KSPP

昆山频谱电子科技有限公司

电缆产品选型指南

KSPP

Profile

Kunshan Spectrum Electronic Technology Co., Ltd. is a high-tech enterprise dedicated to the development, design, production and sales of high-end interconnected passive device products.

covers three product lines:

luct line includes marine equipment calbes, marine detection systems
n systems cables, towing systems cables, longitudinal water-sealed cables
tric composited cables, integrated cables, communication cables, RF
tabilized cables, optical fibers cables etc.;

product line includes RF connectors, precision adapters, RF attenuators

The cable assemblies product line includes RF cable assemblies, test cable assemblies etc.

The company adheres to the quality policy of "excellence, optimization of products and services, continuous improvement, and enhancement of customer satisfaction", and focuses on providing customers with integrated solutions to meet the individual needs of customers. The company has the ability of product design, production and verification of RF up to 67GHz, full ocean depth, towed load-bearing and photoelectric composite integration.

KSPP

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Icon Meaning

Flexible Cables

Operating Temperature

Flame Performance

Smoke Density

Chemical Resistance

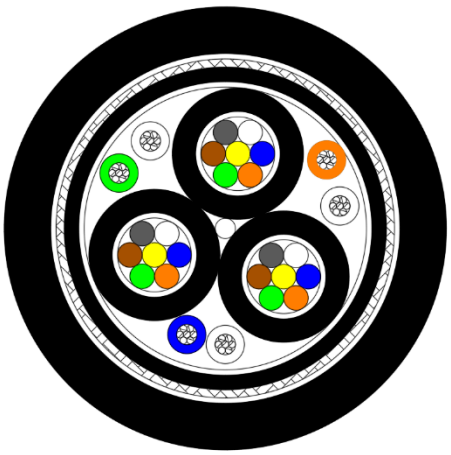
Halogen-free

Weather Resistance

EMI

KSPP

18 Opticl & 6 Electrical Longitudinal Watertight Composite Cable



Application

Underwater cabin cable.

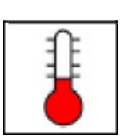
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZHFMGU-6×22AWG+18F	6 Core Electrical 18 Optical Fibers	16.2±0.3	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	1000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤58.2Ω/km
Fiber Attenuation	≤0.5dB/km @1310nm/1550nm
Min.. Bending Radius	240mm
Low Temperature Test	-40℃, 4h, No Cracking
High Temperature Test	+70℃, 4h, No Cracking
Longitudinal Watertightness Test	18.0Mpa 4h
Transverse Watertightness Test	18.0Mpa 4h
Bending Test	15D loading 5kg 50Cycle
Impact Test	1kg, 850cm, Impact 10 times
Pressure Test	2000N/10cm, 1Min.

Note: When the fiber length is less than 300 meters, only the transparent test is done.

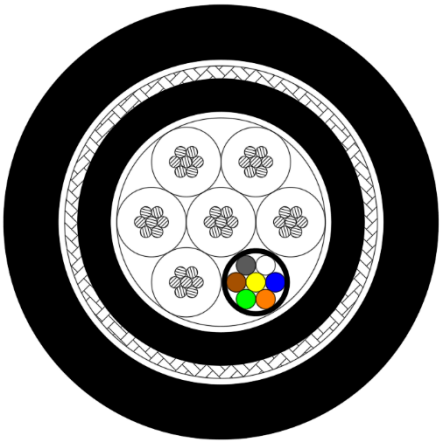



-40ºC~+70ºC

6 Optical & 6 Electrical Longitudinal Watertight Composite Cable

Application

Underwater cabin cable.



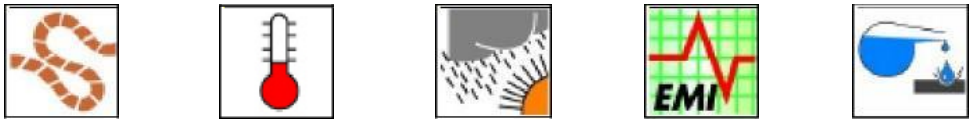
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZMDFYE--6x1.4+6F	6 Core Electrical 6 Optical Fibers	18.7±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	5000V DC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤12.8Ω/km
Fiber Attenuation	≤0.5dB/km @1310nm&1550nm
Min.. Bending Radius	12D
Bending Test	10D，loading 5kg，50Cycle
Impact Test	850mm，1kg Impact,10 times
Temperature Cycling Test	-30℃～60℃ 2 Cycle
Pressure Test	2kN/10cm，1Min.
Longitudinal Watertightness Test	6.75MPa，8h
Transverse Watertightness Test	6.75MPa，8h

Note: When the fiber length is less than 300 meters, only the transparent test is done.



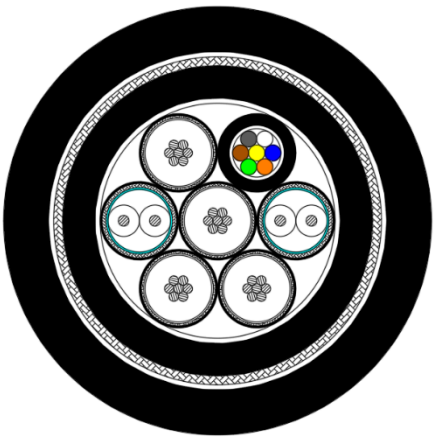
-30℃~+60℃

KSPP

Optical Single、Digital Single and Power Longitudinal Watertight Composite Cable

Application

Underwater cabin cable.



Cable Description

Cable P/N	Cable Diameter mm	Sheath Material
CHWDMPU--2x2x0.28+4x1.5+6F	24.0±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	2000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Characteristic Impedance	100Ω±20Ω（1 MHz ~100MHz）
Attenuation	≤4.8 dB/100m @ 1MHz ≤8.7 dB/100m @ 4MHz ≤11.9dB/100m @ 10MHz ≤21.2dB/100m @ 31.25MHz ≤30.8dB/100m @ 62.5MHz ≤39.9dB/100m @ 100MHz
Next Crosstalk	≥62 dB/100m @ 1MHz ≥53 dB/100m @ 4MHz ≥47 dB/100m @ 10MHz ≥40 dB/100m @ 31.25MHz ≥35 dB/100m @ 62.5MHz ≥32 dB/100m @ 100MHz
Far Crosstalk	≥61 dB/100m @ 1MHz ≥49 dB/100m @ 4MHz ≥41 dB/100m @ 10MHz ≥31 dB/100m @ 31.25MHz ≥25 dB/100m @ 62.5MHz ≥21 dB/100m @ 100MHz
Fiber Attenuation	≤3.5dB/km @850nm, ≤1.5dB/km @850nm
Min.. Bending Radius	12D
Low Temperature Test	-40℃, 4h, No Cracking
High Temperature Test	+85℃, 4h, No Cracking
Longitudinal Watertightness Test	6.75Mpa 8h
Transverse Watertightness Test	6.75Mpa 8h

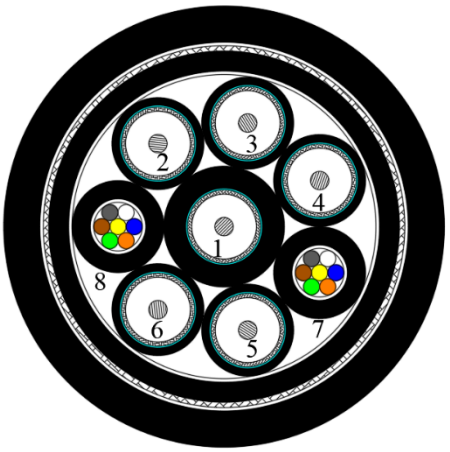
Note: When the fiber length is less than 300 meters, only the transparent test is done.

-40ºC~+85ºC

12 Optical & 6 Coaxial Longitudinal Watertight Composite Cable

Application

Underwater cabin cable.



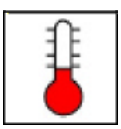
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZMSFPU-6Coax+12F	6 Coaxial 12 Optical Fibers	24.5±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	1500V AC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤25Ω/km
Characteristic Impedance	50Ω±3Ω（1300MHz）
Attenuation	0.8 dB/100m @ 1300MHz
Fiber Attenuation	≤0.5dB/km @1310nm&1550nm
Min.. Bending Radius	10D
Low Temperature Test	-40℃, 4h, No Cracking
High Temperature Test	+85℃, 4h, No Cracking
Longitudinal Watertightness Test	6.75Mpa 8h
Transverse Watertightness Test	6.75Mpa 8h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

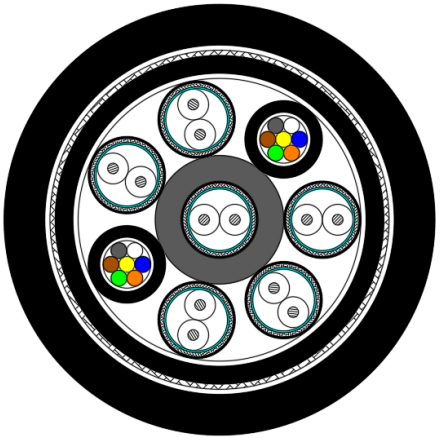
-40ºC~+85ºC

KSPP

12 Optical & 6 Pairs Elcetrical Longitudinal Watertight Composite Cable

Application

Underwater cabin cable.



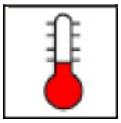
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZHWFMUPGU-12x0.28+12F	6P Network 12 Optical Fibers	25.0±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	1000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤70Ω/km
Characteristic Impedance	100Ω±20Ω（1 MHz ~100MHz）
Attenuation	≤4.8 dB/100m @ 1MHz　≤8.7 dB/100m @ 4MHz ≤11.9dB/100m @ 10MHz　≤21.2dB/100m @ 31.25MHz ≤30.8dB/100m @ 62.5MHz　≤39.9dB/100m @ 100MHz
Next Crosstalk	≥62 dB/100m @ 1MHz　≥53 dB/100m @ 4MHz ≥47 dB/100m @ 10MHz　≥40 dB/100m @ 31.25MHz ≥35 dB/100m @ 62.5MHz　≥32 dB/100m @ 100MHz
Far Crosstalk	≥61 dB/100m @ 1MHz　≥49 dB/100m @ 4MHz ≥41 dB/100m @ 10MHz　≥31 dB/100m @ 31.25MHz ≥25 dB/100m @ 62.5MHz　≥21 dB/100m @ 100MHz
Fiber Attenuation	≤0.5dB/km @1310nm&1550nm
Min.. Bending Radius	12D
Low Temperature Test	-40℃, 4h, No Cracking
High Temperature Test	+85℃, 4h, No Cracking
Longitudinal Watertightness Test	6.75Mpa 8h
Transverse Watertightness Test	6.75Mpa 8h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

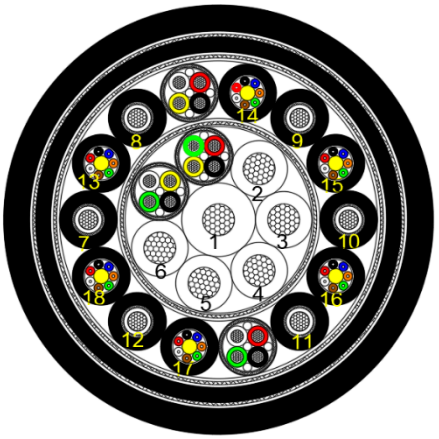



-40°C~+85°C

42 Optical & 28 Electrical Longitudinal Watertight Composite Cable

Application

Underwater cabin cable.



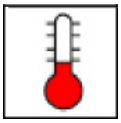
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZMYJPU-6×8.0+6×2.0+16×1.0+42F	6 Core Power 6 Core Contrial 16 Core Singal 42 Optical Fibers	42.5±0.5	Polyurethane

Cable Performance

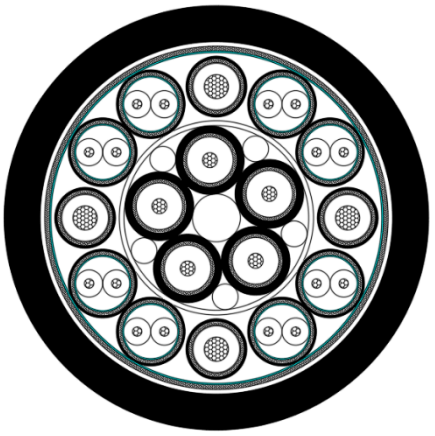
Test Item	Technical Requirements
Voltage Test	1500V AC 5Min.
Conductor Resistance（+20℃）	≤19.5 (1.0mm^2) Ω/km ≤9.5 (2.0mm^2) Ω/km ≤2.6 (8.0mm^2) Ω/km
Insulation Resistance	≥1000MΩ·km
Attenuation（dB/km）	≤3.5@850nm&1300nm
Pressure Test	2kN/10cm，1Min.
Min.. Bending Radius	15D
Low Temperature Test	-40℃，4h
High Temperature Test	+85℃，4h
Longitudinal Watertightness Test	6.75Mpa 8h
Transverse Watertightness Test	6.75Mpa 8h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

-40ºC~+85ºC

Coaxial、Digital Single and Power Longitudinal Watertight Composite Cable



Application

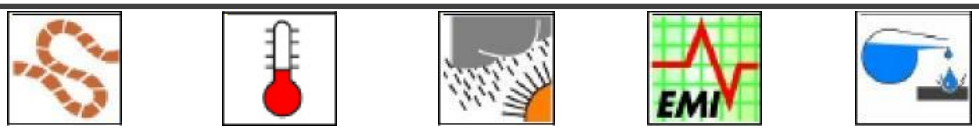
Underwater cabin cable.

Cable Description

Cable P/N	Cable Diameter mm	Sheath Material
CHWSPU-25	≤27.0	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	2000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Characteristic Impedance	100Ω±20Ω（1 MHz ~100MHz）(Pairs) (50±2)Ω(40MHz)(Coaxial)
Attenuation	≤4.8 dB/100m @ 1MHz ≤8.7 dB/100m @ 4MHz ≤11.9dB/100m @ 10MHz ≤21.2dB/100m @ 31.25MHz ≤30.8dB/100m @ 62.5MHz ≤39.9dB/100m @ 100MHz
Next Crosstalk	≥62 dB/100m @ 1MHz ≥53 dB/100m @ 4MHz ≥47 dB/100m @ 10MHz ≥40 dB/100m @ 31.25MHz ≥35 dB/100m @ 62.5MHz ≥32 dB/100m @ 100MHz
Far Crosstalk	≥61 dB/100m @ 1MHz ≥49 dB/100m @ 4MHz ≥41 dB/100m @ 10MHz ≥31 dB/100m @ 31.25MHz ≥25 dB/100m @ 62.5MHz ≥21 dB/100m @ 100MHz
Attenuation	≤10.9 dB/100m @ 40MHz ≤25.0 dB/100m @ 200MHz
Min.. Bending Radius	12D
Low Temperature Test	-40℃, 4h
High Temperature Test	+85℃, 4h
Longitudinal Watertightness Test	6.75Mpa 6h

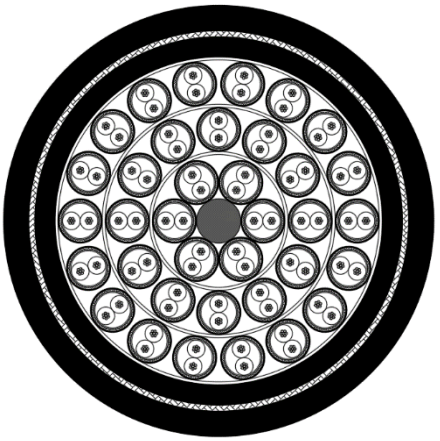


-40ºC~+85ºC

Longitudinal Watertight Single Cable

Application

Underwater cabin cable.

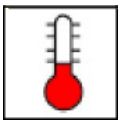


Cable Description

Reference Standards	Cable Name
Q/PPDL 0032-2020	Longitudinal Watertight Single Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Longitudinal Watertightness Test	6.75 6h	MPa
Transverse Watertightness Test	6.75 6h	MPa
Bending Test	12D，500times	/
Low Temperature Test	-35℃，4h	/
High Temperature Test	+85℃，4h	/
Salt Spray Test	96h	/
Mold Test	CLASS I	/
Breaking Force Test	≥800	N
Voltage Test	DC 1.0kV 5Min.	/
Insulation Resistance	≥500	MΩ·km @20℃
Next CrosstalkAttenuation	≥72	dB@1MHz
Far CrosstalkAttenuation	≥65	dB@1MHz
Attenuation	≤4.8	dB/m@1MHz

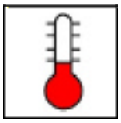



-35°C~+85°C

Longitudinal Watertight Single Cable

Cable Parameters

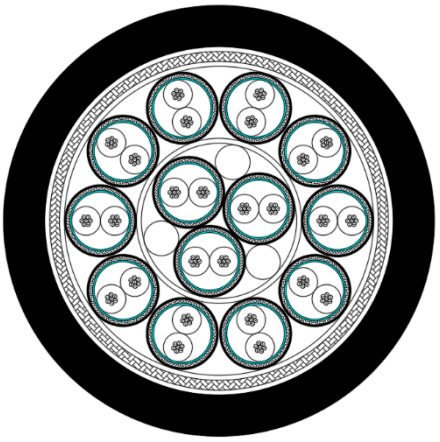
Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
1	JHMYJYP 4×2×0.2	-	2.0	13.9±0.5
2	JHMYJYP 7×2×0.2	-	2.0	16.3±0.5
3	JHMYJYP 13×2×0.2	-	2.5	22.0±0.5
4	JHMYJYP 36×2×0.2	-	2.5	32.2±0.5
5	JHMYJUP 4×2×0.2	-	2.3	14.9±0.5
6	JHMYJUP 7×2×0.2	-	2.3	17.3±0.5
7	JHMYJUP 13×2×0.2	-	2.5	23.0±0.5
8	JHMYJUP 36×2×0.2	-	2.5	33.2±0.5
9	JHMYJYPGY 4×2×0.2	0.8	2.0	16.6±0.5
10	JHMYJYGYP 7×2×0.2	0.8	2.0	19.3±0.5
11	JHMYJYPGY 13×2×0.2	0.8	2.5	25.3±0.5
12	JHMYJYPGY 36×2×0.2	1.0	2.5	35.3±0.5
13	JHMYJUPGU 4×2×0.2	0.8	2.3	17.6±0.5
14	JHMYJUPGU 7×2×0.2	0.8	2.3	20.3±0.5
15	JHMYJUPGU 13×2×0.2	0.8	2.5	26.3±0.5
16	JHMYJUPGU 36×2×0.2	1.0	2.5	36.3±0.5
17	JHMYJYP 4×2×0.35	-	2.0	14.8±0.5
18	JHMYJYP 7×2×0.35	-	2.0	17.5±0.5
19	JHMYJYP 13×2×0.35	-	2.5	23.7±0.5
20	JHMYJYP 36×2×0.35	-	2.5	34.8±0.5
21	JHMYJUP 4×2×0.35	-	2.3	14.8±0.5
22	JHMYJUP 7×2×0.35	-	2.3	18.5±0.5
23	JHMYJUP 13×2×0.35	-	2.5	24.7±0.5
24	JHMYJUP 36×2×0.35	-	2.5	35.8±0.5
25	JHMYJYPGY 4×2×0.35	0.8	2.0	17.8±0.5
26	JHMYJYGYP 7×2×0.35	0.8	2.0	20.4±0.5
27	JHMYJYPGY 13×2×0.35	0.8	2.5	27.0±0.5
28	JHMYJYPGY 36×2×0.35	1.0	2.5	38.0±0.5
29	JHMYJUPGU 4×2×0.35	0.8	2.3	18.8±0.5
30	JHMYJUPGU 7×2×0.35	0.8	2.3	21.4±0.5
31	JHMYJUPGU 13×2×0.35	0.8	2.5	28.0±0.5
32	JHMYJUPGU 36×2×0.35	1.0	2.5	39.0±0.5
33	JHMYJYP 4×2×0.5	-	2.0	15.8±0.5
34	JHMYJYP 7×2×0.5	-	2.0	18.6±0.5
35	JHMYJYP 13×2×0.5	-	2.5	25.4±0.5
36	JHMYJYP 36×2×0.5	-	2.5	37.5±0.5
37	JHMYJUP 4×2×0.5	-	2.3	16.8±0.5
38	JHMYJUP 7×2×0.5	-	2.3	19.6±0.5


Longitudinal Watertight Network Single Cable

Application

Underwater cabin cable.

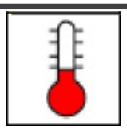


Cable Description

Reference Standards	Cable Name
Q/PPDL 0028-2020	Longitudinal Watertight Network Single Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Longitudinal Watertightness Test	6.75 6h	MPa
Transverse Watertightness Test	6.75 6h	MPa
Bending Test	12D, 500times	/
Low Temperature Test	-35℃, 4h	/
High Temperature Test	+85℃, 4h	/
Salt Spray Test	96h	/
Mold Test	CLASS I	/
Breaking Force Test	≥800	N
Voltage Test	DC 1.0kV 5Min.	/
Insulation Resistance	≥500	MΩ·km @20℃
Next CrosstalkAttenuation	Cat5e Standard	/
Far CrosstalkAttenuation	Cat5e Standard	/

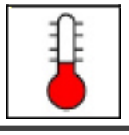



-35°C~+85°C

Longitudinal Watertight Network Single Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
1	JHSMYJYP 4×2×0.2	-	2.0	16.2±0.5
2	JHSMYJYP 7×2×0.2	-	2.0	19.2±0.5
3	JHSMYJYP 13×2×0.2	-	2.5	26.4±0.5
4	JHSMYJUP 4×2×0.2	-	2.3	17.2±0.5
5	JHSMYJUP 7×2×0.2	-	2.3	20.2±0.5
6	JHSMYJUP 13×2×0.2	-	2.5	27.4±0.5
7	JHSMYJYPGY 4×2×0.2	0.8	2.0	19.2±0.5
8	JHSMYJYGYP 7×2×0.2	0.8	2.0	22.2±0.5
9	JHSMYJYPGY 13×2×0.2	0.8	2.5	29.6±0.5
10	JHSMYJUPGU 4×2×0.2	0.8	2.3	20.2±0.5
11	JHSMYJUPGU 7×2×0.2	0.8	2.3	23.2±0.5
12	JHSMYJUPGU 13×2×0.2	0.8	2.5	30.6±0.5
13	JHSMYJYP 4×2×0.35	-	2.0	18.5±0.5
14	JHSMYJYP 7×2×0.35	-	2.0	22.1±0.5
15	JHSMYJYP 13×2×0.35	-	2.5	30.6±0.5
16	JHSMYJUP 4×2×0.35	-	2.3	19.5±0.5
17	JHSMYJUP 7×2×0.35	-	2.3	23.1±0.5
18	JHSMYJUP 13×2×0.35	-	2.5	31.6±0.5
19	JHSMYJYPGY 4×2×0.35	0.8	2.0	21.5±0.5
20	JHSMYJYGYP 7×2×0.35	0.8	2.0	25.2±0.5
21	JHSMYJYPGY 13×2×0.35	0.8	2.5	33.8±0.5
22	JHSMYJUPGU 4×2×0.35	0.8	2.3	22.5±0.5
23	JHSMYJUPGU 7×2×0.35	0.8	2.3	26.2±0.5
24	JHSMYJUPGU 13×2×0.35	0.8	2.5	34.8±0.5
2526	JHSMYJYPGY 4×2×0.5	0.8	2.0	18.7±0.5
27	JHSMYJYGYP 7×2×0.5	0.8	2.0	21.5±0.5
28	JHSMYJYPGY 13×2×0.5	0.8	2.5	28.6±0.5
29	JHSMYJYPGY 36×2×0.5	1.0	2.5	40.6±0.5
30	JHSMYJUPGU 4×2×0.5	0.8	2.3	19.7±0.5
31	JHSMYJUPGU 7×2×0.5	0.8	2.3	22.5±0.5
32	JHSMYJUPGU 13×2×0.5	0.8	2.5	29.6±0.5
33	JHSMYJUPGU 36×2×0.5	1.0	2.5	41.6±0.5

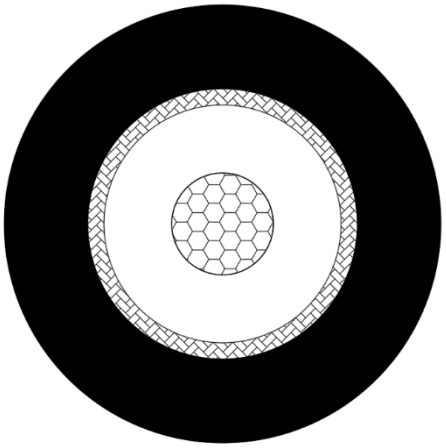



-35°C~+85°C

Longitudinal Watertight Coaxial Cable

Application

Underwater cabin cable.

