Future Perspective Cabeling 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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Draka

A brand of the Prysmian Group

Draka

Draka Media & Broadcasting Solution

WHO ENABLES THE BROADCASTING OF EVENTS?
DRAKA STUDIO BROADCAST CABLES

A brand of the

Prysmian Group

Prysmian Group
Linking the future

As the worldwide leader in the cable industry, Prysmian Group believes in the eff ective, 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 fi bre 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 fi bre 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.

Quality cables for the transmission of digital and analogue audio and video signals to professional levels

RANKED AS NUMBER ONE IN EUROPE, DRAKA IS A LEADING PROVIDER OF PROFESSIONAL BROADCAST AND STUDIO CABLES. SINCE 1958 DRAKA BROADCAST SOLUTIONS HAVE DELIVERED LEVELS OF TECHNICAL EXCELLENCE THAT HAVE PROVEN THEMSELVES IN PRACTICE UNDER THE MOST DEMANDING CONDITIONS.

Draka broadcast cables are optimally tailored to an information and entertainment market which is now spanning the analogue and digital world. Whether broadcasting a regional traffic report by a local radio station or the transmission of a World Class soccer into the world – the success of broadcast production always depends on the reliability of the audio, video, camera and lighting control cables. Draka has decades of experience in the cable manufacturing, research and development in close cooperation with broadcasting professionals.

Inspiring partnerships

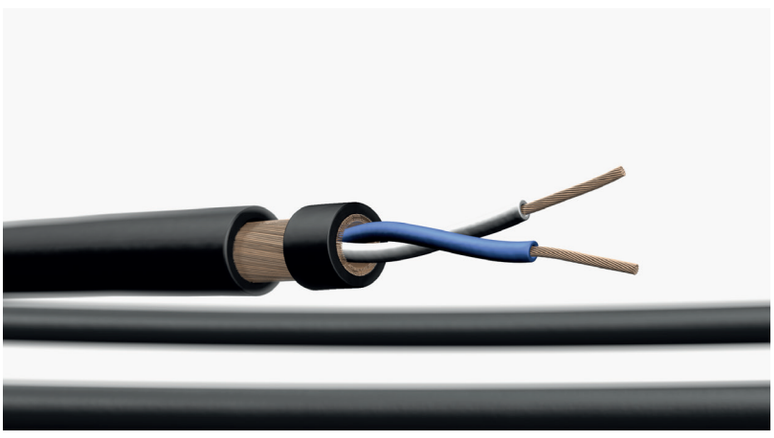
Since the beginning of professional broadcasting, Draka has worked in close cooperation with leading national and international broadcasting companies. Leading edge solutions in the form of high-quality analogue, SDI, HDTV and hybrid fiber optic arise from these partnerships. With 30 billion viewers around the globe, the World Cup 2006 in Germany, for example, was the most-watched event in television history during a period of 4 weeks. Draka delivered the cables necessary for this new record and enabled broadcasts in HDTV for the first time. Draka also supported Euro Masters 2008 in Austria and Switzerland. Draka meets the specifications of national broadcasters as well as with AES/EBU, SMPTE, IEC, EN and VDE.

Leading sound studios are users of Draka cables. Superior quality of sound requires cutting edge technology where cabling is an essential link. In this field, Draka offers modern cable solutions for analogue and digital recording as well as for microphone and speaker cabling. As one of the world's leading manufacturers of passive network cables, Draka can guarantee the high efficiency of passive transmission cables which are produced using the latest technology. For live events, there is only a single chance for a successful performance. There is no alternative to absolute reliability. Draka offe rs the best solutions for lighting control, sound, microphone and speaker interconnections and can quickly respond to the requirements of production companies in order to guarantee an optimum live performance.

Comprehensive product line

The studio broadcast solutions of Draka comprise:

- High-precision analogue and digital 75 Ω video cables
- Analogue and digital multicore audio cables
- Microphone cables, speaker cables
- Lighting control and Sound cables
- Camera cables for studio and outdoor transmission
- Multicore camera cables
- Studio connecting cables
- Hybrid camera cables




HD


THOMSON BROAD


16: 10:28
16: 10:28

Factors of success

THE DEMANDS ON THE STUDIO TECHNIQUE ARE NEARLY UNLIMITED. SPORTS EVENTS, POLITICS, CULTURE AND NEWS – CAMERA TEAMS HAVE TO DELIVER OPTIMAL PICTURES WORLDWIDE, AND WITH OUR HIGH-PERFORMANCE PRODUCTS WE ARE YOUR RELIABLE PARTNER. WHETHER STUDIO PRODUCTION OR OUTSIDE BROADCASTING, ANALOGUE OR SDI, SDTI OR HDTV, LIVE OR VIRTUAL – WE HAVE GOT THE RIGHT CABLE FOR YOU.

Our products are developed and produced for the latest technology. We guarantee high efficiency of the passive transmission. To support your success, our products offer economic efficiency and excellent capacity reserves.

Product Diversity

- High-precision analogue and digital 75 Ω video cables, switcher and mixer, VTR and monitor.
- Analogue and digital multi-pair cables for the audio connection of camera connecting studios and broadcasting vans.
- Microphone cables in robust constructionfor the application on stage, in the speaker's cabin or during outside broadcasting.
- Speaker cables easy to wind up and multipurpose: they can be used for PA systems, security monitoring, edit suites, hi-fi systems and post production.
- Light & sound cables for light control (according to DMX512 standard) and highly flexible cables for musical instruments.
- Triax camera cables for the electric connection between camera and CCU; also available as Triflex cable for mobile application.
- Multicore camera cables assembled for leading camera systems upon request.
- Studio connecting cables for spacesaving and ergonomic application.
- Optical fiber cables for long-distance transmission.

Service-oriented

With our products we create the conditions for a reliable and safe transmission of signals. Our studio cables fulfil significant specifications like ARD- and BBC-Specification, AES/EBU, SMPTE, IEC, EN and VDE. Thus, we can guarantee optimal transmission characteristics and best electromagnetic compatibility. Our studio cables are available with various outer sheath versions: PVC, PVC-rubber, FRNC or PUR. Our enormous experience is the basis for the high and certified quality standards our products are known for. Our offer is completed by qualified advisory service prior to the purchase decision, information as to the installation and a flexible logistics concept.

