

Brilliance cable assembly for HDTV

2012-04-01 v1.0

Applications

- Optical Fiber link with power supply for outside Broadcast Vehicles, Camera Control Units, Editing Suites, Studio facilities, Production facilities, Video conferencing, Major entertainment venues and sports stadiums

General standards

- ARIB (BTA S-1006B)
- ANSI/SMPTE (304M-1998 and 311M-1998) and EBU (R100-1999) compatible

Ordering information

The Brilliance cable assemblies are defined regarding connector type, packaging way and length:

Part Number: CA00XXX.00YZ

CA00XXX = Connectors terminated on both ends

	Description 2	Connector 1	Relief & CAP Type	Gaiters	Connector 2	Relief & CAP Type	Gaiters	Cable Type
CA00270	3K.93C (FUW/GMF, PUW/GMP) ST.ST. E	FUW	GMF		PUW	GMP		7804E
CA00272	3K.93C (FUW/GMF/PEV, PUW/GMP/PER) ST.ST. E	FUW	GMF	GMF.3K. 140.156 PEV	PUW	GMP	GMP.3K. 140.165 PER	7804E
CA00273	3K.93C (FMW/GMA/BFG, PEW/GMA/BRA) ST.ST.E	FMW	GMA, BFG		PEW	GMA, BRA		7804E
CA00274	3K.93C (FMW/GMA/BFG, PEW/GMA/BRA) ST.ST.ENH	FMW	GMA, BFG		PEW	GMA, BRA		7804ENH
CA00275	3K.93C (FUW/GMF, PUW/GMP) ST.ST.ENH	FUW	GMF		PUW	GMP		7804ENH
CA00276	3K.93C (FMW/GMA/BFG, PUW/GMP) ST.ST. E	FUW	GMA, BFG		PUW	GMP		7804E
CA00277	3K.93C (FUW/GMF/PEV, PUW/GMP/PER) ST.ST. ENH	FUW	GMF	GMF.3K. 140.156 PEV	PUW	GMP	GMP.3K. 140.165 PER	7804ENH
CA00278	3K.93C (FMW/GMA/BFG, PUW/GMP) ST.ST. ENH	FMW	GMA, BFG		PUW	GMP		7804ENH
CA00280	3K.93C (FUW/GMF, PUW/GMP) ST.ST. ENH	FUW	GMF		PUW	GMP		7804EPU
CA00281	3K.93C (FMW/GMA/BFG, PUW/GMP) ST.ST. EPU	FMW	GMA, BFG		PUW	GMP		7804EPU
CA00283	3K.93C (FUW/GMF/PEV, PUW/GMP/PER) ST.ST. EPU	FUW	GMF	GMF.3K. 140.156 PEV	PUW	GMP	GMP.3K. 140.165 PER	7804EPU
CA00287	3K.93C (FUW/GMF/PEV, PUW/GMP/PER) ST.ST. EPU GT450	FUW	GMF	GMF.3K. 140.156 PEV	PUW	GMP	GMP.3K. 140.165 PER	7804EPU
CA00293	3K.93C (PEW/GMA/BRA, PEW/GMA/BRA) ST.ST. EPU	PEW	GMA, BRA		PEW	GMA, BRA		7804E
CA00294	3K.93C (FMW/GMA/BHA, -) ST.ST. EPU	FMW	GMA, BHA		Open	-		7804E
CA00299	3K.93C (FUW/GMF, PEW/GMA) ST.ST. EPU	FUW	GMF		PEW	GMA		7804EPU
CA00311	3K.93C ((FUW/GMF/PEV, PUW/GMP/PER) ST.ST. ECH	FUW	GMF	GMF.3K. 140.156 PEV	PUW	GMP	GMP.3K. 140.165 PER	7804ECH

