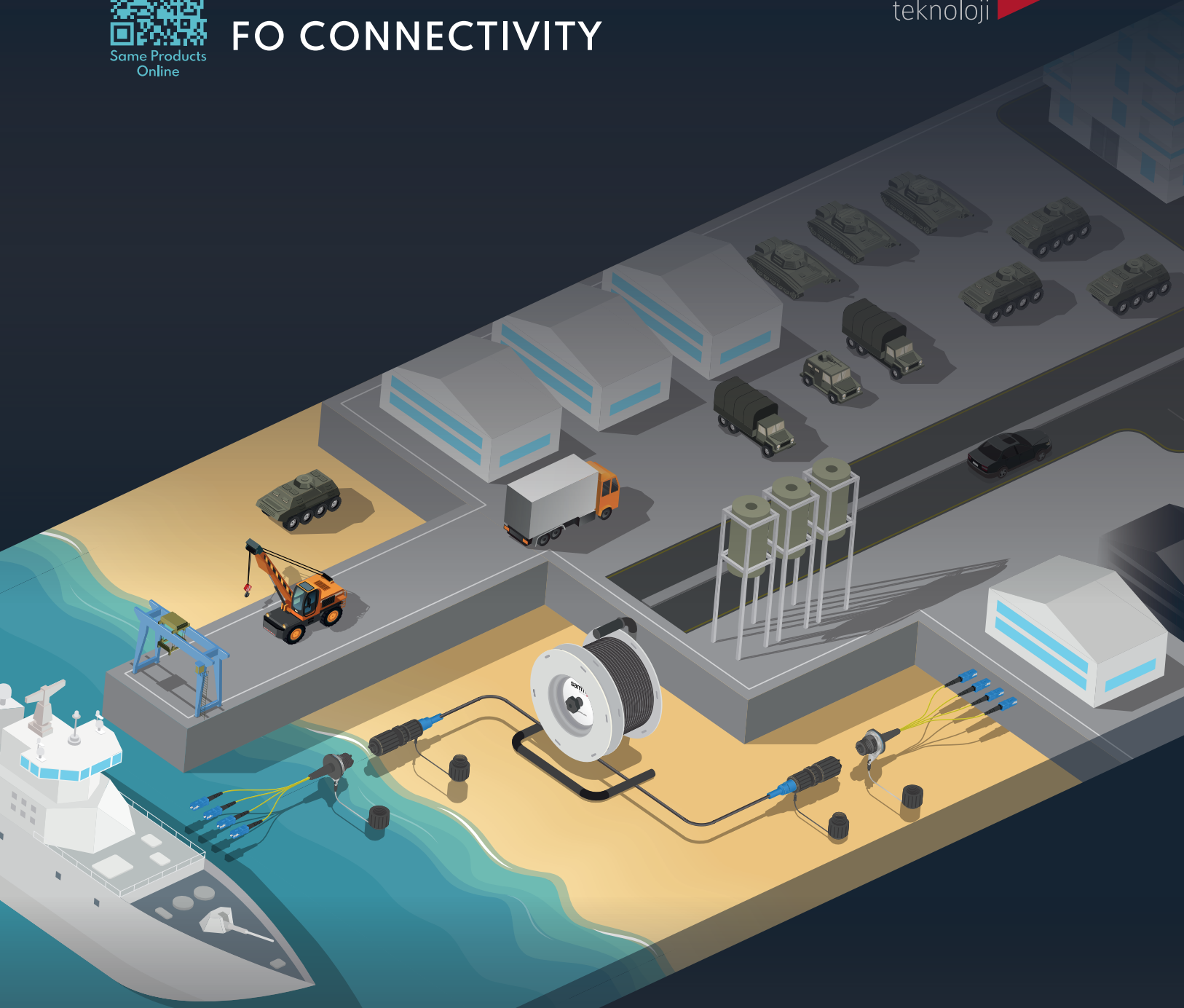




HARSH ENVIRONMENTS FO CONNECTIVITY



HERMAPHRODITIC MILITARY & INDUSTRIAL ASSEMBLIES

4CH Receptacle to SC/LC/FC Cable Assemblies

Sample Coding

Product Code	TAC-PC-04-020-A2_JamNut Rec.(4Ch)/4xSCSX-1.5M
Product Description	CABLE ASSEMBLY, SINGLE MODE A2, 4 CH JAMNUT RECEPTACLE. TO 4*SCSX_1.5 meters

