

## HYBRID CABLES

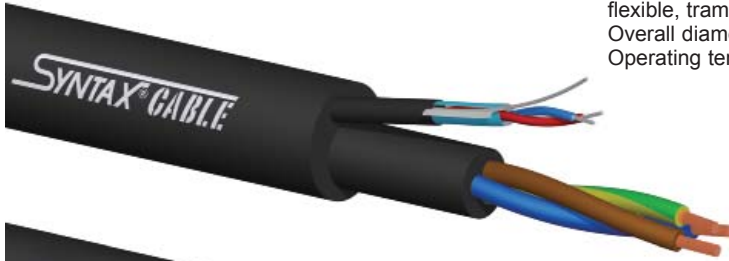
## POWER + DIGITAL mod. 7XD1F315SX - 7XD2F315SX

The SYNTAX® POWER+DIGITAL is a hybrid cable with a jacketed 3 x 1.5 mm<sup>2</sup> main power cable combined with one or two DMX twisted pairs (7XD1F315SX or 7XD2F315SX).

The digital signal pair is shielded by an aluminium/polyester foil screen and covered with a black PVC jacket. The power line is equipped with its own PVC jacket for added safety in compliance with the I.E.C. regulation. Suitable for parallel controls of light mixing boards via power line and DMX signal via digital cable. Also used for analogic audio cabinets when power is supplied. The external flame-retardant black PVC jacket is very flexible, trampling-proof, impact absorbing and water-proof.

Overall diameter 7XD1F315SX: 14 mm - 7XD2F315SX: 14.5 mm.  
Operating temperature -30° to 70° C.

7XD1F315SX



7XD2F315SX

**1(2) x DIGITAL**

- Conductors: Bare OFC 24 AWG 19 x 0,12 mm red/blue Foam - Skin Ø 1,4 mm
- Conductors jacket: tinned OFC 24 AWG 7 x 0,20 mm
- Drain wire: aluminium/polyester foil 100% cov.
- Screen: Black PVC Ø 3,8 mm flame-retardant
- External jacket: 1-4 Mhz 110 Ω
- Nominal Impedence: <90 Ω/Km
- D.C.R. conductors: <70 Ω/Km
- D.C.R. shield: 1Khz 40 nF/Km
- Capacitance cond./cond: 1Khz 80 nF/Km
- Capacitance cond./shield:

**1 x POWER**

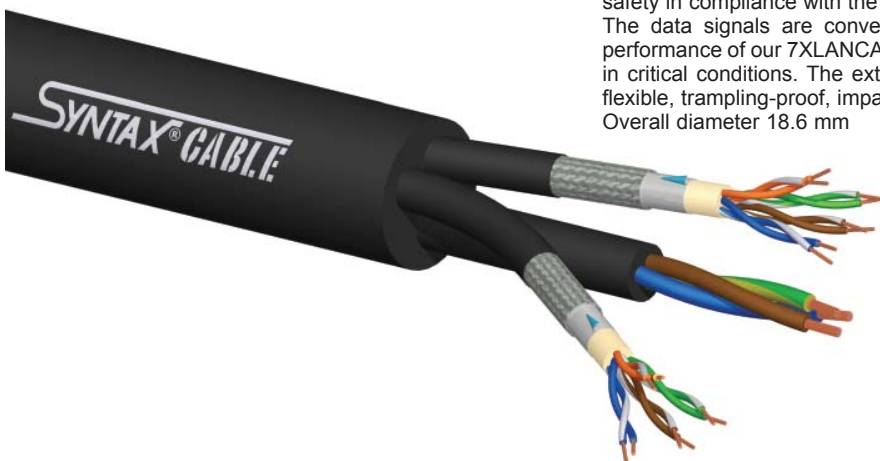
- Conductors: stranded OFC 3 x 1.5 mm<sup>2</sup> - 15 AWG
- Conductors jacket: Brown, Blue, Green-Yellow PVC
- External jacket: Black PVC Ø 6,8 mm flame retardant

Overall jacket: Black PVC super flex flame retardant  
7XD1F315SX: Ø 14,0 mm  
7XD2F315SX: Ø 14,5 mm

## POWER + 2 x CAT5E mod. 7YPW3LN2

The combined SYNTAX® 7YPW3LN2 cable finds its main application in the digital signage field, whenever a clean, easy and fast cabling is required. The power line is equipped with its own PVC jacket for added safety in compliance with the I.E.C. regulation.