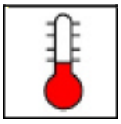


Cable Description

Cable P/N	Num./Single Wire Dia. mm	Cable Diameter mm	Sheath Material
CSMU-50-5-1-001	7/0.5	8.5±0.2	Polyurethane
CSMU-50-5-1-002	1.40	8.5±0.2	Polyurethane

Cable Performance

Test Item	Technical Requirements	
	SYU-50-5-1-001	SYU-50-5-1-002
Voltage Test	1500V AC 1Min.	
Insulation Resistance:	≥1000MΩ·km	
Characteristic Impedance	50±2Ω（100 MHz ~2000MHz）	
Attenuation	≤0.2dB/m@100MHz, ≤0.5dB/m@1.0GHz, ≤0.8dB/m@2.0GHz	
VSWR	≤1.3（100 MHz ~2000MHz）	
Min.. Bending Radius	40mm	
Low Temperature Test	-45℃, 20h	
High Temperature Test	100℃, 168h	
Longitudinal Watertightness Test	4.5Mpa 8h	
Constant Damp Heat Test	70℃, humidity:93%, 144h	

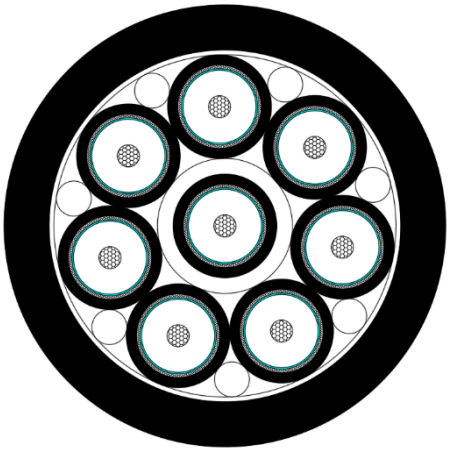



-40°C~+70°C

Longitudinal Watertight 8 Coaxial Cable

Application

Underwater cabin cable.

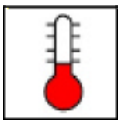


Cable Description

Cable P/N	Num./Single Wire Dia. mm	Cable Diameter mm	Sheath Material
CSMU 8×50-5	1/1.45	29.0±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	1500V AC 1Min.
Insulation Resistance	≥1000MΩ·km
Characteristic Impedance	50Ω±2Ω
Attenuation	≤2.5dB/m@12.0GHz
VSWR	≤1.5（12GMHz）
Breaking Force Test	≥800 N
Min.. Bending Radius	12D
Low Temperature Test	-40℃, 4h
High Temperature Test	+85℃, 4h
Longitudinal Watertightness Test	6.75Mpa 6h

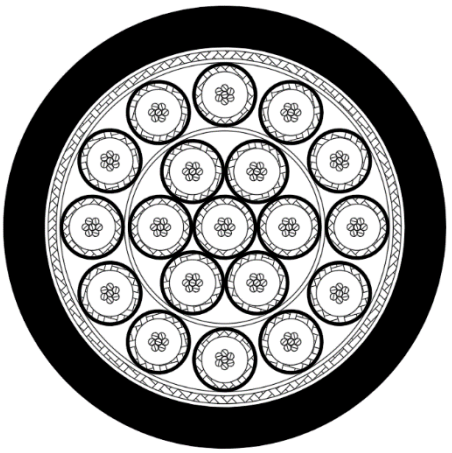



-40°C~+85°C

Longitudinal Watertight Control Cable

Application

Underwater cabin cable.

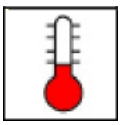


Cable Description

Reference Standards	Cable Name
Q/PPDL 0030-2020	Longitudinal Watertight Control Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Longitudinal Watertightness Test	6.75 6h	MPa
Transverse Watertightness Test	6.75 6h	MPa
Bending Test	12D,500 times	/
Low Temperature Test	-35℃, 4h	/
High Temperature Test	+85℃, 4h	/
Salt Spray Test	96h	/
Mold Test	CLASS I	/
Breaking Force Test	≥800	N
Voltage Test	DC 3.6kV 5Min.	/
Insulation Resistance	≥500	MΩ·km @20℃

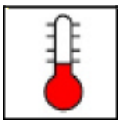



-35°C~+85°C

Longitudinal Watertight Control Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
1	JKMYJYP 3×0.35	-	2.0	11.5±0.5
2	JKMYJYP 7×0.35	-	2.0	13.8±0.5
3	JKMYJYP 8×0.35	-	2.0	14.8±0.5
4	JKMYJYP 12×0.35	-	2.2	17.6±0.5
5	JKMYJYP 19×0.35	-	2.2	20.0±0.5
6	JKMYJYP 37×0.35	-	2.5	25.7±0.5
7	JKMYJUP 3×0.35	-	2.3	12.5±0.5
8	JKMYJUP 7×0.35	-	2.3	14.8±0.5
9	JKMYJUP 8×0.35	-	2.3	15.8±0.5
10	JKMYJUP 12×0.35	-	2.5	18.6±0.5
11	JKMYJUP 19×0.35	-	2.5	21.0±0.5
12	JKMYJUP 37×0.35	-	2.5	26.7±0.5
13	JKMYJYPGY 3×0.35	0.8	2.0	14.7±0.5
14	JKMYJYPGY 7×0.35	0.8	2.0	17.0±0.5
15	JKMYJYPGY 8×0.35	0.8	2.0	17.8±0.5
16	JKMYJYPGY 12×0.35	0.8	2.2	20.6±0.5
17	JKMYJYPGY 19×0.35	0.8	2.2	25.0±0.5
18	JKMYJYPGY 37×0.35	1.0	2.5	29.3±0.5
19	JKMYJUPGU 3×0.35	0.8	2.3	15.7±0.5
20	JKMYJUPGU 7×0.35	0.8	2.3	18.0±0.5
21	JKMYJUPGU 8×0.35	0.8	2.3	18.8±0.5
22	JKMYJUPGU 12×0.35	0.8	2.5	21.6±0.5
23	JKMYJUPGU 19×0.35	0.8	2.5	26.0±0.5
24	JKMYJUPGU 37×0.35	1.0	2.5	30.3±0.5
25	JKMYJYP 3×0.5	-	2.0	12.0±0.5
26	JKMYJYP 7×0.5	-	2.0	14.4±0.5
27	JKMYJYP 8×0.5	-	2.0	15.3±0.5
28	JKMYJYP 12×0.5	-	2.2	18.3±0.5
29	JKMYJYP 19×0.5	-	2.2	20.7±0.5
30	JKMYJYP 37×0.5	-	2.5	26.8±0.5

-35°C~+85°C

Longitudinal Watertight Control Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
31	JKMYJUP 3×0.5	-	2.3	13.0±0.5
32	JKMYJUP 7×0.5	-	2.3	15.4±0.5
33	JKMYJUP 8×0.5	-	2.3	16.3±0.5
34	JKMYJUP 12×0.5	-	2.5	19.3±0.5
35	JKMYJUP 19×0.5	-	2.5	21.7±0.5
36	JKMYJUP 37×0.5	-	2.5	27.8±0.5
37	JKMYJYPGY 3×0.5	0.8	2.0	15.0±0.5
38	JKMYJYPGY 7×0.5	0.8	2.0	17.4±0.5
39	JKMYJYPGY 8×0.5	0.8	2.0	18.3±0.5
40	JKMYJYPGY 12×0.5	0.8	2.2	21.3±0.5
41	JKMYJYPGY 19×0.5	0.8	2.2	25.7±0.5
42	JKMYJYPGY 37×0.5	1.0	2.5	30.4±0.5
43	JKMYJUPGU 3×0.5	0.8	2.3	16.0±0.5
44	JKMYJUPGU 7×0.5	0.8	2.3	18.4±0.5
45	JKMYJUPGU 8×0.5	0.8	2.3	19.3±0.5
46	JKMYJUPGU 12×0.5	0.8	2.5	22.3±0.5
47	JKMYJUPGU 19×0.5	0.8	2.5	26.7±0.5
48	JKMYJUPGU 37×0.5	1.0	2.5	31.4±0.5
49	JKMYJYP 3×0.75	-	2.0	12.7±0.5
50	JKMYJYP 7×0.75	-	2.0	15.3±0.5
51	JKMYJYP 8×0.75	-	2.0	16.3±0.5
52	JKMYJYP 12×0.75	-	2.2	19.5±0.5
53	JKMYJYP 19×0.75	-	2.2	22.2±0.5
54	JKMYJYP 37×0.75	-	2.5	29.0±0.5
55	JKMYJUP 3×0.75	-	2.3	13.7±0.5
56	JKMYJUP 7×0.75	-	2.3	16.3±0.5
67	JKMYJUP 8×0.75	-	2.3	17.3±0.5
68	JKMYJUP 12×0.75	-	2.5	20.5±0.5
59	JKMYJUP 19×0.75	-	2.5	23.2±0.5
60	JKMYJUP 37×0.75	-	2.5	30.0±0.5

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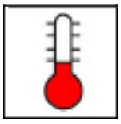
-35°C~+85°C

KSPP

Longitudinal Watertight Control Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
61	JKMYJYPGY 3×0.75	0.8	2.0	15.7±0.5
62	JKMYJYPGY 7×0.75	0.8	2.0	18.3±0.5
63	JKMYJYPGY 8×0.75	0.8	2.0	19.3±0.5
64	JKMYJYPGY 12×0.75	0.8	2.2	22.5±0.5
65	JKMYJYPGY 19×0.75	0.8	2.2	27.2±0.5
66	JKMYJYPGY 37×0.75	1.0	2.5	32.5±0.5
67	JKMYJUPGU 3×0.75	0.8	2.3	16.7±0.5
68	JKMYJUPGU 7×0.75	0.8	2.3	19.3±0.5
69	JKMYJUPGU 8×0.75	0.8	2.3	20.3±0.5
70	JKMYJUPGU 12×0.75	0.8	2.5	23.5±0.5
71	JKMYJUPGU 19×0.75	0.8	2.5	28.2±0.5
72	JKMYJUPGU 37×0.75	1.0	2.5	33.5±0.5
73	JKMYJYP 3×1.0	-	2.0	13.1±0.5
74	JKMYJYP 7×1.0	-	2.0	15.9±0.5
75	JKMYJYP 8×1.0	-	2.0	17.0±0.5
76	JKMYJYP 12×1.05	-	2.2	20.4±0.5
77	JKMYJYP 19×1.0	-	2.2	23.2±0.5
78	JKMYJYP 37×1.0	-	2.5	30.3±0.5
79	JKMYJUP 3×1.0	-	2.3	14.1±0.5
80	JKMYJUP 7×1.0	-	2.3	16.9±0.5
81	JKMYJUP 8×1.0	-	2.3	18.0±0.5
82	JKMYJUP 12×1.0	-	2.5	21.4±0.5
83	JKMYJUP 19×1.0	-	2.5	24.2±0.5
84	JKMYJUP 37×1.0	-	2.5	31.3±0.5
85	JKMYJYPGY 3×1.0	0.8	2.0	16.1±0.5
86	JKMYJYPGY 7×1.0	0.8	2.0	19.0±0.5
87	JKMYJYPGY 8×1.0	0.8	2.0	20.0±0.5
88	JKMYJYPGY 12×1.0	0.8	2.2	23.4±0.5
89	JKMYJYPGY 19×1.0	0.8	2.2	28.2±0.5
90	JKMYJYPGY 37×1.0	1.0	2.5	33.9±0.5
91	JKMYJUPGU 3×1.0	0.8	2.3	17.1±0.5

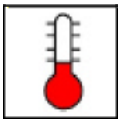



-35°C~+85°C

Longitudinal Watertight Control Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
92	JKMYJUPGU 7×1.0	0.8	2.3	20.0±0.5
93	JKMYJUPGU 8×1.0	0.8	2.3	21.0±0.5
94	JKMYJUPGU 12×1.0	0.8	2.5	24.4±0.5
95	JKMYJUPGU 19×1.0	0.8	2.5	29.2±0.5
96	JKMYJUPGU 37×1.0	1.0	2.5	34.9±0.5
97	JKMYJYP 3×1.5	-	2.0	13.7±0.5
98	JKMYJYP 7×1.5	-	2.0	16.8±0.5
99	JKMYJYP 8×1.5	-	2.0	18.0±0.5
100	JKMYJYP 12×1.5	-	2.2	21.6±0.5
101	JKMYJYP 19×0.5	-	2.2	24.7±0.5
102	JKMYJYP 37×0.5	-	2.5	32.4±0.5
103	JKMYJUP 3×1.5	-	2.3	14.7±0.5
104	JKMYJUP 7×1.5	-	2.3	17.8±0.5
105	JKMYJUP 8×1.5	-	2.3	19.0±0.5
106	JKMYJUP 12×1.5	-	2.5	22.6±0.5
107	JKMYJUP 19×1.5	-	2.5	25.7±0.5
108	JKMYJUP 37×1.5	-	2.5	33.4±0.5
109	JKMYJYPGY 3×1.5	0.8	2.0	16.8±0.5
110	JKMYJYPGY 7×1.5	0.8	2.0	19.8±0.5
111	JKMYJYPGY 8×1.55	0.8	2.0	21.0±0.5
112	JKMYJYPGY 12×1.5	0.8	2.2	24.6±0.5
113	JKMYJYPGY 19×1.5	0.8	2.2	29.7±0.5
114	JKMYJYPGY 37×1.5	1.0	2.5	36.0±0.5
115	JKMYJUPGU 3×1.5	0.8	2.3	17.8±0.5
116	JKMYJUPGU 7×1.5	0.8	2.3	20.8±0.5
117	JKMYJUPGU 8×1.5	0.8	2.3	22.0±0.5
118	JKMYJUPGU 12×1.5	0.8	2.5	25.6±0.5
119	JKMYJUPGU 19×1.5	0.8	2.5	30.7±0.5
120	JKMYJUPGU 37×1.5	1.0	2.5	37.0±0.5

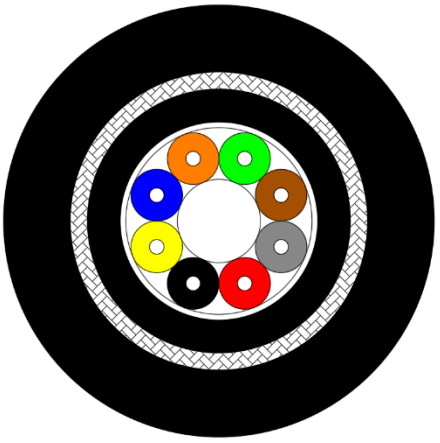



-35°C~+85°C

Longitudinal Watertight Optical Fiber Cable

Application

Underwater cabin cable.



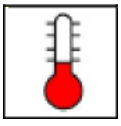
Cable Description

Cable P/N	Fiber Type	Cable Diameter mm	Sheath Material
CMFUPU-6F-xx(Fiber Type)	G652、G657 OM1、OM2、OM3	8.0±0.5	Polyurethane
CMFYPY-6F-xx(Fiber Type)			Polyolefins
CMFUPU-8F-xx(Fiber Type)		10.0±0.5	Polyurethane
CMFYPY-8F-xx(Fiber Type)			Polyolefins

Cable Performance

Test Item	Technical Requirements
Fiber Attenuation	≤0.5dB/km @1310nm&1550nm
Min.. Bending Radius	15D
Bending Test	10D, loading5kg, 50times
Tortuosis Test	10D, loading5kg, 3000times
Impact Test	850mm, 1kg, 10 times
Temperature Cycling Test	-30℃～60℃ 2Cycle
Pressure Test	2kN/10cm, 1Min.
Longitudinal Watertightness Test	6.75MPa, 8h
Transverse Watertightness Test	6.75MPa, 8h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

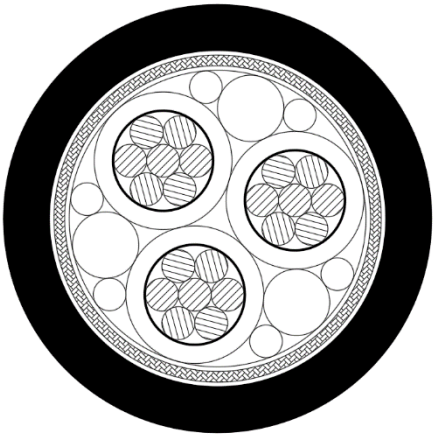




-30℃~+60℃

Longitudinal Watertight Power Cable

Application

Underwater cabin cable.

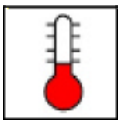


Cable Description

Reference Standards	Cable Name
Q/PPDL 0029-2020	Longitudinal Watertight Power Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Longitudinal Watertightness Test	6.75 6h	MPa
Transverse Watertightness Test	6.75 6h	MPa
Bending Test	12D, 500times	/
Low Temperature Test	-35℃, 4h	/
High Temperature Test	+85℃, 4h	/
Salt Spray Test	96h	/
Mold Test	CLASS I	/
Breaking Force Test	≥800	N
Voltage Test	DC 8.4kV 5Min.	/
Insulation Resistance	≥500	MΩ·km @20℃

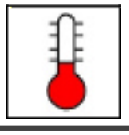



-35°C~+85°C

Longitudinal Watertight Power Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
1	JMYJYP 2×2.0	-	2.0	12.7±0.5
2	JMYJYP 3×2.0	-	2.0	13.2±0.5
3	JMYJYP 7×2.0	-	2.0	16.0±0.5
4	JMYJYP 8×2.0	-	2.0	17.0±0.5
5	JMYJYP 12×2.0	-	2.3	20.4±0.5
6	JMYJYP 19×2.0	-	2.3	23.2±0.5
7	JMYJUP 2×2.0	-	2.3	13.7±0.5
8	JMYJUP 3×2.0	-	2.3	14.2±0.5
9	JMYJUP 7×2.0	-	2.3	17.0±0.5
10	JMYJUP 8×2.0	-	2.3	18.0±0.5
11	JMYJUP 12×2.0	-	2.5	21.4±0.5
12	JMYJUP 19×2.0	-	2.5	24.2±0.5
13	JMYJYPGY 2×2.0	0.8	2.0	15.7±0.5
14	JMYJYPGY 3×2.0	0.8	2.0	16.2±0.5
15	JMYJYPGY 7×2.0	0.8	2.0	19.0±0.5
16	JMYJYPGY 8×2.0	0.8	2.0	20.0±0.5
17	JMYJYPGY 12×2.0	0.8	2.3	23.6±0.5
18	JMYJYPGY 19×2.0	0.8	2.3	26.4±0.5
19	JMYJUPGU 2×2.0	0.8	2.3	16.7±0.5
20	JMYJUPGU 3×2.0	0.8	2.3	17.2±0.5
21	JMYJUPGU 7×2.0	0.8	2.3	20.0±0.5
22	JMYJUPGU 8×2.0	0.8	2.3	21.0±0.5
23	JMYJUPGU 12×2.0	0.8	2.5	24.6±0.5
24	JMYJUPGU 19×2.0	0.8	2.5	27.4±0.5
25	JMYJYP 2×2.5	-	2.0	13.5±0.5
26	JMYJYP 3×2.5	-	2.0	14.1±0.5
27	JMYJYP 7×2.5	-	2.0	17.2±0.5
28	JMYJYP 8×2.5	-	2.0	18.3±0.5
29	JMYJYP 12×2.5	-	2.3	22.1±0.5
30	JMYJYP 19×2.5	-	2.3	25.2±0.5
31	JMYJUP 2×2.5	-	2.3	14.5±0.5
32	JMYJUP 3×2.5	-	2.3	15.1±0.5

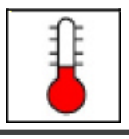



-35°C~+85°C

Longitudinal Watertight Power Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
33	JMYJUP 7×2.5	-	2.3	18.2±0.5
34	JMYJUP 8×2.5	-	2.3	19.3±0.5
35	JMYJUP 12×2.5	-	2.5	23.1±0.5
36	JMYJUP 19×2.5	-	2.5	26.2±0.5
37	JMYJYPGY 2×2.5	0.8	2.0	16.5±0.5
38	JMYJYPGY 3×2.5	0.8	2.0	17.1±0.5
39	JMYJYPGY 7×2.5	0.8	2.0	20.2±0.5
40	JMYJYPGY 8×2.5	0.8	2.3	21.9±0.5
41	JMYJYPGY 12×2.5	0.8	2.3	25.3±0.5
42	JMYJYPGY 19×2.5	0.8	2.3	28.4±0.5
43	JMYJUPGU 2×2.5	0.8	2.3	17.5±0.5
44	JMYJUPGU 3×2.5	0.8	2.3	18.1±0.5
45	JMYJUPGU 7×2.5	0.8	2.3	21.2±0.5
46	JMYJUPGU 8×2.5	0.8	2.3	22.9±0.5
47	JMYJUPGU 12×2.5	0.8	2.5	26.3±0.5
48	JMYJUPGU 19×2.5	0.8	2.5	29.4±0.5
49	JMYJYP 2×4.0	-	2.0	14.9±0.5
50	JMYJYP 3×4.0	-	2.0	15.6±0.5
51	JMYJYP 7×4.0	-	2.0	19.3±0.5
52	JMYJYP 8×4.0	-	2.0	20.6±0.5
53	JMYJUP 2×4.0	-	2.3	15.9±0.5
54	JMYJUP 3×4.0	-	2.3	16.6±0.5
55	JMYJUP 7×4.0	-	2.3	20.3±0.5
56	JMYJUP 8×4.0	-	2.5	21.6±0.5
57	JMYJYPGY 2×4.0	0.8	2.0	17.9±0.5
58	JMYJYPGY 3×4.0	0.8	2.0	18.8±0.5
59	JMYJYPGY 7×4.0	0.8	2.0	23.0±0.5
60	JMYJYPGY 8×4.0	0.8	2.3	24.8±0.5
61	JMYJUPGU 2×4.0	0.8	2.3	18.9±0.5
62	JMYJUPGU 3×4.0	0.8	2.3	19.8±0.5
63	JMYJUPGU 7×4.0	0.8	2.3	24.0±0.5
64	JMYJUPGU 8×4.0	0.8	2.5	25.8±0.5

