



***Siechem***

**Wires & Cables**



**Drone  
Cables**

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## Siechem Tethered Drone Cable

### Application

- ✓ Power transmission line inspection.
- ✓ Substation monitoring & thermal scanning.
- ✓ Oil & gas pipeline inspection.
- ✓ Refinery and chemical plant surveillance.
- ✓ Construction site progress monitoring.
- ✓ High-rise building inspection.
- ✓ Factory & warehouse surveillance.
- ✓ Offshore platform inspection.
- ✓ Police & Defence operation.
- ✓ Disaster Management & Emergency Response.

### Features

- ✓ High tensile strength.
- ✓ Continuous power transmission capability.
- ✓ Hybrid design.
- ✓ High voltage DC insulation.
- ✓ Low diameter & compact design.
- ✓ UV resistant for outdoor use.
- ✓ Oil & chemical resistant sheath.
- ✓ Low signal loss for data transmission.
- ✓ Weather Proof.
- ✓ Ultra Light weight design.

### Product Construction

- ✓ Conductor : Silver - plated copper conductor
- ✓ Insulation : Fluoropolymer
- ✓ Insulation Colour :  
Data Pair : Blue / White  
Power Pair : Grey / White, Red / Black  
Fiber Optic : Orange, Green, Blue, Brown
- ✓ No. of Fiber core : 4 Nos.
- ✓ Fiber Diameter : 0.250 mm
- ✓ Optical fiber : G657.A.2
- ✓ Optical fiber insulation : Acrylate
- ✓ Loose Tube material : Nylon
- ✓ Loose Tube Diameter : 1.45 mm
- ✓ Filler Material : Aramid Yarn
- ✓ Barrier : Weather - proof barrier
- ✓ Outer sheath : Fluoropolymer Fiber Braid - Black

Drone Cables

Tethered UAV

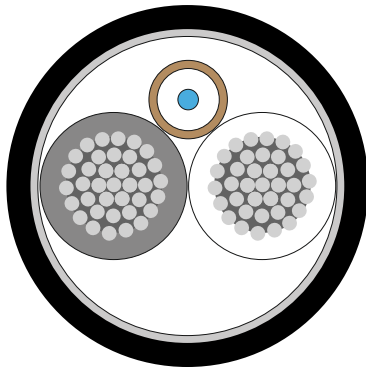
Approvals	Accreditations	Certifications

### Technical Data

- ✓ Temperature range  
Data pair : -60°C to +200°C  
Power pair : -60°C to +200°C  
fiber optic : -60°C to +85°C
- ✓ Operating Voltage (Vrms) :  
Data pair : 250  
Power pair : 600
- ✓ Testing Voltage (Vrms) :  
Data pair : 1500  
Power pair : 1500
- ✓ Maximum optical loss at 1310 nm dB/Km :  
Fiber optic : 0.36
- ✓ Maximum optical loss at 1550 nm dB/Km :  
Fiber optic : 0.23
- ✓ Coating type :  
Fiber optic : High-temperature Acrylate
- ✓ Tensile Strength N (lb) :  
16 AWG : 1538 (345)  
20 AWG : 1092 (245)  
24 AWG : 910 (204)
- ✓ Scrape Abrasion Cycles, 500g (1.1lb) :  
SAE AS4373 : > 36,000
- ✓ Fluid Immersion / Weight Stability is pass,  
% Absorption (SAE AS 4373) :  
>1 (Salt Water, Diesel)  
> 2.5 (Hydraulic)

### Cable Designs

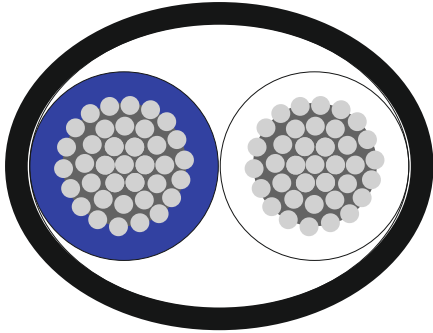
#### 1. Power & Fiber Optic Composite Cable