The data signals are conveyed by two Cat5e cable with the same performance of our 7XLANCAT5 cable, to ensure a reliable performance in critical conditions. The external flame-retardant black PVC jacket is flexible, trampling-proof, impact absorbing and easy to handle.  
Overall diameter 18.6 mm

**2 x CAT5E**

- Conductors: Solid bare OFC Ø=0,51mm - 24 AWG
- Conductors jacket: Polyolefin Foam - Ø=0,95 mm
- Color code: Comply EIA/TIA 568
- First screen: aluminium-mylar foil 100% cov.
- Second screen: tinned copper braid cov. >80%
- Resistance of conductors: < 90 Ω/Km
- Insulation resistance: > 10.000 Ω/Km
- Capacity between conductors: 51 nF/Km
- Impedance from 1 to 100MHz: 100 Ω
- Jacket: Black PVC Ø 6,4mm flame-retardant

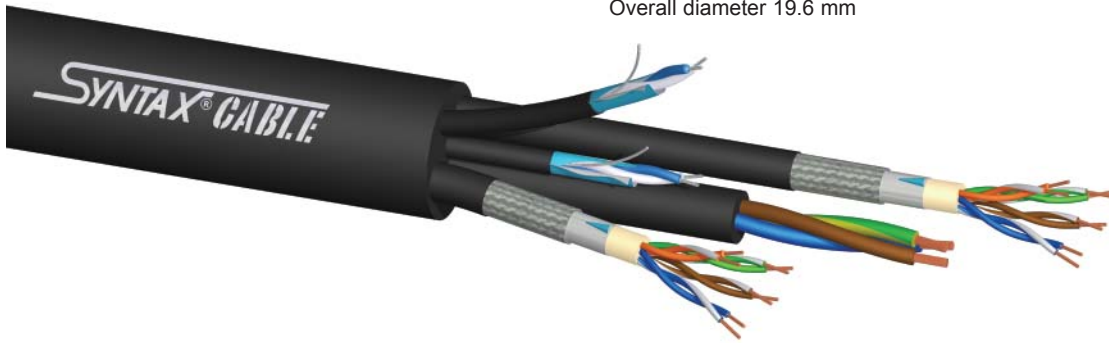
**1 x POWER**

- Conductors: stranded OFC 3 x 1.5 mm<sup>2</sup> - 15 AWG
- Conductors jacket: Brown, Blue, Green-Yellow PVC
- External jacket: Black PVC Ø 6,8 mm flame-retardant

Overall jacket: matt Black PVC flame-retardant Ø=18,6 mm

## POWER + 2 x CAT5E + 2 x DIGITAL mod. 7YPW3LN2DG2

The SYNTAX® 7YPW3LN2DG2 cable has the same specs as the 7YPW3LN2 cable with the addition of two AES/EBU digital pair cables. Overall diameter 19.6 mm



### 2 x CAT5E

- Conductors: Solid bare OFC Ø=0,51mm - 24 AWG
- Conductors jacket: Polyolefin Foam - Ø=0,95 mm
- Color code: Comply EIA/TIA 568
- First screen: aluminium-mylar foil 100% cov.
- Second screen: tinned copper braid cov. >80%
- Resistance of conductors: < 90 Ω/Km
- Insulation resistance: > 10.000 Ω/Km
- Capacity between conductors: 51 nF/Km
- Impedance from 1 to 100MHz: 100 Ω
- Jacket: Black PVC Ø 6,4 mm flame-retardant

### 2 x DIGITAL

- Conductors: tinned OFC 24 AWG - 28 x 0,10mm
- Conductors jacket: white/blue gas injected foam Ø 1,4mm
- Drain wire: tinned OFC 24 AWG - 7 x 0,18mm
- Screen: aluminium/mylar foil 100% cov.
- Nominal Impedence: 1-4 Mhz 110 Ω/100 mt
- External jacket: Black PVC flame-retardant Ø 3,4mm
- D.C.R. conductors: <86 Ω/Km
- D.C.R. shield: <70 Ω/Km
- Capacitance cond./cond.: 1Khz 37 nF/Km
- Capacitance cond./shield: 1Khz 57 nF/Km

