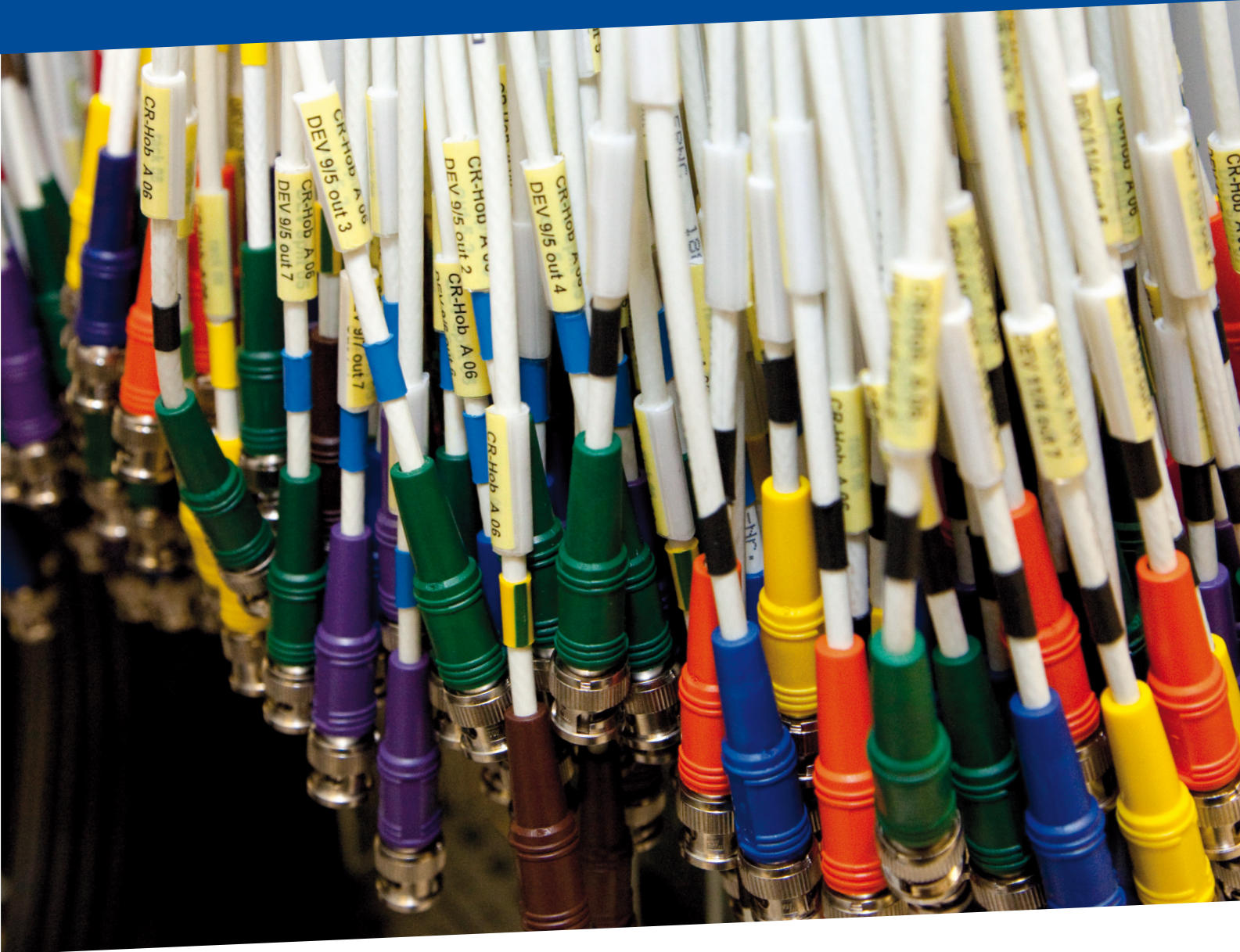




Draka CATV Network Solutions

FOR AN UNDISTURBED DIGITAL WORLD



A brand of the

Prysmian
Group

Prysmian Group

Linking the future

As the worldwide leader in the cable industry, Prysmian Group believes in the effective, efficient and sustainable supply of energy and information as a primary driver in the development of communities.