Triax, video and audio cables made by Draka Communications – extreme space ratio and still optimal transmission characteristics.

Capacity reserves

TODAY, STUDIO PRODUCTIONS AND OUTSIDE BROADCASTINGS HAVE TO BE REALISED IN MUCH SHORTER TIME. THERE IS NO TIME FOR TECHNICAL PROBLEMS. OUR STUDIO AND TRANSMISSION CABLES HAVE A HIGH NOISE-IMMUNITY, AN EXCELLENT EMC, AN OPTIMAL SCREENING FACTOR AND ENORMOUS CAPACITY RESERVES –TRANSMISSION RESULTS ARE OUTSTANDING EVEN WHEN USING LONG APPLICATION LENGTHS. THIS IS ACHIEVED BY THE APPLICATION OF SELECTED MATERIALS AND AN OPTIMAL CABLE DESIGN.

Transmission quality
Digital demands imply a good transmission performance. The quality of the signals is often limited by typical interference factors. Among others, these are the near end cross talk (coupling of pairs next to each other) and the line-attenuation.

In order to achieve an excellent transmission quality, we develop and produce studio cables with a high screening factor, low line-attenuation and low transfer impedance.

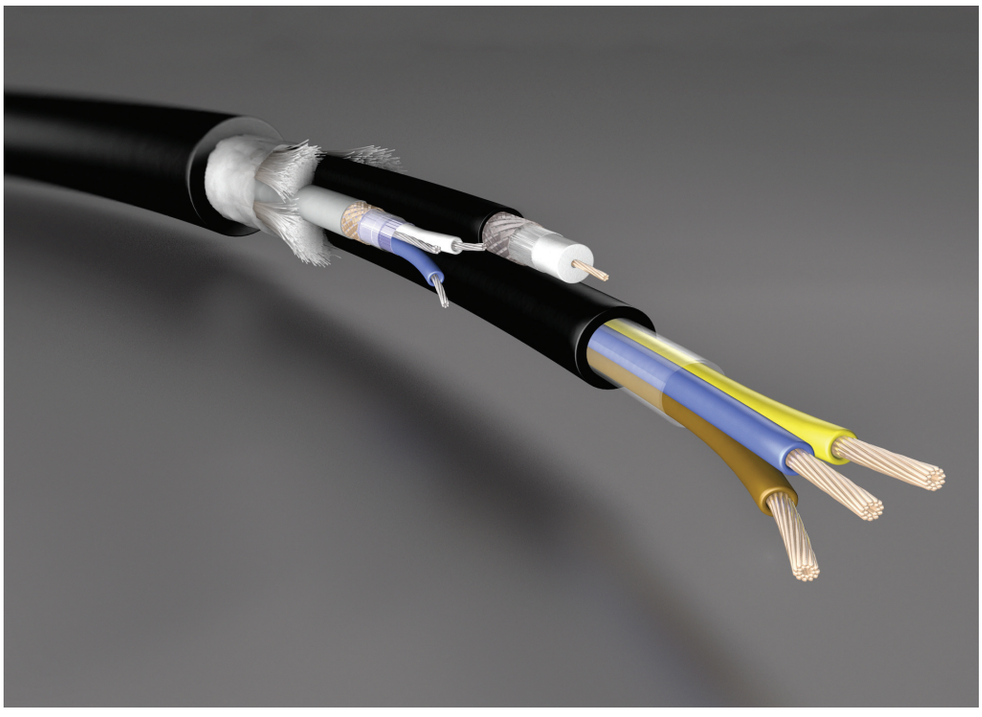
For our audio cables, this is obtained by perfectly adjusted pair twisting lengths and a 100% pair screening.

We apply an aluminium-laminated foil and a tight, tinned copper braid for fixed installations. For mobile applications we recommend our highly flexible cables with a screening of spiraled wires.

Screening Factor
Professional transmissions can only be achieved by a high noiseimmunity which has been standard with our studio cables for years. The high-quality screening of our products ensures an exceptionally high noiseimmunity in an electromagnetic environment without emitting interferences on other systems.

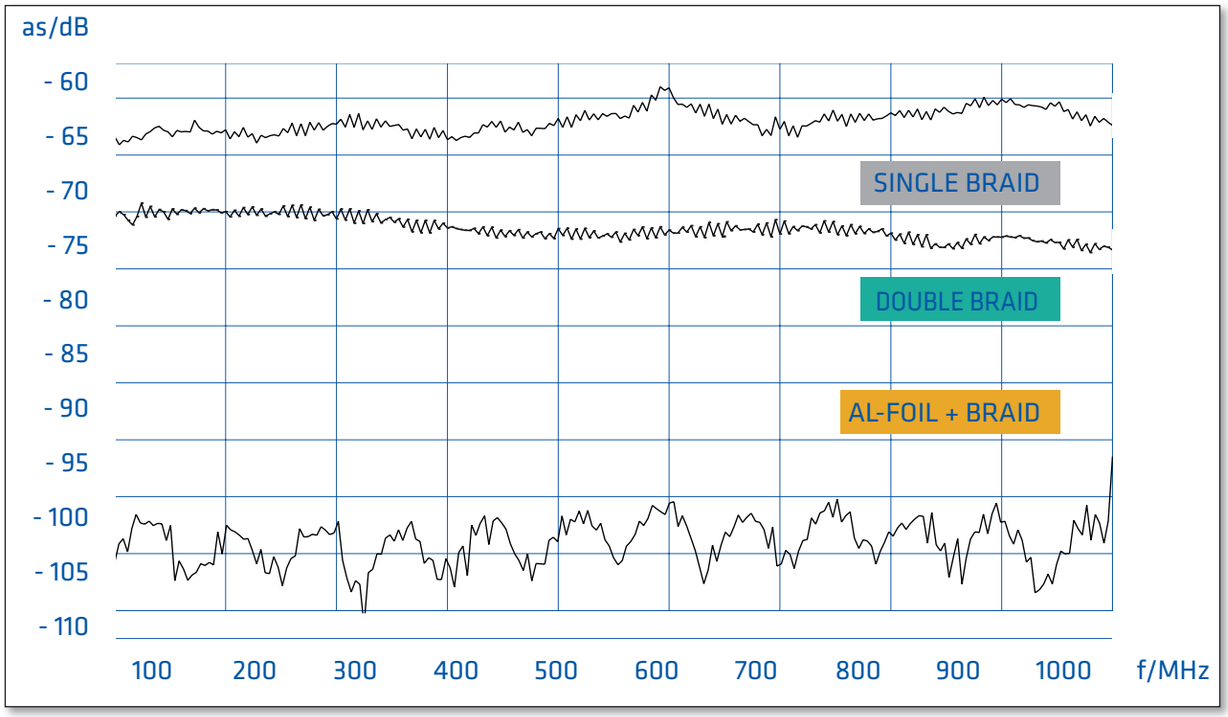
Fact is: the higher the screening factor, the better the noise-immunity of the cable. A screening of aluminium-double-laminated foil plus braid results (at 300 MHz) in a screening efficiency improved by 20 dB in comparison to a cable screened with a double braid.