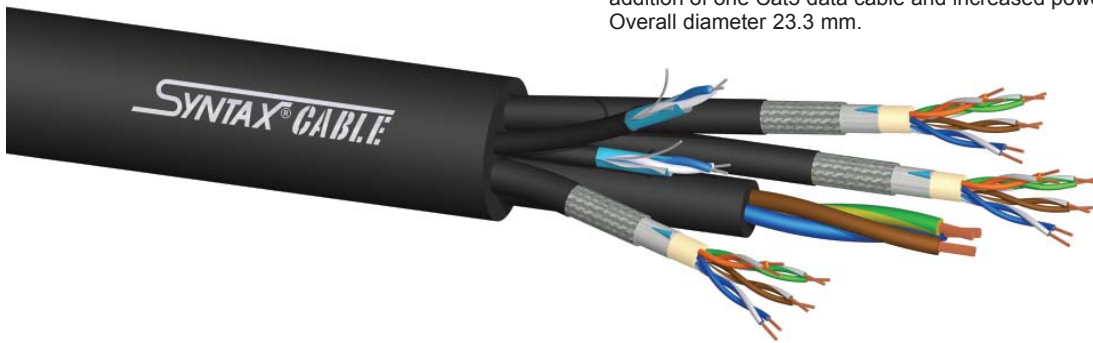
### 1 x POWER

- Conductors: stranded OFC 3 x 1.5 mm<sup>2</sup> - 15AWG
- Conductors jacket: Brown, Blue, Green-Yellow PVC
- External jacket: Black PVC Ø 6,4 mm flame-retardant

Overall jacket: matt Black PVC flame-retardant Ø=19,6 mm

## POWER + 3 x CAT5E + 2 x DIGITAL mod. 7YPW3LN3DG2

The SYNTAX® 7YPW3LN3DG2 cable was designed for usage on the new digital consoles, which use the third Cat5 as redundant line. The cable has the same specs as the 7YPW3LN2DG2 cable with the addition of one Cat5 data cable and increased power line up to 2.5mm<sup>2</sup>. Overall diameter 23.3 mm.



### 3 x CAT5E

- Conductors: Solid bare OFC Ø=0,51mm - 24 AWG
- Conductors jacket: Polyolefin Foam - Ø=0,95 mm
- Color code: Comply EIA/TIA 568
- First screen: aluminium-mylar foil 100% cov.
- Second screen: tinned copper braid cov. >80%
- Resistance of conductors: < 90 Ω/Km
- Insulation resistance: > 10.000 Ω/Km
- Capacity between conductors: 51 nF/Km
- Impedance from 1 to 100MHz: 100 Ω
- Jacket: Black PVC Ø 6,4 mm flame-retardant

### 2 x DIGITAL

- Conductors: tinned OFC 24 AWG - 28 x 0,10mm
- Conductors jacket: white/blue gas injected foam Ø 1,4mm
- Drain wire: tinned OFC 24 AWG - 7 x 0,18mm
- Screen: aluminium/mylar foil 100% cov.
- Nominal Impedence: 1-4 Mhz 110 Ω/100 mt
- External jacket: Black PVC flame-retardant Ø 3,4mm
- D.C.R. conductors: <86 Ω/Km
- D.C.R. shield: <70 Ω/Km
- Capacitance cond./cond.: 1Khz 37 nF/Km
- Capacitance cond./shield: 1Khz 57 nF/Km

### 1 x POWER

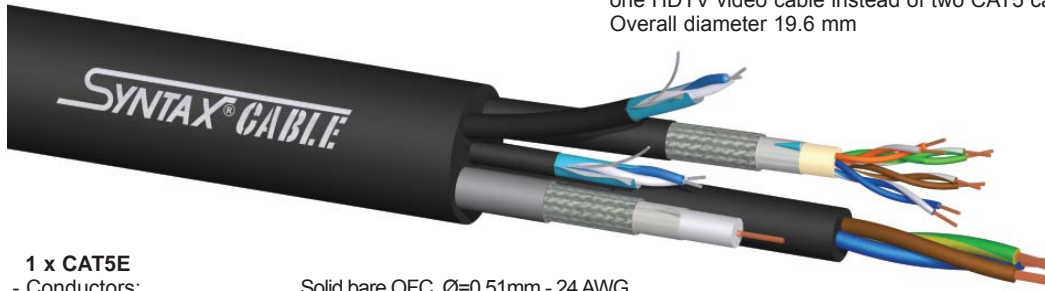
- Conductors: stranded OFC 3 x 2.5 mm<sup>2</sup> - 13AWG
- Conductors jacket: Brown, Blue, Green-Yellow PVC
- External jacket: Black PVC Ø 9,1 mm flame-retardant