With this in mind, we provide major global organisations in many industries with best-in-class cable solutions, based on state-of-the-art technology. Through two renowned commercial brands – Prysmian and Draka – based in almost 100 countries, we're constantly close to our customers, enabling them to further develop the world's energy and telecoms infrastructures, and achieve sustainable, profitable growth.

In our energy business, we design, produce, distribute and install cables and systems for the transmission and distribution of power at low, medium, high and extra-high voltage.

In telecoms, the Group is a leading manufacturer of all types of copper and fibre cables, systems and accessories – covering voice, video and data transmission.

Drawing on over 130 years' experience and continuously investing in R&D, we apply excellence, understanding and integrity to everything we do, meeting and exceeding the precise needs of our customers across all continents, at the same time shaping the evolution of our industry.



What links communications to communities?

Cable solutions to support the development of the world's telecoms infrastructure

As the world's largest producer of telecoms cables, supporting the infrastructures of many of the world's leading telecoms operators, the Prysmian Group delivers optical fibre and copper cabling solutions that help link communications to communities around the globe.

Covering voice, video and data transmission, we are world leader in the production of optical fibre, offering unique and fully owned technology. Our portfolio sets the benchmark in global innovation, and is the outcome of continuous multi-million Euro investment in R&D and production in more than 30 facilities worldwide.

Hybrid cables for the enjoyment of future technology

LEADING TRADE FAIRS LIKE THE CEBIT IN HANOVER MAKE IT ABUNDANTLY CLEAR: THE “INTELLIGENT BUILDING” IS THE CONCEPT OF THE FUTURE. NOT ONLY WILL IT OFFER NEW POSSIBILITIES OF USING VARIOUS MEDIA AND DEVICES INTERACTIVELY, BUT IT WILL ALSO MAKE LIFE MORE COMFORTABLE AND SAFER, AND IN ADDITION WILL SAVE ENERGY COSTS.

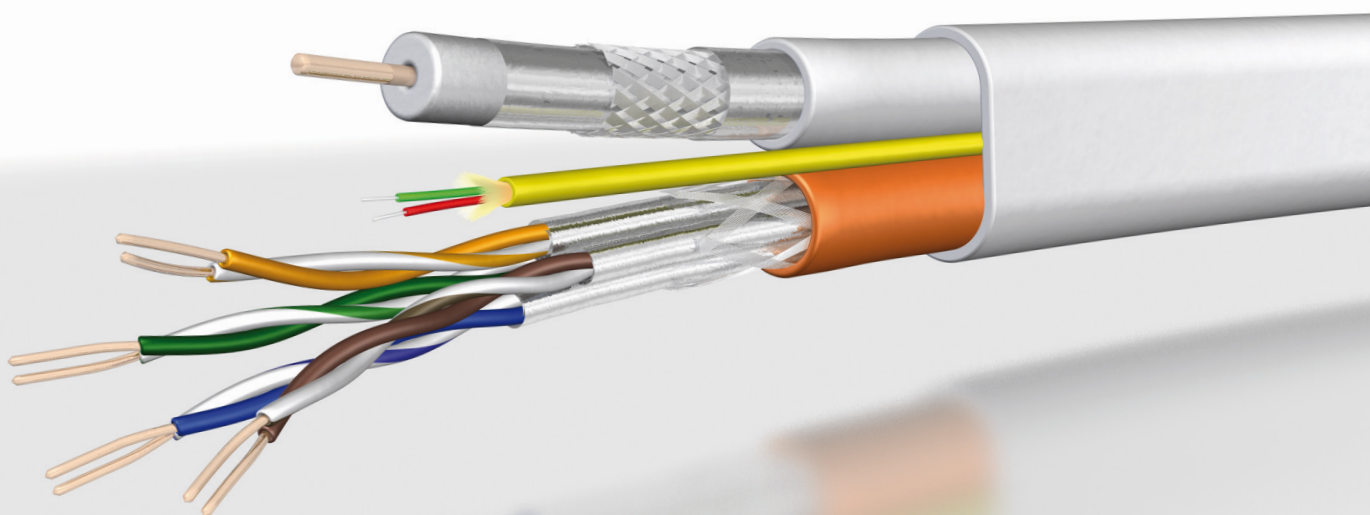
Hence, the demands on home cabling are very high. In order to ensure a perfect quality of data transmission, high-quality shielding of the cables is necessary. The future-oriented solution of Draka means: multi-platform indoor cables consisting of various combinations of coaxial cables, conventional data cables and future-oriented fibre optic cables.