* Single Mode A1 and A2 , Multi Mode OM3 fibers are available upon request
** Different lengths and connector configurations are availabe upon request



4CH Plug to Plug On-Reel Cable Assemblies

Sample Coding

Product Code	TAC-CR1PC-04-058-A2-Plug(4Ch)/Plug(4Ch)-200M
Product Description	ON REEL CABLE ASSEMBLY, SINGLE MODE A2, 4 CH PLUG TO 4 CH PLUG _200 meters

* Single Mode A1 and A2 , Multi Mode OM3 fibers are available upon request
** Different lengths are availabe upon request



TACLight™ 4CH Hermaphroditic Fiber Optic Connectors

The TACLight™ Hermaphroditic Fiber Optic Connector is engineered to deliver exceptional performance in demanding environments where frequent mating cycles are critical. Its robust design ensures reliability and durability, making it ideal for use in harsh conditions.

One of its standout features is its unique hermaphroditic 4 channels genderless design, which allows each connector to serve as both a plug and a receptacle. This flexibility not only simplifies installation but also enhances field maintenance by reducing the need for multiple connector types.

These connectors are built to withstand harsh environmental conditions, including corrosion, shock, and thermal shock. This resilience ensures consistent performance and longevity even in the most challenging operational settings.



Applications

- Outdoor Fiber optic connectors
- Deployable military tactical systems
- Emergency restoration systems
- Ship to shore communications
- Outside Broadcast
- Homeland security and surveillance

Features

- **Hermaphroditic Configurations:** Available in 4, 8, and 12 channel configurations, offering genderless compatibility.
- **Field Maintainable Design:** Allows for easy cable cleaning, re-works, re-polishing, and re-terminating, reducing downtime.
- **Multiple Plating Options:** Choose from Black Anodize, Black Anodize Matte, Cadmium, and Passivated Stainless Type 303 for varied environmental needs.
- **Compatibility:** Supports both singlemode and multimode fibers without part substitution, ensuring versatility.
- **Captured Split Alignment Sleeves:** Enhances insertion loss performance for reliable connectivity.
- **PC Polish:** Ensures consistent optical performance with precision.
- **Dust Caps:** Includes both hermaphroditic and standard dust caps for protection when connectors are not in use.
- **Custom Assemblies:** Available on custom reels, tailored to specific deployment needs for convenience and efficiency.

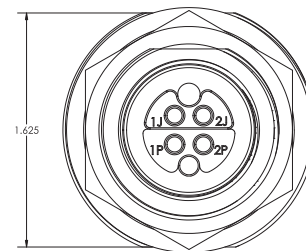
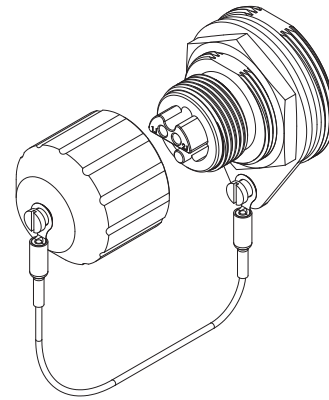
Technical Specifications

Optical Insertion Loss	0.75 dB max, 0.35 dB typ (9/125)
Optical Insertion Loss	0.75 dB max, 0.14 dB typ (62.5/125)
Mating Durability	1000 cycles per EIA-455-21
Corrosion Resistance	EIA-455-16, salt spray, test condition C
Temperature Life	Per EIA-RS-455-4
Thermal Shock	-54°C to +85°C per EIA-455-3, Test Cond. 3
Humidity	Per EIA-455-5, Type 2
Temperature Life	85°C for 250 hours per EIA 455-4

