



**SMPTE 311M - hybrid camera cable
FRNC**

- SMPTE 311 compliant
- suitable for extended distances (up to 4000 m)
- 2 x single-mode optical fibre conductors E9/125 µm
- 6 x copper lines (4 x power + 2 x remote control)
- central stranded steel strength member, 19 x 0.30 mm
- flame retardant and non corrosive (FRNC)

This rugged, extremely durable composite cable complies with the SMPTE 311 standard and was designed for use with professional HD cameras. It features two bend-resistant single-mode optical fibre cables built in compliance with ITU-T G.657A, which conduct the HD signal across extremely long distances of up to 4000 metres. The cable also has four integrated power lines and two control signal conductors. A central insulated steel core ensures the maximum tensile strength. The CAM311 hybrid cable is available in a variety of jackets for various purposes. A flexible, temperature-resistant PUR jacket is the best for outdoor applications, while FRNC is the material of choice for installations. The CAM311 is available as both bulk cable and in premade models (CAM-P...) such as a cable with LEMO-SMPTE connectors. We recommend ordering premade cables from us, as we are among the few manufacturers with the requisite certification and sophisticated measurement and production technology necessary for production.

hybrid

twisting	2 fibers + 4 power cond. + 2 signal cond. + fillers twisted around a central steel strength member, Ø 1.5 mm isolated
overall shield	tinned copper braid, DC resistance < 20 Ω/km
taping	core stranding and shielding are wrapped with fleece
outer jacket	FRNC
overall diameter	9.2 mm

fiber optic

fiber type	Single-Mode 9/125 µm, ITU G.657.A
mode field diameter	8.9 ± 0.8 µm
cladding diameter	125 µm
primary coating	acrylate, Ø 245 µm
secondary coating	tight buffered fibre, Ø 0.9 mm
core colors	blue and yellow
max. ttenuation @ 1310 nm	< 0.5 dB/km

mechanical & thermal characteristics acc. to IEC 60794-1-2

tensile strength	2000 N acc. to test E1
crush resistance	3000 N/10 cm acc. to test E3
flex resistance	50,000 cycles acc. to test E8
steel rope	-40°C / +85°C acc. to test F1 (temperature cycling)

power core

conductor	stranded tinned copper, 19 x 0.20 mm
cond. cross section	0.60 mm ²
insulation	PVC or PE, Ø 1.5 mm
core colors	2x withe and 2x black
conductor resistance	30 Ω/km
min. insulation resistance	10 GΩ x km
test voltage	1750 V

control core

conductor	stranded tinned copper, 7 x 0.20 mm
cond. cross section	0.22 mm ²
core colors	red and grey
insulation	PVC or PE, Ø 1.5 mm
conductor resistance	80 Ω/km
min. insulation resistance	10 GΩ x km
test voltage	1750 V

order code	outer jacket	working temperature	cable color	weight kg/m
CAM311H	FRNC	-30°C / +70°C	black	0.11

technical specifications are subject to change