For example, hybrid cables consist of a coaxial cable for today's services like TV or broadband internet, a high-quality data cable for IP-based services or networks, and bend insensitive optical fibres for next generation super high-speed networks and IP services. Thus, Draka offers a future-proof solution independent from the respective network operator.

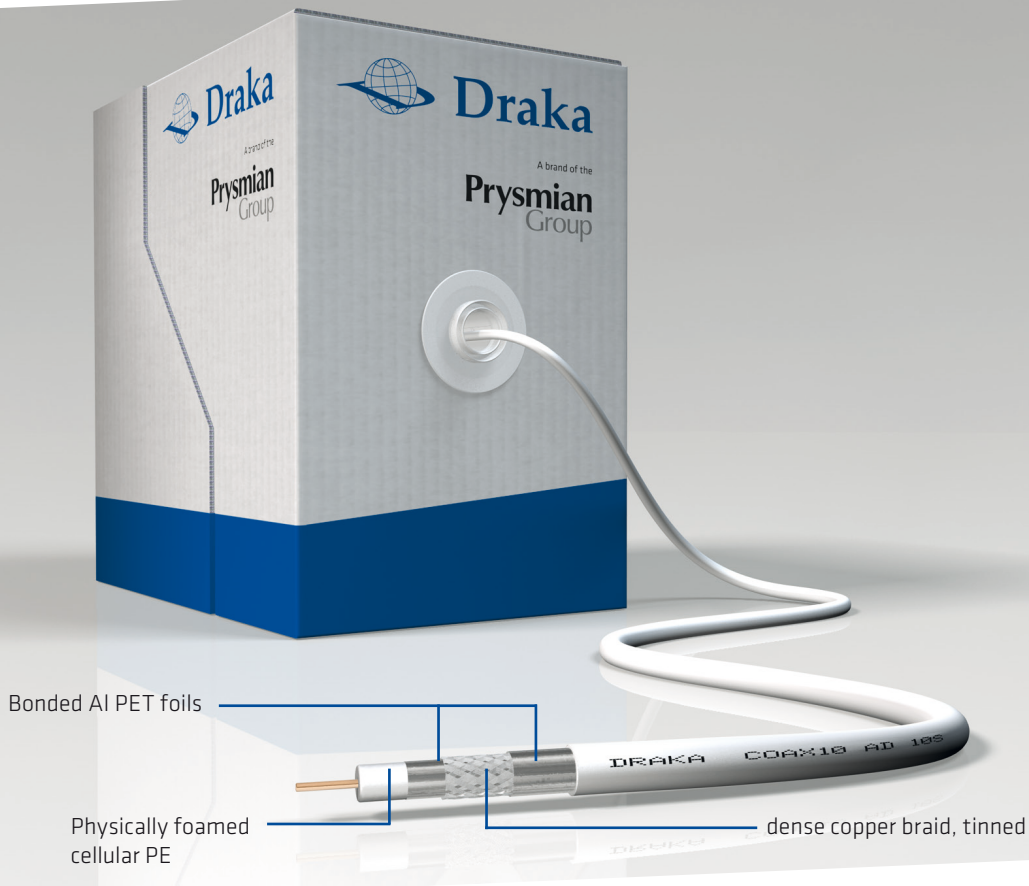
Cables of screening class “A” for Triple Play applications

Already common applications like Triple Play – the transmission of internet, telephone and TV over one cable – can be optimally solved with shielded coaxial cables. Systems use the so-called backward channel being in the lower frequency range. The quality of the shielding in this frequency range is indicated by the so-called transfer impedance. The rule of thumb is: The lower the transfer impedance the better the shielding effect for the backward channel. For these applications Draka offers coaxial cables with an extra low transfer impedance, which exceed the requirements of screening class A and higher.

In order to eliminate digital noise like pixelation on TV reception, the best possible physical shielding of the coaxial cable is of utmost importance. The patented Draka tri-shield coaxial cable design, consisting of dense braid shielding under-layered by two aluminium PET foils, serves this purpose. Compared to conventional cables, it shows a considerably better shielding attenuation, preventing interference from appliances in the immediate environment. Draka tri-shield cables help to meet the limiting values given by law.



Draka Cable Solutions



Benefits for housing societies, property managers and home owners at a glance.

