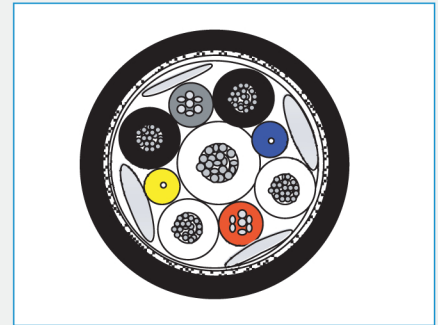


# SMPTE 311M-HD-Hybrid-Camera Cable

## Hybrid-HDTV-Camera Cable

### Construction

<b>Element 1: Auxiliary Conductors AWG20 (4 x 0.6 mm<sup>2</sup>)</b>	
<b>Conductor</b>	tinned stranded copper wires, 19 x 0.20 mm, diameter 1.0 mm
<b>Insulation</b>	HDPE, diameter 1.5 mm
<b>Identification</b>	2 x black, 2 x white
<b>Element 2: Signal Conductors AWG24 (2 x 0.22 mm<sup>2</sup>)</b>	
<b>Conductor</b>	tinned stranded copper wires, 7 x 0.20 mm, diameter 0.6 mm
<b>Insulation</b>	HDPE, diameter 1.1 mm
<b>Identification</b>	1 x red, 1 x grey
<b>Element 3: Fibre Optic Single Mode (2 x 9/125µ)</b>	
<b>Mode field diameter</b>	at 1310 nm, diameter 9.5 µm ± 1 µm
<b>Cladding diameter</b>	diameter 125 µm ± 1 µm
<b>Concentricity error</b>	≤ 1 µm
<b>Coating material</b>	UV-cross-linked Acrylate, diameter 245 µm
<b>Buffer material</b>	Thermoplastic, diameter 0.9 µm ± 0.05 µm
<b>Identification</b>	1 x blue, 1x yellow
<b>Element 4: Strength Member AWG16 (1 x 1.22 mm<sup>2</sup>)</b>	
<b>Conductor</b>	galvanized steel wires, diameter 1.6 mm
<b>Insulation</b>	HDPE, diameter 2.1 mm
<b>Identification</b>	1 x white
<b>Cable lay up</b>	
<b>Stranding</b>	Core: 1 x Element 4, diameter 2.1 mm Layer: 4 x Element 1 + 2 x Element 2 + 2 x Element 3 and in the outer interstices 4 x fibrillated Polypropylene as needed for roundness, diameter 5.2 mm Sequence according to the above drawing
<b>Wrapping</b>	1 x non-woven fabric tape, diameter 5.4 mm
<b>Screen</b>	Copper wire braid, tinned 95% opt. coverage, diameter 5.9 mm
<b>Sheath</b>	PUR or LSZH, diameter 9.2 mm black, RAL 9005
<b>Weight</b>	Nom. 115 kg/km
<b>Tensile force N</b>	Nom. 800



### 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

### Fire Rating

IEC 60332-1, IEC 60754-2, IEC 61034

### Mechanical Properties at 20°C

<b>Temperature range PUR (LSZH)</b>	during operation	- 40° C to + 70° C ( -25°C to +70°C)
<b>Max. humidity</b>	-	95 %

### Electrical Properties at 20°C

<b>Auxiliary Conductors AWG20 (4 x 0.6 mm<sup>2</sup>)</b>		
<b>DC resistance</b>	-	≤ 35.3 Ω/km
<b>Loop resistance</b>	-	≤ 43 Ω/km
<b>Insulation resistance</b>	-	≥ 104 MΩ*km
<b>Test voltage</b>	-	1750 V <sub>AC rms</sub>
<b>Operating voltage</b>	-	≤ 300 V <sub>AC rms</sub>
<b>Signal Conductors AWG24 (2 x 0.22 mm<sup>2</sup>)</b>		
<b>DC resistance</b>	-	≤ 97.5 Ω/km
<b>Loop resistance</b>	-	≤ 184 Ω/km
<b>Insulation resistance</b>	-	≥ 104 MΩ*km
<b>Test voltage</b>	-	1750 V <sub>AC rms</sub>
<b>Operating voltage</b>	-	≤ 300 V <sub>AC rms</sub>
<b>Overall screen</b>	-	
<b>DC resistance</b>	-	≤ 20 Ω/km

### Optical Properties

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

### Ordering Information

P/N	Product Description	P.U
1002458 CT2987000 glossy	SMPTE 311M Hybrid Camera Cable, Hybrid-HDTV-Camera Cable, SMPTE 311M-HD-Hybrid-Camera Cable	1000m/drum
1008069 CT2987002 dull	SMPTE 311M Hybrid Camera Cable, Hybrid-HDTV-Camera Cable, SMPTE 311M-HD-Hybrid-Camera Cable	1000m/drum
1018337 CT7687000	SMPTE 311M Hybrid Camera Cable LSZH, Hybrid-HDTV-Camera Cable, SMPTE 311M-HD-Hybrid-Camera Cable	1000m/drum