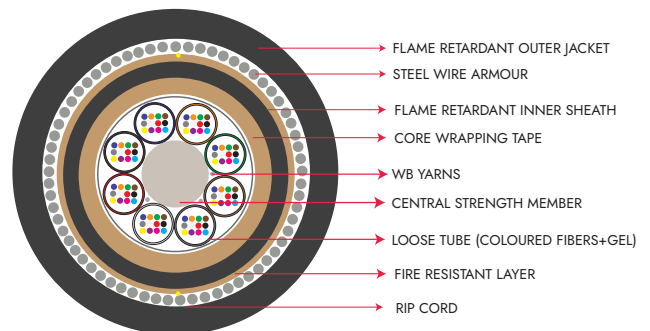
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT steel wire armoured cable is suitable for direct burial or duct application. The cable consist of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with special water blocking compound surrounded with suitable tape to avoid water penetration. Fire Resistant material layers provided for fire protection. The cable is sheathed with special fire retardant material. The high tensile wire armouring is provided over inner sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60331, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	1~4	14.0	340 ±25%	4000
96F	12	15.2	405 ±25%	4000
144F	12	19.5	510 ±30%	4000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



# LOOSE TUBE DOUBLE JACKET STEEL BRAIDED ARMoured CABLE

BSML###2#W0###  
1F-144F

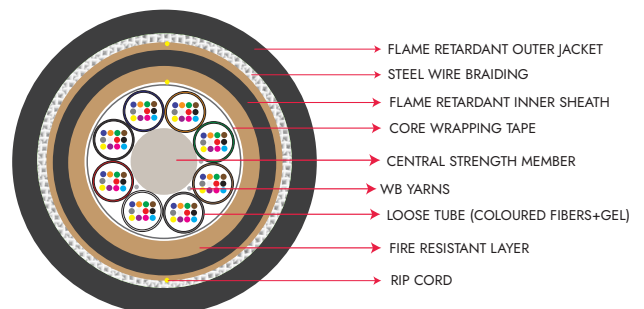
## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT braided armoured cable is suitable for direct burial or duct application. The cable consist of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with special water blocking compound surrounded with suitable tape to avoid water penetration. Fire Resistant material layers provided for fire protection. The cable is sheathed with special fire retardant material. The braided wire armouring is provided over inner sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber

### PRODUCT APPLICATION

- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-144F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame retardant.
- ◆ Meeting the international fire standards.
- ◆ Also available in customized options as per customer requirements.

### COMPLIANCE STANDARDS

IEC 60793, IEC 60794, IEC 60331, IEC 60332, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000, and Customer specifications



Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	1~4	13.7	260 ±10%	2500
72F	12	13.7	260 ±10%	2500
96F	12	15.0	300±10%	2500
144F	12	17.5	390±10%	2500

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking

- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# LOOSE TUBE TRIPLE JACKET FRP ARMoured CABLE

BRML###2#P0###  
1F-96F

## Fireproof

### PRODUCT INFORMATION

APAR's APAR's FIRE RESISTANT FRP armoured cable is suitable for direct burial or duct application. The cable consist of optical fibers in jelly filled loose tubes, which are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with special water blocking compound surrounded with suitable tape to avoid water penetration. Fire Resistant material layers provided for fire protection. The cable is sheathed with special fire retardant material. The termite resistant intermediate sheath is provided over inner sheath. The FRP armoring is provided over intermediate sheath. The fire retardant jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

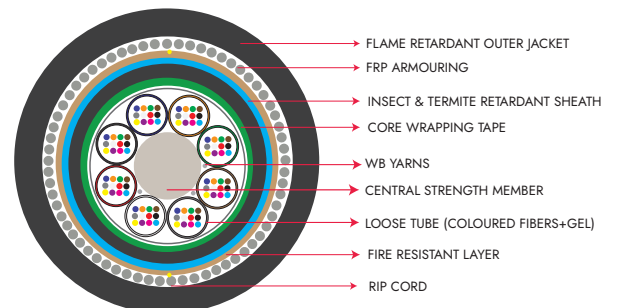
- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-96F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.
- ◆ Excellent strength and complete protection from rodents
- ◆ Extended Fire resistance up to 180 Minutes at 750° C