- / Hybrid solutions consisting of a coaxial cable, a data cable and an optical fibre cable ensure the future sustainability of cable solutions and the value retention of the building – independent from the network operator.
- / Tri-shield coaxial cables exceed the requirements of screening class A including the transfer impedance.
- / High-quality halogen-free flame retardant cables ensure optimum fire protection.

Prevention with future prospects

For many years, flame retardance has been among the minimum requirements of indoor cables. PVC cables were often used in the past. PVC is less flammable than other materials, but they do not prevent a spread of fire. They may even release toxic and corrosive gases when burnt. The future-proof alternative: High-quality FRNC (LSHF) materials with considerably improved properties in case of fire.

Draka Cable Solutions

Protecting FRNC sheath

All CATV cables are available with halogen-free and flame retardant FRNC sheath. Excellent materials guarantee best electrical and mechanical properties of the cable.

The ability of our cables to avoid a spread of fire is documented by two standardized test methods: The fire characteristics of a single cable are determined according to IEC 60332-1. IEC 60332-3-24 tests the characteristics of cable bundles.

IEC 60332-3-24 passed

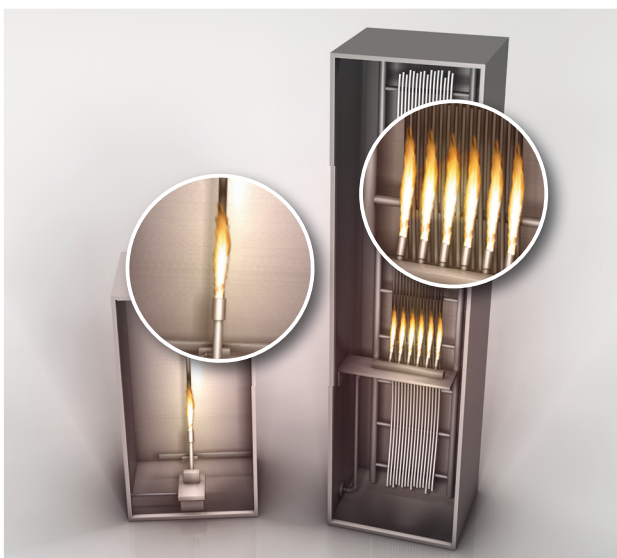
In a 4 metre high cabinet, a cable bundle is exposed to a strong flame for 20 minutes. The cables burn within the range of the propane gas flame (up to 1 metre), however, the cable bundle extinguishes

itself and the remaining cable length remains without damage: No fire propagation, no excessive smoke development obstructing chances to escape in case of emergency.

For comparison: Under the same conditions, PVC cables burn completely within 5 minutes over the entire length.

Safety

Highest precautionary measures as to the cabling apply at crowded places (e.g. hospitals, airports, schools, department stores, hotels), in buildings with a high concentration of commodity values, and wherever a breakdown would involve high expenses (e.g. industrial plants, power stations, EDP centres, banks) as well as in alarm, signal and control systems.



Improved fire protection characteristics

- / No spread of fire (fire propagation), e.g. transmission of the local fire alongside the cable
- / No emission of corrosive gases, possibly creating acid with extinguishing water
- / Very low smoke development
- / No dioxin in the fire residues
- / Considerably low toxicology of fire gases

Fire test according to IEC 60332-1 (on the left) and IEC 60332-3-24 (on the right)

Drop and Trunk cables – Indoor and Outdoor

Draka manufactures high-quality copper and fibre optic cables for all multimedia applications.

Screening class A

To reduce egress and ingress to a tolerable level, our CATV cables are equipped with screening constructions which fulfil the latest EN 50117-2-n standard. Drop cables follow classes A, B or C, Trunk cables reach class A+ or A++ performance.

Anti-aging and low reflections

The dielectrics consist of physically foamed cellular PE, thus no chemical additives are needed and no aging effects appear.

Halogen-free and flame retardant

For each application the correct sheath material. You can choose between FRNC for indoor use and PE for outdoor use. Also water resistant materials being both halogen-free and flame retardant are available.

Connector compatibility




Draka CATV cables are compatible to all major connectors – we have this approved by leading connector manufacturers. Compatibility certificates and all relevant data sheets are available for download at www.draka.com/communications or www.prysmiangroup.com.