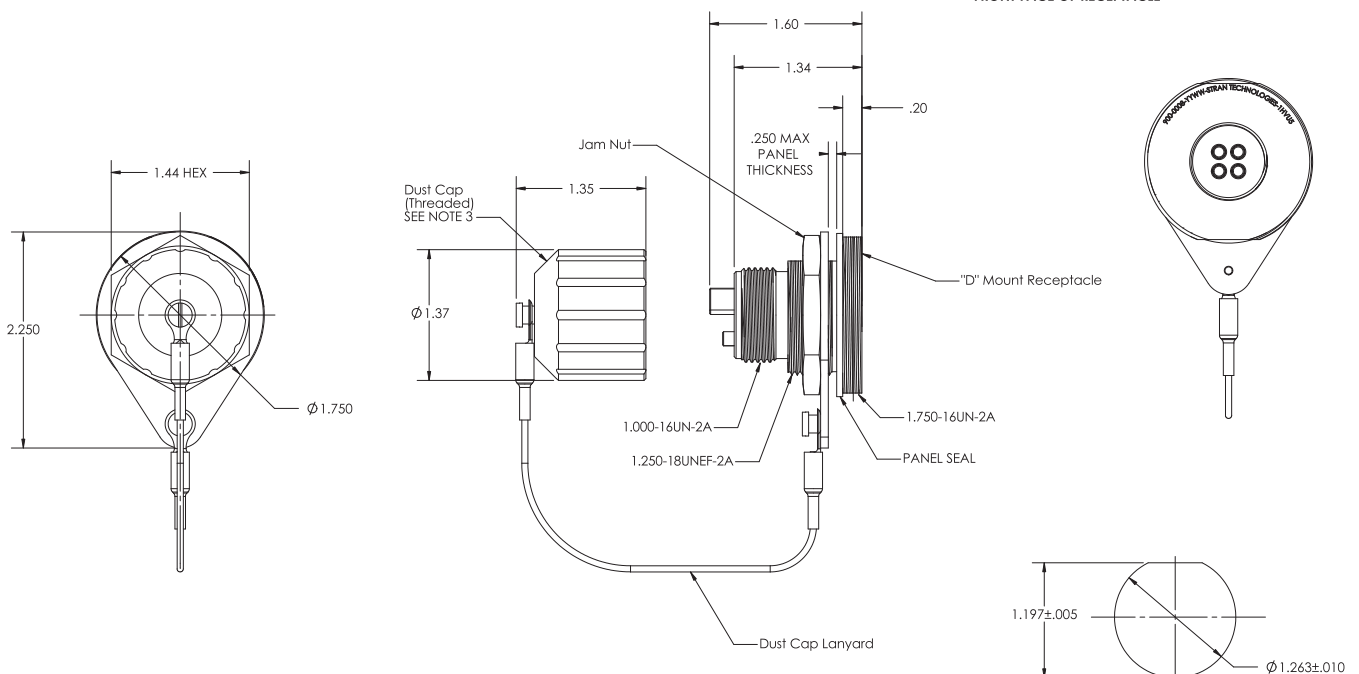
Vibration	Per MIL-STD-1344, Method 2005
Cable Retention	> 400 lbs per EIA 455-6
Fluid Immersion	Per EIA-455-12
Impact	EIA-455-2, method C, severe
Crush	225 lbs per EIA-455-26
Cable Seal Flexing	Per MIL-STD-1344, Method 2017
Return Loss MMF	> 30 dB with PC polish
Return Loss SMF	> 40 dB with PC polish

