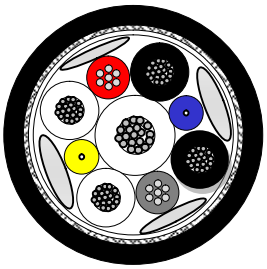
SMPTE 311M-HD-Hybrid-Camera Cable

Hybrid-HDTV-Camera Cable



Application

This Hybrid HD Camera Cable 2SM 9/125 + 4 x AWG20 + 2 x 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 Conductors 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 Optic Single Mode (2 x 9/125µ)	
Mode field diameter	at 1310 nm, diameter 9.5 µm ± 1 µm
Cladding diameter	diameter 125 µm ± 1 µm
Concentricity error	≤ 1 µm
Coating material	UV-cross-linked Acrylate, diameter 245 µm
Buffer material	Thermoplastic, diameter 0.9 µm ± 0.05 µm
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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Construction

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 mm²)		
DC resistance		≤ 35.3 Ω/km
Loop resistance		≤ 70.6 Ω/km
Insulation resistance		≥ 10^4 MΩ*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		≥ 10^4 MΩ*km
Test voltage		1750 $V_{AC\ rms}$
Operating voltage		≤ 300 $V_{AC\ rms}$

Overall screen		
DC resistance		≤ 20 Ω/km

Optical properties

at 20°C

Fibre 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

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