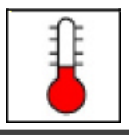



-35°C~+85°C

Longitudinal Watertight Power Cable

Cable Parameters

Serial	Cable P/N	Inner Sheath Thickness mm	Outer Sheath Thickness mm	Cable Diameter mm
65	JMYJY 1×10.0	-	2.0	11.0±0.5
66	JMYJYP 1×10.0	-	2.0	12.7±0.5
67	JMYJYP 2×10.0	-	2.0	19.9±0.5
68	JMYJYP 3×10.0	-	2.0	20.9±0.5
69	JMYJYP 4×10.0	-	2.0	23.6±0.5
70	JMYJU 1×10.0	-	2.3	12.0±0.5
71	JMYJUP 1×10.0	-	2.3	13.7±0.5
72	JMYJUP 2×10.0	-	2.3	20.9±0.5
73	JMYJUP 3×10.0	-	2.3	21.9±0.5
74	JMYJUP 4×10.0	-	2.3	23.6±0.5
75	JMYJYPGY 2×10.0	0.8	2.0	22.9±0.5
76	JMYJYPGY 3×10.0	0.8	2.0	24.0±0.5
77	JMYJYPGY 4×10.0	0.8	2.0	25.8±0.5
78	JMYJUPGU 2×10.0	0.8	2.0	23.9±0.5
79	JMYJUPGU 3×10.0	0.8	2.0	25.0±0.5
80	JMYJUPGU 4×10.0	0.8	2.0	26.8±0.5
81	JMYJY 1×25.0	-	2.0	12.8±0.5
82	JMYJYP 1×25.0	-	2.0	14.5±0.5
83	JMYJYP 2×25.0	-	2.0	23.5±0.5
84	JMYJYP 3×25.0	-	2.0	24.8±0.5
85	JMYJYP 4×25.0	-	2.0	27.0±0.5
86	JMYJY 1×25.0	-	2.3	13.8±0.5
87	JMYJYP 1×25.0	-	2.3	15.5±0.5
88	JMYJUP 2×25.0	-	2.3	24.5±0.5
89	JMYJUP 3×25.0	-	2.3	25.8±0.5
90	JMYJUP 4×25.0	-	2.5	28.0±0.5
91	JMYJYPGY 2×25.0	0.8	2.0	26.5±0.5
92	JMYJYPGY 3×25.0	0.8	2.0	27.8±0.5
93	JMYJYPGY 4×25.0	0.8	2.0	30.2±0.5
94	JMYJUPGU 2×25.0	0.8	2.0	27.5±0.5
95	JMYJUPGU 3×25.0	0.8	2.0	28.8±0.5
96	JMYJUPGU 4×25.0	0.8	2.0	31.2±0.5

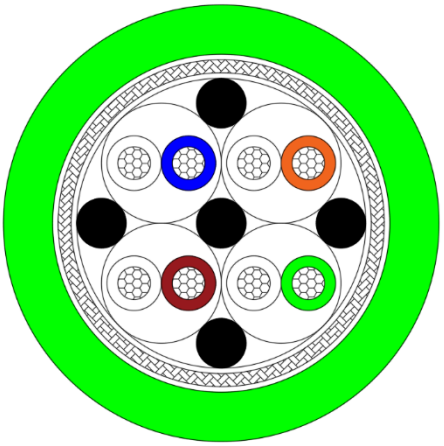



-35°C~+85°C

Deep-Sea Network Cable

Application

Network Communication Between
Deep-Sea Devices.

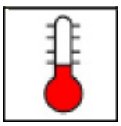


Cable Description

Cable P/N	Cable Name
CHWYJPU 4X2X24AWG	70Mpa Deep-Sea Network Cable

Cable Performance

Item	Requirment	Unit
Rated Voltage	600	V AC
Insulation Resistance	≥500	MΩ·km @20℃
Voltage Test	2000V AC, 50Hz, 5Min.	/
Operating Capacitance	≤70	nF/km
Characteristic Impedance @100MHz	100±15	Ω
Attenuation @100MHz	≤29	dB/100m @20℃
Nom. Weight	170	g/m
Min.. Bending Radius	6D	mm
VulcanizationCable Performance	Vulcanization 120℃, 2h	/
Transverse Watertightness Test	70MPa, Cat5e	/

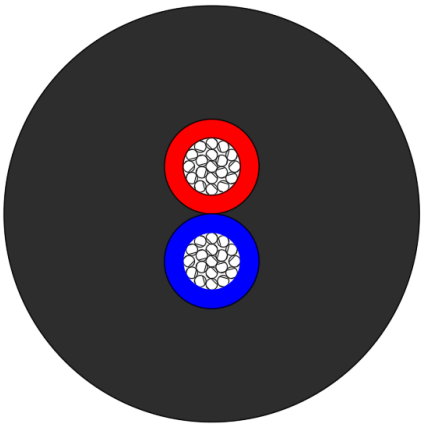



-40°C~+85°C

Deep-Sea Dual-core Cable

Application

Using in communication and control connections in deepwater systems.



Cable Description

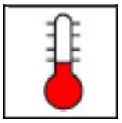
Cable P/N	Cable Name
MHE-2x0.6mm^2	60MPa Deep-Sea Dual-core Cable

Structure

Structure	Material	Dimensions（mm）
Conductor	Tin Plated Stranded Conductor	19/0.20
Insulation	Fluoroplastics	/
Cabling	-	/
Sheath	Rubber	5.8±0.5

Cable Performance

Test Item		Technical Requirements
Conductor Resistance（20°C）	Ω/km	≤34.5
Insulation Resistance (20°C, 250V DC)	MΩ·km	≥500
Operating Voltage	V	600
Dielectric Strength（AC 2Min.）	V	2000
Transverse Watertightness Test	MPa	60，2h

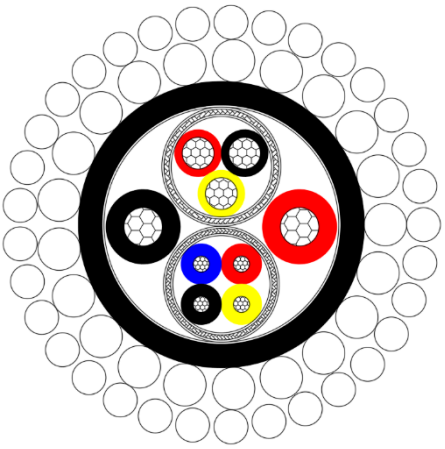



-40°C~+125°C

280kN Power, Control and Signal Composited Steel Wire Towing Cable

Application

Using in towing system.



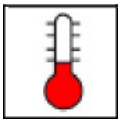
Cable Description

Cable P/N	Cable Name
CZDOHWGY-2×2mm^2+1×3×16AWG+1×4×22AWG	280kN Power, Control and Signal Composited Steel Wire Towing Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	15xOD	mm
Breaking Force	≥280	KN
Working Pull	≥80	KN
Nom. Weight (Air/Sea)	1750/1420	Kg/Km
Density(Air/Sea)	4.6/4.5	g/cm^3
Transverse Watertightness Test	5.0, 4h	MPa
Conductor Resistance(+20℃)	≤10.6 (2mm^2) ≤14.3(16AWG) ≤58.2(22AWG)	Ω/km @20℃
Insulation Resistance	≥500	MΩ·km @20℃
Voltage Test	5000 (2mm^2) 2250 (16AWG, 22AWG)	kV/AC,5Min.
Characteristic Impedance	100±10 @ 1MHz (Single)	Ω

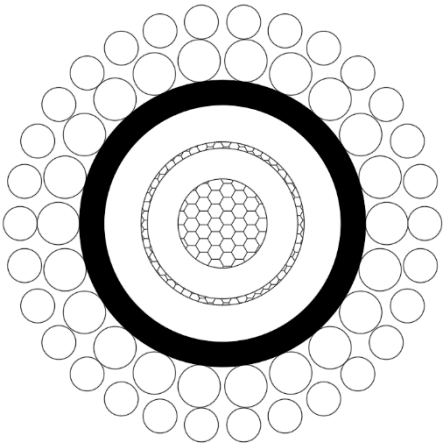
Note: Sea density 1.026 g/cm^3


100kN Steel Wire Towing Power Cable

Application

Using in towing system.

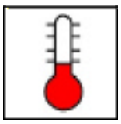


Cable Description

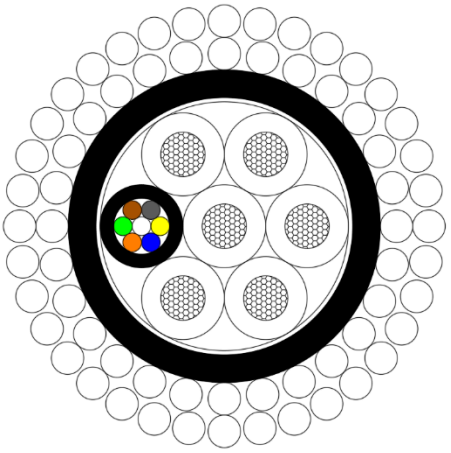
Cable P/N	Cable Diameter mm	Sheath Material
CZDGYU	16.0±0.3	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	6500V AC 1Min.
Operating Voltage	2000V AC
Max. Operating Current	10A
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤10.6Ω/km
Breaking Force	≥100kN
Working Pull	30kN
Nom. Weight（Air/Sea）	880/700 (Kg/Km)
Density（Air/Sea）	4.20/3.35 (g/cm^3)
Transverse Watertightness Test	18Mpa，4h（Sheath内）
Min.. Bending Radius	15D
Low Temperature Test	-40℃，4h
High Temperature Test	+85℃，4h

20kN 6 Optical and 6 Electrical Composited Steel Wire Towing Cable



Application

Using in towing system.

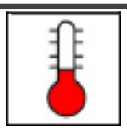
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CDFYJPGL-20-6x0.5+6F	6 core electrical 6 core fiber	14.2±0.2	Polyolefins

Cable Performance

Test Item	Technical Requirements
Voltage Test	1000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤45Ω/km
Fiber Attenuation	0.5dB km@1310nm&1550nm
Breaking Force	≥20kN
Density	3.5g/cm^3
Min.. Bending Radius	15D
Longitudinal Watertightness Test	2.5MPa, 4h
Transverse Watertightness Test	2.5MPa, 4h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

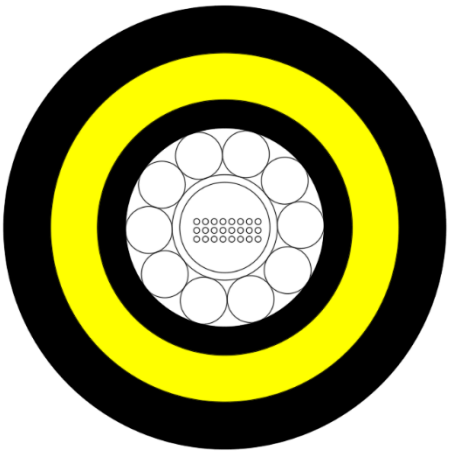



-40°C~+60°C

100kN 24 Fiber Microgravity Towed Fiber Optic Cable

Application

Using in towing system.



Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZKU-24F	24 Core G652	16.0±0.5	Polyurethane

Cable Performance

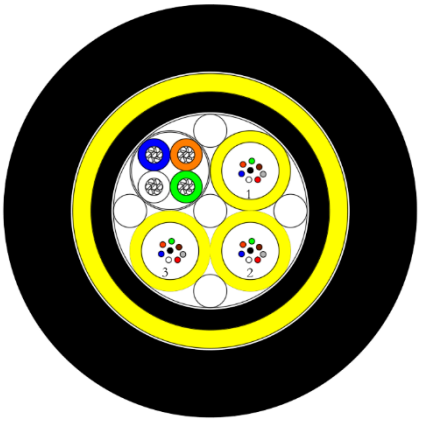
Test Item	Technical Requirements
Min.. Bending Radius	300mm
Working Pull	≥30 KN
Short Pull	≥50 KN
Breaking Force Test	≥100 KN
Impact	≥50 N·m
Pressure Test	≥5 KN/10cm
Density	1.62 g/cm^3
Transverse Watertightness Test	4.5MPa
Fiber Attenuation	≤0.3dB/km
Operating Temperature	-2℃～+36℃
Storage Temperature	-40℃～+50℃

Note: When the fiber length is less than 300 meters, only the transparent test is done.

30kN 24 Optical and 4Electrical Composited Zero Buoyancy Towing Cable

Application

Using in towing system.



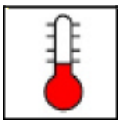
Cable Description

Cable P/N	Unit Composition	Cable Diameter mm	Sheath Material
CZHFKU-4×22AWG+24F	4 core electrical 24 core fiber	18.0±0.5	Polyurethane

Cable Performance

Test Item	Technical Requirements
Voltage Test	1000V AC 1Min.
Insulation Resistance	≥500MΩ·km
Conductor Resistance（+20℃）	≤58.2Ω/km
Breaking Force	≥30kN
Density	1.03g/cm^3
Min.. Bending Radius	15D
Low Temperature Test	-40℃, 4h
High Temperature Test	+85℃, 4h
Bending Test	15D loading 5kg 50Cycle
Impact Test	1kg, 850cm, Impact 10 times
Transverse Watertightness Test	18MPa 4h

Note: When the fiber length is less than 300 meters, only the transparent test is done.

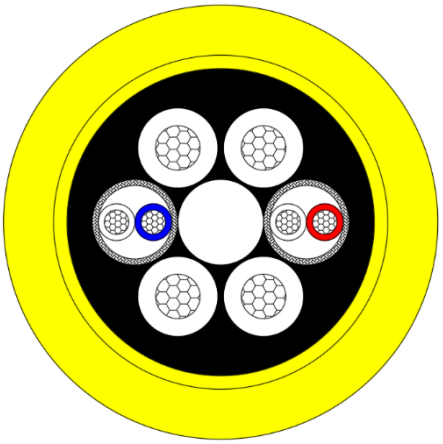



-40°C~+85°C

25kN 4 Power and 2 Pairs Single Composited Towing Cable

Application

Using in towing system.



Cable Description

Cable P/N	Cable Name
CZDHPKU-4x2.5+2x(2x0.75)P	25kN 4 Power and 2 Pairs Single Composited Towing Cable

Cable Performance

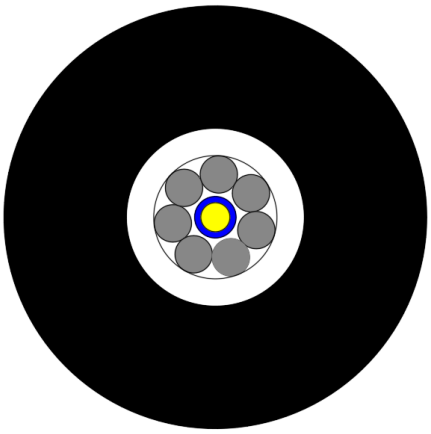
Item	Requirment	Unit
Min.. Bending Radius	8D	mm
Breaking Force T	25	KN
Working Pull	8	kN
Transverse Watertightness Test	4.5	MPa
Density	1.4	g/cm^3
Nom. Weight	420	g/m
Conductor Resistance(+20℃)($2.5mm^2$)	≤8.0	Ω/km @20℃
Insulation Resistance($2.5mm^2$)	≥500	MΩ·km @20℃
Voltage Test($2.5mm^2$)	3000	V/AC,1Min.
Conductor Resistance(+20℃)($0.75mm^2$)	≤26.7	Ω/km @20℃
Insulation Resistance($0.75mm^2$)	≥500	MΩ·km @20℃
Voltage Test($0.75mm^2$)	1000	V/AC,1Min.

-40°C~+80°C

1 Core Transverse Watertight Steel Wire Armoured Fiber Optical Cable

Application

Fiber optic signal transmission for underwater equipment.

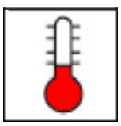


Cable Description

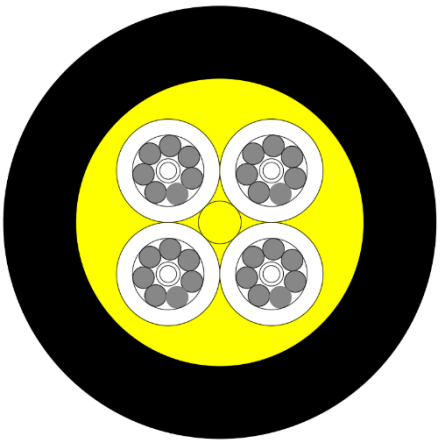
Cable P/N	Cable Diameter mm	Sheath Material	Weight g/m
CGYU-1F	5.1±0.2	Polyurethane	31

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	15D	mm
Transverse Watertightness Test	20MPa 4h	/
Fiber Attenuation	≤0.5	dB/km @1310nm&1550nm
Pressure Test	2000N	GJB 1428-2009
Bending Test	15D，1500次	GJB 1428-2009
Impact Test	1.5kg，Impact50次	GJB 1428-2009
Breaking Force	800	N
Working Pull	400	N
Density	1.5	g/cm^3

-30°C~+70°C



4 Core Transverse Watertight Steel Wire Armoured Fiber Optical Cable

Application

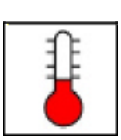
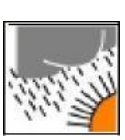
Fiber optic signal transmission for underwater equipment.

Cable Description

Cable P/N	Cable Diameter mm	Sheath Material	Weight g/m
CMGYU-4F	9.0±0.2	Polyurethane	105

Cable Performance

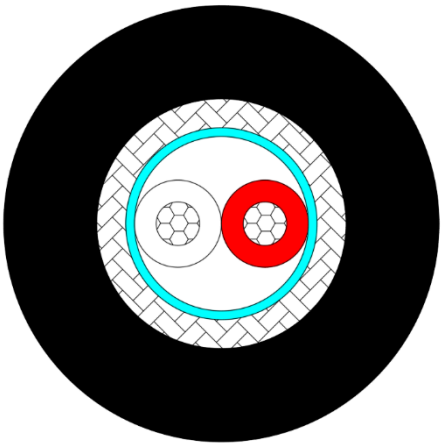
Item	Requirment	Unit
Min.. Bending Radius	15D	mm
Transverse Watertightness Test	20MPa 4h不	/
Fiber Attenuation	≤0.5	dB/km @1310nm&1550nm
Pressure Test	2000N	GJB 1428-2009
Bending Test	15D，1500次	GJB 1428-2009
Impact Test	1.5kg，Impact50次	GJB 1428-2009
Breaking Force	800	N
Working Pull	400	N
Density	1.6	g/cm^3



-30°C~+70°C



Dual-Core Hydrophone Cable

Application

Hydrophone cable.

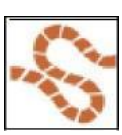
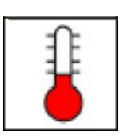


Cable Description

Cable P/N	Cable Diameter mm	Sheath Material	Weight g/m
CHWE-2x0.05	3.0±0.2	Polyurethane	15

Cable Performance

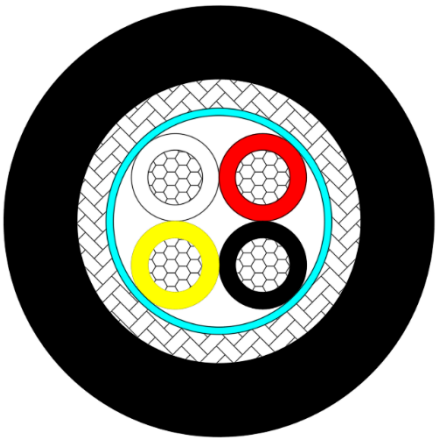
Item	Requirment	Unit
Min.. Bending Radius	10xOD	mm
Conductor Resistance（+20℃）	≤410	Ω/km @20℃
Insulation Resistance	≥500	MΩ·km @20℃
Voltage Test	1.0	kV/DC,1Min.
Transverse Watertightness Test试验	6.75MPa	2h



-40°C~+85°C

4 Core Hydrophone Cable

Application

Hydrophone cable.



Cable Description

Cable P/N	Cable Diameter mm	Sheath Material	Weight g/m
CHWE-4x0.2	4.0±0.2	Polyurethane	35

Cable Performance

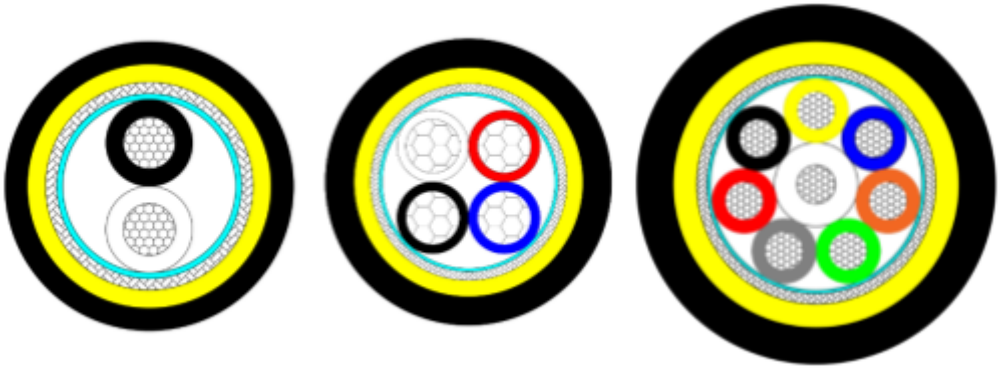
中文	Requirment	Unit
Min.. Bending Radius	10xOD	mm
Conductor Resistance（+20℃）	≤95.0	Ω/km @20℃
Insulation Resistance	≥1000	MΩ·km @20℃
Voltage Test	1.5	kV/AC,1Min.
Transverse Watertightness Test	6.75MPa	2h

-40ºC~+85ºC

High-voltage Hydrophone Cable

Application

1000V High-voltage cables for hydrophones.