TACLight™ 4CH Hermaphroditic Fiber Optic Receptacle Connectors

PERFORMANCE	SPECIFICATION
MATING DURABILITY	500 CYCLES PER EIA-455-21
VIBRATION	PER EIA-RS-455-11, Condition 1
MECHANICAL SHOCK	PER EIA-RS-455-14, Condition A
THERMAL SHOCK	-54°C to +75°C PER MIL-STD-1344, Method 1003
TEMPERATURE LIFE	PER EIA-RS-455-4
CORROSION RESISTANCE	PER MIL-STD-1344, Method 1001
HUMIDITY	10 cycles per MIL-STD-1678, Method 4030
FLUID IMMERSION	PER MIL-STD-1344, Method 1016
CRUSH RESISTANCE	PER MIL-STD-1344, Method 2008-1
MAINTANANCE AGING	PER MIL-STD-1344, METHOD 2002
CABLE PULL OUT FORCE	22 POUNDS MIN. PER EIA-455-6
CABLE SEAL FLEXING	PER MIL-STD-1344, METHOD 2017
IMPACT	PER EIA-455-2
MATED CONNECTOR	INSERTION LOSS: 0.75 dB MAX.



CAVITY ARRANGEMENT
FRONT FACE OF RECEPTACLE



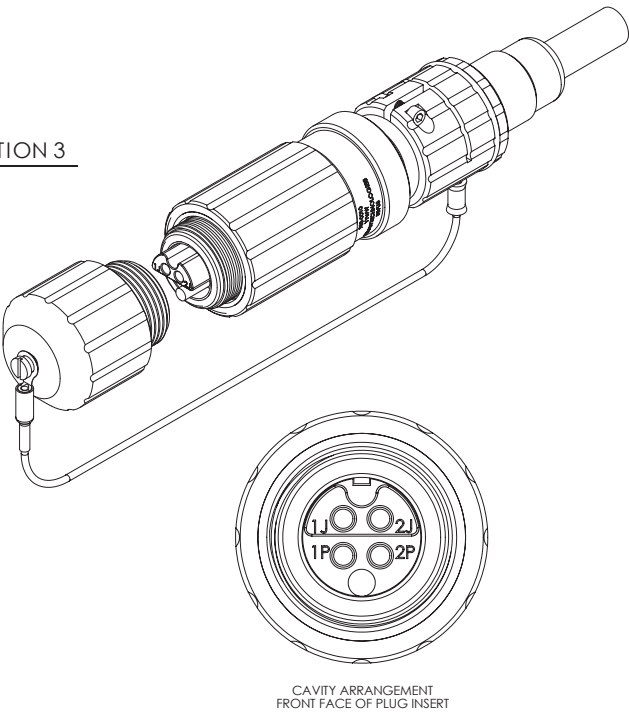
Recommended Panel Cutout

NOTES:

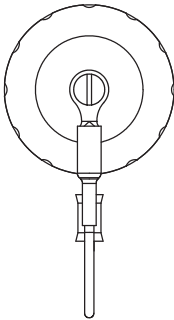
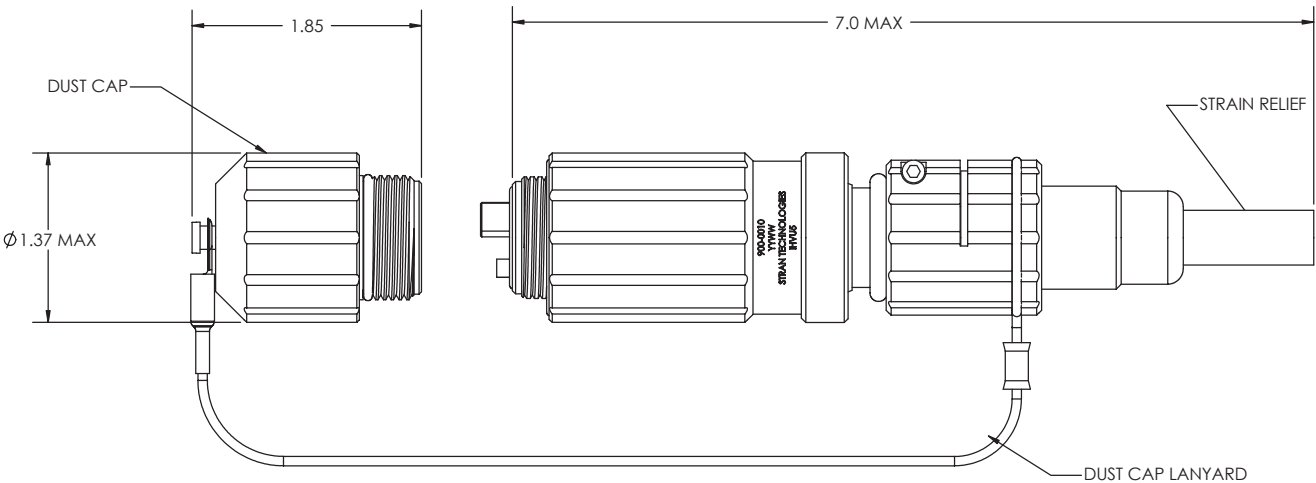
- 1.) Guide Pins-Dust Cap Hardware: Stainless Steel
- 2.) Seals: Viton
- 3.) All Dimensions are for Reference only
- 4.) Receptacle Components Material: 6061-T6 Aluminum
- 5.) Finish: Black Anodize