Compared to a cable screened with a single braid, the screening factor even incrases by 30 dB. With this production quality we fulfil the specifications of public broadcasting companies and international standards. For economical reasons, our products with aluminium-double-laminated foil and copper braid are applied in high-frequency ranges, thus achieving low transfer impedances.



Multicore camera cables: coaxial elements, power-, audio- and pilot cores. Upon request, our studio cables are available with halogenfree FRNC sheath.

Screening factor



Maximum transmission distance

Draka Video Cable Types	Attenuation at 1.5GHz (half clock frequency) as per data sheet [dB]	Calculated application length acc. To SMPTE 424M [m]	3Gb/s HD 1080P max. cable length tested TG 700 & WFM 8300 of Tektronix [m]
0.6/2.8 AF	43.2	47	80
0.8/3.7 AF	31.3	64	110
0.8L/3.7 Dz	33.9	59	100
1.0/4.8 AF	24.9	72	130
1.4/6.6 AF	19.6	102	190
1.6/7.3 AF	16.9	119	230
HD PRO 0.6/2.8 AF	39.6	50	100
HD PRO 0.8/3.7 AF	30.6	66	120
HD PRO 1.0/4.8 AF	24.9	80	150

Fire protection

FIRE PROTECTION IS AN IMPORTANT ASPECT IN THE STUDIO AREA. PVC CABLES WERE OFTEN USED IN THE PAST. THEY ARE HARD TO IGNITE, BUT THEY DO NOT PREVENT A SPREAD OF FIRE. THEY EVEN EMIT CORROSIVE AND TOXIC GASES. WHERE STRONG SECURITY REGULATIONS HAVE TO BE ADHERED TO WE CAN PROVIDE STUDIO CABLES WITH FRNC (FLAME-RETARDANT-NON-CORROSIVE) SHEATH.

Testing

The secret of good fire protection characteristics lies in the material applied in our cables: On the one hand the fire load is considerably reduced by applying cellular PE, on the other hand the application of heat transmitting aluminiumlaminated foil is an additional fire barrier.

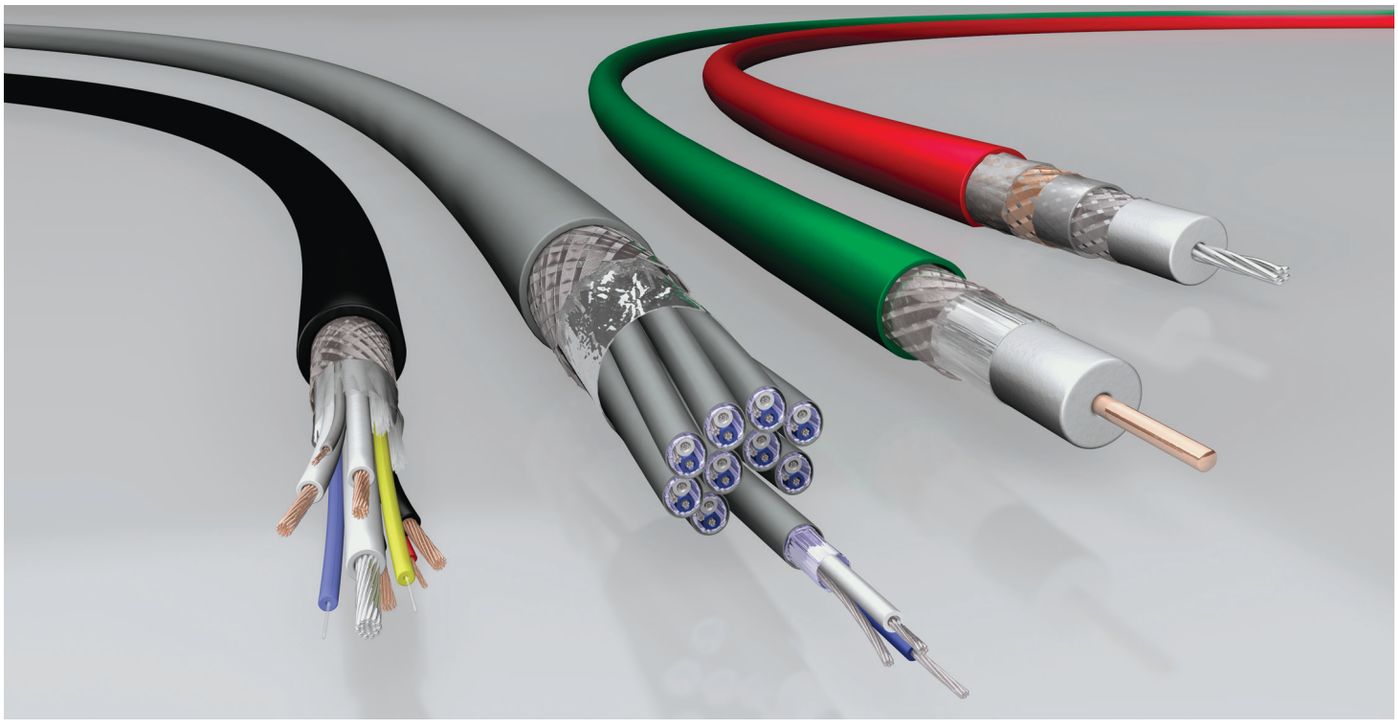
In order to examine the specific fire characteristics, our studio cables are subject to standardized test methods where either a single cable (test method B = IEC 60332-1) or a cable bundle (Test method C = IEC 60332-3-24) is tested. While the single cable is exposed to only one flame, the second test method examines the strength of the fire propagation by exposing a cable bundle to a line of flames for a longer period of time. The outcome: Our studio cables fully comply with the strong DIN regulations.

