



Arctic Cable Solutions

YANGER® Cable Expert



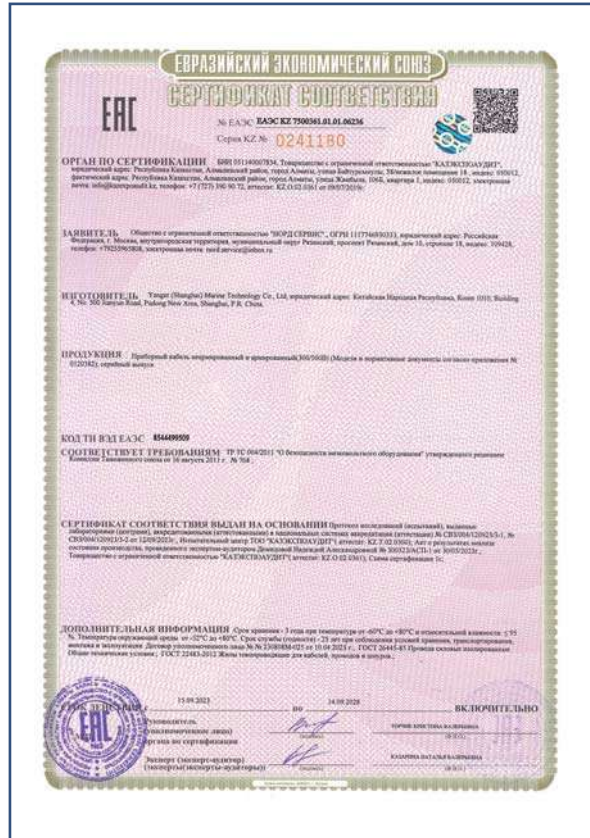
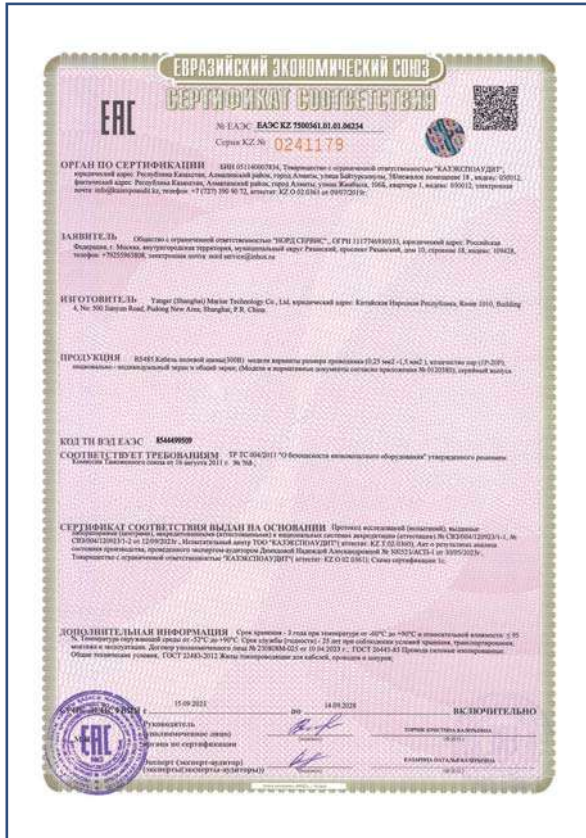
YANGER focusing on the field of high-quality industrial cables with EAC certificate, including power cable, instrumentation cable and other special cable, which widely used in marine, oil and gas industries. At present, Yanger has companies located in Shanghai and Hong Kong.

Yanger also anticipates the demands of future markets with progressive research and development. The company continuously monitors and interprets industry trends, and uses state-of-the-art R&D methods to introduce innovative new products that meet the needs of the rapidly changing market.

Yanger quality system is approved to conform to the requirements of ISO-9001:2015. In addition, many Yanger products are approved and verified by national and international certification bodies such as UL, CUTR, FSC, DNV, ABS, CCS etc.

Apart from manufacturing cables, Yanger also provides cable cutting, pre-trimming and cable assembly component services. Thus, with our one-stop turnkey service, Yanger customers can immediately use their cables.

Our Certificates



1 Application

For used in power transmission and distribution system. suitable for outdoor use at temperature range from -52°C to +80°C.

2 Standard & specification

Cable design comply with IEC 60502-1, IEC 60228, GOST 31996-2012, GOST 22483-2012, IEC 60332-3-22, IEC 61034, IEC 60754-2

3 Design

3.1 Conductor

Up to 2.5mm²: Tinned annealed stranded circular non-compacted copper conductor in accordance with IEC 60228 Class 2

4 to 25mm²: Plain annealed stranded circular non-compacted copper conductor in accordance with IEC 60228 Class 2

Above 25mm²: Plain annealed stranded circular compacted copper conductor in accordance with IEC 60228 Class 2

3.2 Insulation

Extruded XLPE compound comply with IEC 60502-1

Color:

2C: Brown, Blue

3C: Black, Brown, Grey

4C: Black, Brown, Grey, Blue

2C+E: Brown, Blue, Green/Yellow (Earth)

3C+E: Black, Brown, Grey, Green/Yellow (Earth)

4C+E: Black, Brown, Grey, Blue, Green/Yellow (Earth)

5 core and above: black core printed white numbers

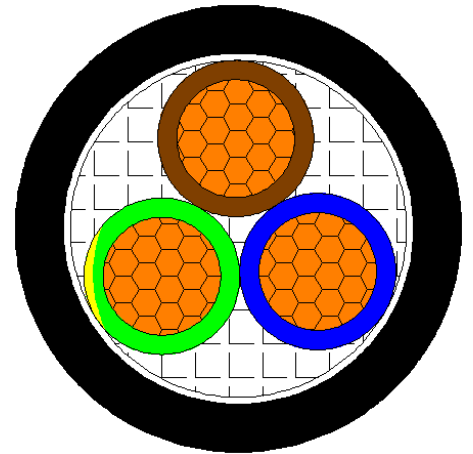
3.3 Assembly and filler(optional)