- ✓ Size : 16 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 29 AWG / 0.286 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Fiber : 1 Single Mode, 900 micron
- ✓ Nominal Outer Diameter : 3.8 mm / 0.148 in.
- ✓ Min. Bending Radius : 38 mm / 1.48 in.
- ✓ Nominal Weight : 33 Kg/Km
- ✓ Max. Conductor DC Resistance : 4.5 Ω/1000ft
- ✓ Size : 20 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 32 AWG / 0.20 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Fiber : 1 Single Mode, 900 micron
- ✓ Nominal Outer Diameter : 2.9 mm / 0.117 in.
- ✓ Min. Bending Radius : 29 mm / 1.17 in.
- ✓ Nominal Weight : 18 Kg/Km
- ✓ Max. Conductor DC Resistance : 9.1 Ω/1000ft
- ✓ Size : 24 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 36 AWG / 0.127 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Fiber : 1 Single Mode, 900 micron
- ✓ Nominal Outer Diameter : 2.3 mm / 0.092 in.
- ✓ Min. Bending Radius : 23 mm / 0.92 in.
- ✓ Nominal Weight : 10.3 Kg/Km
- ✓ Max. Conductor DC Resistance : 23.6 Ω/1000ft

## Siechem Tethered Drone Cable

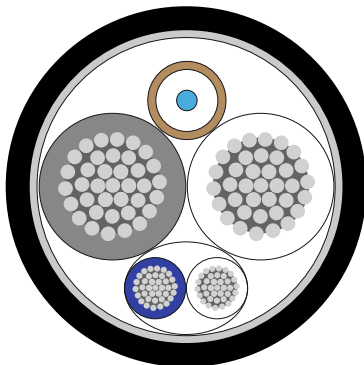
### 2. Power Pair Cable



- ✓ Size : 20 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 32 AWG / 0.20 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Nominal Outer Diameter : 2.9 mm / 0.117 in.
- ✓ Min. Bending Radius : 29 mm / 1.17 in.
- ✓ Nominal Weight : 17 Kg/Km
- ✓ Max. Conductor DC Resistance : 9.1  $\Omega$ /1000ft

- ✓ Size : 24 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 36 AWG / 0.127 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Nominal Outer Diameter : 2.2 mm / 0.087 in.
- ✓ Min. Bending Radius : 22 mm / 0.87 in.
- ✓ Nominal Weight : 9 Kg/Km
- ✓ Max. Conductor DC Resistance : 23.6  $\Omega$ /1000ft

### 3. Power & Data with Fiber Optic Cable



- ✓ Power Pair Cable Size : 16 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 29 AWG / 0.286 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Data Pair Cable Size : 28 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 40 AWG / 0.08 mm.
- ✓ Insulation Thickness : 0.14 mm (Data Pair)
- ✓ Fiber : 1 Single Mode, 900 micron
- ✓ Nominal Outer Diameter : 3.8 mm / 0.148 in.
- ✓ Min. Bending Radius : 38 mm / 1.48 in.
- ✓ Nominal Weight : 36 Kg/Km
- ✓ Max. Conductor DC Resistance : 4.5  $\Omega$ /1000ft

- ✓ Power Pair Cable Size : 20 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 32 AWG / 0.20 mm.
- ✓ Insulation Thickness : 0.14 mm (Power Pair)
- ✓ Data Pair Cable Size : 28 AWG  
No. of strands : 19 Nos.  
Strand Diameter : 40 AWG / 0.08 mm.
- ✓ Insulation Thickness : 0.14 mm (Data Pair)
- ✓ Fiber : 1 Single Mode, 900 micron
- ✓ Nominal Outer Diameter : 3.2 mm / 0.127 in.
- ✓ Min. Bending Radius : 32 mm / 1.27 in.
- ✓ Nominal Weight : 21 Kg/Km
- ✓ Max. Conductor DC Resistance : 9.1  $\Omega$ /1000ft

### Optional

- ✓ Aluminium Alloy Class 5 Non-greasy, flexible conductors available in place of copper conductors to reduce weight.