Overall jacket: matt Black PVC flame-retardant Ø=23,3 mm

# HYBRID CABLES

## POWER + 1 x CAT5E + 1 x VIDEO + 2 x DIGITAL mod. 7YPW3LN1VD1DG2

Another version in our hybrid series range, the SYNTAX 7YPW3LN1VD1DG2 cable is designed as the 7YPW3LN2DG2 cable, but it has one CAT5 and one HDTV video cable instead of two CAT5 cables.  
Overall diameter 19.6 mm



### 1 x CAT5E

- Conductors: Solid bare OFC Ø=0,51mm - 24 AWG
- Conductors jacket: Polyolefin Foam - Ø=0,95mm
- Color code: Comply EIA/TIA 568
- First screen: aluminium-mylar foil 100% cov.
- Second screen: tinned copper braid cov. >80%
- Resistance of conductors: < 90 Ω/Km
- Insulation resistance: > 10.000 Ω/Km
- Capacity between conductors: 51 nF/Km
- Impedance from 1 to 100MHz: 100 Ω
- Jacket: Black PVC flame-retardant Ø 6,4 mm

### 1 x VIDEO

- Conductors: solid OFC red copper 1 x 0,81 mm
- Conductors jacket: Ø 3,75 mm foam-polyolefin
- Shield 1: OFC tinner copper braid
- Shield 2: aluminium foil
- External jacket: gray PVC flame-retardant Ø 5.8 mm
- Capacitance: 60 nF/km
- Resistance of insulation: >10 Ω/Km
- Electrical resistance: Inner conductor < 36 Ω/Km
- Electrical resistance: Screen < 8 Ω/Km
- Nominal impedance: 75 Ω/Km ± 3

### 2 x DIGITAL

- Conductors: tinned OFC 24 AWG - 28 x 0,10 mm
- Conductors jacket: white/blue gas injected foam - Ø 1,4 mm
- Drain wire: tinned OFC 24 AWG - 7 x 0,18 mm
- Screen: aluminium/mylar foil 100% coverage
- Nominal Impedence: 1-4 Mhz 110 Ω/100 mt
- External jacket: Black PVC flame-retardant Ø 3,4 mm
- D.C.R. conductors: <86 Ω/Km
- D.C.R. shield: <70 Ω/Km
- Capacitance cond./cond.: 1Khz 37 nF/km
- Capacitance cond./shield: 1Khz 57 nF/km

### 1 x POWER

- Conductors: stranded OFC 3 x 1.5 mm² - 15 AWG
- Conductors jacket: Brown, Blue, Green-Yellow PVC
- External jacket: Black PVC Ø 6,8 mm flame retardant

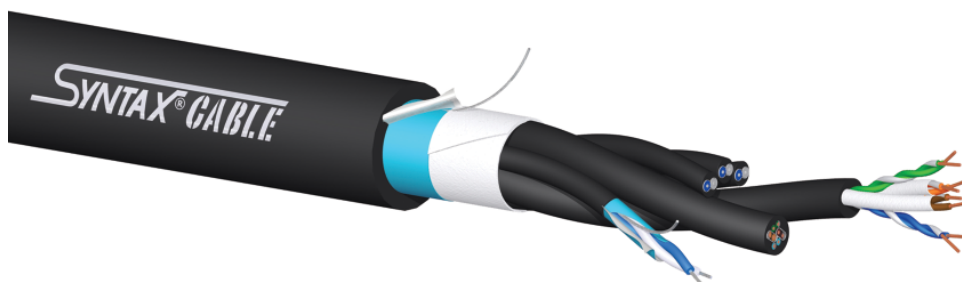
Overall jacket: matt Black PVC flame-retardant Ø=19,6 mm

## 2 x CAT6 + 4 x DIGITAL mod. 7YLN2DG4

The hybrid cable SYNTAX® 7YLN2DG4 perfectly meets the connectivity requirements for the management of Ethernet data signals up to 250MHz frequency and for balanced digital audio lines distribution. Its composition consists of two Cat6 cables and four AES/EBU lines and is suitable to connect many of the new audio, video and lighting digital systems, whenever a clean, easy and fast cabling is required.