Cable Description

Cable P/N	Cable Name	Sheath Material
CHFPEU	High-voltage Hydrophone Cable	Polyurethane

Cable Performance

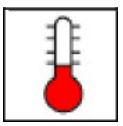
Item	Requirment	Unit
Min.. Bending Radius	10xOD	mm
Insulation Resistance	≥500	MΩ·km @20℃
Voltage Test	4.0	kV/DC,1Min.
Operating Voltage	1000	V
Transverse Watertightness Test	6.75MPa	2h
Bending Test	10D 500次	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+85℃, 4h	/
Salt Spray Test	96h	/
Mold Test	CLASS I	/

-40°C~+85°C

High-voltage Hydrophone Cable

Cable Dimensions

Serial	Cable P/N	Core	Conductor Area mm²	Resistance Ω/km @20℃	Rated Current A	Voltage V	Hydraulic MPa	Diameter mm	Weight g/m
1	CHFPEU-2X0.15	2	0.15	≤139.0	≤1.5	≤1000	6.75	5.0	35
2	CHFPEU-4X0.15	4	0.15	≤139.0	≤1.5	≤1000	6.75	5.5	46
3	CHFPEU-8X0.15	8	0.15	≤139.0	≤1.5	≤1000	6.75	6.7	75
4	CHFPEU-2X0.22	2	0.22	≤94.3	≤2.5	≤1000	6.75	5.0	38
5	CHFPEU-4X0.22	4	0.22	≤94.3	≤2.5	≤1000	6.75	6.0	55
6	CHFPEU-8X0.22	8	0.22	≤94.3	≤2.0	≤1000	6.75	7.0	85
7	CHFPEU-2X0.5	2	0.5	≤42.9	≤5.0	≤1000	6.75	6.2	60
8	CHFPEU-4X0.5	4	0.5	≤42.9	≤5.0	≤1000	6.75	7.0	80
9	CHFPEU-8X0.5	8	0.5	≤42.9	≤4.0	≤1000	6.75	8.4	130
10	CHFPEU-2X0.75	2	0.75	≤27.6	≤8.0	≤1000	6.75	6.6	70
11	CHFPEU-4X0.75	4	0.75	≤27.6	≤7.5	≤1000	6.75	7.8	105
12	CHFPEU-8X0.75	8	0.75	≤27.6	≤5.0	≤1000	6.75	9.5	168
13	CHFPEU-2X1.35	2	1.35	≤15.5	≤13.5	≤1000	6.75	7.5	95
14	CHFPEU-4X1.35	4	1.35	≤15.5	≤10.0	≤1000	6.75	9.0	145
15	CHFPEU-8X1.35	8	1.35	≤15.5	≤8.0	≤1000	6.75	10.8	235

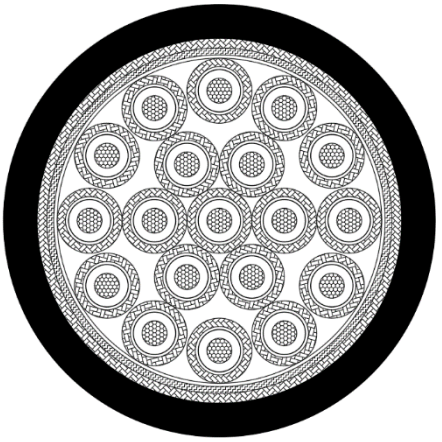
-40ºC~+85ºC

JKQYJ Series, Lightweight Marine Control Cable

Application

Using in the control system of ships or vehicles.

Reference Standards：Q/PPDL 0019-2020

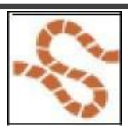
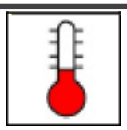


Cable Description

Cable P/N	Cable Name
JKQYJ86/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Armor、PolyolefinsSheath Lightweight Marine Control Cable
JKQYJP86/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Individually Shield、Tinned Copper Wire Armor、PolyolefinsSheath Lightweight Marine Control Cable
JKQYJ85/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Aromor、Cross-Link Polyolefins Sheath Lightweight Marine Control Cable
JKQYJP85/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Individually Shield、Tinned Copper Wire Armor、Cross-Link Polyolefins Sheath Lightweight Marine Control Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500times	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 1.5kV 5Min.	/
Insulation Resistance	≥100	MΩ·km @20℃

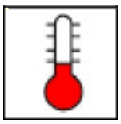



-40°C~+85°C

JKQYJ Series, Lightweight Marine Control Cable

Cable Parameters

Serial	Type	Cable Diameter（mm）			
		JKQYJ86/SC	JKQYJP86/SC	JKQYJ85/SC	JKQYJP85/SC
1	2×0.38	5.6	6.8	5.6	6.8
2	3×0.38	5.8	7.1	5.8	7.1
3	4×0.38	6.1	7.6	6.1	7.6
4	7×0.38	6.9	8.7	6.9	8.7
5	8×0.38	7.1	9.0	7.1	9.0
6	12×0.38	8.3	11.3	8.3	11.3
7	19×0.38	9.4	12.9	9.4	12.9
8	24×0.38	11.1	15.2	11.1	15.2
9	30×0.38	11.6	16.0	11.6	16.0
10	37×0.38	12.4	17.2	12.4	17.2
11	48×0.38	14.3	18.0	14.3	19.4
13	2×0.5	-	-	6.5	7.3
14	3×0.5	-	-	6.8	7.6
15	4×0.5	-	-	7.2	8.2
16	7×0.5	-	-	8.2	9.4
17	8×0.5	-	-	8.5	9.8
18	12×0.5	-	-	10.7	12.3
19	19×0.5	-	-	12.1	14.6
20	24×0.5	-	-	14.3	16.7
21	30×0.5	-	-	15.0	17.8
22	37×0.5	-	-	16.0	19.0
23	48×0.5	-	-	18.2	22.1
24	2×0.62	6.0	7.2	-	-
25	3×0.62	6.2	7.5	-	-
26	4×0.62	6.6	8.0	-	-
27	7×0.62	7.5	6.3	-	-
28	8×0.62	7.8	9.3	-	-
29	12×0.62	9.1	12.1	-	-
30	19×0.62	10.9	14.4	-	-
31	24×0.62	12.3	16.4	-	-
32	30×0.62	12.9	17.5	-	-
33	48×0.62	15.9	21.7	-	-
34	2×0.75	6.8	7.6	6.8	7.6
35	3×0.75	7.1	7.9	7.1	7.9
36	4×0.75	7.6	8.5	7.6	8.5
37	7×0.75	8.7	9.8	8.7	9.8

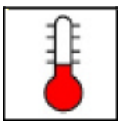



-40°C~+85°C

JKQYJ Series, Lightweight Marine Control Cable

Cable Parameters

Serial	Type	Cable Diameter（mm）			
		JKQYJ86/SC	JKQYJP86/SC	JKQYJ85/SC	JKQYJP85/SC
38	8×0.75	9.0	10.8	9.0	10.8
39	12×0.75	11.3	12.9	11.3	12.9
40	19×0.75	12.9	15.3	12.9	15.3
41	24×0.75	15.2	17.8	15.2	17.8
42	30×0.75	16.0	18.7	16.0	18.7
43	48×0.75	19.4	23.3	19.4	23.3
44	2×0.96	6.5	7.7	6.5	7.7
45	3×0.96	6.8	8.0	6.8	8.0
46	4×0.96	7.2	8.7	7.2	8.7
47	7×0.96	8.2	10.5	8.2	10.5
48	8×0.96	8.6	11.0	8.6	11.0
49	12×0.96	10.7	13.1	10.7	13.1
50	19×0.96	12.1	15.6	12.1	15.6
51	24×0.96	14.3	18.1	14.3	18.1
52	30×0.96	15.0	19.1	15.0	19.1
53	48×0.96	18.2	23.7	18.2	23.7
54	2×1.0	7.1	7.9	7.1	7.9
55	3×1.0	7.4	8.2	7.4	8.2
56	4×1.0	7.9	8.9	7.9	8.9
57	7×1.0	9.1	10.8	9.1	10.8
58	8×1.0	9.5	11.2	9.5	11.2
59	12×1.0	11.9	14.0	11.9	14.0
60	19×1.0	14.1	15.6	14.1	16.1
61	24×1.0	16.1	18.7	16.1	18.7
62	30×1.0	16.9	19.7	16.9	19.7
63	48×1.0	21.1	24.4	21.1	24.4
64	2×1.5	7.9	8.7	7.9	8.7
65	3×1.5	8.3	9.1	8.3	9.1
66	4×1.5	8.9	9.8	8.9	9.8
67	7×1.5	10.8	12.0	10.8	12.0
68	8×1.5	11.3	12.7	11.3	12.7
69	12×1.5	14.1	15.7	14.1	15.7
70	19×1.5	16.1	18.3	16.1	18.3
71	24×1.5	18.7	21.8	18.7	21.8
72	30×1.5	19.7	23.0	19.7	23.0
73	48×1.5	24.6	27.8	24.6	27.8

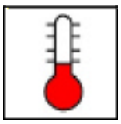



-40°C~+85°C

JKQYJ Series, Lightweight Marine Control Cable

Cable Parameters

Serial	Type	Cable Diameter（mm）			
		JKQYJ86/SC	JKQYJP86/SC	JKQYJ85/SC	JKQYJP85/SC
74	2×2.5	8.9	9.6	8.9	9.6
75	3×2.5	9.3	10.6	9.3	10.6
76	4×2.5	10.6	11.5	10.6	11.5
77	7×2.5	12.2	13.4	12.2	13.4
78	8×2.5	12.8	14.6	12.8	14.6
79	12×2.5	16.1	17.9	16.1	17.9
80	19×2.5	18.7	21.2	18.7	21.2
81	24×2.5	22.3	24.7	22.3	24.7
82	30×2.5	23.5	26.0	23.5	26.0
83	48×2.5	28.5	31.9	28.5	31.9

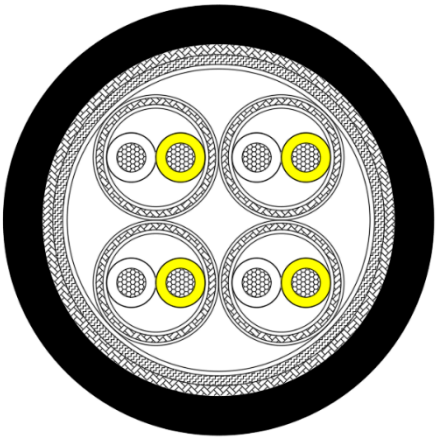
-40°C~+85°C

JHQYJ Series, Lightweight Marine Communication Cable

Application

Using in the communication system of ships or vehicles.

Reference Standards：Q/PPDL 0020-2020



Cable Description

Cable P/N	Cable Name
JHQYJ86/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Armor、Polyolefins Sheath 、Lightweight Marine Communication Cable
JHQYJP86/SC	Cross-Link Polyolefins Insulation、Tinned Copper Wire Individually Shield、Tinned Copper Wire Armor、Polyolefins Sheath、Lightweight Marine Communication Cable
JHQYJZP86/SC	Cross-Link PolyolefinsInsulation、Tinned Copper Wire Shield、Tinned Copper Wire Armor、Polyolefins Sheath、Lightweight Marine Communication Cable

Cable Performance

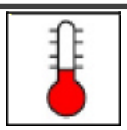
Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500times	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 1.5kV 5Min.	/
Insulation Resistance	≥100	MΩ·km @20℃

-40℃~+85℃

JHQYJ Series, Lightweight Marine Communication Cable

Cable Parameters

Serial	Type	Cable Diameter（mm）		
		JHQYJ86/SC	JHQYJP86/SC	JHQYJZP86/SC
1	1×2×0.38	5.6	6.2	6.0
2	2×2×0.38	8.1	8.7	8.9
3	3×2×0.38	8.5	9.3	9.1
4	4×2×0.38	9.1	10.6	9.7
5	5×2×0.38	10.5	11.6	11.1
6	7×2×0.38	10.7	12.3	11.3
7	8×2×0.38	10.8	12.8	11.4
8	12×2×0.38	12.9	14.9	14.0
9	19×2×0.38	14.7	18.2	15.3
10	24×2×0.38	16.8	19.6	17.6
11	30×2×0.38	17.9	21.7	18.5
12	37×2×0.38	18.7	22.3	19.3
13	48×2×0.38	21.8	25.1	22.4
14	1×2×0.62	6.0	6.5	6.6
15	2×2×0.62	8.9	9.9	9.5
16	4×2×0.62	10.6	11.8	11.2
17	7×2×0.62	11.9	14.3	12.5
18	8×2×0.62	12.0	15.0	12.6
19	12×2×0.62	14.9	17.00	15.5
20	19×2×0.62	16.4	19.6	17.2
21	24×2×0.62	19.1	23.0	19.7
22	30×2×0.62	20.1	23.5	21.2
23	37×2×0.62	21.7	25.2	22.3
24	48×2×0.62	24.5	28.6	25.3
25	1×2×0.96	6.5	7.0	7.1
26	2×2×0.96	9.9	11.4	11.0
27	4×2×0.96	11.8	13.0	12.4
28	7×2×0.96	13.3	15.8	14.4
29	8×2×0.96	13.4	16.6	14.5
30	12×2×0.96	16.8	18.9	17.6
31	19×2×0.96	18.8	22.6	19.4
32	24×2×0.96	22.3	25.6	23.1
33	30×2×0.96	23.5	26.3	24.3
34	37×2×0.96	24.6	28.2	25.4
35	48×2×0.96	27.8	32.2	28.6

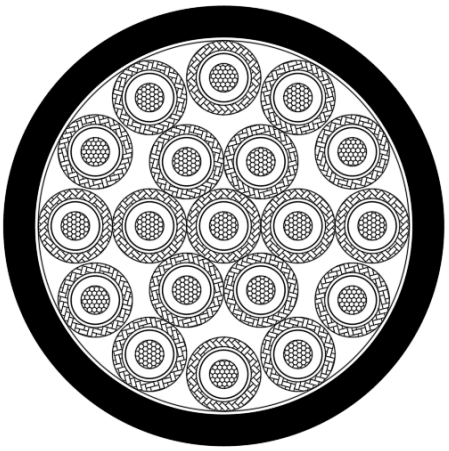
-40°C~+85°C

CHVV Series, PVC Insulation, PVC Sheath Marine Communication Cable

Application

Using in the communication system of ships or vehicles.

Reference Standards: Q/PPDL 0024-2020

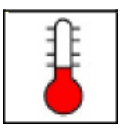


Cable Description

Cable P/N	Cable Name
CHVV	PVC Insulation, PVC Sheath Marine Communication Cable
CHVVP	PVC Insulation, Tinned Copper Wire Individually Shield, PVC Sheath Marine Communication Cable
CHRVP82-90	PVC Insulation, Tinned Copper Wire Individually Shield, Tinned Copper Wire Overall Shield, PVC Sheath Marine Communication Cable
CRHVP-90	PVC Insulation, inned Copper Wire Overall Shield, PVC Sheath Marine Communication Cable

Cable Performance

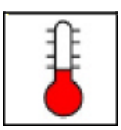
Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500 times	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 1.5kV 5Min.	/
Insulation Resistance	≥50	MΩ·km @20℃


CHVV Series, PVC Insulation, PVC Sheath Marine Communication Cable

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
1	CHVV 4×0.35	1.00	6.7
2	CHVV 4×1	1.00	8.2
3	CHVV 10×1	1.30	12.5
4	CHVVP 4×0.35	1.40	9.0
5	CHVVP 10×0.35	1.50	12.0
6	CHVVP 2×0.5	1.00	7.4
7	CHVVP 4×0.5	1.50	9.5
8	CHVVP 10×0.5	1.50	14.2
9	CHVVP 27×0.5	1.50	19.5
10	CHVVP 30×0.5	1.70	20.0
11	CHVVP 5×0.75	1.30	10.5
12	CHVVP 4×1	1.30	10.5
13	CHVVP 10×1	1.50	14.7
14	CHVVP 19×1	1.50	18.2
15	CHVVP 4×2.5	1.50	13.0
16	CRHVP-90 10×2×0.2	1.50	14.5
17	CRHVP-90 5×2×0.3	1.50	11.5
18	CRHVP-90 5×2×0.35	1.50	11.6
19	CHRVP82-90 4×2×0.3	1.50	12.7
20	CHRVP82-90 5×2×0.35	1.50	14.3
21	CHRVP82-90 10×2×0.35	1.70	17.5

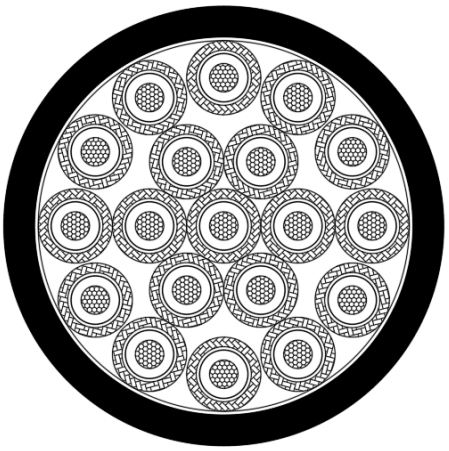




CHVU Series, PVC Insulation, TPU Sheath Marine Communication Cable

Application

Using in the communication system of ships or vehicles

Reference Standards: Q/PPDL 0022-2020

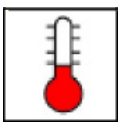


Cable Description

Cable P/N	Cable Name
CHVU	PVC Insulation, TPU Sheath Marine Communication Cable
CHVUP	PVC Insulation, Tinned Copper Wire Individually Shield, TPU Sheath Marine Communication Cable
CHRUP83-105	PVC Insulation, Tinned Copper Wire Individually Shield, Tinned Copper Wire Overall Shield, TPU Sheath Marine Communication Cable
CRHUP-105	PVC Insulation, inned Copper Wire Overall Shield, TPU Sheath Marine Communication Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500times	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 1.5kV 5Min.	/
Insulation Resistance	≥50	MΩ·km @ 20℃

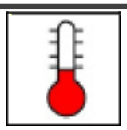



-40°C~+85°C

CHVU Series, PVC Insulation, TPU Sheath Marine Communication Cable

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
1	CHVU 4×0.35	1.00	6.7
2	CHVU 4×1	1.00	8.2
3	CHVU 10×1	1.30	12.5
4	CHVUP 4×0.35	1.40	9.0
5	CHVUP 10×0.35	1.50	12.0
6	CHVUP 2×0.5	1.00	7.4
7	CHVUP 4×0.5	1.50	9.5
8	CHVUP 10×0.5	1.50	14.2
9	CHVUP 27×0.5	1.50	19.5
10	CHVUP 30×0.5	1.70	20.0
11	CHVUP 5×0.75	1.30	10.5
12	CHVUP 4×1	1.30	10.5
13	CHVUP 10×1	1.50	14.7
14	CHVUP 19×1	1.50	18.2
15	CHVUP 4×2.5	1.50	13.0
16	CRHUP-105 10×2×0.2	1.50	14.5
17	CRHUP-105 5×2×0.3	1.50	11.5
18	CRHUP-105 5×2×0.35	1.50	11.6
19	CHRUP83-105 4×2×0.3	1.50	12.7
20	CHRUP83-105 5×2×0.35	1.50	14.3
21	CHRUP83-105 6×2×0.35	1.60	16.0
22	CHRUP83-105 7×2×0.35	1.60	16.0
23	CHRUP83-105 8×2×0.35	1.60	17.0
24	CHRUP83-105 10×2×0.35	1.70	17.5

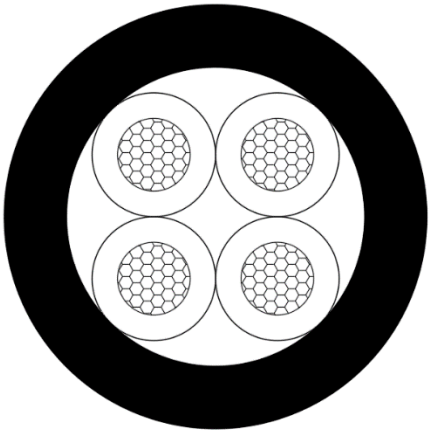
-40°C~+85°C

CRVV Series, PVC Insulation, PVC Sheath Marine Power Cable

Application

Using in the power system of ships or vehicles.

Reference Standards: Q/PPDL 0023-2020



Cable Description

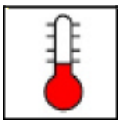
Cable P/N	Cable Name
CRVV-90	PVC Insulation, PVC Sheath Marine Power Cable
CRVVP-90	PVC Insulation, Tinned Copper Wire Overall Shield, PVC Sheath Marine Power Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500次	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 3.5kV 5Min.	/
Insulation Resistance	≥50	MΩ·km @ 20℃

Cable Parameters

Serial	电缆Cable P/N	Sheath平均Min.. Thickness mm	Cable Diameter mm
1	CRVV-90 4×0.35	1.00	6.7
2	CRVV-90 4×0.5	1.50	8.3
3	CRVV-90 2×1	1.00	7.3
4	CRVV-90 4×1	1.20	8.9
5	CRVV-90 5×1	1.20	9.5
6	CRVV-90 19×1	2.00	16.5
7	CRVV-90 2×1.5	1.00	8.0

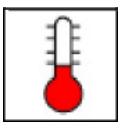



-40°C~+85°C

CRVV Series, PVC Insulation, PVC Sheath Marine Power Cable

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
8	CRVV-90 4×1.5	1.00	9.5
9	CRVV-90 6×1.5	1.50	12.3
10	CRVV-90 7×1.5	1.50	12.3
11	CRVV-90 8×1.5	1.50	13.3
12	CRVV-90 12×1.5	1.50	15.8
13	CRVV-90 2×2.0	1.10	9.6
14	CRVV-90 4×2.0	1.20	11.5
15	CRVV-90 2×2.5	1.10	10.0
16	CRVV-90 4×2.5	1.50	11.7
17	CRVV-90 6×2.5	1.50	14.1
18	CRVV-90 7×2.5	1.50	14.1
19	CRVV-90 8×2.5	1.50	15.2
20	CRVV-90 19×2.5	2.0	22.3
21	CRVV-90 2×4	1.30	11.5
22	CRVV-90 4×4	1.40	13.5
23	CRVV-90 2×6	1.40	13.7
24	CRVV-90 4×6	1.40	16.0
25	CRVV-90 2×8	1.40	15.0
26	CRVV-90 2×8	1.80	18.8
27	CRVV-90 2×10	1.90	17.7
28	CRVV-90 4×10	1.90	20.0
29	CRVV-90 2×16	1.50	19.6
30	CRVV-90 4×16	2.00	24.1
31	CRVV-90 2×25	2.00	22.0
32	CRVV-90 4×25	2.00	28.0
33	CRVV-90 4×2.5+8×1.0	1.50	16.8
34	CRVVP-90 12×0.2	1.20	10.0
35	CRVVP-90 19×0.2	1.30	11.5
36	CRVVP-90 4×0.5	1.50	8.8
37	CRVVP-90 14×0.5	1.50	13.1
38	CRVVP-90 27×0.5	1.75	17.0
39	CRVVP-90 4×1	1.20	9.5
40	CRVVP-90 5×1	1.30	10.5
41	CRVVP-90 12×1	1.50	14.3
42	CRVVP-90 4×2.5+2×0.5	1.50	12.5
43	CRVVP-90 4×8	1.90	19.6

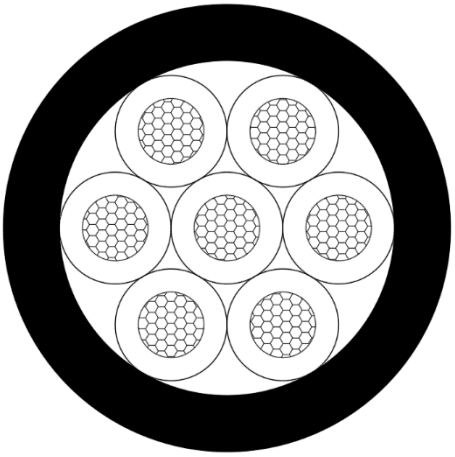
-40°C~+85°C

CRVU Series, PVC Insulation, TPU Sheath Marine Power Cable

Application

Using in the power system of ships or vehicles.