TACLight™ 4CH Hermaphroditic Fiber Optic Plug Connectors

PERFORMANCE	SPECIFICATION
MATING DURABILITY	1000 CYCLES PER EIA-455-21
VIBRATION	PER MIL-STD-1344, METHOD 2005
MECHANICAL SHOCK	PER EIA-455-2
THERMAL SHOCK	-54°C to +85°C PER EIA-455-3, TEST CONDITION 3
TEMPERATURE LIFE	PER EIA-RS-455-4
CORROSION RESISTANCE	PER EIA-455-16
HUMIDITY	PER EIA-455-5, TYPE 2
FLUID IMMERSION	PER EIA-455-2
CRUSH RESISTANCE	225 POUNDS PER EIA-455-26
MAINTANANCE AGING	PER MIL-STD-1344, METHOD 2002
CABLE PULL OUT FORCE	400 POUNDS MIN. PER EIA-455-6
CABLE SEAL FLEXING	PER MIL-STD-1344, METHOD 2017
IMPACT	PER EIA-455-2
MATED CONNECTOR	INSERTION LOSS: 0.75 dB MAX.



CAVITY ARRANGEMENT
FRONT FACE OF PLUG INSERT



- NOTES:
- 1.) Guide Pins-Dust Cap Hardware: Stainless Steel
 - 2.) Seals: Viton
 - 3.) All Dimensions are for Reference only
 - 4.) Receptacle Components Material: 6061-T6 Aluminum
 - 5.) Finish: Black Anodize

Military Fiber Optic Termini

MIL-PRF-29504/14 and /15 fiber optic termini are designed for outstanding optical performance in extreme environments. M29504/14 & /15 termini are qualified to MIL-PRF-29504B specifications. This series of fiber optic termini provide superior optical and mechanical performance and are compatible with M28876 and comparable military-style connectors. MIL-PRF-29504B QPL listed. The M29504/14 and /15 termini design features pre-radius 2.00mm zirconia ultra high-tolerance ferrules, an enhanced cable retention using serrated crimp areas and removable captivated split alignment sleeves.



Technical Specifications

Operating Temperature	-65°C to +150°C (dependent on epoxy and cable)
Thermal Cycling	-54°C to +65°C
Thermal Shock	-55°C to +85°C
Temperature Life	+110°C for 240 hours
Vibration	68 G random
Physical Shock	500 G
Mating Durability	500+ cycles

Salt Spray	500 hours
Pressure Sealing	32psi, (2,000 psi with wiper seal option)
Mating Force	5 lbs. [22.2 N] nominal
Retention Force	22 lbs. [97.9 N]
Cable Retention Force	25 lbs. [111.2 N] (dependent on cable construction)
Weight	0.7 grams max

Optical Performance

Fiber Size	Insertion Loss max.	Insertion Loss typ.
9/125	-0.75 dB	-0.35 dB
50/125	-0.75 dB	-0.35 dB
62.5/125	-0.75 dB	-0.35 dB