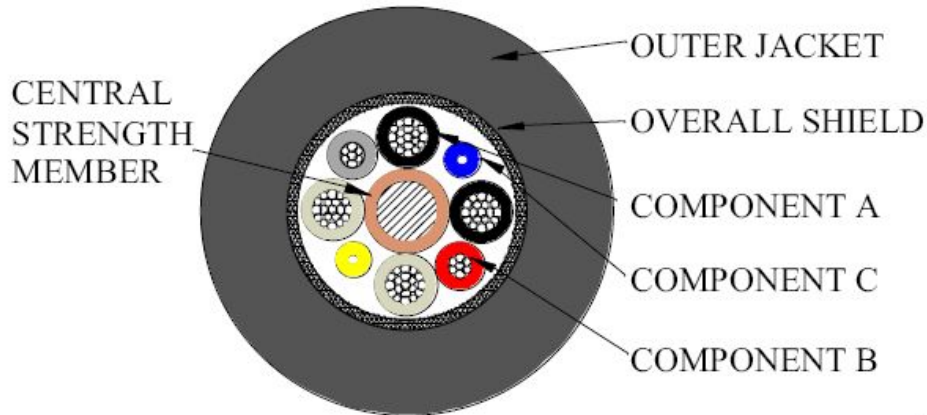
Y = Packaging way

Z = Length(in meter up to 3 digits)

Y = C means coiled / **Y = M** means on the reel

1 = 1m, **2** = 2m,....., **100** = 100 m

Cable specification



1. Component A (4 Power Conductors)
 - Conductor: AWG 20 (19x32) Tinned copper.
 - Insulation: HDPE
 - Nominal diameter: 1.57 mm
 - Colours: Black, White, Black/White and White/Black

2. Component B (2 Signal Conductors)
 - Conductor: AWG 24 (7x32) Tinned copper.
 - Insulation: HDPE
 - Nominal diameter: 1.22 mm
 - Colours: Red and Grey

3. Component C (2 Tight buffered fibres)
 - Fiber: Single mode (9/125 – ITU G.657A).
 - Insulation: Thermoplastic
 - Diameter: 0.9 ± 0.1 mm.
 - Colours: Blue and Yellow

4. Central Strength Member:
 - Up jacketed stranded steel member
 - Conductor: AWG 14 Stainless steel
 - Insulation: HDPE
 - Nominal diameter: 2.16 mm
 - Colours: Violet

5. Cable Assembly:
 - All of the above components cabled to make round

6. Barrier:
 - Non woven foil 25% overlap

7. Shield:
 - Overall tinned copper braid shield
 - 80 % min. coverage

8. Jacket:
 - Nom. wall: 1.50 mm
 - Nom. diameter: 9.2 mm.
 - Colours: Black

Type	7804ENH	7804ECH	7804E	7804EPU
Material	LSNH	LSNH	PVC	PU
Flame retardancy	IEC 60332-1	IEC 60332-3-24	-	-
Application	Studio applications	Studio applications	Studio applications	Field applications

Printlegend:

7804ENH version:
"IDEO BRILLIANCE(R) BY BELDEN-NL 7804ENH SMPTE311M COMPOSITE SINGLE MODE FIBER OPTIC CAMERA CABLE 2F9UM 2C24 4C20 SHIELDED FRNC/LSNH IEC 60332-1 MMY"+ meter marking MM= month, YY=year

7804E version:
"VIDEO BRILLIANCE(R) BY BELDEN-NL 7804E SMPTE311M COMPOSITE SINGLE MODE FIBER OPTIC CAMERA CABLE 2F9UM 2C24 4C20 SHIELDED PVC MMY" + meter marking MM= month, YY=year

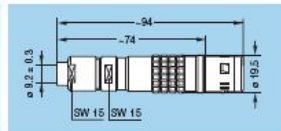
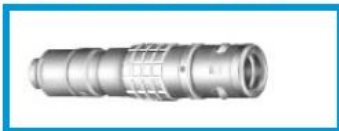
7804ECH version:
"VIDEO BRILLIANCE(R) BY BELDEN 7804ECH SMPTE311M COMPOSITE SINGLE MODE FIBER OPTIC CAMERA CABLE 2F9UM 2C24 4C20 SHIELDED FRNC/LSNH IEC 60332-3-24 MMY" + meter marking MM= month, YY=year

