



Caledonian

EN 50288-7 Instrumentation Cables



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PE Insulated, LSZH Sheathed Instrumentation Cables

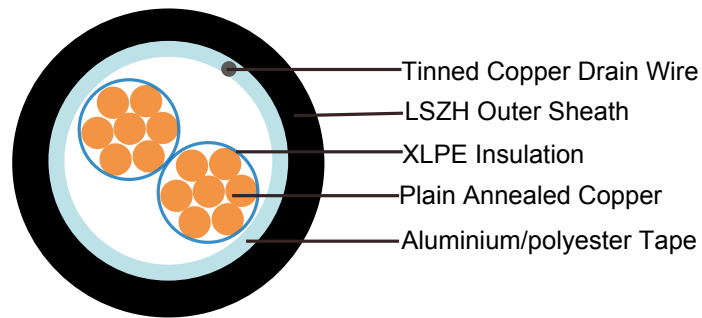
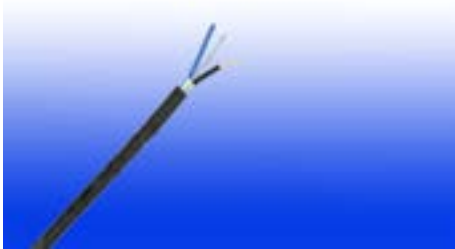
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XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multicore)

RE-2X(St)H 90°C / 500V



APPLICATION

The LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)***	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance**	ICEA S-73-532

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.



VOLTAGE RATING

500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black numbered

Outer Sheath: Black, blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5	2.5
Insulation thickness (nominal)	mm	0.55	0.55	0.55	0.6	0.6	0.7
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3	7.4
Insulation resistance (20°C)	MΩ.km(Min.)	5000					
Mutual Capacitance (1 kHz)	pF/m(Max.)	250					
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500					
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40	60
Operating voltage	V	500					
Test Voltage U _{rms}	Core to Core	2000					
	Core to Screen	2000					

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)H				
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multicore					
RE-2X(St)H 2C0.5	2x1x0.5	0.55	0.9	6.2	47

Caledonian Cable Code	RE-2X(St)H				
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 3C0.5	3x1x0.5	0.55	0.9	6.5	50
RE-2X(St)H 4C0.5	4x1x0.5	0.55	0.9	7.0	60
RE-2X(St)H 5C0.5	5x1x0.5	0.55	0.9	7.6	71
RE-2X(St)H 8C0.5	8x1x0.5	0.55	1.0	9.1	95
RE-2X(St)H 10C0.5	10x1x0.5	0.55	1.0	10.4	127
RE-2X(St)H 12C0.5	12x1x0.5	0.55	1.0	10.7	151
RE-2X(St)H 14C0.5	14x1x0.5	0.55	1.0	11.3	162
RE-2X(St)H 16C0.5	16x1x0.5	0.55	1.1	11.8	180
RE-2X(St)H 20C0.5	20x1x0.5	0.55	1.1	13.3	222
RE-2X(St)H 24C0.5	24x1x0.5	0.55	1.1	14.7	274
RE-2X(St)H 27C0.5	27x1x0.5	0.55	1.2	15.0	282
RE-2X(St)H 30C0.5	30x1x0.5	0.55	1.2	15.7	318
RE-2X(St)H 37C0.5	37x1x0.5	0.55	1.2	16.9	372
RE-2X(St)H 40C0.5	40x1x0.5	0.55	1.2	17.6	372
0.75mm ² , Multicore					
RE-2X(St)H 2C0.75	2x1x0.75	0.55	0.9	6.5	51
RE-2X(St)H 3C0.75	3x1x0.75	0.55	0.9	6.9	62
RE-2X(St)H 4C0.75	4x1x0.75	0.55	0.9	7.4	74
RE-2X(St)H 5C0.75	5x1x0.75	0.55	0.9	8.1	96
RE-2X(St)H 8C0.75	8x1x0.75	0.55	1.0	9.7	126
RE-2X(St)H 10C0.75	10x1x0.75	0.55	1.0	11.1	156
RE-2X(St)H 12C0.75	12x1x0.75	0.55	1.0	11.5	183
RE-2X(St)H 14C0.75	14x1x0.75	0.55	1.1	12.2	200
RE-2X(St)H 16C0.75	16x1x0.75	0.55	1.1	12.9	224
RE-2X(St)H 20C0.75	20x1x0.75	0.55	1.1	14.3	284
RE-2X(St)H 24C0.75	24x1x0.75	0.55	1.2	16.0	324
RE-2X(St)H 27C0.75	27x1x0.75	0.55	1.2	16.3	363
RE-2X(St)H 30C0.75	30x1x0.75	0.55	1.2	16.9	396