The interstices between cores filled with non-hygroscopic polypropylene rope to form substantially circular shape with a suitable binder tape

3.4 Outer sheath

Extruded LSZH ST8 compound comply with IEC 60502-1

Color: Black



Cable Drawing for Reference



Conductor flexibility Class 2



Lead free



Rated Voltage U_o/U (U_m) 0.6/1(1.2)



Max. conductor temp.in service 90°C



Flame retardant IEC 60332-3-22



Smoke density IEC 61034



Halogen free IEC 60754-2

4 Cable marking-Inkjet

For example:

EAC YANGER® IEC 60332-3-22 CU/XLPE/LSZH 2C×2.5+E 2.5 SQMM 0.6/1kV H Γ (A) - HF -52° C~+40° C YEAR ****M

Note: “****M” meter marking by inkjet with increased sequence with numbering
“H Γ (A) - HF” at least every 1 metre appear on the cable

5 Operation condition

Rated voltage, U ₀ /U(U _m), kV	0.6/1(1.2)
Rated, operating temperature range, °C	-52~+80
Min. installation temperature without preheating, °C	-20
Max. conductor temperature in service, °C	90
Max. permissible short-circuit temperature,5 sec, °C	250
Min. bending radius, D overall diameter of cable	15D
Flame retardant	IEC 60332-3-22
Halogen Gas Emission	IEC 60754-1, < 0.5%
Low Smoke Emission	IEC 61034-1/2
UV resistant	UL 1581
Oil resistant	IEC60811(IRM 902 - 4h at 70°C, variation ±40%)
Oxygen Index (Sheath)	ASTM D 2863
Cold bend	IEC 60811-1-4, -35°C
Cold impact	IEC 60811-1-4 & CSA C22.2 No.38-10, -35°C
Chemical resistance	Accidental



Conductor flexibility
Class 2



Lead free



Rated Voltage
U₀/U (U_m)
0.6/1(1.2)



Max. conductor temp.in service
90°C



Flame retardant
IEC 60332-3-22



Smoke density
IEC 61034



Halogen free
IEC 60754-2

No.	Cable Size	Nom. cross section (Phase)		Insulation		Nom. cross section (Earth)	Insulation		Outer Sheath	Overall Dia(+/-10%)	Approx. Weight	DC Resistance at 20°C Phase/Earth	Reactance	Capacitance	Short-circuit withstand capacity(I _s)	Voltage drop	Test Voltage 5 mins	Max. allowable Pulling tension	Current Rating		Insulation Core Color	Outer Sheath Color
		Nom. Thick.	Min. Thick.	Nom. Thick.	Min. Thick.		in air at 30°C	Underground (buried)20°C														
		mm	mm	mm	mm		A	A														
1	2C2.5+E	2.5	0.7	0.53	1.8	12.1	186	7.56	0.2901	0.2617	0.41	0.347	3500	0.5	36	30	Brown, Blue, Green/Yellow	Black				
2	2C4+E	4	0.7	0.53	1.8	13.2	245	4.61	0.2828	0.3123	0.64	0.288	3500	0.8	49	39	Brown, Blue, Green/Yellow	Black				
3	2C6+E	6	0.7	0.53	1.8	14.3	312	3.08	0.2774	0.3626	0.94	0.248	3500	1.2	63	49	Brown, Blue, Green/Yellow	Black				
4	2C10+E	10	0.7	0.53	1.8	16.5	461	1.83	0.2704	0.4628	1.53	0.202	3500	2.0	86	65	Brown, Blue, Green/Yellow	Black				
5	2C16+E	16	0.7	0.53	1.8	18.8	659	1.15	0.2654	0.5726	2.29	0.171	3500	3.3	115	84	Brown, Blue, Green/Yellow	Black				
6	3C2.5+E	2.5	0.7	0.53	1.8	13.0	223	7.56	0.2901	0.2617	0.41	0.309	3500	0.7	32	30	Black, Brown, Grey, Green/Yellow	Black				
7	3C4+E	4	0.7	0.53	1.8	14.2	297	4.61	0.2828	0.3123	0.64	0.247	3500	1.1	42	39	Black, Brown, Grey, Green/Yellow	Black				
8	3C6+E	6	0.7	0.53	1.8	15.4	394	3.08	0.2774	0.3626	0.94	0.213	3500	1.6	54	49	Black, Brown, Grey, Green/Yellow	Black				
9	3C10+E	10	0.7	0.53	1.8	17.9	576	1.83	0.2704	0.4628	1.53	0.176	3500	2.7	75	65	Black, Brown, Grey, Green/Yellow	Black				
10	3C16+E	16	0.7	0.53	1.8	20.5	833	1.15	0.2654	0.5726	2.29	0.149	3500	4.4	100	84	Black, Brown, Grey, Green/Yellow	Black				
11	4C2.5+E	2.5	0.7	0.53	1.8	14.0	264	7.56	0.2901	0.2617	0.41	0.309	3500	0.9	32	30	Black, Brown, Grey, Blue, Green/Yellow	Black				
12	4C4+E	4	0.7	0.53	1.8	15.3	353	4.61	0.2828	0.3123	0.64	0.247	3500	1.4	42	39	Black, Brown, Grey, Blue, Green/Yellow	Black				
13	4C6+E	6	0.7	0.53	1.8	16.7	461	3.08	0.2774	0.3626	0.94	0.213	3500	2.0	54	49	Black, Brown, Grey, Blue, Green/Yellow	Black				
14	4C10+E	10	0.7	0.53	1.8	19.4	696	1.83	0.2704	0.4628	1.53	0.176	3500	3.4	75	65	Black, Brown, Grey, Blue, Green/Yellow	Black				
15	4C16+E	16	0.7	0.53	1.8	22.4	1017	1.15	0.2654	0.5726	2.29	0.149	3500	5.4	100	84	Black, Brown, Grey, Blue, Green/Yellow	Black				
16	6C2.5+E	2.5	0.7	0.53	1.8	15.0	325	7.56	0.2901	0.2617	0.41	0.309	3500	1.2	32	30	black core printed white numbers +Y/G	Black				
17	3C25+E	25	0.9	0.71	1.6	22.9	1126	0.727/1.15	0.2671	0.5294	3.58	0.144	3500	6.2	127	107	Black, Brown, Grey, Green/Yellow	Black				
18	2C1.5	1.5	0.7	0.53	/	10.8	129	12.2	0.3007	0.2124	0.26	0.405	3500	0.2	26	23	Brown, Blue	Black				
19	7C1.5	1.5	0.7	0.53	1.5	13.8	249	12.2	0.3007	0.2124	0.26	0.368	3500	0.7	23	23	black core printed white numbers	Black				