\*\* We have obtained various approvals, accreditations, and certifications — some of which may not be relevant to this catalog.



**Siechem RG 174 Co - Axial Cable**

**Application**

- ✓ Coaxial cable used in GPS, WLAN, and cellular communication
- ✓ Coaxial cable to be used as car antenna cable and feeder cable.
- ✓ Automotive inner Wiring for communication and Electronic Devices.
- ✓ Automotive TV/ Radio.
- ✓ Drop Wire, House wiring to indoor.
- ✓ Monitoring / Security camera.
- ✓ Ringing circuit connection between high frequency apparatus

**Product Construction**

- ✓ Conductor : Annealed Plain standard Copper Conductor
- ✓ Insulation : Polypropylene (PP)
- ✓ Insulation Colour : Natural
- ✓ Braiding : ATC
- ✓ Outer Sheath : Polyvinylchloride (PVC)
- ✓ Sheath Color : Black

**Technical Data**

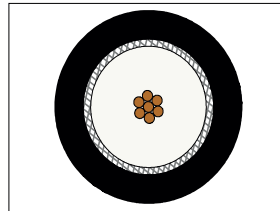
- ✓ Operating temperature : - 40°C to + 105°C
- ✓ Standard : ES 96220-01
- ✓ Characteristic Impedance : 50 ± 3 Ω
- ✓ Nom Capacitance at 1 kHz : 99 pF/m
- ✓ Testing voltage : 2kV AC
- ✓ Max Operating Voltage : 60 V
- ✓ Bending Radius :
  - Single : 5 x cable OD
  - Multiple : 10 x cable OD
- ✓ Stripping force :
  - Conductor to core : 2-17N
  - Shield to Sheath : 8-30N

**Features**

- ✓ Low loss.
- ✓ Characteristic Impedance is constant in high frequency domain.
- ✓ We are superior in flexibility workability after being lightweight.
- ✓ It is high cover, low loss type.
- ✓ Highly fidelity data transfer.

Automotive Cables **RG 174**

**2D View**



**Approvals Accreditations Certifications**



Part Number	Conductor Construction					Nominal Insulation Wall Thickness	Core Diameter	Nom. Braiding Wire Dia	Nom. Outer Sheath Thickness	Nom. Overall Diameter	Approx. Cable Weight	Max. Conductor Resistance at 20°C
	Nominal Cross-Section	No. of Core	No. of Strand	Strands Wire (Nom.)	Conductor Diameter (Max.)							
B518A260004	Sq.mm	Nos.	Nos.	mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km
	0.14	1	7	0.16	0.50	0.52	1.52 ± 0.05	0.10	0.40	2.8 ± 0.10	12	130

Frequency (GHz)	0.5	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1.0	1.1
Attenuation (dB/100m)Nom	14.29	18.28	24.74	28.79	39.89	48.71	51.8	60.26	66.89	84.25	90.32	91.54
Frequency (GHz)	1.2	1.3	1.4	1.5	1.6	1.7	1.8	1.9	2.0	2.1	2.2	2.3
Attenuation (dB/100m) Nom	96.35	96.95	97.83	98.21	101.2	107.56	110.15	111.65	114.27	118.74	120.91	121.92
Frequency (GHz)	2.4	2.5	2.6	2.7	2.8	2.9	3.0	3.5	4.0	4.5	5.0	6.0
Attenuation (dB/100m) Nom.	123.42	124.24	126.45	1296.86	133.08	137.85	140.31	199.89	275.56	281.11	319.44	368.23

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**Siechem RG 316 - (50 ohms ) Type Co-axial Cable**

**Applications**

- ✓ Communication systems
- ✓ Indoor/Outdoor system
- ✓ Wireless system
- ✓ Jumper cable assemblies
- ✓ Broadcast and military equipment
- ✓ Radio frequency