7804EPU version:
VIDEO BRILLIANCE(R) BY BELDEN-NL 7804EPU SMPTE311M COMPOSITE SINGLE MODE FIBER OPTIC CAMERA CABLE 2F9UM 2C24 4C20 SHIELDED PUR MMY"+ meter marking M= month, YY=year

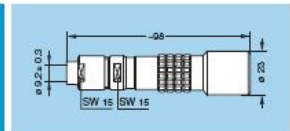
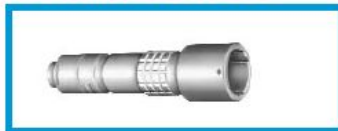
Connector specifications

Male connectors		Female connectors	
	Lemo partnumber		Lemo partnumber
FUW=	FUW.3K.93C.TLMC96	PUW=	PUW.3K.93C.TLCC96
FMW=	FMW.3K.93C.TLMT96Z	PEW=	PEW.3K.93C.TLCT96Z
FXW=	FXW.3K.93C.TLM	EDW=	EDW.3K.93C.TLC

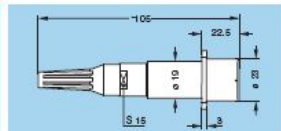
FUW.3K.93C.TLMC96



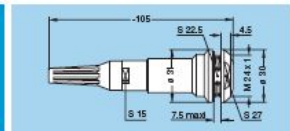
PUW.3K.93C.TLCC96



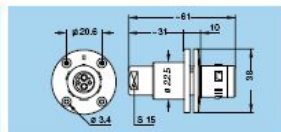
FMW.3K.93C.TLMT96Z



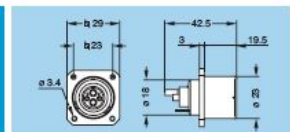
PEW.3K.93C.TLCT96Z



FXW.3K.93C.TLM



EDW.3K.93C.TLC



Bend Relief & Cap specifications

Lemo partnumber	
FUW	GMF.3K.085.EANZ
PUW	GMP.3K.085.EANZ
GMA	GMA.3B.090.DN
FMW, FXW	BHA.3K.100.EAN
EDW, PEW	BRA.3K.200.EAN
FMW, FXW	BFG.3K.100.EAN
PUW	BRF.3K.200.EAN
FMW, FXW	BHA.3K.100.715EN
EBW, EDW, ENW, PBW, PEW	BRA.3K.100.715EN

Technical information

1) Electrical characteristics

	Power	Signal
Number of contacts	2	2
Contact type for plugs	Male	Female
Male contact OD	1.3 mm	0.9 mm
Contact type	Crimp	Crimp
Conductor AWF min.	18	24
Conductor AWF max.	14	20
Working Voltage max.	≤ 600 Vrms	≤ 42 Vrms
Test Voltage	2250 Vrms	1000 Vrms
Rated current	10A	3A
Contact resistance	<4 mΩ	<5 mΩ
Shell to Shell conductivity	<5 mΩ	
Insulation resistance	>10 ⁹ Ω	

2) Fiber optic characteristics

All connectors are complied with EN 61300-03-04 method B.

	Characteristics
Number of contacts	2
Type of contact	F2
Fiber core/ cladding	Single mode 9/125 μm
Ferrule bore inside	125 μm
Insertion loss	18

3) Mechanical characteristics & Environmental characteristics

	Characteristics
Cable retention force	> 1000 N
Endurance: St. Steel	20000 cycles
Drop test	2 m
Shock	100 g, 10-50 ms
Vibration	7 cycles (20-2000Hz)
Temperature	- 40° C to +80° C
Temperature cycling	- 55° C to +90° C
Humidity	Up to 95% at 60C
Water resistance	Depth of 1.8 m for 48 hours
Corrosion	48 hous. 5% salt water test
Index protection	IP68

4) Packaging

The cable assemblies shorter than 30 meters are put on coils and the longer cable assemblies are put on the Drum.



Belden declares this product to be in compliance with the environmental regulations EU RoHS (Directive 2002/95/EC, 27 Jan 2003); this is valid for all material produced after the RoHS compliant date for this product.