Fiber Type	Return Loss max.
Single Mode (PC)	≤ -40 dB
Single Mode (UPC)	≤ -50 dB

Terminus Insert and Extraction Tools

The Insert and Extraction Tools are designed to support M29504/14 & M29504/15 termini, the M28876 connector family, and the TACLight connector family. Crafted from aircraft-grade aluminum and 400 series medical-grade heat-treated stainless steel, these tools adhere to NAVSEA drawings 6872813-2, 6872813-4, and 6872813-6 standards. These tools ensure reliable handling and maintenance of fiber optic termini, enhancing durability and performance in critical applications.

Order Codes

Product Code	Description
MT02620	420-0029 Tool for Termini Removal
MT02621	420-0028 Tool for Sleeve Extraction and Insertion
MT02622	420-0030 Tool for Termini Insertion



Termini Removal

MT02620



Sleeve Extraction/Insertion

MT02621



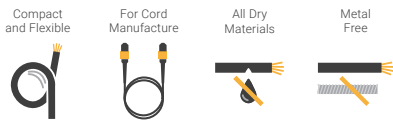
Termini Insertion

MT02622

Ruggedised PUR Jacket Distribution Cable | 4 Fibers

Design Type UT-WT9Q(ZN-AY)11Y

Standards: IEC 60794-1 / IEC 60794-3 / IEC 60793-1

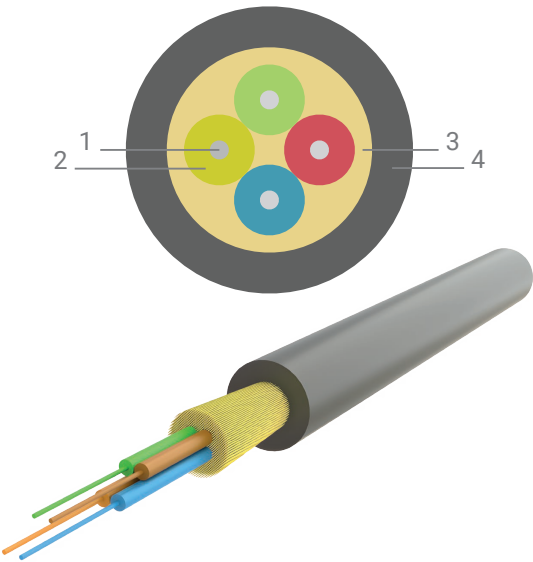


Cable Construction

1	Fiber	Single-mode or Multi-mode 245 μ
2	Tight Buffer Tube	900μ TPE
3	Strength Member	Water Blocking Swellable Aramid yarn
4	Outer Jacket	TPU

Properties

High tensile strength with improved crush resistance
For direct connector assembly and easy stripping
Excellent coiling capability for Suitable for military tactical field use
High chemical resistance against acids and alkalies
For high mechanical and thermal stability
Metal free, halogen free and non-corrosive fire gases
UV-protected, outdoor use, and high abrasion and cut resistance



Mechanical Properties

Test	Test Standard	Specified Value
Tensile Force	IEC 60794-1-21-E1	1800 N (Installation), 600 N (In Service)
Crush Resistance	IEC 60794-1-21-E3	4400 N / 10 cm (Installation), 2000 N / 10 cm (In Service)
Impact	IEC 60794-1-21-E4	Wp=10J, R:30cm, 3 impacts
Repeated Bending	IEC 60794-1-21-E6	R= 20 x D, 25 cycles
Torsion	IEC 60794-1-21-E7	L:1 m, ±180°, 5 cycles
Cable Bending	IEC 60794-1-21-E11A	R= 20 x D, 4 turns, 3 cycles