Approved by many network operators




Many users appreciate the quality and reliability of Draka. Thus, our Drop and Trunk cables are approved, e.g. by Kabel Deutschland (KDG), TeleNet or UPC.



Drop cable Indoor cable with PVC or FRNC sheath				Screening Option		
				 <p>S „Super“ 2 bonded Al-PET foils + 70-80% braid Screening attenuation > 110 dB Class A* + reserve</p>	 <p>A „Advanced“ Al-PET foil + 70-80% braid Screening attenuation > 90 dB Class A*</p>	 <p>E „Economy“ Al-PET foil + 40% braid Screening attenuation > 80 dB Class B/C*</p>
Type	Attenuation @ 862MHz	Inner conductor/ dielectric	Outer Diameter			
Coax15 AD 06	30 dB/100 m	0.66/2.95 mm	4.3 mm	Cabelcon: F-60 Mini 3.2/5.6 PPC: CMP-MC32 Pink • CMP-MC30 Yellow		
Coax11 AD 08	24 dB/100 m	0.8/3.5 mm	5.0 mm	Cabelcon: Series -11 • Series -106 – F-59 (3.7) PPC: CMP-MC37 Orange		
Coax10 AD 10**	19 dB/100 m	0.95/4.65 mm	6.8 mm	Cabelcon: Series -01 (4.9) • F-56 (4.9) PPC: Series A025 (4.9) • CMP-6-49 Blue • EX6-49/83		
Coax9 AD 11	17 dB/100 m	1.13/4.8 mm	6.8 mm	Cabelcon: Series -01 (5.1) • F-56 (5.1) PPC: Series A025 (5.1) • CMP-6-51 Grey • EX6-51/83		
Coax6 AD 16	13 dB/100 m	1.61/7.15 mm	10.1 mm	Cabelcon: Series -C232 • Series -32 • FM-RG11 PPC: Series B004 • EX11		
Coax10 Trishield	18.6 dB/100 m	1.0/4.55 mm	6.8 mm	2 bonded Al-PET foils + 50% braid	Cabelcon: Serie -01 (4,9) • F-56 (4,9) PPC: Serie A025 (4,9) CMP-6-49 Blue EX6-49/83	

* Class A, B and C according to EN 50117-2-1, -2, -4 and -5 (incl. Cenelec SC46XA)

** Also available with super light aluminium braid: Coax10 AD 10 S Al

Trunk cable Outdoor cable with PE sheath				Screening Option		
				 <p>S „Super“ Welded CU tube Screening attenuation > 120 dB Class A++*</p>	 <p>A „Advanced“ Cu-PET-Cu foil + 60% braid Screening attenuation > 100 dB Class A+*</p>	 <p>E „Economy“ Cu foil + 60% braid Screening attenuation > 90 dB Class A/B*</p>
Type	Attenuation @ 862MHz	Inner conductor/ dielectric	Outer Diameter			
Coax6 CT 15	11 dB/100 m	1.55/7.25 mm	10.1 mm	-	Cabelcon: Serie -C232 • Serie -32 • FM-RG11 PPC: Serie B004 • EX11	
Coax4 CT 22	9 dB/100 m	2.2/8.8 mm	12.3 mm	Cabelcon: Serie -C303 Serie -03 PPC: Serie D015 KES connector	Cabelcon: Serie -C303 • Serie -03 PPC: Serie D015	
Coax4 CT 22	9 dB/100 m	2.2/9.3 mm	12.5 mm	-	Cabelcon: Serie -309 PPC: Serie D056	
Coax4 CT 22	9 dB/100 m	2.2/10.2 mm	13.8 mm	-	Cabelcon: Serie -413 • Serie -C314 PPC: Serie E019	
Coax3 CT 33	6 dB/100 m	3.3/13.5 mm	17.1 mm	Cabelcon: Serie -C525 Serie -25 PPC: Serie G003 KES connector	Cabelcon: Serie -C525 • Serie -25 PPC: Serie G003	
Coax2 CT 48	4.1 dB/100m	4.75/19.4mm	24.9 mm	Cabelcon: Serie -17 KES connector	-	

* Class A+ and A++ according to EN 50117-2-3 (incl. Cenelec SC46XA)

Future-oriented cabling Solutions

We have offices and production facilities all over the world. To get in touch with us and find out how we can help you build your network, visit our website at www.draka.com/communications or contact us.

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