1 Application

For used in power transmission and distribution system, suitable for outdoor use at temperature range from -52°C to +80°C.

2 Standard & specification

Cable design comply with IEC 60502-1, IEC 60228, GOST 31996-2012, GOST 22483-2012, IEC 60332-3-22, IEC 60331, IEC 61034, IEC 60754-2, GOST 31565-2012

3 Design

3.1 Conductor

Up to 2.5mm²: Tinned annealed stranded circular non-compacted copper conductor in accordance with IEC 60228 Class 2

4 to 25mm²: Plain annealed stranded circular non-compacted copper conductor in accordance with IEC 60228 Class 2

Above 25mm²: Plain annealed stranded circular compacted copper conductor in accordance with IEC 60228 Class 2

3.2 Fire proof layer

Mica Glass tape overlapped around the conductor

3.3 Insulation

Extruded XLPE compound comply with IEC 60502-1

Color:

2C: Brown, Blue

3C: Black, Brown, Grey

4C: Black, Brown, Grey, Blue

2C+E: Brown, Blue, Green/Yellow (Earth)

3C+E: Black, Brown, Grey, Green/Yellow (Earth)

4C+E: Black, Brown, Grey, Blue, Green/Yellow (Earth)

5 core and above: black core printed white numbers

3.4 Assembly and filler(optional)

The interstices between cores filled with non-hygroscopic polypropylene rope to form substantially circular shape with a suitable binder tape

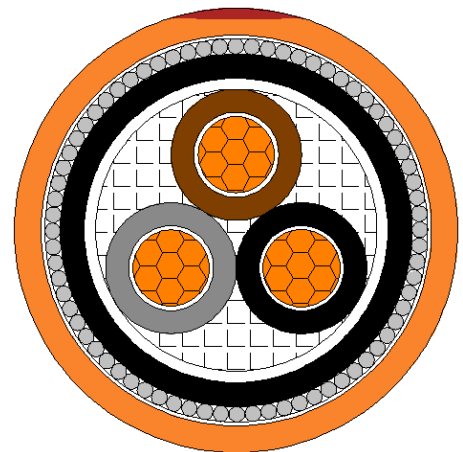
3.5 Inner sheath

Extruded LSZH ST8 compound comply with IEC 60502-1

Color: Black

3.6 Metal armour

A layer of galvanize steel wires with suitable binder tape helically



Cable Drawing for Reference



Conductor flexibility Class 2



Lead free



Rated Voltage U_o/U (U_m) 0.6/1(1.2)



Max. conductor temp.in service 90°C



Flame retardant IEC 60332-3 Cat.A



Smoke density IEC 61034



Halogen free IEC 60754-2

applied on the inner sheath

3.7 Outer sheath

Extruded LSZH ST8 compound comply with IEC 60502-1
Color: Orange with a red strip

4 Cable marking-Inkjet

For example:

EAC YANGER IEC 60331 CU/MGT/XLPE/LSZH/SWA/LSZH 2C×2.5+E 2.5 SQMM 0.6/1KV H Γ (A) - FRHF -52° C~+40° C YEAR ****M

Note: "****M" meter marking by inkjet with increased sequence with numbering
" H Γ (A) - FRHF" at least every 1 metre appear on the cable

5 Operation condition

Rated voltage, U ₀ /U(U _m), kV	0.6/1(1.2)
Rated, operating temperature range, °C	-52~+80
Min. installation temperature without preheating, °C	-20
Max. conductor temperature in service, °C	90
Max. permissible short-circuit temperature,5 sec, °C	250
Min. bending radius, D overall diameter of cable	12D
Flame retardant	IEC 60332-3-22
Fire resistant	IEC60331(2 h)
Halogen Gas Emission	IEC 60754-1, < 0.5%
Low Smoke Emission	IEC 61034-1/2
UV resistant	UL 1581
Oil resistant	IEC60811(IRM 902 - 4h at 70°C, variation ±40%)
Oxygen Index (Sheath)	ASTM D 2863
Cold bend	IEC 60811-1-4, -35°C
Cold impact	IEC 60811-1-4 & CSA C22.2 No.38-10, -35°C
Chemical resistance	Accidental



Conductor flexibility
Class 2



Lead free



Rated Voltage
U₀/U (U_m)
0.6/1(1.2)



