



SMPTE 311M-HD-Hybrid-Camera Cable

Hybrid-HDTV-Camera Cable



Application

This Hybrid HD Camera Cable $2SM 9/125 + 4 \times AWG20 + 2 \times AWG24$ acc. to SMPTE 311M-Standard contains Single-Mode Optical Fibres, Auxiliary- and Signal Conductors. It is used in professional video productions for simultaneous transmission of energy, 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.

Standards

SMPTE 311M

Flame resistance

FRNC jacket: IEC 60332-1, IEC 60754-2, IEC 61034

Construction

Element 1: Auxiliary Conductors AWG20 (4 x 0.6 mm²)						
Conductor	tinned stranded copper wires, 19 x 0.20 mm, diameter 1.0 mm					
Insulation	HDPE, diameter 1.5 mm					
Identification	2 x black, 2 x white					
Element 2: Signal Co	onductors AWG24 (2 x 0.22 mm²)					
Conductor	tinned stranded copper wires, 7 x 0.20 mm, diameter 0.6 mm					
Insulation	HDPE, diameter 1.1 mm					
Identification	1 x red, 1 x grey					
Element 3: Fibre Opt	tic Single Mode (2 x 9/125µ)					
Mode field diameter	at 1310 nm, diameter 9.5 μ m \pm 1 μ m					
Cladding diameter	diameter 125 μ m \pm 1 μ m					
Concentricity error	≤ 1 µm					
Coating material	UV-cross-linked Acrylate, diameter 245 μm					
Buffer material	Thermoplastic, diameter 0.9 μ m \pm 0.05 μ m					
Identification	1 x blue, 1x yellow					
Element 4: Strength	Member AWG16 (1 x 1.22 mm2)					
Conductor	galvanized steel wires, diameter 1.6 mm					
Insulation	HDPE, diameter 2.1 mm					
Identification	1 x white					





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Stranding	Core: 1x Element 4, diameter 2.1 mm Layer: 4x Element 1 + 2x Element 2 + 2x Element 3 in the outer interstices 4x fibrillated Polypropylene as needed for roundness, diameter 5.2 mm Sequence according to the above drawing				
Wrapping	1 x non-woven fabric tape, diameter 5.4 mm				
Screen	Copper wire braid, tinned 95% opt. coverage, diameter 5.9 mm				
Sheath	PUR or FRNC, diameter 9.2 mm black, RAL 9005				
Printing	PUR: DRAKA SMPTE 311 M Zero-Loss HD Cable + batch number + meter marking FRNC: DRAKA SMPTE 311 M Zero-Loss HD Cable FRNC + batch number + meter marking				

Mechanical properties

Temperature range PUR (FRNC)	during operation	- 40° C to + 70° C (-25°C to +70°C)
Max. humidity		95 %

Electrical properties

at 20°C

Auxiliary Conductors AWG20 (4 x 0.6 mm ²)	
DC resistance	≤ 35.3 Ω/km
Loop resistance	≤ 70.6 Ω/km
Insulation resistance	$\geq 10^4 \mathrm{M}\Omega^*\mathrm{km}$
Test voltage	1750 V _{AC rms}
Operating voltage	≤ 300 V _{AC rms}

Signal Conductors AWG24 (2 x 0.22 mm²)

DC resistance	≤ 97.5 Ω/km
Loop resistance	≤ 184 Ω/km
Insulation resistance	$\geq 10^4 \mathrm{M}\Omega^*\mathrm{km}$
Test voltage	1750 V _{AC rms}
Operating voltage	≤ 300 V _{AC rms}

Overall screen

Overall Screen				
DC resistance		≤ 20 Ω/km		

Optical properties

at 20°C

ribre Optic Single Mode (2 x 9/125µ)					
Cut-off wavelength		1100 - 1350 nm			
Attenuation	at 1310 nm	0.5 dB			
Dispersion	at 1310 nm	3.5 ps/nm*km			



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Technical data

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Product	Type	Weight	Standard	Drum size	Copper	Tensile	Minimum	Storage
code			delivery		content	force	bending	
			length				radius	
		kg/km	m	PWD		N	mm	
60027899	SMPTE 311M	115	1000	760/470/500	47.2	800	65	inside
glossy	Hybrid Camera							
	Cable							
60014967	SMPTE 311M	115	1000	760/470/500	47.2	800	65	inside
dull	Hybrid Camera							
	Cable							
60014856	SMPTE 311M	115	1000	760/470/500	47.2	800	90	inside
	Hybrid Camera							
	Cable FRNC							

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