At a glancer

- No fire propagation as the cable extinguishes itself automatically, i.e. no transmission of the local fire alongside the cables.
- No emission of corrosive gases.
- Very low smoke production.
- No Dioxin in the fire remains.

A 60 cm long piece of cable is exposed to a flame for 60 seconds. The cable does not ignite.

A cable bundle is exposed to a line of fl ames for 20 minutes in a 4 meter high cabinet. Approximately one meter above the fl ames the cable bundle must extinguish itself with only a minimal production of smoke.



FIND OUT MORE ABOUT OUR BROADCASTING AND MEDIA CABLES BY VISITING US AT **WWW.DRAKA.COM/COMMUNICATIONS** OR **WWW.PRYSMIANGROUP.COM**. THERE YOU WILL FIND CERTIFICATION INFORMATION, DATA SHEETS, WHITE PAPERS, AND MORE. OR EMAIL US AT MULTIMEDIA@PRYSMIANGROUP.COM

Radio and television stations as well as film stations are using our wide variety of products, ranging from audio-, video- and triax cables, microphoneand loudspeaker cables as well as optical fibre cables.

The wide range of different applications reflects not only our extensive application know-how, but also its decades of experience and considerable competence in the field of cables. After all, our roots go back to the 19 th century.

As a reliable partner of trading, industrial and service companies we offer flexible, trend-setting cabling concepts which provide a high measure of investment security.

Not least responsible for that is the development department which works permanently on new solutions for the markets of tomorrow.

Video cables - Brilliance

NOWADAYS HIGH-QUALITY PICTURES ARE STANDARD. WITH A NARROW CHARACTERISTIC IMPEDANCE TOLERANCE, OUR VIDEO CABLES PROVIDE PERFECT CONDITIONS FOR AN OPTIMAL COMBINATION BETWEEN SWITCHER AND MIXER AS WELL AS BETWEEN VTR AND MONITOR.

Choice of material
Due to the application of cellular PE insulation material in combination with double laminated aluminium foil and tinned copper braid with high optical coverage, our video cables reach maximum electrical characteristics.

Beside the used materials, the cable design and the exact insulation are essential for the quality of our video cables. We pay attention to these requirements, and therefore we can realize lowest reflections, a high structural return loss and a considerably low fire load.

Packing density
Extreme space ratios arise no problems for our video cables. Using cellular PE, our video cables obtain a much better packing density at same performance. Therefore our video cables easily solve the space problems on cable carriers and in cable ducts.

Our video cables reach attenuation values reduced by 30% compared to plain PE cables. Thereby you obtain a higher transmission capacity with the same outer diameter.

Standards
Our video cables fulfil the regulation R2 of European and International standards like IEC 60 801-4 and EN 50083-2.

References
Proven Quality: The result of a comparative research by the independent institute RBT in Nuremberg attested our efforts in the product quality.

Even in video transmission systems up to 1.5 GHz our video cables ensure a screening value of > 100dB at a very low transfer impedance.

Video cables




Cable type		0.6/2.8 AF	0.8/3.7 AF	1.0/4.8 AF	1.4/6.6 AF
Electrical properties					
Attenuation* at (dB/100 m)	5 MHz	2.5	1.9	1.6	1.0
	100 MHz	10.5	7.9	6.2	4.8
	500 MHz	24.5	17.6	14.8	12.0
	1000 MHz	35.3	25.5	20.7	17.9
	2250 MHz	54.0	39.5	31.7	27.5
	3500 MHz	70.7	51.7	41.5	36.0
Characteristic impedance	Ω	75 ± 0.75	75 ± 0.75	75 ± 0.75	75 ± 0.75
Mutual capacitance	pF/m	56	56	56	56
Sreening factor	dB	> 100	> 100	> 100	> 100
Maximum application length at digital TV-transmission*					
Data rate Mbit/s	Application length				
143 NTSC SMPTE 170M	m	290	385	485	645
177 Composite PAL	m	255	340	430	570
270 SDI	m	230	305	365	480
360 Widescreen	m	200	265	315	415
1500 HDTV SMTPE 292M	m	60	80	100	144
Mechanical properties					
Diameter	mm	4.5	5.9	7.0	9.2
Weight	kg / km	27.0	49.0	69.0	109.0
Tensile force	N	60	100	140	200
Product code		**CT | SAP**	**CT | SAP**	**CT | SAP**	**CT | SAP**
PVC		2738600 | 1002160	2710800 | 1002151	2758300 | 1002198	2758400 | 1002200
FRNC-B					
FRNC-C		2850202 | 1002203	2850301 | 1002206	2850401 | 1002208	2850601 | 1002211
DMC Flex PUR					
Other cable types on request					

* 90 % of the calculated max. lengths

Analogue + Digital




	1.6/7.3 AF	HD PRO 0.6/2.8 AF	HD PRO 0.8/3.7 AF	HD PRO 1.0/4.8 AF
	0.9	2.5	1.9	1.6
	4.5	10	7.9	6.2
	11.0	24	17.6	14.8
	16.2	33.2	25.5	20.7
	25.0	90.2	39.5	31.7
	32.7	65.8	51.7	41.5
	75 ± 0.75	75 ± 0.75	75 ± 0.75	75 ± 0.75
	56	56	56	56
	> 100	> 100	> 100	> 100
	705	290	385	485
	630	255	340	430
	530	230	305	365
	460	200	265	315
	161	66	91	112
	10.3	4.5	5.9	7.0
	150.0	27.0	49.0	69.0
	270	60	100	140
	CT | SAP	**SAP**	**SAP**	**SAP**
	2757800 | 1002197			
		1014488	1014489	1014490
	2760901 | 1002202			

