

**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 1mm<sup>2</sup>; ≤100mm for 1.5mm<sup>2</sup>; ≤150mm for 2.5mm<sup>2</sup>;

**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 (0.5mm<sup>2</sup>)

**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

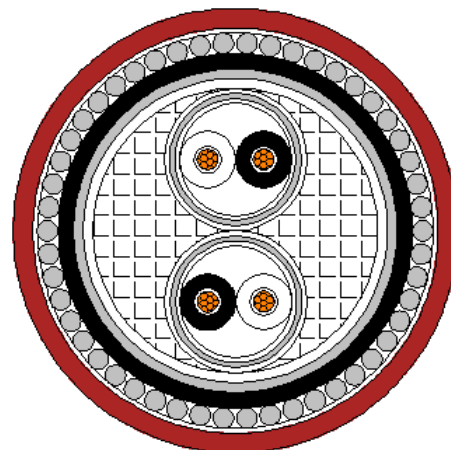
**3.6 Collective screen**

Aluminum-polyester tape shield applied on assembly core, the metallic side down in electrical contact with a drain wire (0.5mm<sup>2</sup>)

**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  
Uo/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 amour**

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 <sub>0</sub> /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  
U<sub>0</sub>/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/MGT/XLPE/IS/OS/LSZH/SWA/LSZH**

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 90°C (50Hz)	Test Voltage		Insulation resistance	Max. mutual capacitance	Max. Capacitance between conductor and shield	Max. L/R ratio	Current Rating		Max. allowable Pulling tension	Insulation Core Color	Outer Sheath Color
			Nom. Thick.	Min. Thick.									Nom. Thick.	Nom. Dia.					Nom. Thick.	1 min			
			mm <sup>2</sup>	mm	mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	Ω/km	V	V	MΩ·100m	pF/m	pF/m	μH/Ω	A	A	KN
1	02IP-S10-BSHNW	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	White, Black	Red
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