Reference Standards: Q/PPDL 0021-2020



Cable Description

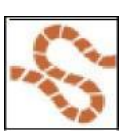
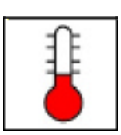
Cable P/N	Cable Name
CRVU-105	PVC Insulation, TPU Sheath Marine Power Cable
CRVUP-105	PVC Insulation, Tinned Copper Wire Overall Shield, TPU Sheath Marine Power Cable

Cable Performance

Item	Requirment	Unit
Min.. Bending Radius	12D	mm
Bending Test	12D 500次	/
Low Temperature Test	-40℃, 4h	/
High Temperature Test	+105℃, 4h	/
Voltage Test	DC 3.5kV 5Min.	/
Insulation Resistance	≥50	MΩ·km @ 20℃

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
1	CRVU-105 4×0.35	1.00	6.7
2	CRVU-105 4×0.5	1.50	8.3
3	CRVU-105 2×1	1.00	7.3
4	CRVU-105 4×1	1.20	8.9
5	CRVU-105 5×1	1.20	9.5
6	CRVU-105 19×1	2.00	16.5

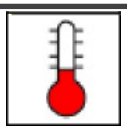



-40°C~+85°C

CRVU Series, PVC Insulation, TPU Sheath Marine Power Cable

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
7	CRVU-105 2×1.5	1.00	8.0
8	CRVU-105 4×1.5	1.00	9.5
9	CRVU-105 6×1.5	1.50	12.3
10	CRVU-105 7×1.5	1.50	12.3
11	CRVU-105 8×1.5	1.50	13.3
12	CRVU-105 12×1.5	1.50	15.8
13	CRVU-105 2×2.0	1.10	9.6
14	CRVU-105 4×2.0	1.20	11.5
15	CRVU-105 2×2.5	1.10	10.0
16	CRVU-105 4×2.5	1.50	11.7
17	CRVU-105 6×2.5	1.50	14.1
18	CRVU-105 7×2.5	1.50	14.1
19	CRVU-105 8×2.5	1.50	15.2
20	CRVU-105 19×2.5	2.0	22.3
21	CRVU-105 2×4	1.30	11.5
22	CRVU-105 4×4	1.40	13.5
23	CRVU-105 2×6	1.40	13.7
24	CRVU-105 4×6	1.40	16.0
25	CRVU-105 2×8	1.40	15.0
26	CRVU-105 2×8	1.80	18.8
27	CRVU-105 2×10	1.90	17.7
28	CRVU-105 4×10	1.90	20.0
29	CRVU-105 2×16	1.50	19.6
30	CRVU-105 4×16	2.00	24.1
31	CRVU-105 2×25	2.00	22.0
32	CRVU-105 4×25	2.00	28.0
33	CRVU-105 4×2.5+8×1.0	1.50	16.8
34	CRVUP-105 12×0.2	1.20	10.0
35	CRVUP-105 19×0.2	1.30	11.5
36	CRVUP-105 4×0.5	1.50	8.8
37	CRVUP-105 14×0.5	1.50	13.1
38	CRVUP-105 27×0.5	1.75	17.0
39	CRVUP-105 4×1	1.20	9.5
40	CRVUP-105 5×1	1.30	10.5
41	CRVUP-105 12×1	1.50	14.3
42	CRVUP-105 4×2.5+2×0.5	1.50	12.5

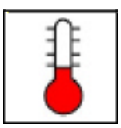



-40°C~+85°C

CRVU Series, PVC Insulation, TPU Sheath Marine Power Cable

Cable Parameters

Serial	Cable P/N	Min.. Thickness mm	Cable Diameter mm
43	CRVUP-105 4×8	1.90	19.6
44	CRVUP-105 6×8	2.00	23.4
45	CRVUP-105 4×10	2.00	21.3
46	CRVUP-105 6×10	2.00	25.3
47	CRVUP-105 4×16	2.20	25.0
48	CRVUP-105 6×16	2.50	30.5

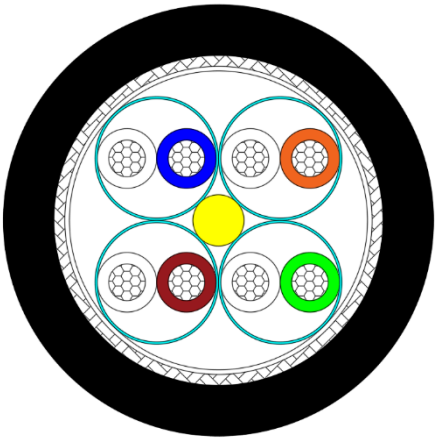



-40°C~+85°C

Field Computer Signal Cable

Application

Using in computer communication and voice communication transmission between command systems in field environments.

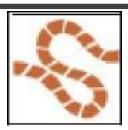
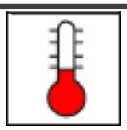


Cable Description

Cable P/N	Core	Num./Single Wire Dia.（mm）	Cable Diameter（mm）	Sheath Material
HWSE94-3	3pairs	19/0.16	10.0±0.5	Polyurethane
HWSE94-2	2 pairs	19/0.16	12.0±0.5	Polyurethane
HWSE94-4	4 pairs	19/0.16	12.0±0.5	Polyurethane

Cable Performance

Test Item		Technical Requirements
ConductorConductor Resistance（20°C）	Ω/km	≤71.2
Insulation Resistance (20°C, 250V DC)	MΩ·km	≥200
Insulation Dielectric Strength（DC 2Min.）	V	2000

-40°C~+80°C

Metal Armored Field Fiber Optic Cable Ⅰ

Application

Using in field emergency,
instant communication
or other occasions.

Cable Description

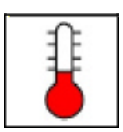
Cable P/N	Buffer Dia. mm	Armor1	Armor2	Armor3	Diameter mm	Sheath Material
GYFJZU06-1-FF-C	0.6	Spiral Stainless Steel Strip	Aramid Yarn	Stainless Steel Wire Braid	2.0±0.2	TPU
GYFJZU06-2-FF-C					3.2±0.2	
GYFJZU06-4-FF-C					4.8±0.2	
GYFJZU06-6-FF-C					6.5±0.3	

Note：FF means Fiber Type，C means Sheath Color。

Cable Performance

Item	Unit	Cable Performance			
Cable P/N	/	GYFJZU06-1 -FF-C	GYFJZU06-2 -FF-C	GYFJZU06-4 -FF-C	GYFJZU06 -6-FF-C
Attenuation	dB/km	0.4dB/km@1310nm 0.3dB/km@1550nm			
Operating Temperature	℃	-40～+70			
Weight	g/m	≤10	21	36	65
Min.. Bending Radius	mm	Dynamic 20D Static 10D			
Tensile Strength	N	Long 200 Short 400			Long 400 Short 800
Pressure Test	N/10cm	Long 3000 Short 5000			

Note：Cable Performance using G652D.


Metal Armored Field Fiber Optic Cable Ⅱ

Application

Using in field emergency,
instant communication
or other occasions.

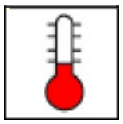
Cable Description

Cable P/N	Buffer Dia. mm	Armor1	Armor2	Armor3	Diameter mm	Sheath Material
GYFJZU09-1-B6-BK	0.9	Spiral Stainless Steel Strip	Aramid Yarn	Stainless Steel Wire Braid	3.0±0.2	Polyurethane
GYFJZU09-2-B6-BK					4.8±0.2	
GYFJZU09-4-B6-BK					4.8±0.2	
GYFJZU09-6-B6-BK					6.5±0.3	

Note：B6 means Fiber Type G657，BK means Sheath Color is black。

Cable Performance

Item	Unit	Cable Performance			
Cable P/N	/	GYFJZU09-1 -B6-BK	GYFJZU09-2 -B6-BK	GYFJZU09-4 -B6-BK	GYFJZU09-6 -B6-BK
Attenuation	dB/km	0.5dB/km@1310nm 0.5dB/km@1550nm			
Operating Temperature	℃	-40～+85			
Weight	g/m	≤10	21	36	65
Min.. Bending Radius	mm	Dynamic 20D Static 10D			
Tensile Strength	N	Long 200 Short 400			Long 400 Short 800
Pressure Test	N/10cm	Long 3000 Short 5000			

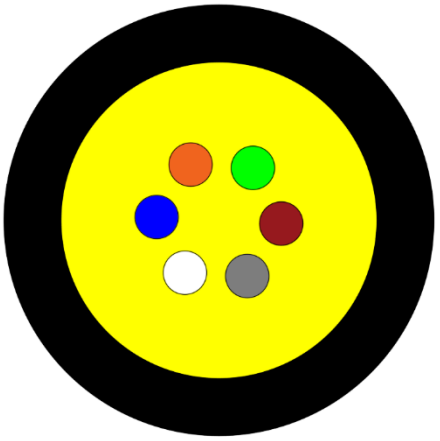



-40°C~+70°C

Non-metal Armored Field Fiber Optic Cable

Application

Using in field emergency,
instant communication
or other occasions.

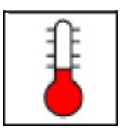


Cable Description

Cable P/N	Buffer Dia. mm	Diameter mm	Sheath Material
GYFZU-1-FF-C	0.6/0.9	2.0±0.2	Polyurethane
GYFZU-2-FF-C		5.0±0.2	
GYFZU-4-FF-C		5.8±0.2	
GYFZU-6-FF-C		6.0±0.2	

Cable Performance

Item	Unit	Cable Performance
Attenuation	dB/km	0.4dB/km@1310nm 0.3dB/km@1550nm
Operating Temperature	℃	-40℃~+75℃
Diameter	mm	2.00±0.10
Min.. Bending Radius	mm	Dynamic 20D Static 10D
Tensile Strength	N	Long 30 Short 50
Pressure Test	N/10cm	Long 800 Short 2000（6F）

-40°C~+75°C

Optical-electric Composited Field cable

Application

Using in field laying,

can be laid overhead or directly buried.

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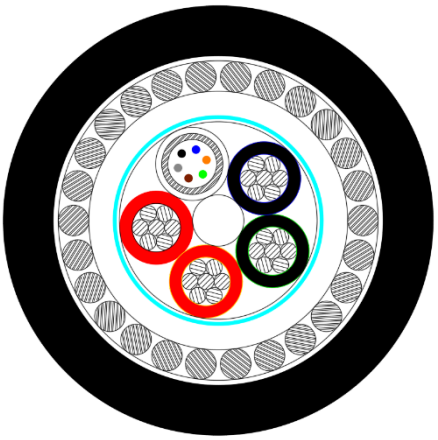
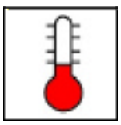


Cable Description

Cable P/N	Cable Name
YTGD-4x1.5+6B1	Optical-electric Composited Field cable

Cable Performance

Cable Performance	Requirment	Unit
Operating Temperature	-40~+65	℃
Storage Temperature	-40~+75	℃
Min.. Bending Radius	15xOD	mm
Tensile Strength	17	KN
Nom. Weight	370	Kg/Km
Fiber Attenuation	≤0.4	dB@1310nm(dB/km)
Conductor Resistance（+20℃）	≤12.0	Ω/km @20℃
Insulation Resistance	≥500	MΩ•km @20℃
Voltage Test	1.0	kV/DC,5Min.

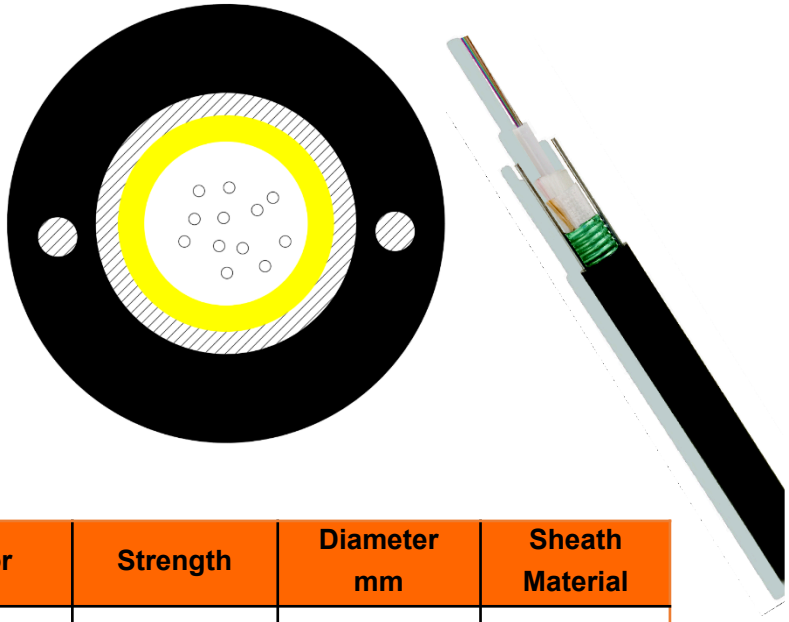



-40ºC~+75ºC

Centrel Tube Optical Fiber Cable

Application

Optical Communiction System.



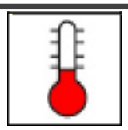
Cable Description

Cable P/N	Tube Material	Armor	Strength	Diameter mm	Sheath Material
GYXTW-4-FF	PBT	Wrinkle Steel Strip	Steel Wire	≤9.8	Polyethylene
GYXTW-6-FF					
GYXTW-8-FF					
GYXTW-12-FF					

Note：FF means Fiber Type。

Cable Performance

Fiber Core	Weight kg	Min.. Bending Radius		Tensile Strength		Pressure Test (N/100mm)	
		Static	Dynamic	Short	Long	Short	Long
4	90	10XD	20XD	1500	600	1000	300
6	90						
8	90						
12	90						

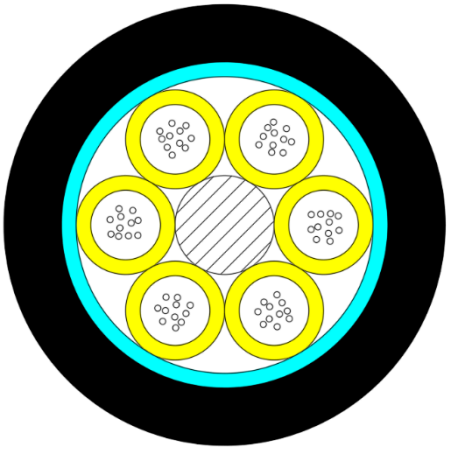


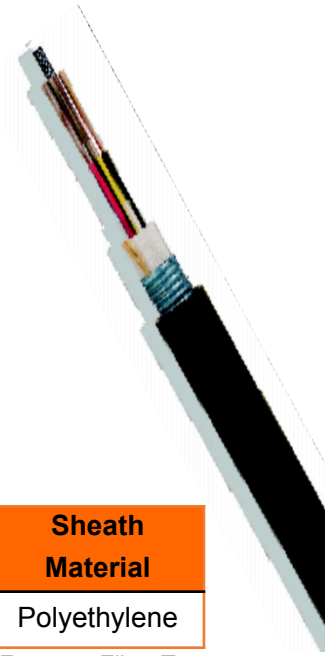
-40°C~+60°C

Layer twisted Loose Tuber Optical Fiber Cable

Application

Optical Communiction System.





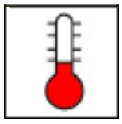
Cable Description

Cable P/N	Tube Material	Armor	Strength	Sheath Material
GYTA-N-FF	PBT	Al/PET Tape	Steel Wire	Polyethylene

Note：N means Fiber Num.， FF means Fiber Type。

Cable Performance

Fiber Core	Diameter mm	Weight kg	Min.. Bending Radius		Tensile Strength		Pressure Test (N/100mm)	
			Static	Dynamic	Short	Long	Short	Long
4	9.8	82	10XD	20XD	1500	600	1000	300
8	9.8	82						
12	9.8	82						
16	9.8	82						
24	10.2	90						
36	10.7	105						
48	10.7	105						
72	11.6	130						
96	13.1	142						
144	16.0	220						
256	18.2	245						

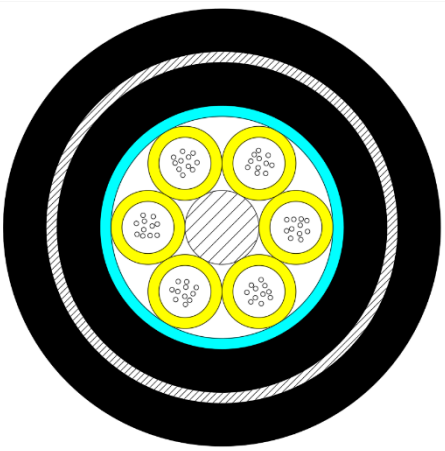
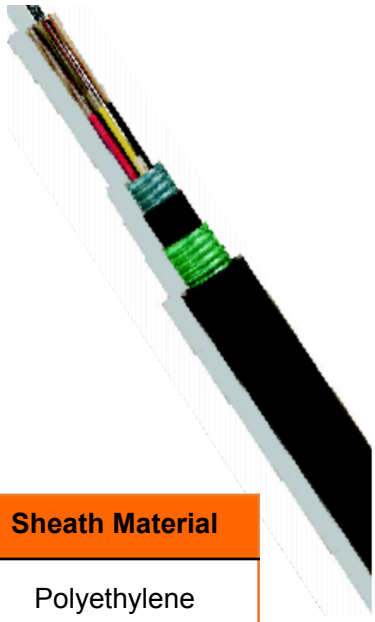


-40°C~+60°C

Steel Tape Armor Layer twisted Loose Tuber Optical Fiber Cable

Application

Optical Communiction System.

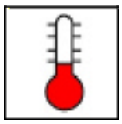
Cable Description

Cable P/N	Tube Material	Armor	Strength	Sheath Material
GYTA53-N-FF	PBT	Al/PET tape Wrinkle Steel Strip	Steel Wire	Polyethylene

Note：N means Fiber Num.， FF means Fiber Type。

Cable Performance

Fiber Core	Diameter mm	Weight kg	Min.. Bending Radius		Tensile Strength		Pressure Test (N/100mm)	
			Static	Dynamic	Short	Long	Short	Long
4	13.9	190	10XD	20XD	3000	1000	3000	1000
8	13.9	190						
12	13.9	190						
16	13.9	190						
24	13.9	190						
36	14.3	205						
48	14.9	215						
72	15.4	230						
96	16.9	270						
144	19.8	370						
256	22.3	430						

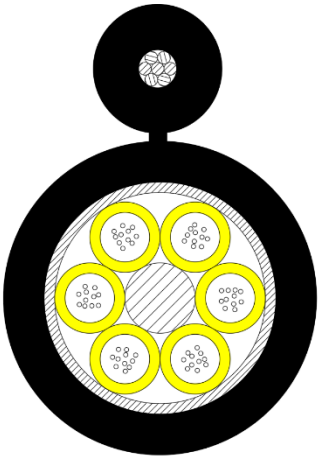


-40°C~+60°C

Figure-8 Layer twisted Loose Tuber Optical Fiber Cable

Application

Optical Communiction System.



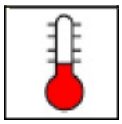
Cable Description

Cable P/N	Tube Material	Armor	Strength	Sheath Material
GYTC8S-N-FF	PBT	Wrinkle Steel Strip	FRP	Polyethylene

Note：N means Fiber Num.， FF means Fiber Type。

Cable Performance

Fiber Core	Diameter mm	Weight kg	Min.. Bending Radius		Tensile Strength		Pressure Test (N/100mm)	
			Static	Dynamic	Short	Long	Short	Long
4	9.8x18.8	210	10XD	20XD	7000	3500	2000	1000
8	9.8x18.8	210						
12	9.8x18.8	210						
16	9.8x18.8	210						
24	10.2x18.8	230						
36	10.2x19.3	230						
48	10.7x19.7	230						
72	11.3x20.3	255						
96	12.9x21.9	350						
144	16.3 x22.7	390						

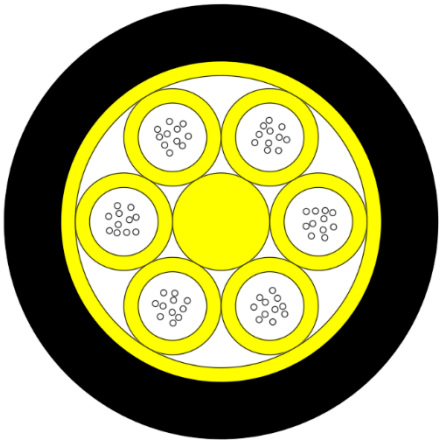


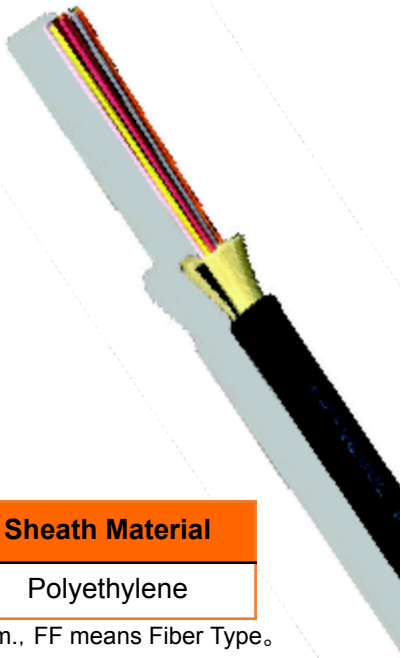
-40ºC~+60ºC

Non-metal Optical Fiber cable

Application

Optical Communiction System.





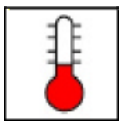
Cable Description

Cable P/N	Tube Material	Armor	Strength	Sheath Material
GYFTY-N-FF	PBT	Wrinkle Steel Strip	FRP	Polyethylene

Note：N means Fiber Num.， FF means Fiber Type。

Cable Performance

Fiber Core	Diameter mm	Weight kg	Min.. Bending Radius		Tensile Strength		Pressure Test (N/100mm)	
			Static	Dynamic	Short	Long	Short	Long
4	10.1	80	10XD	20XD	1500	600	1000	300
8	10.1	80						
12	10.1	80						
16	10.1	80						
24	10.1	80						
36	10.1	80						
48	10.8	90						
72	10.8	90						
96	12.9	125						
144	16.2	192						
256	17.6	215						

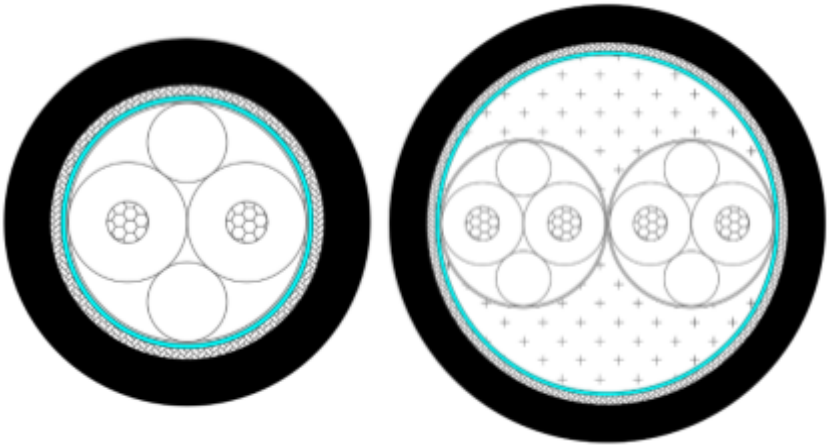


-40°C~+60°C

Can-bus Cable

Application

Meet the transmission requirements of the Can-bus system.