Max. conductor temp.in service
90°C



Flame retardant
IEC 60332-3 Cat.A



Smoke density
IEC 61034



Halogen free
IEC 60754-2

CABLE TYPE:0.6/1KV CU/MGT/XLPE/LSZH/SWA/LSZH

No.	Cable Size	Insulation		Nom. Cross-section (Earth)	Insulation		Inner Sheath	Under armour (+/- 10%)	Steel wire	Outer Sheath	Overshell Dia(+/- 10%)	Approx. Weight	DC Resistance at 20°C	Reactance	Capacitance	Short-circuit withstand capacity(I _{sc})	Voltage drop	Test Voltage	Max. allowable Pulling tension	Current Rating		Insulation Core Color	Outer Sheath Color	
		Nom. Thick.	Min. Thick.		in air at 30°C	Underground (buried) at 20°C																		
1	2C2.5+E	2.5	0.7	0.53	2.5	0.7	0.53	1.0	11.5	0.8	1.8	17.3	4.89	7.56	0.3062	0.1935	0.347	3500	0.5	36	A	A	Brown, Blue, Green/Yellow	Orange with a red strip
2	2C4+E	4	0.7	0.53	4	0.7	0.53	1.0	12.5	0.8	1.8	18.3	5.80	4.61	0.2869	0.2278	0.288	3500	0.8	48	A	A	Brown, Blue, Green/Yellow	Orange with a red strip
3	2C6+E	6	0.7	0.53	6	0.7	0.53	1.0	13.6	0.8	1.8	19.4	6.74	3.08	0.2801	0.2617	0.248	3500	1.2	63	A	A	Brown, Blue, Green/Yellow	Orange with a red strip
4	2C10+E	10	0.7	0.53	10	0.7	0.53	1.0	15.1	1.25	1.8	21.8	9.95	1.83	0.2822	0.3169	0.202	3500	2	86	A	A	Brown, Blue, Green/Yellow	Orange with a red strip
5	2C16+E	16	0.7	0.53	16	0.7	0.53	1.0	17.5	1.25	1.8	24.2	12.64	1.15	0.2754	0.3873	0.172	3500	3.3	115	A	A	Brown, Blue, Green/Yellow	Orange with a red strip
6	3C2.5+E	2.5	0.7	0.53	2.5	0.7	0.53	1.0	12.5	0.8	1.8	18.3	5.64	7.56	0.3062	0.1935	0.309	3500	0.7	32	A	A	Black, Brown, Grey, Green/Yellow	Orange with a red strip
7	3C4+E	4	0.7	0.53	4	0.7	0.53	1.0	13.7	0.8	1.8	19.5	6.66	4.61	0.2869	0.2278	0.247	3500	1.1	42	A	A	Black, Brown, Grey, Green/Yellow	Orange with a red strip
8	3C6+E	6	0.7	0.53	6	0.7	0.53	1.0	14.9	1.25	1.8	21.6	9.32	3.08	0.2801	0.2617	0.213	3500	1.6	54	A	A	Black, Brown, Grey, Green/Yellow	Orange with a red strip
9	3C10+E	10	0.7	0.53	10	0.7	0.53	1.0	16.6	1.25	1.8	23.3	11.56	1.83	0.2822	0.3169	0.176	3500	2.7	75	A	A	Black, Brown, Grey, Green/Yellow	Orange with a red strip
10	3C16+E	16	0.7	0.53	16	0.7	0.53	1.0	19.3	1.6	1.8	26.7	16.60	1.15	0.2754	0.3873	0.149	3500	4.4	100	A	A	Black, Brown, Grey, Green/Yellow	Orange with a red strip
11	4C2.5+E	2.5	0.7	0.53	2.5	0.7	0.53	1.0	13.7	0.8	1.8	19.5	6.37	7.56	0.3062	0.1935	0.309	3500	0.9	32	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
12	4C4+E	4	0.7	0.53	4	0.7	0.53	1.0	15.0	1.25	1.8	21.7	9.08	4.61	0.2869	0.2278	0.247	3500	1.4	42	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
13	4C6+E	6	0.7	0.53	6	0.7	0.53	1.0	16.4	1.25	1.8	23.1	10.70	3.08	0.2801	0.2617	0.213	3500	2	54	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
14	4C10+E	10	0.7	0.53	10	0.7	0.53	1.0	18.3	1.25	1.8	25.0	13.36	1.83	0.2822	0.3169	0.176	3500	3.4	75	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
15	4C16+E	16	0.7	0.53	16	0.7	0.53	1.0	21.2	1.6	1.8	28.6	19.10	1.15	0.2754	0.3873	0.149	3500	5.4	100	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
16	6C2.5+E	2.5	0.7	0.53	2.5	0.7	0.53	1.0	14.9	1.25	1.8	21.6	8.86	7.56	0.3062	0.1935	0.309	3500	1.2	32	A	A	black core printed white numbers+YG	Orange with a red strip
17	2C15	1.5	0.7	0.53	/	/	/	1.0	9.8	0.8	1.8	15.6	3.95	12.2	0.116	0.166	15.48	3500	0.2	26	A	A	Brown, Blue	Orange with a red strip
18	4C95+E	95	1.1	0.89	50	1.0	0.80	1.2	40.9	2.0	2.4	50.3	67.26	0.193	0.078	0.506	0.449	3500	29.2	298	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip
19	4C120+E	120	1.2	0.98	70	1.1	0.88	1.4	46.0	2.5	2.5	57.2	88.24	0.153	0.077	0.534	0.367	3500	37.4	346	A	A	Black, Brown, Grey, Blue, Green/Yellow	Orange with a red strip

1 Application

For used in power transmission and distribution system, suitable for outdoor use at temperature range from -52°C to +80°C. For VSD system application.