In addition to the individual shielding on each AES/EBU cable, the overall shield with drain wire ensures protection from external noise (EMI) for Cat6 lines, greatly improving the return loss value, which is usually critical with standard S/FTP shielding.

The highly flexible PVC outer jacket, oversized and flame-retardant, ensures excellent handling and durability in mobile applications. The outer diameter 17.5 mm..



### 2 x CAT6

- Conductors: Solid bare OFC - Ø=0,57mm
- Conductors jacket: Polyolefin Foam - Ø=1 mm
- Color code: Comply EIA/TIA 568
- Jacket: Black PVC flame-retardant Ø=6,2 mm
- Resistance of conductors: < 75 Ω/Km
- Insulation resistance: > 5 GΩ/Km
- Capacity between conductors: 48 nF/Km
- Impedance from 1 to 250MHz: 100Ω ± 15%

### 4 x DIGITAL

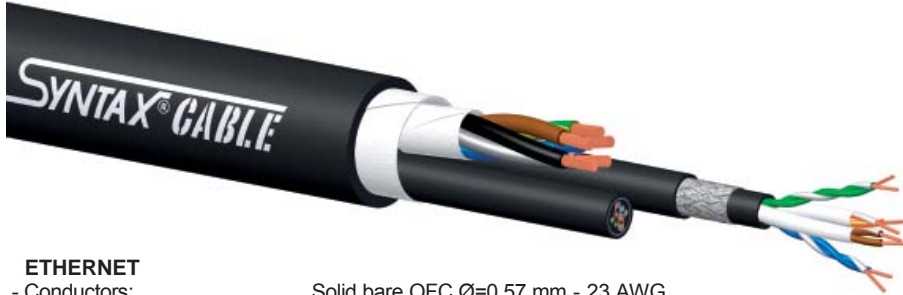
- Conductors: tinned OFC 24 AWG - 28 x 0,10 mm
- Conductors jacket: white/blue gas injected foam - Ø 1,4 mm
- Drain wire: tinned OFC 24 AWG - 7 x 0,18 mm
- Screen: aluminium/mylar foil 100% coverage
- Nominal Impedence: 1-4 Mhz 110 Ω/100 mt
- External jacket: Black PVC flame-retardant Ø=3,4 mm
- D.C.R. conductors: <86 Ω/Km
- D.C.R. shield: <70 Ω/Km
- Capacitance cond./cond.: 1Khz 37 nF/Km
- Capacitance cond./shield: 1Khz 57 nF/Km

Overall jacket: matt Black PVC flame-retardant Ø=17,5 mm  
 Overall screen: aluminium-mylar foil 100% coverage  
 Drain wire: tinned OFC 24 AWG 7 x 0,18 mm  
 Operating temperature: -30° +70° C

## ETHERNET CABLES mod. 7XPW5LAN2CAT6

Specifically designed for the new SGH Syntax Gigamod Hybrid connector.

Useful to make backbone Lines, Rack Links connection that need a balanced load distribution, Hi-Power Video devices distribution system. The SYNTAX® 7XPW5LAN2CAT6 hybrid cable finds its main application in the field of digital signals, whenever tidy, easy and fast wiring is required. It is particularly suited for backbone lines, rack link connections where a well-balanced load distribution is needed, Hi-Power Video distribution devices and systems. The power line is wrapped by non woven overlapping tape, a solution granting improved stability and reduced overall diameter (Ø=21,5). The data signals are conveyed by two Cat6 cables having the same characteristics as our 7XLANCAT6PUR cable, so as to ensure reliable performance in critical conditions. The external flame-retardant black PVC jacket is flexible, trampling-proof, impact absorbing and easy to handle.