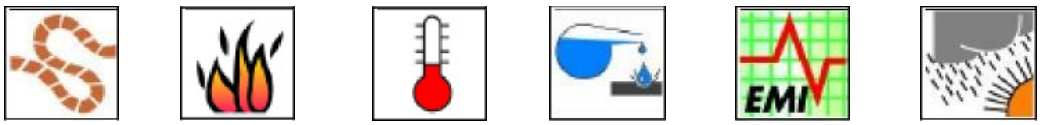
Cable Description

Cable P/N	Cable Name
CANC	Can-bus Cable

Cable Performance

Item	Requirment							
Cable P/N	CANC 2X0.22	CANC 2X2X0.22	CANC 2X0.35	CANC 2X2X0.35	CANC 2X0.5	CANC 2X2X0.5	CANC 2X0.75	CANC 2X2X0.75
ConductorArea（mm^2）	0.22	0.22	0.35	0.35	0.5	0.5	0.75	0.75
Diameter（mm）	5.8	8.2	7.0	10.0	7.9	11.2	9.0	11.2
Nom. Weight（g/m）	41	63	59	90	70	107	90	107
Conductor Resistance（Ω/km @20℃）	94.3	94.3	62.0	62.0	41.9	41.9	27.6	27.6
Insulation Resistance（MΩ·km @20℃）	500							
Voltage Test（kV/DC,5Min.）	1.0							
Characteristic Impedance（Ω @1MHz）	120±20							

Attenuation (dB/100m@1MHz)	2.6	2.6	2.2	2.2	1.8	1.8	1.5	1.5
Min.. Bending(mm)	10xD							
Operating Temperature(℃)	-40～+85							

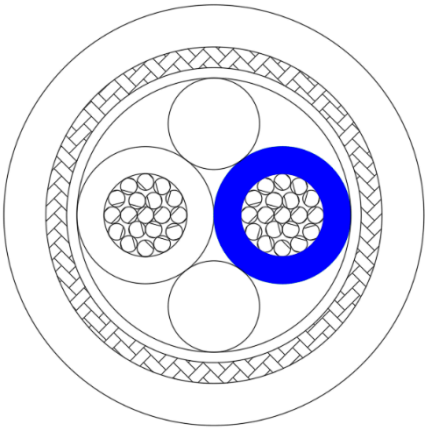


-40ºC~+85ºC

1553B Bus Cable

Application

Data bus 1553B system.

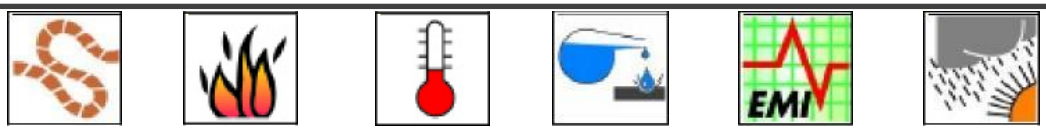


Cable Description

Cable P/N	Cable Name
1553B-T	XL-ETFEI nsulation, Tin Plated Copper Wire Shield, XL-ETFE Sheath1553B Data Cable
1553B-S	XL-ETFEInsulation, Silver Plated Copper Wire Shield, XL-ETFE Sheath1553B Data Cable

Cable Performance

Item	Unit/材料
Conductor	24AWG Silver Plated Copper Wire
Insulation	XL-ETFE
Filler	XL-ETFE
Shield	Silver /Tin Plated Copper Wire
Sheath	XL-ETFE
Diameter	3.3 mm±0.18mm
Impedance	77Ω
Operating Capacitance	≤98pF/m
Attenuation	≤4.6dB/m @ 1MHz
Transfer Impedance	≤100Ω/km
Voltage Test	AC 1000V 1Min.
Operating Voltage	600V

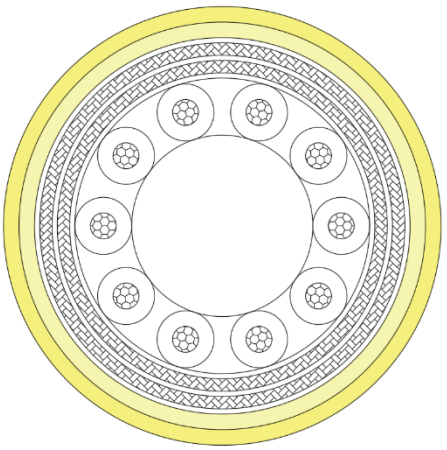


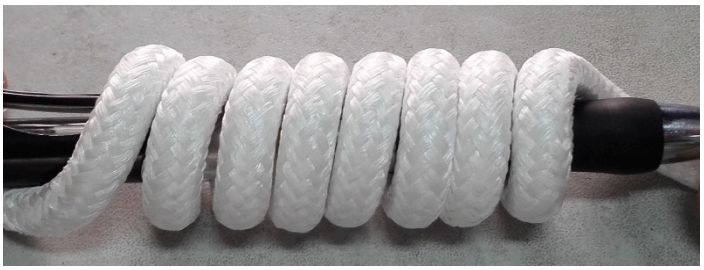
-55ºC~+150ºC

10 Core High Voltage Ultra-flexible Cable

Application

The cable is suitable for high-voltage and low-current worl
mainly used in the testing and protection of traveling wave tube
other equipment.



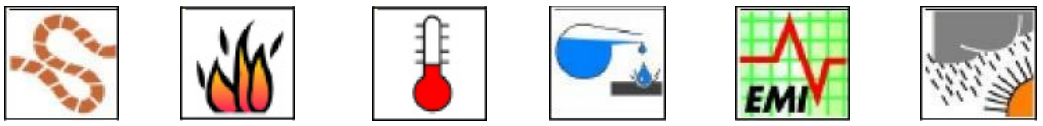


Cable Description

Cable P/N	Num./Single Wire Dia. mm	Insulation Diameter mm	Cable Diameter mm	Sheath Material
ZDF-10X0.15	19/0.1	1.1	10.8±0.7	PTFE Yarn Braiding

Cable Performance

Test Item	Technical Requirements
Voltage Test	18000V DC 5Min.
Insulation Resistance	≥1000MΩ·km
Inner Conductor Resistance（+20℃）	≤137Ω/km
Middle Conductor Resistance（+20℃）	≤24.0Ω/km
Outer Conductor Resistance（+20℃）	≤14.5Ω/km
Insulation Bending	Insulation Min.. Bending Radius：6mm @ 1 Circle 9mm @3Circle 18mm@100Circle
Cable Bending	Cable Min.. Bending Radius：30mm@1Circle 49mm @15Circle 86mm@100Circle

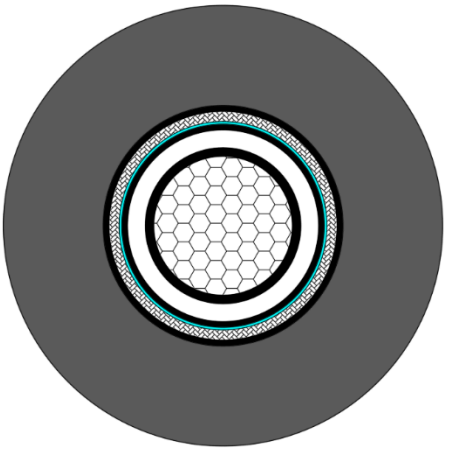


-55°C~+180°C

50kV High Voltage Coaxial Cable

Application

Using in high voltage and low current equipment.



Cable Description

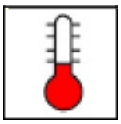
Cable P/N	Cable Name
ZHDEV-50	50kV High Voltage Coaxial Cable

Structure

StructureCable P/N	Material	Dimensions（mm）
Conductor	Tin Plated Stranded Conductor	4.5mm^2
Semi-conductive Layer	Black Semi-conductive Insulation	/
Insulation	TPE	/
Semi-conductive Layer	Black Semi-conductive Tape	/
Braiding	Tin Plated Copper	Braiding Density≥85%
Sheath	Soft PVC	13.0±0.4

Cable Performance

Test Item		Technical Requirements
ConductorConductor Resistance（20°C）	Ω/km	≤5.64
Insulation Resistance (20°C, 250V DC)	MΩ·km	≥1000
Operating Voltage	kV	50
Dielectric Strength	kV	80

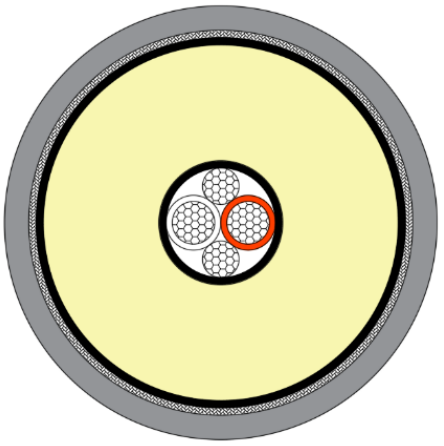



-40°C~+70°C

75kV High Voltage Cable

Application

Using in high voltage and low current equipment.



Cable Description

Cable P/N	Cable Name
ZDOPEV-2x2.5+2x1.8	75kV High Voltage Cable

Structure

Structure	Requirment	Unit
Dual-core Drain Wire		
Conductor	Tin Plated Stranded Copper Wire（2.5）	mm^2
Dual-core Power Wire		
Conductor	Tin Plated Stranded Copper Wire（1.8）	mm^2
Insulation	Fluoroplastics	/
Color	White、Red	/
Cabling	-	/
Semi-conductive Layer	Black Semi-conductive Insulation	/
Insulation	TPE	/
Shield	Tin Plated Copper Wire Braiding, Braiding Density≥95%	/
Sheath	PVC	/
Diameter	17.8±0.3	mm
Color	Gray	/

Cable Performance

Test Item		Technical Requirements
ConductorConductor Resistance（20°C）	Ω/km	≤6.6 ($2.5mm^2$) ≤9.5 ($1.8mm^2$)
Insulation Resistance (20°C, 250V DC)	MΩ·km	≥1000
Operating Voltage	kV	50
Dielectric Strength	kV（DC 10Min.）	120

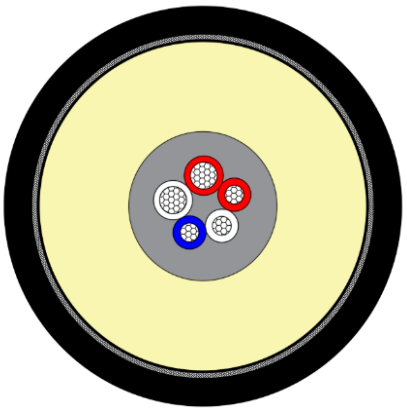
Dielectric Strength（Core-Shield）	kV（AC 5Min.）	3.5

-40°C~+70°C

160kV High Voltage Cable

Application

Using in high voltage and low current equipment.



Cable Description

Cable P/N	Cable Name
ZDOPEV-3x1.3+2x0.6	160kV High Voltage Cable

Structure

Structure	Requirment	Unit
3 Core Power Wire		
Conductor	Tin Plated Stranded Copper Wire（1.3）	mm^2
Insulation	-	/
Dual-Core Control Wire		
Conductor	Tin Plated Stranded Copper Wire（0.6）	mm^2
Insulation	-	/
Cabling	-	/
Semi-conductive Layer	Black Semi-conductive Insulation	/
Insulation	TPE	/
Shield	Tin Plated Copper Wire Braiding Density≥95%	/
Sheath	PVC	/
Diameter	29.5±0.5	mm
Color	Black	/

Cable Performance

Test Item		Technical Requirements
ConductorConductor Resistance（20°C）	Ω/km	≤34.5 (0.6mm^2) ≤14.5 (1.3mm^2)
Insulation Resistance (20°C, 250V DC)	MΩ·km	≥1000
Operating Voltage	kV	160

Dielectric Strength	kV（DC 10Min.）	220
Dielectric Strength（Core-Shield）	kV（AC 5Min.）	1.0

-40°C~+70°C

7AF-250 Series High Temperature Hook-up Wire

Application

Using in below AC 600V aircraft wiring, electrical equipment and instrument internal wiring connection.Hook-up wire can use long operating temperature200℃ and short operating temperature250℃（no more than 500h）。The Min.imumoperating temperature is -65°C。

1—Conductor；2—Insulation；3—Shield；

Cable Description

Cable P/N	Name
AF-250	Silver Plated Copper, PTFE Inuslation Hook-up Wire
AFP-250	Silver Plated Copper, PTFE Inuslation, Silver Plated Copper Braiding Shield, Hook-up Wire

Cable Parameters

Area mm^2	Num./ Diameter mm	Max. Diameter mm		Conductor Resistance ≤Ω/km	Insulation Resistance ≥MΩ·km	Weight kg/km	
		AF-250	AFP-250			AF-250	AFP-250
0.06	7/0.10	1.0	1.45	348.9		2.17	5.50
0.12	7/0.15	1.15	1.75	150.7		3.31	7.66
0.20	7/0.20	1.40	1.95	81.5		5.1	12.2
0.35	19/0.16	1.60	2.15	46.9		7.3	14.1
0.50	19/0.18	1.80	2.35	37.1		9.1	16.7
0.75	19/0.23	2.05	2.60	22.7		13.1	22.9
1.0	19/0.26	2.20	2.85	17.8	1×10^4	16.0	26.5
1.2	19/0.28	2.40	3.10	15.3		18.8	31.2
1.5	19/0.32	2.60	3.30	11.7		23.1	36.2
2.0	19/0.37	2.85	3.55	8.78		29.1	43.9
2.5	19/0.41	3.30	4.00	7.25		37.3	53.1
3.0	37/0.32	3.50	4.30	6.03		43.6	63.1
4.0	37/0.37	3.80	4.60	4.51		53.9	75.0

5.0	37/0.41	4.30	5.20	3.67		67.7	90.3
6.0	37/0.45	4.60	5.50	3.09		79.3	103.6

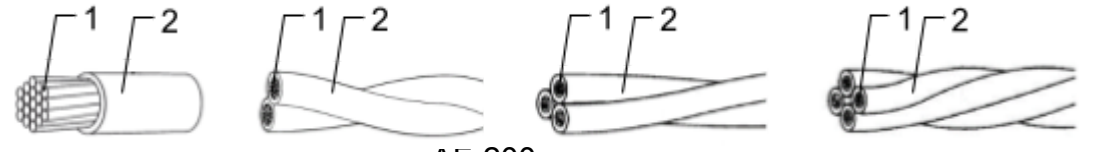
-65°C~+250°C

AF-200 Series High Temperature Hook-up Wire

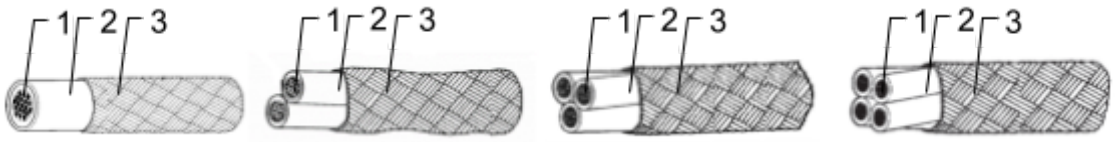
Application

This product is suitable for high temperature, anti-corrosion, flammable, explosion-proof and other harsh environments, and is mainly used in aviation, aerospace, ships, communications in the field of electronic and electrical equipment and instrument lines between circuit connections also be used in such as air conditioners, microwave ovens, electronic disinfection cabinets, electric ovens and electric heaters.

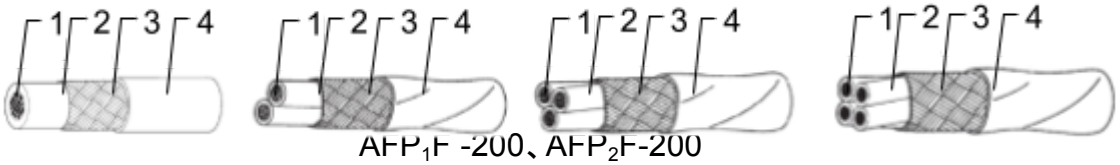
Structure



AF-200



AFP_1-200、AFP_2-200



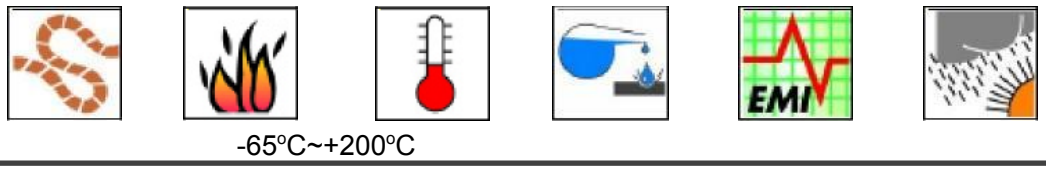
AFP_1F-200、AFP_2F-200

1—Conductor；2—Insulation；3—Shield；4—Sheath

产品编号

Cable P/N	Name
AF-200	Silver Plated Copper, FEP Inuslation Hook-up Wire
AFP_1-200	Silver Plated Copper, FEP Inuslation, Tin Plated Copper Braiding Shield, Hook-up Wire
AFP_2-200	Silver Plated Copper, FEP Inuslation, Silver Plated Copper Braiding Shield, Hook-up Wire
AFP_1F-200	Silver Plated Copper, FEP Inuslation, Tin Plated Copper Braiding Shield, FEP Sheath Hook-up Wire

AFP_2F-200	Silver Plated Copper, FEP Inuslation, Silver Plated Copper Braiding Shield, FEP Sheath Hook-up Wire



-65ºC~+200ºC

AF-200 Series High Temperature Hook-up Wire

Cable Dimensions

Area mm²	AWG	Num./ Diameter mm	Insulation Min..Thickness mm	Sheath Min..Thickness mm	Diameter Max. mm		
					AF-200	AFP1-200 AFP2-200	AFP1F-200 AFP2F-200
0.013	36	7/0.05	0.20	0.25	0.85	1.25	2.05
0.035	32	7/0.08	0.20	0.25	0.95	1.35	2.15
0.06	30	7/0.10	0.20	0.25	1.05	1.45	2.25
0.08	28	7/0.12	0.20	0.25	1.11	1.51	2.31
0.12	—	(1/0.40)	0.20	0.25	1.10	1.60	2.40
		7/0.15	0.20	0.25	1.20	1.70	2.50
0.14	26	19/0.10	0.20	0.30	1.25	1.75	2.65
0.2	24	7/0.20	0.20	0.30	1.35	1.85	2.75
		(19/0.12)	0.20	0.30	1.35	1.85	2.75
0.30	—	(1/0.60)	0.20	0.30	1.30	1.80	2.70
0.35	22	19/0.16	0.20	0.30	1.60	2.10	3.00
0.5	20	19/0.18	0.20	0.30	1.75	2.25	3.15
0.6		19/0.20	0.20	0.30	1.85	2.35	3.25
0.75	19	19/0.23	0.20	0.30	2.00	2.60	3.50
1.0	18	19/0.26	0.25	0.30	2.20	2.75	3.65
1.2	16	19/0.28	0.25	0.30	2.30	2.85	3.75
1.5	15	19/0.32	0.25	0.30	2.60	3.30	4.20
2.0	14	19/0.37	0.25	0.30	2.90	3.60	4.50
2.5	13	19/0.41	0.30	0.30	3.50	4.10	5.00
		49/0.26	0.30	0.30	3.50	4.10	5.00
3.0	12	37/0.32	0.30	0.30	3.70	4.30	5.20
		49/0.28	0.30	0.30	3.70	4.30	5.20
4.0	11	37/0.37	0.40	0.40	4.20	4.80	5.90
		49/0.32	0.40	0.40	4.20	4.80	5.90
5.0	10	37/0.41	0.40	0.40	4.60	5.30	6.40
		49/0.36	0.40	0.40	4.60	5.30	6.40
6.0	9	37/0.45	0.40	0.40	4.90	5.60	6.70
		49/0.39	0.40	0.40	4.90	5.60	6.70
7.0	—	133/0.26	0.45	0.55	5.50	6.40	8.00
8.0	8	133/0.29	0.45	0.55	6.00	6.90	8.50
10	7	133/0.32	0.45	0.55	6.40	7.30	8.90

13	6	133/0.35	0.50	0.55	6.85	7.80	9.40
		133/0.36	0.50	0.55	7.00	7.90	9.50
16	5	133/0.39	0.50	0.55	7.50	8.40	10.00
20	4	133/0.45	0.50	0.55	8.10	9.00	10.60

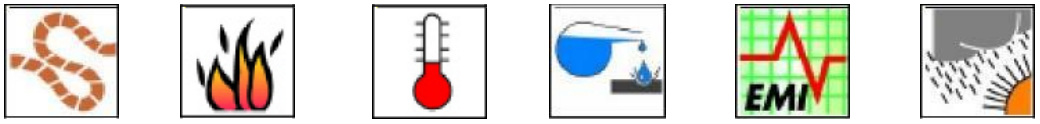
-65ºC~+200ºC

AF-200 Series High Temperature Hook-up Wire

Cable Dimensions

Area mm²	AWG	Num./ Diameter mm	Insulation Min..Thickness mm	Sheath Min..Thickness mm	Diameter Max. mm		
					AF-200	AFP1-200 AFP2-200	AFP1F-200 AFP2F-200
2 Core	0.08	28	7/0.12	0.25	2.22	2.82	3.72
	0.12	—	7/0.15	0.25	2.40	3.00	3.90
	0.14	26	19/0.10	0.25	2.50	3.10	4.00
	0.20	24	7/0.20	0.25	2.70	3.30	4.20
			(19/0.12)	0.25	2.70	3.30	4.20
	0.35	22	19/0.16	0.25	3.20	3.80	4.70
	0.50	20	19/0.18	0.25	3.50	4.10	5.00
	0.60	20	19/0.20	0.25	3.70	4.30	5.20
	0.75	19	19/0.23	0.25	4.00	4.60	5.50
	1.00	18	19/0.26	0.30	4.40	5.00	6.10
	1.20	16	19/0.28	0.30	4.60	5.20	6.30
	1.50	15	19/0.32	0.30	5.20	5.80	6.90
	2.00	14	19/0.37	0.30	5.80	6.40	7.50
3 Core	0.08	28	7/0.12	0.25	2.40	3.00	3.90
	0.12	—	7/0.15	0.25	2.59	3.19	4.09
	0.14	26	19/0.10	0.25	2.70	3.30	4.20
	0.20	24	7/0.20	0.25	2.92	3.52	4.42
			19/0.12	0.25	2.92	3.52	4.42
	0.35	22	19/0.16	0.25	3.46	4.06	4.96
	0.50	20	19/0.18	0.25	3.78	4.38	5.28
	0.60	20	19/0.20	0.25	4.00	4.60	5.50
	0.75	19	19/0.23	0.30	4.32	4.92	6.02
	1.00	18	19/0.26	0.30	4.75	5.35	6.45
	1.20	16	19/0.28	0.30	4.97	5.57	6.67
	1.50	15	19/0.32	0.30	5.62	6.22	7.32
	2.00	14	19/0.37	0.30	6.26	6.86	7.96
4 Core	0.08	28	7/0.12	0.25	3.03	3.83	4.83
	0.12	—	7/0.15	0.25	3.28	4.08	5.08
	0.14	26	19/0.10	0.25	3.41	4.21	5.21
	0.20	24	7/0.20	0.25	3.69	4.49	5.49

			(19/0.12)	0.25	3.69	4.49	5.49
	0.35	22	19/0.16	0.30	4.37	5.17	6.37
	0.50	20	19/0.18	0.30	4.78	5.58	6.78
	0.60	20	19/0.20	0.30	5.05	5.85	7.05
	0.75	19	19/0.23	0.30	5.46	6.26	7.46
	1.00	18	19/0.26	0.30	6.01	6.81	8.01
	1.20	16	19/0.28	0.30	6.28	7.08	8.28
	1.50	15	19/0.32	0.40	7.10	7.90	9.30



-65ºC~+200ºC

AF-200 Series High Temperature Hook-up Wire

Conductor Resistance & Insulation Resistance

Area mm²	AWG	Num./ Diameter mm	Conductor Resistance ≤ Ω/km 20℃		Insulation Resistance ≥ MΩ·m 20℃
			1core	2-4 core	
			Silver Plated		
0.013	36	7/0.05	1570	—	1.5×10⁶
0.035	32	7/0.08	545	—	
0.06	30	7/0.10	349	352	
0.08	28	7/0.12	215	217	
0.12	—	(1/0.40)	141	—	
		7/0.15	151	153	
0.14	26	19/0.10	123	124	
0.20	24	7/0.2	84.8	85.6	
		(19/0.12)	83.5	84.3	
0.30	—	(1/0.60)	62	—	
0.35	22	19/0.16	54.3	54.8	
0.50	20	19/0.18	41.3	41.7	
0.60		19/0.20	29.8	30.1	
0.75	19	19/0.23	24.1	24.3	
1.0	18	19/0.26	19.3	19.5	
1.2	16	19/0.28	15.3	15.5	
1.5	15	19/0.32	12.7	12.8	
2.0	14	19/0.37	10.2	10.3	
2.5	13	19/0.41	7.40	—	
		49/0.26			
3.0	12	37/0.32	6.45	—	
		49/0.28			
4.0	11	37/0.37	5.00	—	
		49/0.32			
5.0	10	37/0.41	4.10	—	

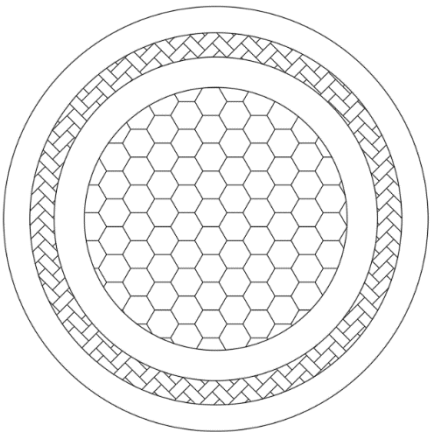
		49/0.36			
6.0	9	37/0.45	3.30	—	
		49/0.39			
7.0	—	133/0.26	2.62	—	
8.0	8	133/0.29	2.16	—	
10	7	133/0.32	1.68	—	
13	6	(133/0.35)	1.46	—	
		133/0.36	1.37	—	
16	5	133/0.39	1.13	—	
20	4	133/0.45	0.886	—	

-65°C~+200°C

12Ω Micro-bent Coaxial Cable

Application

Microwave communication equipment for special impedances.