Environmental Properties

Property	Conditions	Test Standard	Result / Value
Temperature Range	-	IEC 60794-1-22-F12	-5 to +50°C (Installation), -25 to +60 °C (In Service), -40 to +60 °C (Storage)
Water Penetration	3m specimen,1m water altitude	IEC 60794-1-2-F5B	No leakage in 24 hours
Fire Propagation	Vertical single cable	IEC 60332-1-2	passed
Smoke Density	-	IEC 61034-2	passed
Halogen Acid Gas	Jacket material	IEC 60754-1	passed
Degree of Acidity	Jacket material	IEC 60754-2	passed
2011/65/EC (RoHS)	-	-	compliant
(EU) No 305/2011 (CPR)	-	EN 50575	Eca

Ordering Codes

Order Code	Fiber Count	Sub Unit Count	Tube Diameter (mm) nom.	Cable Diameter (mm) nom.	Cable Weight (kg) nom.
004F-UT-WT9Q(ZN-AY)11Y-4U090-1x4-...-Eca-1.8kN	4	4	0.9	5.8	25

* Available fiber types are G657.A1, G657.A2, G651.OM2, G651.OM3, G651.OM4

* Sample Code: 004F-UT-WT9Q(ZN-AY)11Y-4U090-1x4-A1-BK-Eca-1.8kN

Portable Field Deployable Fiber Optic Cable Reel

This tactical portable cable reel is made of metal and has an embedded stand, a crank and a brake screw. The portable cable reel is suitable for fiber optic and copper cables and it is designed for field, military and tactical applications, where quick cable deployment is essential.

Features

Made of Steel that is both light and strong.
Stackable Frame Design
Double flange for easy access to the inner end
Foldable Crank handle
Central brake knob to prevent unwanted rotation
Integrated carrying and unwinding stand
Stand protection feet to prevent damage from the surface

Reel Capacity

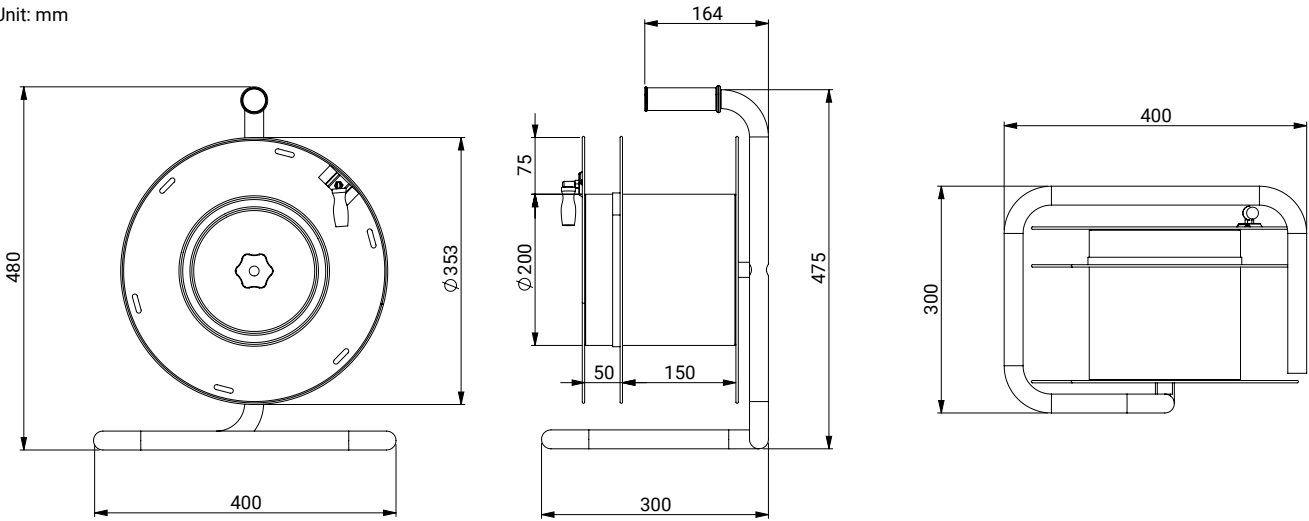
Cable Capacity	Cable Diameter
200 m	5.6 mm
300 m	4.8 mm

Reel Specifications

Model Number	Reel Weight
MT02698	12 kg

Dimensions

Unit: mm





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