### COMPLIANCE STANDARDS

IIEC 60793, IEC 60794, EC 60331-25 / AS/NZS 60331-25 ,IEC 60332, AS/NZS 1660-5-2, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000



Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
6F-72F	1~4	18.3	390 ±15%	4000
96	8	19.4	430 ±15%	4000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES		
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D		
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N		
Impact strength (N.m)	IEC-60794-1-21-E4	10		
Torsion	IEC-60794-1-21-E7	± 180°		
Temperature Cycling	IEC-60794-1-22-F1	Installation -20°C to +70°C	Operation -20°C to +70°C	Storage -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr		
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage		

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC ~Laser Symbol~ Telephone Symbol~ Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.

# TIGHT BUFFERED TRIPLE JACKET FRP ARMOURED CABLE

BSML###2#W0###  
1F-24F

## Fireproof

### PRODUCT INFORMATION

APAR's FIRE RESISTANT Double jacket FRP armoured cable is suitable for duct or direct burial application. The cable is tight buffered fiber design cable. The cable consist of tight buffered optical fibers filled in module along with flexible strength members. The module is made of strong thermoplastic material inner sheath. The termite resistant intermediate sheath is provided over inner sheath. Fire Resistant material layers provided for fire protection. The FRP armouring is provided over intermediate sheath, which gives cable excellent mechanical protection and rodent resistance. The cable is then jacketed flame retardant material. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Fire resistant design is typical installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.

### PRODUCT FEATURES

- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.
- ◆ Excellent strength and complete protection from rodents
- ◆ Extended Fire resistance up to 120 Minutes at 750° C

### COMPLIANCE STANDARDS

IIEC 60793, IEC 60794, EC 60331-25 / AS/NZS 60331-25 ,IEC 60332, AS/NZS 1660-5-2, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000



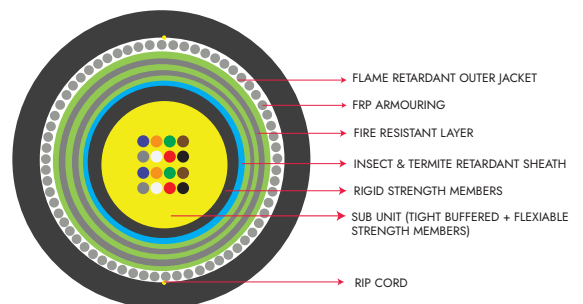
Flame Retardant



Water Resistant



Low Smoke



## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
2F	2	13.2	200±10%	3000
4F	4	14.0	210±10%	3000
6F	6	14.5	220±10%	3000
12F	12	15.5	245±10%	3000
24F	24	11.5	240±10%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	3000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



# TIGHT BUFFERED TRIPLE JACKET FRP ARMoured CABLE

BRNT###3#P0###  
8F-48F

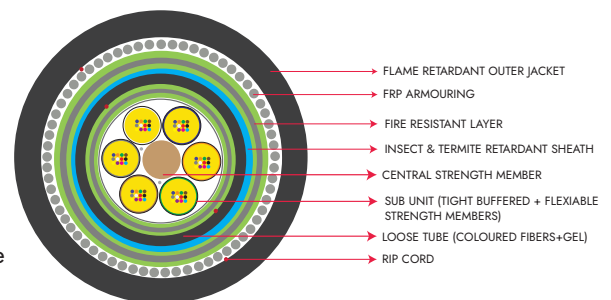
## Fireproof

### PRODUCT INFORMATION

Apar's FIRE RESISTANT FRP armoured cable is suitable for direct burial or duct application. The cable consists of optical fibers in Tight buffer & Aramid yarn Jacketed by LSZH, This Module are stranded over FRP (fiber reinforced plastic rod). The FRP rod is excellent central strength member. The stranded core is filled with special water blocking compound surrounded with suitable tape to avoid water penetration. The cable is inner sheathed with special flame retardant material. The termite resistant intermediate sheath is provided over inner sheath. Fire Resistant material layers provided for fire protection. The FRP armouring is provided over intermediate sheath. The cable is then jacketed flame retardant material. The jacket gives the cable a strong and smooth finish. This product is available in various fiber counts.