Analogue

0.6/3.7	0.6/3.7 Dz	0.8/4.9 Dz	1.0/6.6
2.4	2.4	1.8	1.4
10.9	10.9	8.0	6.5
25.7	25.7	19.2	15.5
	36.3	27.1	39.2
	56.5	47.0	
75 ± 0.75	75 ± 0.75	75 ± 0.75	75 ± 0.75
67	67	67	67
> 65	> 75	> 75	> 65
	285	380	
	245	325	
	200	265	
	170	225	
	55	75	
6.0	6.3	7.4	9.2
50.0	70.0	86.0	100.0
70	200	200	150
CT | SAP	**CT | SAP**	**CT | SAP**	**CT | SAP**
2740200 | 1002172	2741001 | 1002185	2741601 | 1002189	274200 | 1002191
7640200 | 1002213			2741001 | 1002216

Audio cables - The world of sounds

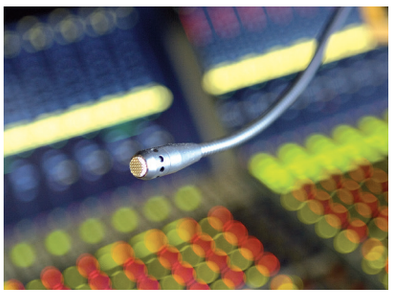
IN ORDER TO ENABLE A REALIZATION OF OPTIMAL TRANSMISSION, WE HAVE DEVELOPED A WIDE RANGE OF DIGITAL AND ANALOGUE AUDIO CABLES. OUR PRODUCTS OFFER AN EXCELLENT ADAPTATION TO YOUR SOUND TRANSMISSION SYSTEM AND A PERFECT SIGNAL TRANSMISSION. OUR ANALOGUE CABLES ARE DESIGNED IN ACCORDANCE WITH THE ARD SPECIFICATIONS, OUR DIGITAL AUDIO CABLES ADDITIONALLY COMPLY WITH THE AES/EBU STANDARD.

Characteristic impedance
High data rates require a special cable design. Therefore, our audio cables grant a low ER (relative permittivity) and low loss factor thanks to a foamskin, insulation with narrow tolerances. Thus, our digital audio cables achieve a specified characteristic impedance of 110 Ω and data rates of 3 Mbit/s (single channel) and 6 Mbit/s (two-channel).

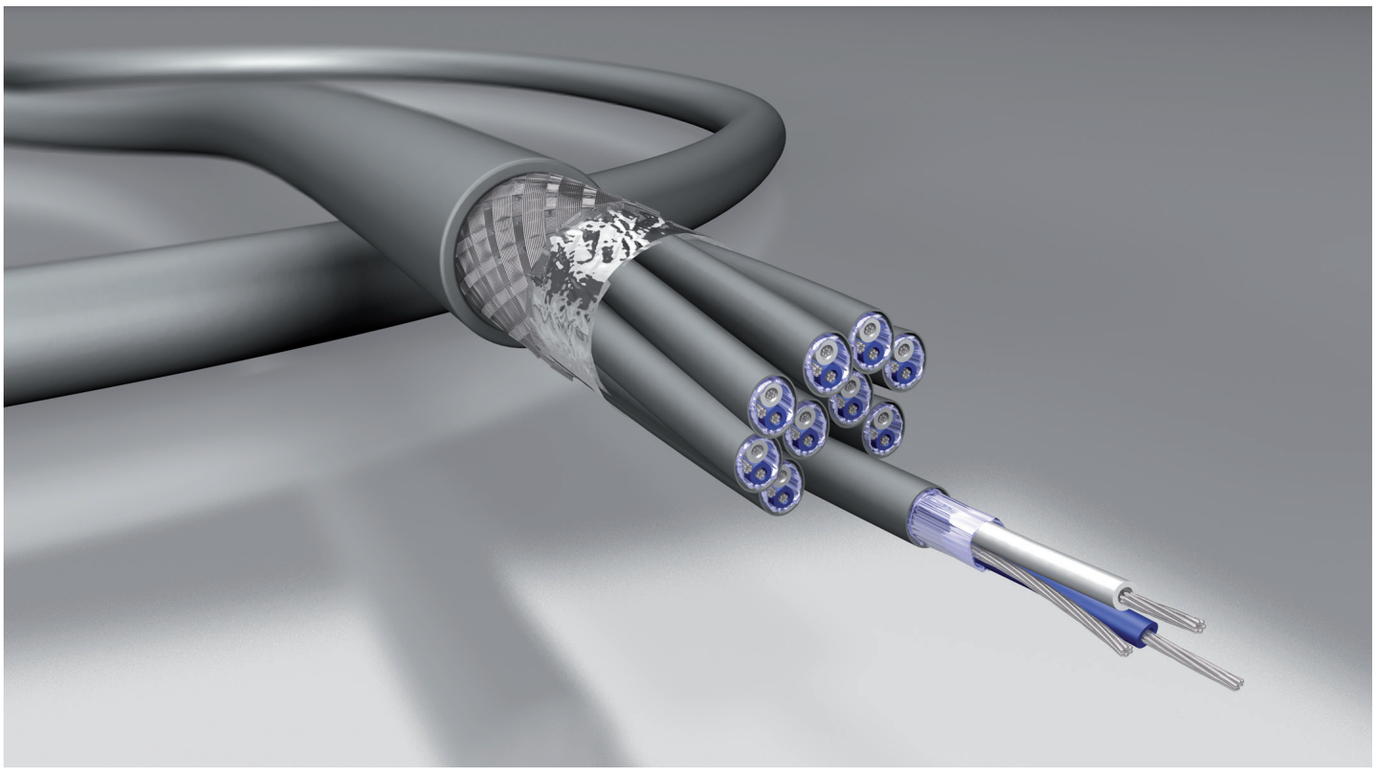
Transmission quality
We produce audio cables for the high demands of studios and broadcasting vans designed to provide a perfect transmission quality. What characterizes our products is a low fire load and a high aging and abrasion resistance.

Interference transmission resistance
Perfectly adjusted twisting of the pairs and an excellent individual screening guarantee interference transmission resistance, immunity to outer interferences and lowest cross talk even at high frequencies.