2 Standard & specification

Cable design comply with IEC 60502-1, IEC 60228, GOST 31996-2012, GOST 22483-2012, IEC 60332-3-22, IEC 60331, IEC 61034, IEC 60754-2, GOST 31565-2012

3 Design

3.1 Conductor

Up to 25mm²: Plain annealed stranded circular non-compacted copper conductor in accordance with IEC 60228 Class 2

Above 25mm²: Plain annealed stranded circular compacted copper conductor in accordance with IEC 60228 Class 2

3.2 Fire resistance

Mica Glass tape overlapped around the conductor

3.3 Insulation

Extruded XLPE compound comply with IEC 60502-1

Color: 3C: Black, Brown, Grey

3.4 Earth conductor

Three earth insulation conductors (color: Yellow/Green) arranged in 360°symmetrical configuration

3.5 Assembly and filler(optional)

The interstices between cores filled with non-hygroscopic polypropylene rope to form substantially circular shape with a suitable binder tape

3.6 Metallic screen

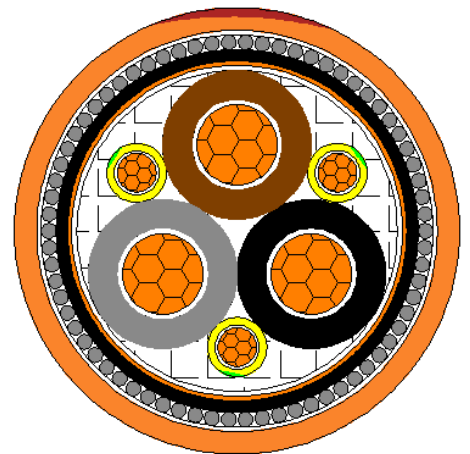
A layer of copper tape helically overlap applied on the assembly core

3.7 Separation sheath

Extruded LSZH ST8 compound comply with IEC 60502-1
 Color: Black

3.8 Metal amour

A layer of galvanize steel wires with suitable binder tape helically



Cable Drawing for Reference



Conductor flexibility
 Class 2



Lead free



Rated Voltage
 Uo/U (Um)
 0.6/1(1.2)



Max. conductor temp.in service
 90°C



Flame retardant
 IEC 60332-3-22



Smoke density
 IEC 61034



Halogen free
 IEC 60754-2

applied on the separation sheath

3.9 Outer sheath

Extruded LSZH ST8 compound comply with IEC 60502-1
 Color: Orange with a red strip

4 Cable marking-Inkjet

EAC YANGER® IEC 60331 CU/MGT/XLPE/OA.SCR/LSZH/SWA/LSZH 3C×10+3E×1.5 SQMM 0.6/1kV Н Г (А) - FRHF -52° C~+40° C 2020 ****M

Note: “****M” meter marking by inkjet with increased sequence with numbering “Н Г (А) - FRHF” at least every 1 metre appear on the cable

5 Operation condition

Rated voltage, U0/U(Um), kV	0.6/1(1.2)
Rated, operating temperature range, °C	-52~+80
Min. installation temperature without preheating, °C	-20
Max. conductor temperature in service, °C	90
Max. permissible short-circuit temperature,5 sec, °C	250
Min. bending radius, D overall diameter of cable	12D
Flame retardant	IEC 60332-3-22
Fire resistant	IEC60331(2 h)
Halogen Gas Emission	IEC 60754-1, < 0.5%
Low Smoke Emission	IEC 61034-1/2
UV resistant	UL 1581
Oil resistant	IEC60811(IRM 902 - 4h at 70°C, variation ±40%)
Oxygen Index (Sheath)	ASTM D 2863
Cold bend	IEC 60811-1-4, -35°C
Cold impact	IEC 60811-1-4 & CSA C22.2 No.38-10, -35°C
Chemical resistance	Accidental



Conductor flexibility
 Class 2



Lead free



Rated Voltage
 Uo/U (Um)
 0.6/1(1.2)



Max. conductor temp.in service
 90°C



Flame retardant
 IEC 60332-3-22



Smoke density
 IEC 61034



Halogen free
 IEC 60754-2



0.6/1kV
 CU/MGT/XLPE/
 OA.SCR/LSZH/SWA/LSZH
 Power Cable

CABLE TYPE:0.6/1kV CU/MGT/XLPE/OA.SCR/LSZH/SWA/LSZH																												
No.	Cable Size	Nom. cross section (Phase)		Insulation		Nom. Cross-section (Earth)	Insulation		Separation Sheath	Under armour Dia. (+/- 10%)	Steel wire Nom. Dia.	Outer Sheath		Overall Dia (+/- 10%)	Approx. Weight kg/km	DC Resistance at 20°C Phase / Earth Ω/km	Reactance Ω/km	Capacitance $\mu F/km$	Short-circuit withstand capacity(1s)	Voltage drop V/m	Test Voltage		Max. allowable pulling tension KN	Current Rating		Insulation Core Color	Outer Sheath Color	
		Nom. Thick.	Min. Thick.	Nom. Thick.	Min. Thick.		Nom. Thick.	Nom. Thick.				in air at 30°C	Underground (buried)20°C								5 mins	V		A	A			
1	3C10*3E	mm ²	mm	mm	mm	mm ²	mm	mm	mm	mm	mm	mm	mm	mm	1124	1.83/12.1	0.2704	0.4628	1.53	0.176	V	3500	KN	75	A	65	Black, Brown, Grey, Green/Yellow	Orange with a red strip

1 Application

For used in control systems for analogue or digital signal transmission, suitable for outdoor use at temperature range from -52°C to +80°C.