**Product Construction**

- ✓ Conductor : Plain Copper Clad steel Conductor
- ✓ Insulation : PE
- ✓ Core Identification : Natural
- ✓ Braiding : ATC
- ✓ Sheath : PVC-Black

**Technical Data**

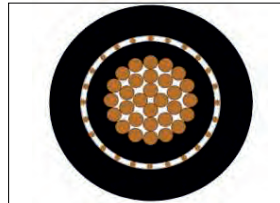
- ✓ Standard : ES 96220-01
- ✓ Characteristic Impedance :  $50 \pm 2$  Ohms
- ✓ Insulation Resistance : 1000 M $\Omega$ . km
- ✓ Electrostatic capacity : 105 nF/km
- ✓ Standard Damping rate :

**Features**

- ✓ Halogen free and flame retardant
- ✓ UV, oil and chemical resistant
- ✓ Low loss in signal quality
- ✓ High frequency cable with a characteristic impedance of 50 Ohms
- ✓ Direct burial applications
- ✓ Low attenuation values

Co- axial Cable **RG 316**

**2D View**



Approvals	Accreditations	Certifications

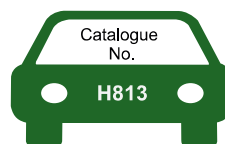
Part Number	Area	No. of Strands	Wire Dia Nom	Conductor Dia	Insulation Thickness Nom	Braiding Wire Dia Nom	Sheath Thickness Nom	Cable Overall Dia Diameter Nom	Maximum Conductor Resistance at 20°C	Approx Weight
	Sq.mm	Nos	mm	mm	mm	mm	mm	mm	$\Omega$ /km	Kg/km
H813A2701XX	0.16	7	0.17	0.51	0.50	0.102	0.25	$2.50 \pm 0.10$	275.9	14

Note : XX\* : Please add last two digits in the part number as per the colour code given hereunder replacing XX while ordering.

Red - 01	Yellow - 02	Blue - 03	Black - 04	Green - 05	Yellow-Green - 06	Grey - 07	Brown - 08	White - 09	Orange - 10	Violet - 11
Chocolate - 12	Tan - 13	Charcoal - 14	LT Blue - 15	DK Grey - 16	LT Green - 17	DK Green - 18	DK Blue - 19	Purple - 20	Pink - 21	

Frequency (GHz)	1500	1600	2500	5000	5800	6000
Attenuation (dB/km) Nom.	940	970	1300	41860	2030	2080

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**Siechem Coaxial LMR 200 Cable**

**Application**

- ✓ Used for wireless communication systems.
- ✓ Automotive & EV RF Systems.
- ✓ Short Antenna feed lines.
- ✓ Used for application eg. WLL, GPS, LMR, WLAN, WiMax, SCADA & Mobile Antenna.

**Product Construction**

- ✓ Conductor : Solid Bare Copper Conductor.
- ✓ Insulation : Foamed Polyethylene.
- ✓ Core Identification : Natural or (as per customer order).
- ✓ Shield : Aluminium Tape (Duofoil) (Coverage 100%).
- ✓ Shielding : ATC Braiding (Coverage 80%).
- ✓ Outer sheath : PVC - Black.

**Technical Data**

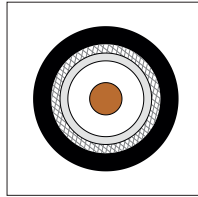
- ✓ Operating temperature : -40°C to +85°C.
- ✓ Tensile strength : 40 lb.
- ✓ Dielectric Constant : 1.45 NA.
- ✓ Cutoff frequency : 39 GHz.
- ✓ Velocity of Propagation : 83%.
- ✓ Time Delay : 4.02 nS/m.
- ✓ Impedance : 50Ω
- ✓ Cutoff frequency : 39 GHz.
- ✓ Capacitance : 83.3 pF/m.
- ✓ Inductance : 0.20 uH/m.
- ✓ Shielding Effectiveness : >90 dB.
- ✓ DC Resistance :  
Inner Conductor (20°C Max) : 17.6 Ω/Km,  
Outer Conductor (20°C Max) : 16.1 Ω/Km.
- ✓ Voltage withstand : 1000 V DC.
- ✓ Jacket Spark test : 3000 V rms.
- ✓ Peak Power : 2.5 kW.
- ✓ Bending Radius :  
Static : 5 x Cable OD  
Dynamic : 10 x Cable OD.