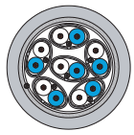
The right cable for every demand
Mobile application (e.g. outdoor live transmission of a concert) calls for high flexibility. Particularly suitable for this purpose are our products with the flexible spiraled copper wire screen. Fixed installations require high performances and best electromagnetic compatibility. This is guaranteed by an overall screening consisting of aluminiumlaminated foil and tight tinned copper braid.

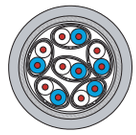


Audio cables fordigital and analogue broadcasting and TV-technique offer an enjoyment of sound to the audience



Audio cables

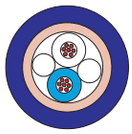





Cable type	Digital Sound nxP	AC 10 SS 26/7 nxP	Profisound Flex	AC 10 SS 23/1
Cable design Single Element				
Conductor	Stranded Cu-wires bare 0.12 mm²	Stranded Cu-wires tinned 0.14 mm²	Stranded Cu-wires bare 0.22 mm²	Solid Cu-wires bare 0.25 mm²
Insulation	Foam PP	Foam skin-PE	Foam skin-PP	Foam skin-PE
Pair screen	Spiraled Cu-wires	PET-Al-Foil + stranded Cu-wires	PET-Al-Foil + stranded Cu-wires	PET-Al-Foil + solid Cu-wire
Total construction				
Overall screen	Cu-braid	PET-Al-Foil		PET-AL-Foil
	tinned	+ Cu-braid		+ CU-braid
Sheath	DMC Flex PUR	FRNC	DMC Flex PVC	FRNC
Electrical properties				
Attenuation at (MHz) Nominal value				
0.015 (dB/100 m)	0.6	0.55	0.30	0.33
1	3.0	3.00	2.50	2.45
4	6.0	5.30	4.20	4.20
10	10.9	8.10	6.30	6.30
Characteristic impedance at 6 MHz	110 Ω	110 Ω	110 Ω	110 Ω
DC loop resistance at i 20°C ± 5°C and 500V	≤ 288 Ω/km	≤ 288 Ω/km	≤ 175 Ω/km	≤ 165 Ω/km
Mutual capacitance at 800 Hz	nom. 45nF/km	nom. 45nF/km	nom. 45nF/km	nom. 45nF/km
Diameter				
1P				4.60
2P		7.00	9.20	8.30
4P		8.40	10.00	10.90
8P		11.90	12.50	13.00
10P	10.50	13.70		14.00
12P		14.10	15.00	15.60
Product code	**SAP**	**CT | SAP**	**SAP**	
1P				7649010 | 1002105
2P		7652410 | 1002147		7649710 | 1002115
4P		7651610 | 1002126	1017131	
8P		7652111 | 1002142	1017132	7648710 | 1002103
10P	1016552	7651811 | 1002134	1018130	7649410 I 1002111
12P		7651911 | 1002137	1017133	7649510 | 1002113

* FRNC AES/EBU-standard, ARD-specification, DIN VDE 0472 part 804, test method B and C, IEC 60332-1, IEC 60332-3 CF

Digital

		
AC 10 S 26/1	AC 10 SS 24/7	XLR PRO Flex analog / digital
Solid Cu-wires	Solid Cu-wires	Solid Cu-wires
tinned	bare	bare
0.14 mm²	0.22 mm²	0.22 mm²
Foam skin-PE	Foam skin-PE	Foam skin-PE
PET-Al-Foil	Stranded Cu-wires	Stranded Cu-wires
+ Cu-braid		
PVC, FRNC	DMC Flex PVC	DMC Flex PVC
0.60	0.45	0.30
4.00	2.40	1.50
6.80	4.60	3.80
10.00	6.70	6.00
110 Ω	110 Ω	110 Ω
≤ 288 Ω/km	≤ 174 Ω/km	≤ 174 Ω/km
nom. 45nF/km	nom. 45nF/km	nom. 45nF/km
3.00	6.00	6.50
15.10		
7650200* | 1002118	2757601 | 1001982	1018270
7649410 | 1002111		

Analogue

	AC SP 26 / 30	AC S 24 / 7
	Stranded Cu-wires	Stranded Cu-wires
	bare	bare
	0.12 mm²	0.22 mm²
	PE	HDPE
	Spiraled Cu-wires	PET-Al-Folie
	bare	+ stranded Cu-wires
	DMC Flex PVC	PVC
	≤ 164 Ω/km	≤ 175 Ω/km
	nom. 75nF/km	nom. 90nF/km
	2.65	3.30
	CT | SAP	**CT | SAP**
	2963800 | 1002062	2962000 | 1002044

AC 10 SS 24/7 nxP

AC = Audio Cable
10 = tested frequency range in MHz
SS = super screen pair screen and overall screen with Al-laminated plastic foil
SP = spiraled screen pairs in spiraled wires
S = screen Al-laminated plastic foil
23 = AWG-value conductor diameter
nxP = Number of pairs

Camera cables - The world of pictures

CAMERA TEAMS SUPPLY IMPRESSIVE MOMENTS FROM SPORTS, CULTURE, POLITICS OR EVENTS OF THE DAY WORLDWIDE. EXTENSIVE PRODUCTIONS ARE REALIZED IN RECORDING STUDIOS. THE ASSIGNED CAMERA CABLES DETERMINE THE QUALITY OF THESE UNIQUE PICTURES, RECORDINGS AND IMPRESSIONS. TO EXHAUST THE POTENTIAL FUNCTION OF THE USED CAMERAS, WE OFFER YOU OUR HIGH-PERFORMANCE CAMERA CABLES TRIAX, TRIFLEX OR SMPTE 311M.

Compatibility
Camera cables of our product lines Triax and Triflex are suitable for all common camera systems.

Based on our close cooperation with experienced triaxial connector manufactures like Damar & Hagen, Fischer, Lemo as well as assemblers, we obtain short delivery times for our assembled camera cables.

Triax
Our product line Triax is optimized for the requirements of the studio technology. Best transmission quality basing on low attenuation, lowest DC-resistance (even with long application lengths), a long lifespan and a minimal weight are characteristic for our Triax camera cables. The cables are available with PUR (Polyurethane) outer sheath, enabling the Triax cables to be robust and flexible at any time.