2 Standard & specification

Cable design comply with EN 50288-7, IEC 60228, GOST 22483-2012, IEC 60332-3-22, IEC 61034, IEC 60754-2

3 Design

3.1 Conductor

Plain annealed stranded circular copper conductor in accordance with IEC 60228 Class 2

3.2 Insulation

Extruded XLPE compound comply with EN 50288-7

Core identification*(Multi-):

Pair: White, Black

Triple: White, Black, Red

*each pair/triple is printed with number

Lay length for pair / triple:

≤70mm for 1mm²; ≤100mm for 1.5mm²; ≤150mm for 2.5mm²;

3.3 Individual screen

Aluminum-polyester tape shield with a binder tape applied on Each pair/triple, the metallic side down in electrical contact with a drain wire (0.5mm²)

3.4 Assembly and filler(optional)

The interstices between cores filled with non-hygroscopic polypropylene rope to form substantially circular shape with a suitable binder tape

3.5 Collective screen

Aluminum-polyester tape shield applied on assembly core, the metallic side down in electrical contact with a drain wire (0.5mm²)

3.6 Binder Tape

Non-hygroscopic tape wrapped around the collective screen

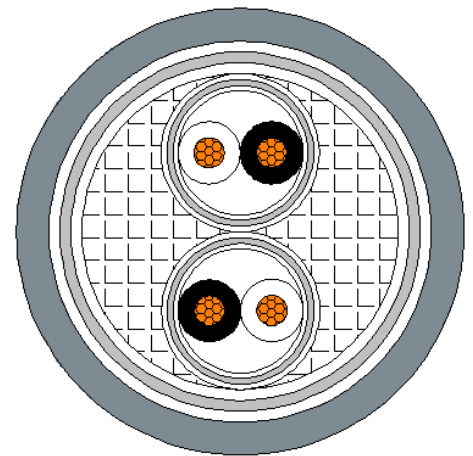
3.7 Outer sheath

Extruded LSZH compound comply with EN 50288-7

Color: Grey (Non-intrinsically safe)

Light Blue (Intrinsically safe)

Orange (Telecom)



Cable Drawing for Reference



Conductor flexibility
Class 2



Lead free



Rated Voltage
U₀/U
300/500V



Max. conductor temp.in service
90°C



Flame retardant
IEC 60332-3-22



Smoke density
IEC 61034



Halogen free
IEC 60754-2

4 Cable marking-Inkjet

For example:

EAC YANGER® IEC 60332-3-22 CU/XLPE/IS/OS/LSZH 2Pair×1 SQMM 300/500V -52° C~+40° C YEAR ****M

Note: “****M” meter marking by inkjet with increased sequence with numbering

5 Operation condition

Rated voltage, U ₀ /U, V	300/500
Rated, operating temperature range, °C	-52~+80
Min. installation temperature without preheating, °C	-30
Max. conductor temperature in service, °C	90
Max. permissible short-circuit temperature,5 sec, °C	250
Min. bending radius, D overall diameter of cable	15D
Flame retardant	IEC 60332-3-22
Halogen Gas Emission	IEC 60754-1, < 0.5%
Low Smoke Emission	IEC 61034-1/2
UV resistant	UL 1581
Oil resistant	IEC60811(IRM 902 - 4h at 70°C, variation ±40%)
Oxygen Index (Sheath)	ASTM D 2863
Cold bend	IEC 60811-1-4, -52°C
Cold impact	IEC 60811-1-4 & CSA C22.2 No.38-10, -52°C
Chemical resistance	Accidental



Conductor flexibility
Class 2



Lead free



Rated Voltage
U₀/U
300/500V



Max. conductor temp.in service
90°C



Flame retardant
IEC 60332-3-22



Smoke density
IEC 61034



Halogen free
IEC 60754-2

CABLE TYPE: 300/500V CU/XLPE/IS/OS/LSZH

No.	Project Cable Code	no. of pairs or triplex cross section	Insulation		Outer Sheath		Overall Dia. (+/-10%)	Approx. Weight kg/km	DC Resistance at 20°C	AC Resistance at 90°C (50Hz)	Test Voltage 1 min	Screen Isolation Voltage		Insulation resistance	Max. mutual capacitance	Max. Capacitance between conductor and shield	Max. IUR ratio	Current Rating		Max. allowable Pulling tension KN	Insulation Core Color	Outer Sheath Color
			Nom. Thick.	Min. Thick.	Nom. Thick.	Min. Thick.						in air at 30°C	in ducts at 20°C									
1		mm ²	mm	mm	mm	mm	kg/km	Ω/km	Ω/km	V	V	V	MD-100m	pF/m	pF/m	μF/Ω	A	A	KN			
2		2x2x1	0.6	0.44	1.0	12.7	169	23.2	18.1	2000	2000	500	10000	150	300	25	14	12	0.3	White, Black	Grey	
3		2x2x1.5	0.6	0.44	1.1	13.8	205	15.5	12.1	2000	2000	500	10000	150	300	40	21	18	0.4	White, Black	Grey	
4		2x2x2.5	0.7	0.53	1.2	16.3	282	9.48	7.41	2000	2000	500	10000	150	300	60	34	29	0.7	White, Black	Grey	
5		2x3x1	0.6	0.44	1.1	14.1	218	23.2	18.1	2000	2000	500	10000	150	300	25	14	12	0.4	White, Black, Red	Grey	
6		2x3x1.5	0.6	0.44	1.1	15.2	262	15.5	12.1	2000	2000	500	10000	150	300	40	21	18	0.6	White, Black, Red	Grey	
7		2x3x2.5	0.7	0.53	1.2	18.0	369	9.48	7.41	2000	2000	500	10000	150	300	60	34	29	1.0	White, Black, Red	Grey	
8		3x2x1	0.6	0.44	1.1	13.6	205	23.2	18.1	2000	2000	500	10000	150	300	25	14	12	0.4	White, Black	Grey	
9		3x2x1.5	0.6	0.44	1.1	14.6	246	15.5	12.1	2000	2000	500	10000	150	300	40	21	18	0.6	White, Black	Grey	
10		3x2x2.5	0.7	0.53	1.2	17.3	343	9.48	7.41	2000	2000	500	10000	150	300	60	34	29	1.0	White, Black	Grey	
11		3x3x1	0.6	0.44	1.1	15.0	265	23.2	18.1	2000	2000	500	10000	150	300	25	14	12	0.6	White, Black, Red	Grey	
12		3x3x1.5	0.6	0.44	1.2	16.3	329	15.5	12.1	2000	2000	500	10000	150	300	40	21	18	0.9	White, Black, Red	Grey	
13		3x3x2.5	0.7	0.53	1.3	19.4	468	9.48	7.41	2000	2000	500	10000	150	300	60	34	29	1.5	White, Black, Red	Grey	
14		6x2x1	0.6	0.44	1.3	19.5	448	23.2	18.1	2000	2000	500	10000	150	300	25	14	12	1.1	White, Black	Grey	
15		6x2x1.5	0.6	0.44	1.3	21.0	547	15.5	12.1	2000	2000	500	10000	150	300	40	21	18	1.6	White, Black	Grey	
16		6x2x2.5	0.7	0.53	1.5	25.0	786	9.48	7.41	2000	2000	500	10000	150	300	60	34	29	2.7	White, Black	Grey	