Cable Description

Cable P/N	Cable Name
SFF-12-4-1	12Ω Micro-bent Coaxial Cable

Structure

Structure	Material	Dimensions（mm）
Conductor	Tin Plated Stranded Conductor	37/0.37
Insulation	Fluoroplastics	/
Braiding	Tin Plated Copper Wire	Density≥95%
Sheath	Fluoroplastics	4.2±0.2

Cable Performance

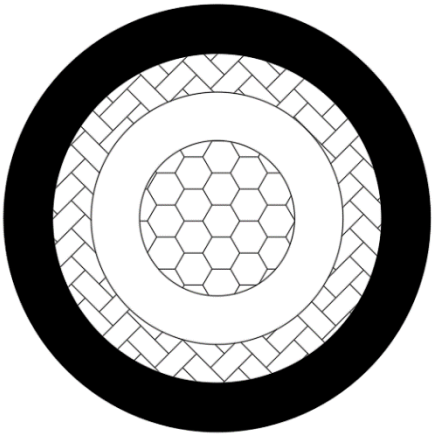
Test Item	Technical Requirements
Voltage Test	1000V DC 5Min.
Insulation Resistance	≥1000MΩ·km
Characteristic Impedance	12Ω±2Ω（30 MHz ~520MHz）
Min.. Bending Radius	60mm
Conductor Resistance（+20℃）	≤5.3Ω/km

-55℃~+150℃

25Ω Micro-bent Coaxial Cable

Application

Microwave communication equipment for special impedances.



Cable Description

Cable P/N	Cable Name
HSFF-25-1-1	25Ω Micro-bent Coaxial Cable

Structure

Structure	Material	Dimensions（mm）
Conductor	Tin Plated Stranded Conductor	19/0.16
Insulation	Fluoroplastics	/
Braiding	Tin Plated Copper Wire	Density≥95%
Sheath	Fluoroplastics	2.2±0.2

Cable Performance

Test Item	Technical Requirements
Voltage Test	1000V DC 5Min.
Insulation Resistance	≥1000MΩ·km
Characteristic Impedance	25Ω±2.5Ω（30 MHz ~512MHz）
Min.. Bending Radius	50mm
Conductor Resistance（+20℃）	≤53Ω/km

-55ºC~+150ºC

A Series RF coaxial cable

Application

Using in radio communication equipment and related electronic devices.

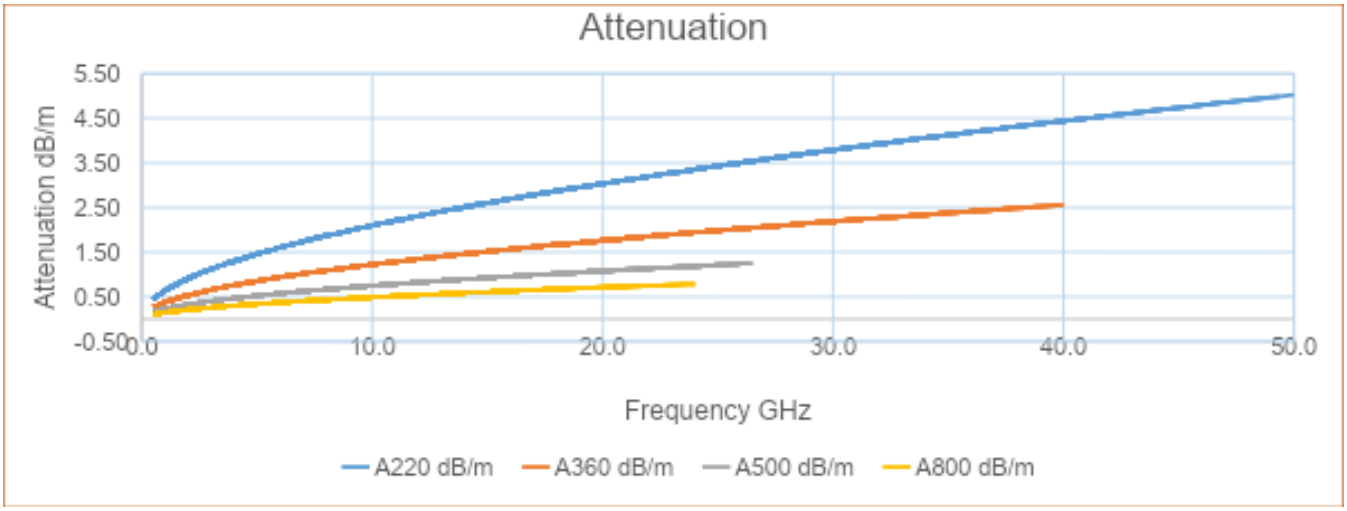
The cable using the insulation material with a transmission rate of more than 81%, as well as a double-layer shield structure, which has ultra-low loss, superior electronic shield cable performance, superior temperature and mechanical phase stability.

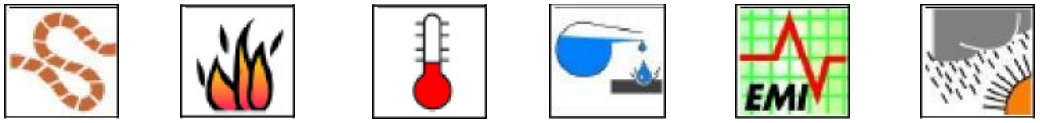
Structure

Structure	Material	A220	A360	A500	A800
		Dimensions（mm）			
Conductor	Silver Plated Copper Wire	0.51	0.91	1.45	2.3
Insulation	F-PTFE	1.4	2.5	3.98	6.2
Wrapping Shield	Silver Plated Copper Tape	1.54	2.66	4.18	6.48
Braiding Shield	Silver Plated Copper Wire	1.95	3.11	4.58	7.16
Sheath	FEP	2.2	3.6	5.1	7.9
Transfer Rate		81%	83%	83%	83%

Min.. Bending Radius（mm）	9	18	25	39
Weight（g/m）	16	33	67	130

Cable Performance

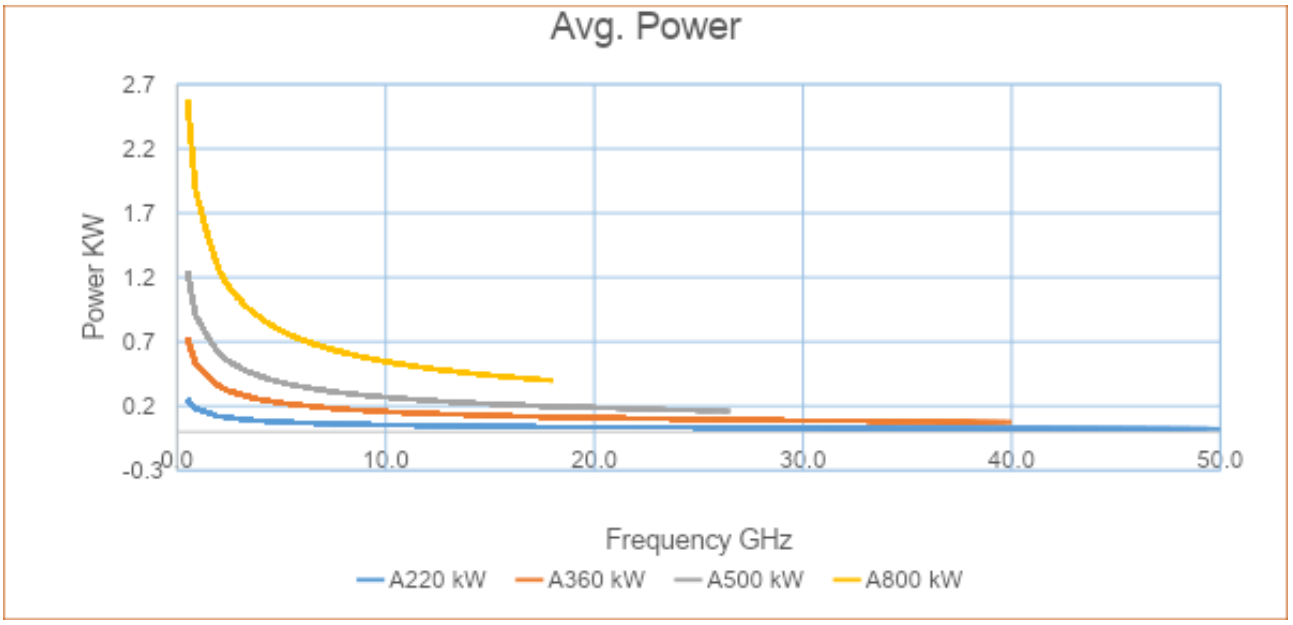


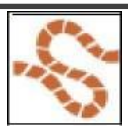


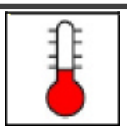
-55ºC~+165ºC

Cable Performance

Cable P/N	A220		A360		A500		A800	
Freq. (MHz)	Att. dB/m	Power kW	Att. dB/m	Power kW	Att. dB/m	Power kW	Att. dB/m	Power kW
500	0.45	0.249	0.27	0.724	0.16	1.240	0.10	2.57
800	0.57	0.196	0.34	0.573	0.21	0.975	0.13	2.025
1000	0.64	0.175	0.38	0.51	0.23	0.873	0.15	1.806
2000	0.91	0.123	0.53	0.359	0.33	0.615	0.21	1.267
3000	1.12	0.1	0.66	0.292	0.40	0.500	0.26	1.028
4000	1.30	0.086	0.76	0.252	0.47	0.431	0.30	0.885
5000	1.46	0.077	0.85	0.225	0.52	0.384	0.34	0.786
6000	1.60	0.07	0.94	0.205	0.58	0.350	0.37	0.715
8000	1.87	0.06	1.09	0.176	0.67	0.302	0.44	0.615
9000	1.99	0.057	1.16	0.166	0.71	0.284	0.46	0.578
10000	2.10	0.054	1.22	0.157	0.75	0.269	0.49	0.546
11000	2.21	0.051	1.29	0.149	0.79	0.256	0.52	0.519
12000	2.31	0.049	1.35	0.143	0.82	0.244	0.54	0.495
14000	2.51	0.045	1.46	0.132	0.89	0.225	0.59	0.456
15000	2.60	0.043	1.51	0.127	0.93	0.217	0.61	0.439
16000	2.70	0.042	1.57	0.123	0.96	0.210	0.63	0.425
18000	2.87	0.039	1.67	0.115	1.02	0.197	0.67	0.398
24000	3.35	0.034	1.94	0.099	1.19	0.170	-	-
26500	3.54	0.032	2.05	0.094	1.25	0.161	-	-
30000	3.79	0.03	2.19	0.088	-	-	-	-
40000	4.44	0.026	2.56	0.075	-	-	-	-







-55°C~+165°C

B Series RF coaxial cable

Application

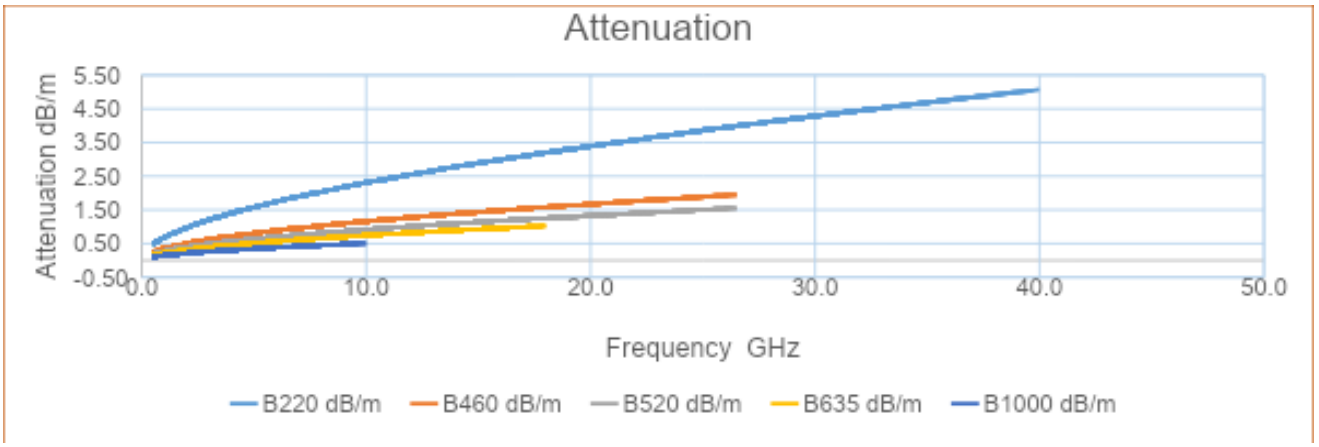
Using in radio communication equipment and related electronic devices.

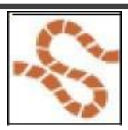
The cable using the insulation material with a transmission rate of more than 76%, as well as a 3-layer shield structure, which has ultra-low loss, superior electronic shield cable performance, superior temperature and mechanical phase stability.

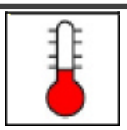
Structure

Structure	Material	B220	B460	B520	B635	B930
		Dimensions（mm）				
Conductor	Silver Plated Copper Wire	0.51	1.02	1.29	1.57	2.44
Insulation	F-PTFE	1.52	3.06	3.91	4.72	7.24
Braiding Shield	Silver Plated Copper Tape	1.7	3.25	4.15	4.96	7.48
Wrapping Shield	Al Tape	-	3.43	4.28	5.1	7.61
Braiding Shield	Silver Plated Copper Wire	1.98	3.93	4.78	5.65	8.19
Sheath	FEP	2.3	4.6	5.2	6.35	9.3
Transfer Rate		76%				
Min.. Bending Radius（mm）		11	19	25	32	50
Weight（g/m）		16	49	60	85	190

Cable Performance



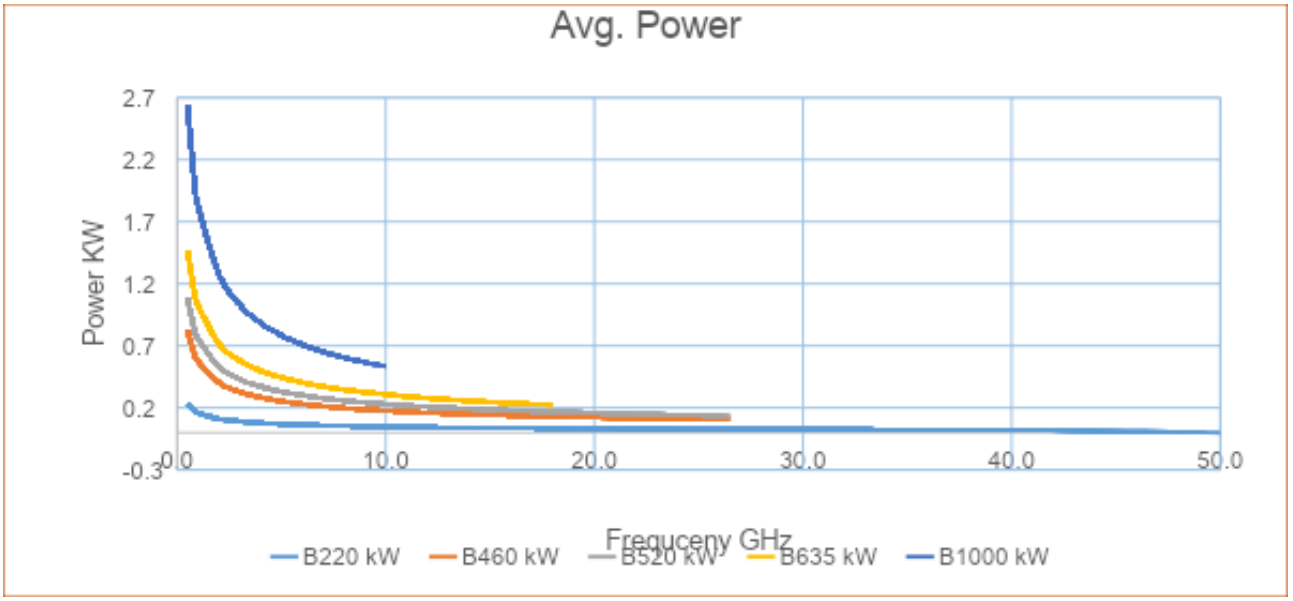




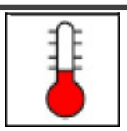
-55°C~+165°C

Cable Performance

Cable P/N	B220		B460		B520		B635		B930	
Freq. (MHz)	Att. dB/m	Power kW	Att. dB/m	Power kW	Att. dB/m	Power kW	Att. dB/m	Power kW	Att. dB/m	Power kW
500	0.48	0.229	0.25	0.82	0.20	1.077	0.16	1.462	0.10	2.632
800	0.61	0.18	0.32	0.646	0.25	0.850	0.20	1.152	0.13	2.069
1000	0.68	0.16	0.35	0.577	0.28	0.758	0.22	1.027	0.15	1.832
2000	0.97	0.112	0.50	0.405	0.40	0.532	0.32	0.717	0.21	1.279
3000	1.21	0.091	0.62	0.33	0.49	0.431	0.39	0.582	0.26	1.031
4000	1.41	0.078	0.72	0.284	0.57	0.371	0.46	0.5	0.31	0.883
5000	1.58	0.069	0.81	0.253	0.64	0.331	0.51	0.445	0.35	0.784
6000	1.75	0.063	0.89	0.23	0.70	0.301	0.57	0.404	0.38	0.71
8000	2.04	0.054	1.03	0.198	0.81	0.258	0.66	0.347	0.45	0.607
9000	2.18	0.05	1.10	0.186	0.87	0.243	0.70	0.326	0.48	0.567
10000	2.31	0.048	1.16	0.177	0.92	0.230	0.74	0.308	0.51	0.535
11000	2.43	0.045	1.22	0.168	0.96	0.218	0.78	0.292	-	-
12000	2.55	0.043	1.28	0.16	1.01	0.208	0.82	0.279	-	-
14000	2.78	0.04	1.38	0.148	1.10	0.192	0.89	0.256	-	-
15000	2.89	0.038	1.44	0.143	1.14	0.185	0.93	0.247	-	-
16000	2.99	0.037	1.49	0.138	1.18	0.179	0.96	0.238	-	-
18000	3.20	0.034	1.58	0.129	1.26	0.168	1.02	0.223	-	-
24000	3.77	0.029	1.85	0.111	-	-	-	-	-	-
26500	3.99	0.028	1.95	0.105	-	-	-	-	-	-
30000	4.29	0.026	-	-	-	-	-	-	-	-
40000	5.07	0.022	-	-	-	-	-	-	-	-








-55°C~+165°C

T Series RF coaxial cable

Application

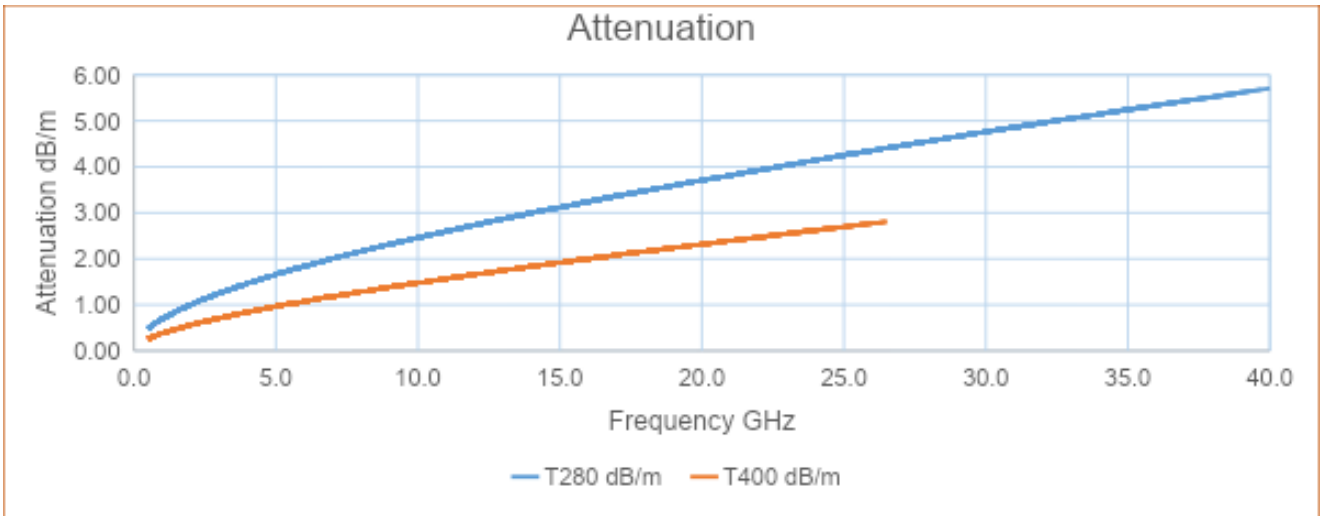
Using in radio communication equipment and related electronic devices.