### PRODUCT APPLICATION

- ◆ Fire resistant design is typically installed between public buildings, in tunnels, metro lines and other places where very high degree of fire safety and support for critical communication is required.
- ◆ Critical systems and signaling applications, Warning systems for mine sites and Fire prone areas.



### PRODUCT FEATURES

- ◆ Available in wide range of 1F-24F, in both single-mode and multi-mode fiber variants.
- ◆ Excellent mechanical protection and flame survival.
- ◆ Meeting the flame international flame survival standards.
- ◆ Also available in customized options as per customer requirements.
- ◆ Excellent strength and complete protection from rodents
- ◆ Extended Fire resistance up to 120 Minutes at 750° C

### COMPLIANCE STANDARDS

IIEC 60793, IEC 60794, EC 60331-25 / AS/NZS 60331-25, IEC 60332, AS/NZS 1660-5-2, IEC 61034, IEC 60754 EIA/TIA, ITU-T, Telcordia GR-20, EN187000



Flame Retardant



Water Resistant



Low Smoke





## PHYSICAL PROPERTIES

FIBER COUNT	RIBBON FIBER/TUBE (12F/RIBBON)	NOMINAL CABLE DIAMETER (MM)	NOMINAL CABLE WEIGHT (KG/KM)	MAXIMUM TENSILE STRENGTH (N)
4F	4	22.1	515 ±25%	3000
8F	4	22.1	515 ±25%	3000
12F	4	22.1	515 ±25%	3000
24F	4	22.5	515 ±25%	3000
48F	8	23.4	550 ±25%	3000

## MECHANICAL AND ENVIRONMENTAL CHARACTERISTICS

NAME OF TEST	REFERENCE STANDARD	OFFERED VALUES
Cable Bending Radius	IEC-60794-1-21-E11	Long term = 20D, Short term = 10D
Crush Resistance (N/10 cm)	IEC-60794-1-21-E3	2000N
Impact strength (N.m)	IEC-60794-1-21-E4	10
Torsion	IEC-60794-1-21-E7	± 180°
Temperature Cycling	IEC-60794-1-22-F1	Installation      Operation      Storage -20°C to +70°C    -20°C to +70°C    -20°C to +70°C
Drip Test	IEC-60794-1-21-E14	30 cm, 70°C, 24 hr
Water Penetration	IEC-60794-1-22-F5B	1m water head, 3m samples, 24 hrs no water leakage

## COLOUR CODING

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more 12 fibers per tube then single or double stripes marking will be offered in compliance to EIA/TIA

### FIBRE STANDARD COLOUR CODE



- ◆ If there are more than 12 tubes per cable then single or double stripes marking will be offered in compliance to EIA/TIA 598.

## PRINTING DETAILS

- ◆ APAR INDIA ~Fiber Count~ Fiber Type~ OFC~  
Laser Symbol~ Telephone Symbol~  
Year of Manufacturing~ Cable ID~ Meter Marking
- ◆ Customized marking available on request.

## PACKING DETAILS

- ◆ Packing Length- 2Km, 4Km, 6Km (tolerance +/- 5%)
- ◆ Packing Material- Wooden Drum
- ◆ Customized drum lengths are available on request.



T: 022 2526 3400/6780 0400 | E: [corporate@apar.com](mailto:corporate@apar.com) | [www.apar.com](http://www.apar.com) | [www.apar.com/telecom-solutions](http://www.apar.com/telecom-solutions)

 @aparldc

 @APARCableSolutions

 @aparablesolutions

 @AparLdc

 @APARLightDutyCablesWires