1 Application

For used in control systems for analogue or digital signal transmission. suitable for outdoor use at temperature range from -52°C to +80°C.

2 Standard & specification

Cable design comply with EN 50288-7, IEC 60228, GOST 22483-2012, IEC 60332-3-22, IEC 60331, IEC 61034, IEC 60754-2, GOST 31565-2012

3 Design

3.1 Conductor

Plain annealed stranded circular copper conductor in accordance with IEC 60228 Class 2

3.2 Fire proof layer

Mica Glass tape overlapped around the conductor

3.3 Insulation

Extruded XLPE compound comply with EN 50288-7

Core identification*(Multi-):

Pair: White, Black

Triple: White, Black, Red

*each pair/triple is printed with number

Lay length for pair / triple:

≤70mm for 1mm²; ≤100mm for 1.5mm²; ≤150mm for 2.5mm²;

3.4 Individual screen

Aluminum-polyester tape shield with a binder tape applied on Each pair/triple, the metallic side down in electrical contact with a drain wire (0.5mm²)

3.5 Assembly and filler(optional)

The interstices between cores filled with non-hygroscopic polypropylene rope to form substantially circular shape with a suitable binder tape

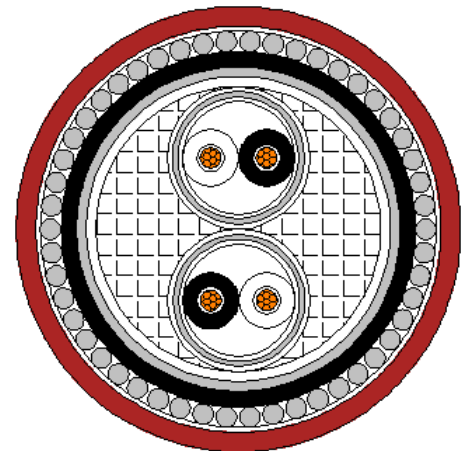
3.6 Collective screen

Aluminum-polyester tape shield applied on assembly core, the metallic side down in electrical contact with a drain wire (0.5mm²)

3.7 Inner sheath

Extruded LSZH compound comply with EN 50288-7

Color: Black



Cable Drawing for Reference



Conductor flexibility Class 2



Lead free



Rated Voltage U₀/U 300/500V



Max. conductor temp.in service 90°C



Flame retardant IEC 60332-3-22



Smoke density IEC 61034



Halogen free IEC 60754-2

3.8 Metal armour

A layer of galvanize steel wires with suitable binder tape helically applied on the inner sheath

3.9 Outer sheath

Extruded LSZH compound comply with EN 50288-7

Color: Red (Non-intrinsically safe)

Red with a blue strip (Intrinsically safe)

Orange (Telecom)

4 Cable marking-Inkjet

For example:

EAC YANGER® IEC 60331 CU/MGT/XLPE/IS/OS/LSZH/SWA/LSZH 2Pair×1 SQMM 300/500V H Γ (A) - FRHF
Project Cable Code -52° C~+40° C YEAR ****M

Note: “****M” meter marking by inkjet with increased sequence with numbering
“H Γ (A) - FRHF” at least every 1 metre appear on the cable

5 Operation condition

Rated voltage, U ₀ /U, V	300/500
Rated, operating temperature range, °C	-52~+80
Min. installation temperature without preheating, °C	-30
Max. conductor temperature in service, °C	90
Max. permissible short-circuit temperature,5 sec, °C	250
Min. bending radius, D overall diameter of cable	15D
Flame retardant	IEC 60332-3-22
Fire resistant	IEC60331(2 h)
Halogen Gas Emission	IEC 60754-1, < 0.5%
Low Smoke Emission	IEC 61034-1/2
UV resistant	UL 1581
Oil resistant	IEC60811(IRM 902 - 4h at 70°C, variation ±40%)
Oxygen Index (Sheath)	ASTM D 2863
Cold bend	IEC 60811-1-4, -52°C
Cold impact	IEC 60811-1-4 & CSA C22.2 No.38-10, -52°C
Chemical resistance	Accidental