The cable using the insulation material with a transmission rate of more than 70%, as well as a 2-layer shield structure, which has ultra-low loss, superior electronic shield cable performance, superior temperature and mechanical phase stability.

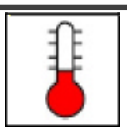
Structure

Structure	Material	T280	T400
		Dimensions（mm）	
Conductor	Silver Plated Copper Wire	0.51	0.91
Insulation	Solid PTFE	1.63	3.0
Wrapping Shield	Silver Plated Copper Tape Wrapping	1.79	3.2
Brading Shield	Silver Plated Copper Wire	2.16	3.55
Sheath	FEP	2.8	4
Transfer Rate		70%	70%
Min.. Bending Radius（mm）		14	20
Weight（g/m）		22	49

Cable Performance



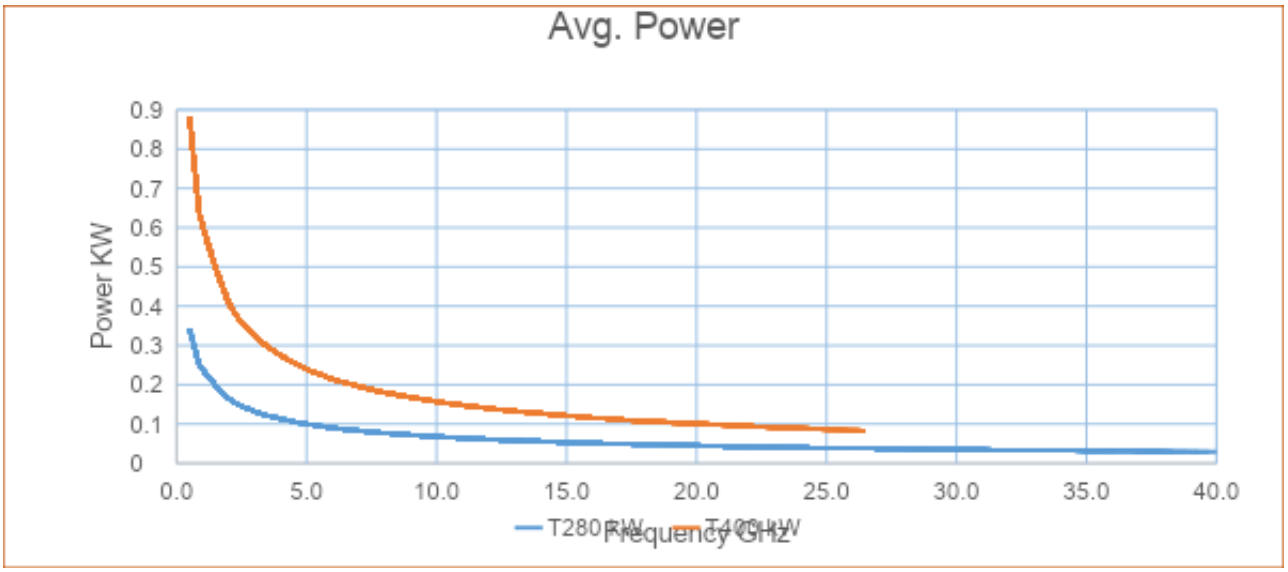




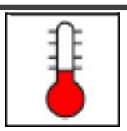

-55°C~+165°C

Cable Performance

Cable P/N	T280		T400	
Freq. (MHz)	Att. dB/m	Power kW	Att. dB/m	Power kW
500	0.48	0.343	0.26	0.883
800	0.62	0.27	0.34	0.685
1000	0.69	0.239	0.38	0.606
2000	1.00	0.165	0.56	0.411
3000	1.25	0.132	0.71	0.325
4000	1.47	0.113	0.84	0.275
5000	1.66	0.10	0.96	0.241
6000	1.84	0.09	1.08	0.215
8000	2.16	0.077	1.28	0.181
9000	2.32	0.072	1.38	0.168
10000	2.46	0.068	1.48	0.157
11000	2.60	0.064	1.57	0.148
12000	2.74	0.061	1.66	0.14
13000	2.87	0.058	1.75	0.133
15000	3.12	0.053	1.92	0.121
16000	3.25	0.051	2.00	0.116
18000	3.48	0.048	2.16	0.107
24000	4.15	0.04	2.62	0.089
26500	4.41	0.038	2.81	0.083
30000	4.76	0.035	-	-
40000	5.71	0.03	-	-







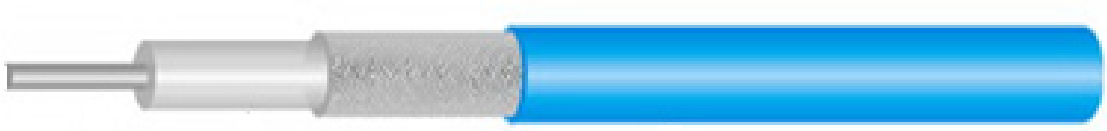

-55°C~+165°C

BR Series Semi-flexible RF Coaxial Cable

Application

Using in radio communication equipment and related electronic devices.

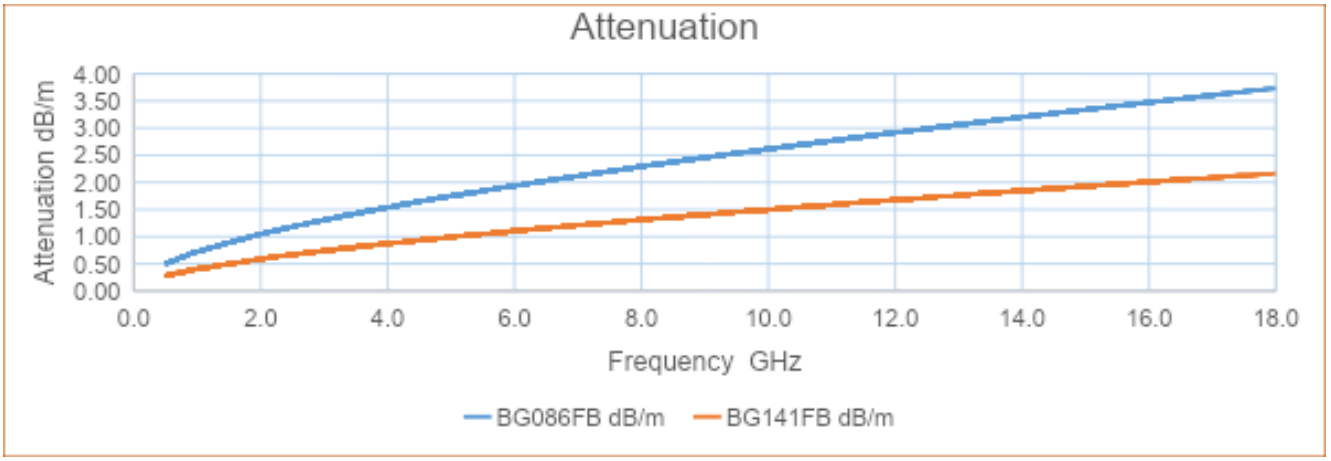
The cable using the insulation material with a transmission rate of 70%, as well as a tin soak copper wire braiding shield, which has ultra-low loss, superior electronic shield cable performance, superior temperature and mechanical phase stability.The cable has moderate softness and can be repeatedly formed by hand.



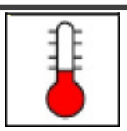
Structure

Structure	Material	BR086 (18G)	BR086FB (18G)	BR141 (18G)	BR141FB (18G)
		Dimensions（mm）			
Conductor	Silver Plated Copper Wire	0.53	0.53	0.93	0.93
Insulation	Solid PTFE	1.66	1.66	2.97	2.97
Braiding Shield	Tin Soak Copper Wire	2.15	2.15	3.53	3.53
Sheath	FEP	-	2.75	-	4.2
Transfer Rate		70%	70%	70%	70%
Min.. Bending Radius（mm）		5	5	5	9
Weight（g/m）		21	21	21	50

Cable Performance



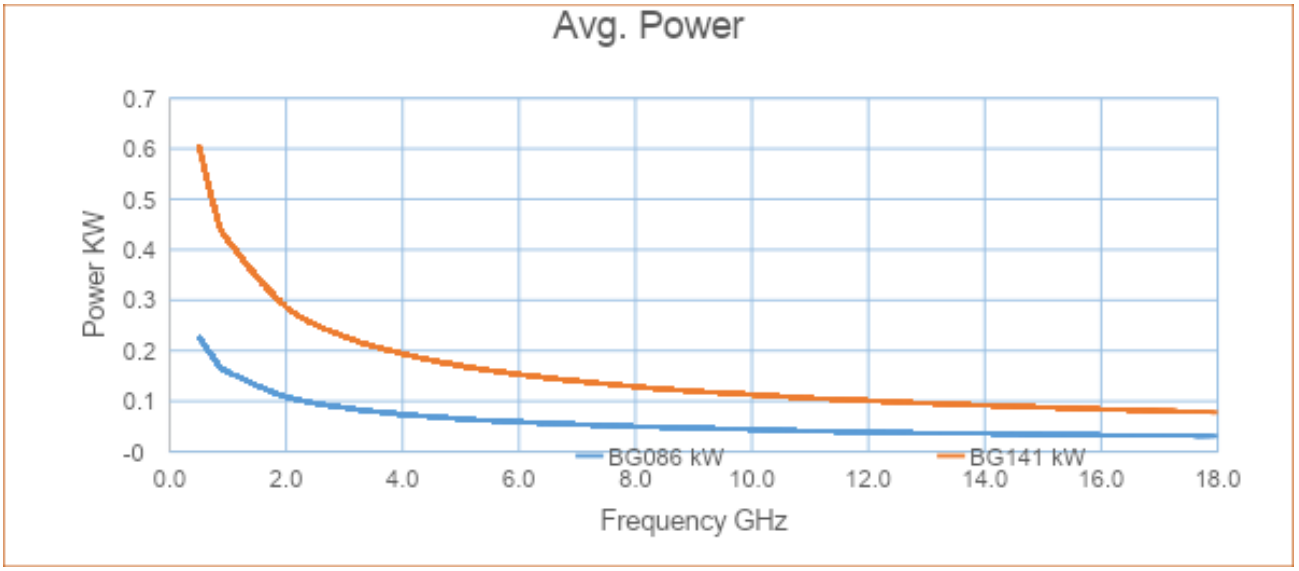




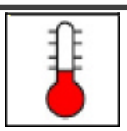

-55°C~+165°C

Cable Performance

Cable P/N	BR086(18G)、BR086FB(18G)			BR141(18G)、BR141FB(18G)		
Freq. (MHz)	Att. dB/100m	Att. dB/100m	Power kW	Att. dB/100m	Att. dB/100m	Power kW
500	49.8	0.50	0.228	27.8	0.28	0.607
800	63.9	0.64	0.178	35.8	0.36	0.471
1000	71.9	0.72	0.158	40.3	0.40	0.419
2000	104.6	1.05	0.109	58.9	0.59	0.287
3000	130.9	1.31	0.087	74	0.74	0.228
4000	153.8	1.54	0.074	87.2	0.87	0.194
5000	174.6	1.75	0.065	99.2	0.99	0.17
6000	193.8	1.94	0.059	110.4	1.10	0.153
7000	211.9	2.12	0.054	121	1.21	0.14
8000	229.1	2.29	0.05	131	1.31	0.129
9000	245.6	2.46	0.047	140.7	1.41	0.12
10000	261.4	2.61	0.044	149.9	1.50	0.113
11000	276.8	2.77	0.041	159	1.59	0.106
12000	291.6	2.92	0.039	167.7	1.68	0.101
13000	306.1	3.06	0.037	176.2	1.76	0.096
14000	320.2	3.20	0.036	184.6	1.85	0.092
15000	333.9	3.34	0.034	192.7	1.93	0.088
16000	347.4	3.47	0.033	200.7	2.01	0.084
17000	360.6	3.61	0.032	208.6	2.09	0.081
18000	373.6	3.74	0.031	216.3	2.16	0.078








-55°C~+165°C

BG&G Series Semi-rigid RF Coaxial Cable

Application

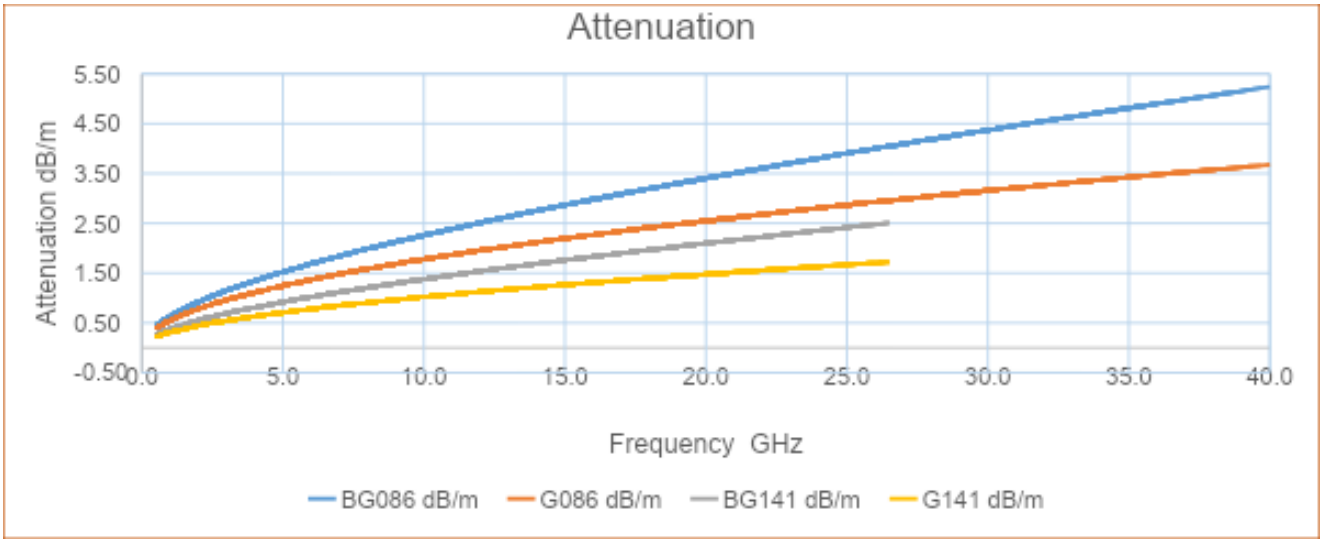
Using in radio communication equipment and related electronic devices.

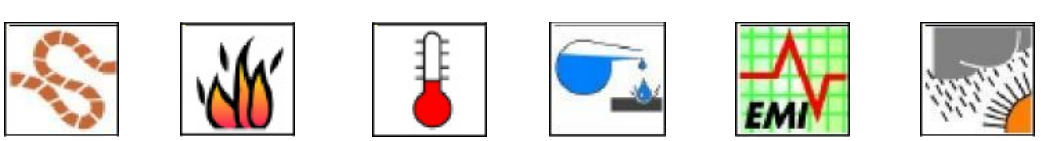
The cable using the insulation material with a transmission rate of 70% and 76%, as well as a copper tube shield, which has ultra-low loss, superior electronic shield cable performance, superior temperature and mechanical phase stability.

Structure

StructureCable P/N	Material	BG086	G086	BG141	G141
		Dimensions（mm）			
Inner Conductor	Silver Plated Copper Wire	0.53	0.56	0.94	0.99
Insulation	Solid PTFE	1.68	—	2.98	—
	Foam PTFE	—	1.68	—	3
Outer Conductor	Ternary Alloy Copper Tube	2.2	2.18	3.58	3.58
Transfer Rate		70%	76%	70%	76%
Min.. Bending Radius（mm）		7	8	8.5	15
Weight（g/m）		19	19	49	43

Cable Performance

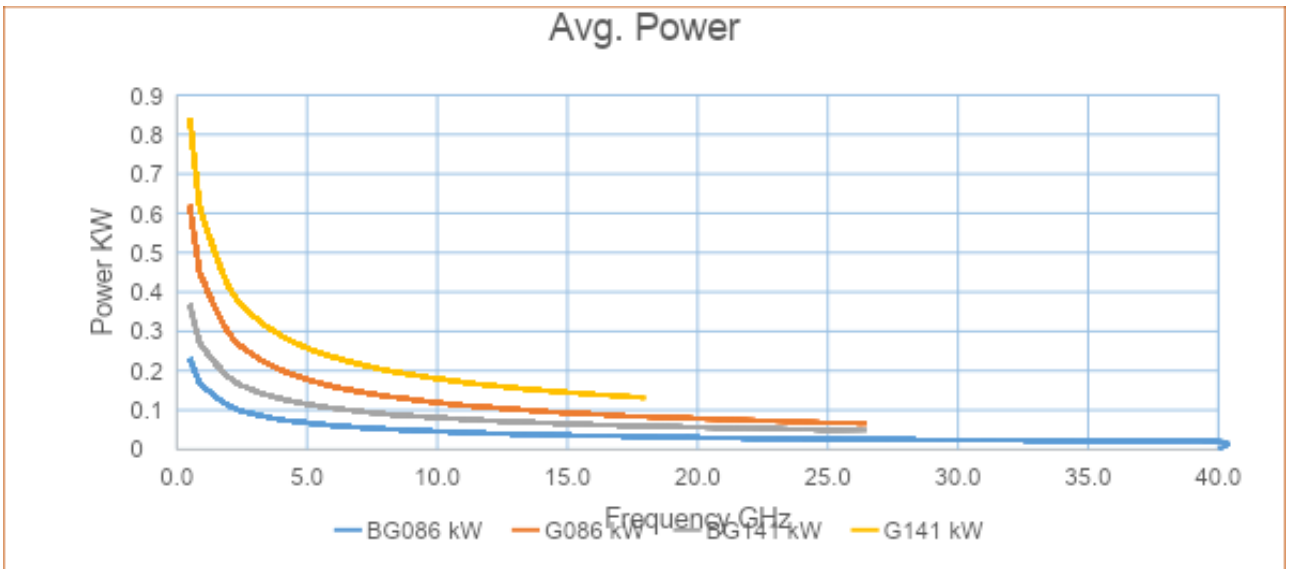


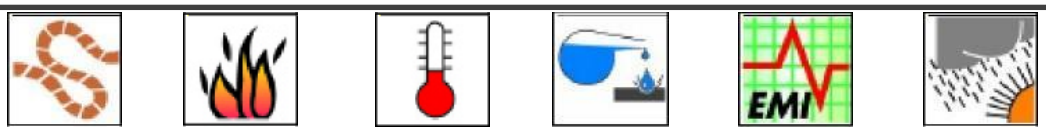


-55ºC~+165ºC

Cable Performance

Cable P/N	BG086		G086		BG141		G141	
Freq. (MHz)	Att. dB/100 m	Power kW	Att. dB/100m	Power kW	Att. dB/100m	Power kW	Att. dB/100m	Power kW
500	0.44	0.231	0.39	0.368	0.26	0.619	0.22	0.839
800	0.57	0.181	0.49	0.290	0.34	0.484	0.28	0.661
1000	0.64	0.161	0.55	0.260	0.38	0.43	0.31	0.59
2000	0.92	0.111	0.78	0.183	0.55	0.296	0.44	0.414
3000	1.15	0.089	0.96	0.149	0.69	0.237	0.55	0.336
4000	1.35	0.076	1.11	0.129	0.81	0.202	0.63	0.29
5000	1.52	0.068	1.25	0.115	0.92	0.178	0.71	0.258
6000	1.69	0.061	1.37	0.105	1.02	0.16	0.78	0.235
8000	1.99	0.052	1.59	0.090	1.21	0.136	0.91	0.202
9000	2.13	0.049	1.69	0.085	1.30	0.127	0.97	0.19
10000	2.26	0.046	1.78	0.081	1.38	0.119	1.02	0.18
11000	2.39	0.043	1.87	0.077	1.46	0.112	1.07	0.171
13000	2.64	0.039	2.04	0.070	1.61	0.102	1.17	0.156
15000	2.87	0.036	2.20	0.065	1.76	0.093	1.27	0.145
16000	2.98	0.035	2.27	0.063	1.83	0.09	1.31	0.14
18000	3.20	0.032	2.41	0.060	1.97	0.083	1.40	0.131
24000	3.81	0.027	2.81	0.051	2.36	0.07	1.63	0.113
26500	4.05	0.026	2.96	0.049	2.51	0.066	1.72	0.107
30000	4.37	0.024	3.16	0.046	-	-	-	-
40000	5.24	0.02	3.68	0.039	-	-	-	-





-55ºC~+165ºC

KSPP

Wire Gauge Comparison Table

AWG	Conductor Dia.(mm)		Aare (mm^2)		Conductor Structure					
	Std.	Min.	Std.	Min.						
32	0.203	—	0.0324	—	7/0.08	8/0.08	—	—	—	—
30	0.254	0.251	0.0507	0.0497	7/0.1	12/0.08	19/0.06	10/0.08	—	—
29	0.287	0.284	0.0647	0.0633	6/0.12	9/0.1	14/0.08	—	—	—
28	0.32	0.318	0.0804	0.079	7/0.127	8/0.12	11/0.1	19/0.08	7/0.12	—
27	0.361	0.358	0.102	0.1	10/0.12	14/0.1	22/0.08	—	—	—
26	0.404	0.399	0.128	0.126	1/0.4	7/0.16	12/0.12	17/0.1	26/0.08	10/0.127
25	0.455	0.45	0.162	0.159	15/0.12	22/0.1	33/0.08	—	—	—
24	0.511	0.506	0.205	0.201	7/0.2	11/0.16	14/0.14	19/0.127	27/0.1	40/0.08
23	0.574	0.568	0.259	0.254	23/0.12	35/0.1	52/0.08	—	—	—
22	0.643	0.637	0.324	0.318	1/0.65	17/0.16	7/0.254	30/0.12	43/0.1	65/0.08
21	0.724	0.717	0.412	0.404	37/0.12	54/0.1	—	—	—	—
20	0.813	0.805	0.519	0.509	7/0.302	10/0.26	21/0.18	26/0.16	34/0.14	45/0.12
19	0.912	0.904	0.653	0.641	1/1.02	7/0.4	16/0.254	19/0.254	41/0.16	65/0.127
18	1.02	1.016	0.823	0.807	16/0.26	34/0.18	42/0.16	54/0.14	70/0.12	—
17	1.15	1.14	1.04	1.02	1/1.291	7/0.51	19/0.32	19/0.287	99/0.1	—
16	1.29	1.278	1.31	1.28	1/1.291	7/0.51	19/0.32	19/0.287	19/0.3	68/0.16
					26/0.26	65/0.16	26/0.254	105/0.127	—	—
14	1.63	1.613	2.08	2.04	19/0.36	41/0.26	7/0.643	41/0.254	105/0.16	
12	2.05	2.03	3.31	3.24	—	—	—	—	—	—