1 Application

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

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(single):
Pair: White, Black
Triple: White, Black, Red

3.4 Twisted core

To form a pair/ triple, the insulated conductors twisted together
Lay length for pair / triple:
$\leqslant$70mm for 1mm^2; $\leqslant$100mm for 1.5mm^2; $\leqslant$150mm for 2.5mm^2;

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^2)

3.7 Inner sheath

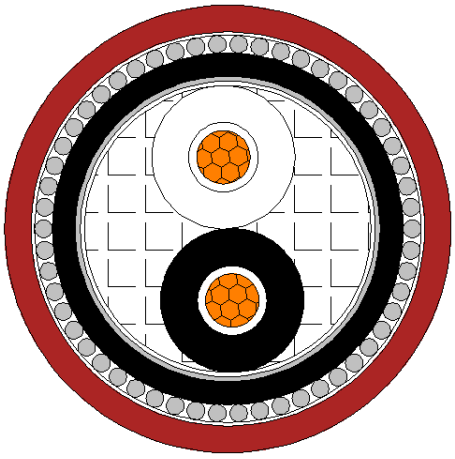
Extruded LSZH compound comply with EN 50288-7
Color: Black

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)



Cable Drawing for Reference

4 Cable marking-Inkjet

For example:

EAC YANGER® IEC 60331 CU/MGT/XLPE/OS/LSZH/SWA/LSZH 1Pair×1.5 SQMM 300/500V нг（A）- FRHF Project Cable Code -52° C~+40° C 2020 ****M

Note: "****M" meter marking by inkjet with increased sequence with numbering
"нг（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, ℃	-52~+80
Min. installation temperature without preheating, ℃	-30
Max. conductor temperature in service, ℃	90
Max. permissible short-circuit temperature,5 sec, ℃	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

CABLE TYPE: 300/500V CU/MGT/XLPE/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					in air at 30°C	in ducts at 20°C			
		mm^2	mm	mm	mm	mm	mm	mm	mm	kg/km	Ω/km	Ω/km	V	MΩ·100m	pF/m	pF/m	μH/Ω	A	A	KN		
1	01IP-S10-ISHNW	1x2x1	0.6	0.44	0.9	8.3	0.9	1.3	13.3	325	18.1	23.2	2000	10000	150	300	25	14	12	0.1	White, Black	Red
2	01IP-S15-ISHNW	1x2x1.5	0.6	0.44	0.9	8.8	0.9	1.3	13.8	349	12.1	15.5	2000	10000	150	300	40	21	18	0.2	White, Black	Red
3	01IP-S25-ISHNW	1x2x2.5	0.7	0.53	0.9	10.1	0.9	1.4	15.3	425	7.41	9.48	2000	10000	150	300	60	34	29	0.3	White, Black	Red
4	01IT-S10-ISHNW	1x3x1	0.6	0.44	0.9	8.8	0.9	1.3	13.8	351	18.1	23.2	2000	10000	150	300	25	14	12	0.2	White, Black, Red	Red
5	01IT-S15-ISHNW	1x3x1.5	0.6	0.44	0.9	9.4	0.9	1.4	14.6	393	12.1	15.5	2000	10000	150	300	40	21	18	0.3	White, Black, Red	Red
6	01IT-S25-ISHNW	1x3x2.5	0.7	0.53	1.0	10.9	0.9	1.4	16.1	479	7.41	9.48	2000	10000	150	300	60	34	29	0.5	White, Black, Red	Red
7	01IP-S10-ISHIW	1x2x1	0.6	0.44	0.9	8.3	0.9	1.3	13.3	325	18.1	23.2	2000	10000	150	300	25	14	12	0.1	White, Black	Red with a blue strip