Triflex
Triflex cables fulfil the high mobility requirements of the used camera cables during outdoor productions. This is ensured by fine-stranded wire inner conductors, combined with a special rubber compound between the braids. The outer sheath is made of a high flexible PVC material, available with a special abrasion-resistant PUR outer sheath upon request.

Typically Triax: Best transmission quality basing on low attenuation and lowest DC-resistance even in large application lengths. Furthermore: minimal weight and long lifespan.

Camera cables

Cable type		Triax 8 + 8/1	Triax 11+11/1	Triax 14
Cable design				
Inner conductor		Cu-wire silver plated ø 1.0 mm	Cu-wire silver plated ø 1.0 mm	Stranded Cu-wire silver plated ø 2.2 mm
Insulation		Foam skin-PE ø 4.5 mm	Foam skin-PE ø 6.5 mm	Foam skin-PE ø 9.7 mm
Inner screen		silver plated ø 5.1 mm	silver plated ø 7.1 mm	silver plated ø 10.5 mm
Insulation		PE ø 6.6 mm	PE ø 8.6 mm	PE ø 11.9 mm
Outer screen		Cu-braid bare ø 7.2 mm	Cu-braid bare ø 9.2 mm	Cu-braid bare ø 12.7 mm
Sheath		PVC, FRNC or PUR	PVC, FRNC or PUR	PVC, FRNC or PUR
Standard/reinforced		ø 8.4 / 8.9 mm	ø 10.9 / 12.2 mm	ø 14.5 mm / -
Electrical properties				
Attenuation	MHz	1 10 100 300	1 10 100 300	1 10 100 300
	(dB/100 m)	0.6 2.2 7.5 13.8	0.5 1.6 5.4 10.3	0.4 1.1 3.8 7.7
Characteristic impedance		75 Ω ± 3 %	75 Ω ± 3 %	≠75 Ω ± 3 %
DC-resistance	Ω/km			
Inner conductor	Ω/km	25	13	6
Inner screen	Ω/km	12	10	6
Outer screen	Ω/km	10	8	4
Insulation resistance				
Inner conductor/inner screen	(MΩ x km)	≥ 10^4	≥ 10^4	≥ 10^4
Inner screen/outer screen	(MΩ x km)	≥ 10^3	≥ 10^3	≥ 10^3
Capaticity	at 800 Hz pF/m	54	54	54
Return loss	MHz	1-100 100-300	1-100 100-300	1-100 100-300
	dB	≥ 26 ≥ 23	≥ 26 ≥ 23	≥ 26 ≥ 23
Screening factor	dB	≥ 75	≥ 75	≥ 75
Operating voltage		300 V eff.	400 V eff.	400 V eff.

Product codew	**CT | SAP**	**CT | SAP**	**CT | SAP**	**CT | SAP**	**CT | SAP**
	Triax 8	Triax 8/1	Triax 11	Triax 11/1	Triax 14
PVC	2765700 | 1002223		2766400 | 1002226		2766700 | 1002236
FRNC	2853201 | 1002266	2853203 | 1002268	2850801 | 1002264		7666700 | 1002273
PUR	2765500 | 1002221		2766600 | 1002233	2767101 | 1002243	2767000 | 1002240
PE			2766404 | 1002229		2766704 | 1002239

Triflex camera cables

Triflex 8+8/1	Triflex 11
Stranded Cu-wire	Stranded Cu-wire
silver plated	silver plated
ø 1.0 mm	ø 1.4 mm
Foam skin-PE	Foam skin-PE
ø 4.5 mm	ø 6.5 mm
silver plated	silver plated
ø 5.1 mm	ø 7.1 mm
TPE	TPE
ø 6.6 mm	ø 8.6 mm
Cu-braid	Cu-braid
bare	bare
ø 7.2 mm	ø 9.2 mm
Special PVC	Special PVC
or FRNC	or FRNC
ø 8.4 / 9.2 mm	ø 10.9 / -
1 10 100 300	1 10 100 300
0.7 2.6 8.4 15.1	0.5 1.8 6.5 11.6
75 Ω ± 3 %	75 Ω ± 3 %
28	15
12	10
10	8
≥ 10^4	≥ 10^4
≥ 10^3	≥ 10^3
54	54
1-100 100-300	1-100 100-300
≥ 26 ≥ 23	≥ 26 ≥ 23
≥ 75	≥ 75
300 V eff.	400 V eff.

CT | SAP	CT | SAP	CT | SAP
Triflex 8	Triflex 8/1	Triflex 11
2767300 | 1002244		2767400 | 1002249
2767900 | 1002255	2767901 | 1002256	2768100 | 1002259

Hybrid camera cable SMPTE 311M

Cable lay up		
Diameter	mm	9.2
Number and dimension auxiliary conductor		4 x 0.60 mm²
Number of signal conductor		2 x 0.22 mm²
Number of fiber optics		2 x 9/125µ
Number of strain relief elements	Ø	1 x 2.10 mm
Mechanical properties		
Bending radius	mm	65.00 mm
Sheath		PUR
Product code		
CT		2987002

Other cable types on request

The hybrid HDTV camera cable is applicable as a camera cable for slomos, as a camera cable for studio applications, as a patch cable or as a camera cable for mobile applications.

It is used in professional video productions for simultaneous transmission of power, video, audio and control signals and is intended to interconnect camera units and base stations in conjunction with the connector interface standard. It is suitable for all new digital camera systems of well-known manufacturers.

Multicore - Proven quality

THE SMOOTH PERFORMANCE OF YOUR PROVEN CAMERA SYSTEMS OF PHILIPS, PANASONIC, BOSCH, SONY, IKEGAMI, HIATACHI, JVC, RCA AND THOMSON HAVE BEEN A VALUABLE FACTOR FOR YEARS! TO MAKE SURE THAT YOUR SYSTEMS FUNCTION WITHOUT ANY LIMIT IN THE FUTURE, WE ARE STOCKING OUR RELIABLE MULTICORE CAMERA CABLES. SO WE CAN REALIZE A SHORT DELIVERY TIME OF MULTICORE CAMERA CABLES FOR COMMON SYSTEMSIN CASE OF REPAIR OR REPLACEMENT.