### ETHERNET

- Conductors: Solid bare OFC Ø=0.57 mm - 23 AWG
- Conductors jacket: Polyolefin Foam - Ø=1 mm
- Color code: green, white-green, orange, white-orange, blue, white-blue, brown, white-brown
- First Jacket: PVC black Ø=6.2 mm flame retardant
- Screen: tinned copper braid coverage >80%
- Second jacket: PUR - Polyurethane compound black Ø=8.0 mm
- Resistance of conductors: < 75 Ω/Km
- Insulation resistance: > 5 GΩ/Km
- Capacity between conductors: 48 nF/Km
- Impedance from 1 to 250MHz: 100 Ω ± 15%
- Operating temperature: -30° +70° C

### POWER

- Conductors: Stranded bare copper 5x2,5mm² IEC60228 CLASS 5
- Conductors Jacket: blue, brown, grey, green-yellow PVC
- Operating Temperature: -30 +70 °C
- Operating Voltage: 450/750V
- External non woven overlapping tape

| Frequency (MHz)       | 1    | 4    | 10   | 16   | 20   | 31.25 | 62.50 | 100  | 200  | 250  |
|-----------------------|------|------|------|------|------|-------|-------|------|------|------|
| Attenuation (dB/100m) | 1.9  | 3.5  | 5.4  | 6.9  | 7.8  | 9.9   | 14.3  | 18.4 | 27.1 | 30.8 |
| Next (dB)             | 89.3 | 79.3 | 69.3 | 64.7 | 62.6 | 58.7  | 53.0  | 49.4 | 44.6 | 43.2 |
| Return Loss (dB/100m) | 30.3 | 28.5 | 27.3 | 26.7 | 26.4 | 25.9  | 25.1  | 24.2 | 23.1 | 21.8 |

## 6 x VIDEO + 8 x DIGITAL mod. 7YVD6DG8HD

The hybrid SYNTAX® 7YVD6DG8HD cable is ideally suitable for the broadcasting world, as it has been conceived to manage combined audio and video signal distribution. The digital twisted pairs have been designed in accordance with the AES/EBU audio standard and the video cables are suitable for HDTV-SDI high performance applications.

Using this cable and the exclusive SYNTAX SV 25/6 multipin audio/video combo connector, it is possible produce several extension leads and eventually link them to any audio/video stage-box. Overall diameter 24,5 mm.



### 6 x VIDEO

- Conductor: Solid bare OFC 1 x 0,81mm - 20 AWG
- Conductor jacket: Ø 3,75 mm foam-polyolefin
- Shield 1: aluminium foil 100% coverage
- Shield 2: tinned OFC braid 90% coverage
- External jacket: Grey PVC numbered Ø 5.8 mm (800 ÷ 1200 Hz) 53 nF/Km ± 5%
- Capacitance: >10 Ω/Km
- Resistance of insulation: Inner conductor < 36 Ω/Km
- Electrical resistance: Screen < 8 Ω/Km
- Nominal impedance: 75 Ω ± 3
- Velocity of propagation: 84%

### 8 x DIGITAL AES/EBU

- Conductors: tinned OFC 24 AWG - 28 x 0,10mm
- Conductors jacket: white/blue gas injected foam Ø 1,4mm
- Drain wire: tinned OFC 24 AWG - 7 x 0,18mm
- Screen: aluminium/mylar foil 100% cov.
- Nominal Impedence: 1-4 Mhz 110 Ω/100 mt
- External jacket: Black PVC flame-retardant Ø 3,4mm
- D.C.R. conductors: <86 Ω/Km
- D.C.R. shield: <70 Ω/Km
- Capacitance cond./cond.: 1Khz 37 nF/Km
- Capacitance cond./shield: 1Khz 57 nF/Km

Overall screen: high density tinned copper braid  
Overall jacket: matt red PVC flame-retardant Ø = 24,5 mm

| Frequency (MHz)       | 5   | 50  | 100 | 200  | 470  | 742  | 862  | 1000 | 1485 | 1750 | 2150 | 2227 | 3000 |
|-----------------------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| Attenuation (dB/100m) | 1.9 | 5.7 | 7.9 | 11.0 | 17.1 | 21.6 | 22.9 | 24.8 | 31.9 | 34.1 | 38.8 | 39.9 | 47.5 |