**Features**

- ✓ Low Loss.
- ✓ Flexible and Easy to install.
- ✓ Weather resistant.
- ✓ RoHS.

Automotive Cables **LMR 200**

**2D View**



**Approvals | Accreditations | Certifications**



Part Number	Conductor Construction				Dia. Over Insulation (Nom)	Shield Thickness (Nom.)	Dia. Over Shield (Nom.)	Braid Thickness (Nom.)	Dia. Over Braid (Nom.)	Outer Sheath Thickness (Nom.)	Overall Diameter (Nom.)	Weight Approx.
	Nom. Cross Section area	No. of Core	No. of Strands	Conductor Diameter (Nom.)								
	mm	Nos.	Nos.	mm	mm	mm	mm	mm	mm	mm	mm	Kg/Km
D853A1000004	0.98	1	1	1.12	2.95 ± 0.1	0.08	3.07	0.12	3.66	0.50	4.95 ± 0.10	38

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Nom. Attenuation (dB/100m)	5.8	7.5	13.1	15.9	22.8	32.6	42.4	46.6	49.3	55.4	86.5
Avg Power kW	1.02	0.79	0.45	0.37	0.26	0.18	0.14	0.13	0.12	0.11	0.07

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**Siechem Coaxial LMR 240 Cable**

**Application**

- ✓ Suitable for RF signal transmission.
- ✓ RF modules and IOT device.
- ✓ LAN & Data transmission.
- ✓ Aerospace.
- ✓ Defence.
- ✓ Medical Devices.
- ✓ Jumper assemblies in wireless communication system.

**Product Construction**

- ✓ Conductor : Solid Bare Copper Conductor.
- ✓ Insulation : Foamed Polyethylene.
- ✓ Core Identification : Natural or (as per customer order).
- ✓ Shield (Outer conductor) : Double Aluminium (Duofoil).
- ✓ Shielding : ATC Braiding (80% Covering).
- ✓ Outer sheath : Polyethylene / PVC - Black.

**Technical Data**

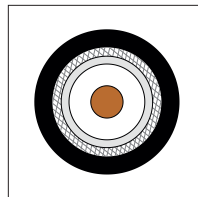
- ✓ Operating temperature : -40°C to +85°C.
- ✓ Tensile strength : 36.3Kg.
- ✓ Dielectric Strength : 1.6 kV.
- ✓ Peak power rating : 5.60 kW.
- ✓ Cut-Off frequency : 31 GHz.
- ✓ Voltage withstand : 1500VDC.
- ✓ Capacitance : 79.4±3 pF/m.
- ✓ Screening factor at 1-1000MHz : >90dB.
- ✓ Admissible ambient temperature : -40°C to +85°C.
- ✓ Impedance : 50Ω.
- ✓ Velocity of propagation : 84%.
- ✓ Dielectric constant : 1.42 NA.
- ✓ Time Delay : 3.97 ns/m.
- ✓ Peak power : 5.6 kW.
- ✓ Inductance : 0.2 μH/m.
- ✓ Shield resistance : 12.8 Ω/Km.
- ✓ Spark test voltage : 5000 V AC.
- ✓ Shielding effectiveness : >90dB.

**Features**

- ✓ Low attenuation.
- ✓ Supports high-frequency transmission.
- ✓ Good Durability.
- ✓ Strong signal performance.
- ✓ UV Resistant.