Conductor flexibility
Class 2



Lead free



Rated Voltage
U₀/U
300/500V



Max. conductor temp.in service
90°C



Flame retardant
IEC 60332-3-22



Smoke density
IEC 61034



Halogen free
IEC 60754-2

No.	Project Cable Code	no. of pairs or triples x cross section	Insulation		Inner Sheath	Under armour Dia. (+/- 10%)	Steel wire	Outer Sheath	Overall Dia. (+/- 10%)	Approx. Weight	DC Resistance at 20°C	AC Resistance at 50Hz	Test Voltage	Screen isolation Voltage	Insulation resistance	Max. mutual capacitance	Max. capacitance between conductor and shield	Max. L/R ratio	Current Rating		Insulation Core Color	Outer Sheath Color	
			Nom. Thick.	Min. Thick.															in air at 30°C	in ducts at 20°C			Max. allowable Pulling tension
1	02IP-S10-BSHNW	mm ²	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	Ω/km	V	V	MΩ.100m	pF/m	pF/m	μH/Q	A	A	KN	White, Black	Red	
		2x2x1	0.6	0.44	1.0	13.8	0.9	1.4	19.0	567	18.1	23.2	2000	500	10000	150	300	25	14	12	0.3		
2	02IP-S15-BSHNW	2x2x1.5	0.6	0.44	1.1	14.9	0.9	1.5	20.3	644	12.1	15.5	2000	500	10000	150	300	40	21	18	0.4	White, Black	Red
3	02IP-S25-BSHNW	2x2x2.5	0.7	0.53	1.2	17.4	0.9	1.5	22.8	789	7.41	9.48	2000	500	10000	150	300	60	34	29	0.7	White, Black	Red
4	02IT-S10-BSHNW	2x3x1	0.6	0.44	1.1	15.6	0.9	1.5	21.0	687	18.1	23.2	2000	500	10000	150	300	25	14	12	0.4	White, Black, Red	Red
5	02IT-S15-BSHNW	2x3x1.5	0.6	0.44	1.1	16.6	0.9	1.5	22.0	756	12.1	15.5	2000	500	10000	150	300	40	21	18	0.6	White, Black, Red	Red
6	02IT-S25-BSHNW	2x3x2.5	0.7	0.53	1.2	19.4	1.25	1.6	25.7	1094	7.41	9.48	2000	500	10000	150	300	60	34	29	1.0	White, Black, Red	Red
7	03IP-S10-BSHNW	3x2x1.0	0.6	0.44	1.1	14.9	0.9	1.5	20.3	649	18.1	23.2	2000	500	10000	150	300	25	14	12	0.4	White, Black	Red
8	03IP-S15-BSHNW	3x2x1.5	0.6	0.44	1.1	15.9	0.9	1.5	21.3	715	12.1	15.5	2000	500	10000	150	300	40	21	18	0.6	White, Black	Red
9	03IP-S25-BSHNW	3x2x2.5	0.7	0.53	1.2	18.6	0.9	1.6	24.2	894	7.41	9.48	2000	500	10000	150	300	60	34	29	1.0	White, Black	Red
10	03IT-S10-BSHNW	3x3x1	0.6	0.44	1.1	16.6	0.9	1.5	22.0	766	18.1	23.2	2000	500	10000	150	300	25	14	12	0.6	White, Black, Red	Red
11	03IT-S15-BSHNW	3x3x1.5	0.6	0.44	1.2	18.0	0.9	1.5	23.4	876	12.1	15.5	2000	500	10000	150	300	40	21	18	0.9	White, Black, Red	Red
12	03IT-S25-BSHNW	3x3x2.5	0.7	0.53	1.3	21.0	1.25	1.6	27.3	1263	7.41	9.48	2000	500	10000	150	300	60	34	29	1.5	White, Black, Red	Red
13	04IP-S10-BSHNW	4x2x1	0.6	0.44	1.1	16.4	0.9	1.5	21.8	739	18.1	23.2	2000	500	10000	150	300	25	14	12	0.5	White, Black	Red
14	08IP-S10-BSHNW	8x2x1	0.6	0.44	1.3	22.7	1.25	1.6	29.0	1322	18.1	23.2	2000	500	10000	150	300	25	14	12	1.1	White, Black	Red
15	08IP-S15-BSHNW	8x2x1.5	0.6	0.44	1.3	24.4	1.25	1.7	30.9	1489	12.1	15.5	2000	500	10000	150	300	40	21	18	1.6	White, Black	Red
16	08IP-S25-BSHNW	8x2x2.5	0.7	0.53	1.5	28.7	1.25	1.8	35.4	1903	7.41	9.48	2000	500	10000	150	300	60	34	29	2.7	White, Black	Red
17	08IT-S10-BSHNW	8x3x1	0.6	0.44	1.3	25.5	1.25	1.7	32.0	1615	18.1	23.2	2000	500	10000	150	300	25	14	12	1.6	White, Black, Red	Red
18	08IT-S15-BSHNW	8x3x1.5	0.6	0.44	1.4	27.6	1.25	1.7	34.1	1858	12.1	15.5	2000	500	10000	150	300	40	21	18	2.4	White, Black, Red	Red
19	08IT-S25-BSHNW	8x3x2.5	0.7	0.53	1.6	32.5	1.25	1.9	39.4	2416	7.41	9.48	2000	500	10000	150	300	60	34	29	4.1	White, Black, Red	Red
20	03TP-S10-BSHNW	3x2x1.0	0.6	0.44	1.1	14.9	0.9	1.5	20.3	649	18.1	23.2	2000	500	10000	150	300	25	14	12	0.4	White, Black	Orange
21	03TP-S15-BSHNW	3x2x1.5	0.6	0.44	1.1	15.9	0.9	1.5	21.3	715	12.1	15.5	2000	500	10000	150	300	40	21	18	0.6	White, Black	Orange
22	02TP-S10-BSHNW	2x2x1.0	0.6	0.44	1.0	13.8	0.9	1.4	19.0	567	18.1	23.2	2000	500	10000	150	300	25	14	12	0.3	White, Black	Orange



© 2024 Yanger Marine

All Right Reserved.

Yanger (Shanghai) Marine Technology Co., Ltd (Yanger) reserves the right to make changes to the products specification without prior notice. Drawings may not be to scale and are provided for general and information purposes only. The information contained in this catalog is the proprietary property of Yanger, and may not to be used, reproduced or disclosed to others without the written authorization of Yanger.



Room 1010, Building 4, No.500 Jiayun Road, Pudong New Area, Shanghai



86-21-51636889



www.yangertec.com