Compatibility
Camera cables of our product lines Triax and Triflex are suitable for all common camera systems.

Based on our close cooperation with experienced triaxial connector manufactures like Damar & Hagen, Fischer, Lemo as well as assemblers, we obtain short delivery times for our assembled camera cables.

Triax
Our product line Triax is optimized for the requirements of the studio technology. Best transmission quality basing on low attenuation, lowest DC-resistance (even with long application

Multicore




Cable type		755-804	757-703	755-901	752-10
Cable design					
Diameter	mm	20.0	16.0	22.2	10.0
Number and dimension of coaxial	75 Ω	5 x 0.8/3.7 AF	7 x 0.6/2.8 AF	5 x 1.0/4.8 AF	2 x 0.6/2.8 AF
Number of powercores	mm^2				2 x 1.5 mm^2 unscreened
Number of cores	mm^2				5 x 0.14 mm^2 unscreened unscreened
Mechanical properties					
Bending radius	mm	200.0	220.0	225.0	95.0
Sheath		DMC Flex PVC	PUR	FRNC-C	DMC Flex PVC
Product codew		**CT | SAP**	**CT | SAP**	**CT | SAP**	**CT | SAP**
		2961400 | 1002319	2758800 | 1002285	2985800 | 1002325	2740500 | 1002370

Other cables types on request

755-804
75: Characteristic impedance of the coaxiales
5: Number of coaxiales
8: cable construction
01: FRNC
02: PVC
03: PUR
04: DMC Flex PVC

756-12	758-2/1 HDTV	Premium Patch CAT7
12.7	13.5	7.0
6 x 0.38L/1.7	3 x 0.6/2.8 AF +5 x 0.38L/1.7	
2 x 1.5 mm² unscreened	6 x 0.5 mm² unscreened	
9 x 0.14 mm² unscreened 8 x 0.14 mm² unscreened	2 x 0.14 mm² unscreened 4 x 0.14 mm² unscreened	
130.0	140.0	25.0
PVC	DMC Flex PUR	DMC Flex PUR
CT | SAP	**CT | SAP**	**CT | SAP**
2739100 | 1002366	2739901 | 1002369	2602700 | 1006811

	VAN	VA 12	VAN 113
	14.0	11.8	13.5
	2 x 0.6/2.8 AF	1 x 0.8/3.7 AF +5 x 0.38L/1.7	1 x 0.6L/2.8 AF
	3 x 1.5 mm² screened		
	3 x 2 x 0.22 mm² screened	2 x 2 x 0.22 mm² screened	1 x 2 x 0.14 mm² screened
	140.0	120.0	120.0
	PUR	DM Flex PVC	DM Flex PVC
	CT | SAP	**CT | SAP**	**CT | SAP**
	2877000 | 1002306	2875700 | 1002302	2963200 | 1002321

VAN 113

V = Video
A = Audio
N = Power supply
1 = 1 x Video
1 = x Audiopair
3 = x Power element

Live on stage

LUXURIOUS ILLUMINATION AND STAGE SHOWS, REPORTING MOTION PICTURES, UNIQUE CONCERTS OR DOCUMENTATIONS FROM ALL CONTINENTS – WE OFFER CABLE SOLUTIONS FOR LIGHT & SOUND, MICROPHONE AND SPEAKERS. OUR CABLES ARE AVAILABLE WITH HIGHLY FLEXIBLE AND ABRASION RESISTANT OUTER SHEATH MADE OF DMC FLEX PUR OR DMC FLEX PVC.

Microphone Cable
Our microphone cables are designed to correspond with the requirements of stage applications as well as the quality requirements for professional studio productions. The DMC Flex PUR sheath is especially abrasion-resistant and cold-resistant. In cooperation with the connector manufacturer Neutrik, Zurich and the Swiss TV we have developed a cold-resisting, digital microphone cable. During the winter games in Davos, the cable was successfully tested under extreme temperature conditions. Besides, our analogue and digital microphone cables are used in speaker cabins or for post production. The cables are suitable for fixed installations or mobile applications.

Speaker Cable
Thousands of people are listening to a live concert, cabling of hi-fi systems, edit suites or post production – the right sound is absolutely necessary. You obtain best sound transmission quality by using our high-quality speaker cables with a DMC Flex PVC sheath. Round and flexible, they grant an easy wind up of the cable.

Light & Sound
Here you find our products for light control and musical instruments (for example E-guitar). Our guitar cables with graphite layer (low-noise guitar cables) reduce the interference caused by statical boost to a minimum. We offer high-quality products and take care of the requirements related to practice, such as flexibility, long application lengths and abrasion resistance. Our digital cables for light control fulfil the DMX 512 standard. They are suitable for fixed installation and mobile application and allow a simple controlling even by long transmission routes. To ensure the perfect sound of an electric or an electrically amplified instrument we have designed a special cable. Due to the DMC Flex PUR sheath and an unsymmetrical construction it is easy to wind up and nevertheless robust. The cable design ensures a low loss and high-quality transmission during application in studios and on stage.




Cable type	DMX PAT 512N	Micro 22	Micro 22 outside	Guitar cable DMC 1/6
Cable design				
Conductor	Stranded Cu-wires tinned 0.34 mm²	Stranded Cu-wires bare 2 x 0.22 mm²	Stranded Cu-wires bare 2 x 0.22 mm²	Stranded Cu-wires bare 2 x 0.22 mm²
Insulation	PE	PVC	Foam skin-PE	PE
Overall screen	PET-Al-Foil Stranded Cu-wires	Spiraled Cu-wires	Aramid Spiraled Cu-wires	Spiraled Cu-wires Spiraled Cu-wires
Number of powercores				
Mechanical properties				
Diameter	5.7 mm	6.0 mm	6.5 mm	6.2 mm
Bending radius	60 mm	25 mm	30 mm	25 mm
Product code	**CT**	**CT | SAP**	**CT | SAP**	**SAP**
	29955701	2989503 | 1002099	2963500 | 1002059	2757700 | 1002523

Other cables types on request.