Automotive Cables **LMR 240**

**2D View**



Approvals	Accreditations	Certifications

Part Number	Conductor Construction				Dia. Over Insulation (Nom)	Duofoil Shield Thickness (Nom)	Dia. Over Shield (Nom.)	Braid Thickness (Nom.)	Dia. Over Braid (Nom.)	Outer Sheath Thickness (Nom.)	Overall Diameter (Nom.)	Weight Approx.	Conductor Resistance at 20°C (Nom.)
	Nom. Cross Section area	No. of Core	No. of Strands	Conductor Diameter (Nom.)									
C999A870004	mm	Nos.	Nos.	mm	mm	mm	mm	mm	mm	mm	mm	Kg/Km	Ω/Km
	1.58	1	1	1.42	3.81	0.08	3.94	0.12	4.52	0.65	6.2	51	10.5

Frequency (MHz)	30	50	150	220	450	900	1500	1800	2000	2500	5800
Nom. Attenuation (dB/100m)	4.4	5.7	9.9	12.0	17.3	24.8	32.4	35.6	37.7	42.4	66.8
Avg Power kW	1.49	1.15	0.66	0.54	0.38	0.26	0.20	0.18	0.17	0.15	0.10

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**Siechem RG 178 Coaxial Cable**

**Application**

- ✓ Used as a multi-core signal/control cable used in electronic and communication equipment.
- ✓ Used for internal wiring in electronic devices.
- ✓ Used in Audio/Video connection cables and multimedia devices.

**Product Construction**

- ✓ Conductor : Silver plated copper covered steel (SCCS)
- ✓ Insulation : Solid PTFE - Black
- ✓ Shield 1 : Silver plated copper
- ✓ Inner sheath : FEP
- ✓ Shield 2 : Silver plated copper
- ✓ Outer sheath : FEP - Black

**Technical Data**

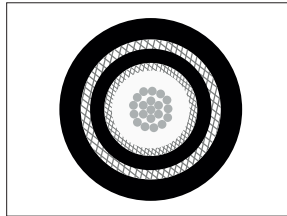
- ✓ Temperature : -55°C to + 200°C
- ✓ Operating Voltage : 1 kV
- ✓ Characteristic Impedance : 50 ± 5 Ω
- ✓ Nominal capacitance : 96.5 pF/m
- ✓ Velocity of propagation ≈ 70%
- ✓ Inner conductor resistance : 800.5 Ohm/Km
- ✓ Outer conductor resistance : 27.9 Ohm/Km
- ✓ Screening effectiveness : >60 dB

**Features**

- ✓ Smaller Outer Diameter.
- ✓ Lightweight and easy to handle.
- ✓ Good electrical conductivity for signal transmission.
- ✓ Easy to install.

Automotive Cables **RG 178**

**2D View**



**Approvals Accreditations Certifications**



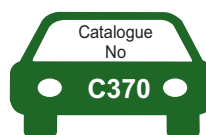
Part Number	Conductor Construction			Core diameter (Nom)	Dia. over Shield 1 (Nom)	Dia. over InnerSheath (Nom)	Dia. over Shield 2 (Nom)	Overall diameter (Nom)	Weight Approx.
	Size	No. of Strands	Strand dia (Nom)						
	Sq. mm	Nos.	mm	mm	mm	mm	mm	mm	kg/km
C370A100404	0.05	7	0.10	1.26	1.26 ± 0.10	1.80 ± 0.10	2.20 ± 0.10	2.85 ± 0.10	24

Note : XX\* : Please add last two digits in the part number as per the colour code given hereunder replacing XX while ordering.

Red - 01	Yellow - 02	Blue - 03	Black - 04	Green - 05	Yellow-Green - 06	Grey - 07	Brown - 08	White - 09	Orange - 10	Violet - 11
Chocolate - 12	Tan - 13	Charcoal - 14	LT Blue - 15	DK Grey - 16	LT Green - 17	DK Green - 18	DK Blue - 19	Purple - 20	Pink - 21	

Frequency (MHz)	100	400	1000	3000
Attenuation (dB/100m) Nom.	45.3	91.2	145.7	257.2
Attenuation (dB/100ft) Nom.	13.8	27.8	44.4	78.4

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