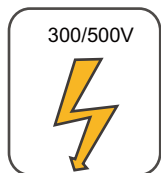
Caledonian Cable Code	RE-2X(St)H				
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 37C0.75	37x1x0.75	0.55	1.2	18.2	472
RE-2X(St)H 40C0.75	40x1x0.75	0.55	1.3	19.1	514
1.0mm ² , Multicore					
RE-2X(St)H 2C1.0	2x1x1.0	0.55	0.9	6.9	61
RE-2X(St)H 3C1.0	3x1x1.0	0.55	0.9	7.3	70
RE-2X(St)H 4C1.0	4x1x1.0	0.55	0.9	7.9	85
RE-2X(St)H 5C1.0	5x1x1.0	0.55	0.9	8.6	109
RE-2X(St)H 8C1.0	8x1x1.0	0.55	1.0	10.3	157
RE-2X(St)H 10C1.0	10x1x1.0	0.55	1.0	11.9	193
RE-2X(St)H 12C1.0	12x1x1.0	0.55	1.0	12.2	214
RE-2X(St)H 14C1.0	14x1x1.0	0.55	1.1	13.0	243
RE-2X(St)H 16C1.0	16x1x1.0	0.55	1.1	13.7	280
RE-2X(St)H 20C1.0	20x1x1.0	0.55	1.1	15.2	336
RE-2X(St)H 24C1.0	24x1x1.0	0.55	1.2	17.0	414
RE-2X(St)H 27C1.0	27x1x1.0	0.55	1.2	17.4	443
RE-2X(St)H 30C1.0	30x1x1.0	0.55	1.2	18.0	484
RE-2X(St)H 37C1.0	37x1x1.0	0.55	1.2	19.6	590
RE-2X(St)H 40C1.0	40x1x1.0	0.55	1.3	20.4	631
1.3mm ² , Multicore					
RE-2X(St)H 2C1.3	2x1x1.3	0.6	0.9	7.4	69
RE-2X(St)H 3C1.3	3x1x1.3	0.6	0.9	7.9	83
RE-2X(St)H 4C1.3	4x1x1.3	0.6	0.9	8.5	105
RE-2X(St)H 5C1.3	5x1x1.3	0.6	1.0	9.5	135
RE-2X(St)H 8C1.3	8x1x1.3	0.6	1.0	11.2	186
RE-2X(St)H 10C1.3	10x1x1.3	0.6	1.1	13.2	228
RE-2X(St)H 12C1.3	12x1x1.3	0.6	1.1	13.6	269
RE-2X(St)H 14C1.3	14x1x1.3	0.6	1.1	14.3	305
RE-2X(St)H 16C1.3	16x1x1.3	0.6	1.1	15.0	351

Caledonian Cable Code	RE-2X(St)H				
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 20C1.3	20x1x1.3	0.6	1.2	16.9	423
RE-2X(St)H 24C1.3	24x1x1.3	0.6	1.2	18.7	507
RE-2X(St)H 27C1.3	27x1x1.3	0.6	1.3	19.3	558
RE-2X(St)H 30C1.3	30x1x1.3	0.6	1.3	20.0	611
RE-2X(St)H 37C1.3	37x1x1.3	0.6	1.3	21.6	743
RE-2X(St)H 40C1.3	40x1x1.3	0.6	1.4	22.7	796
1.5mm ² , Multicore					
RE-2X(St)H 2C1.5	2x1x1.5	0.6	0.9	7.7	78
RE-2X(St)H 3C1.5	3x1x1.5	0.6	0.9	8.1	98
RE-2X(St)H 4C1.5	4x1x1.5	0.6	0.9	8.8	120
RE-2X(St)H 5C1.5	5x1x1.5	0.6	1.0	9.8	153
RE-2X(St)H 8C1.5	8x1x1.5	0.6	1.0	11.6	218
RE-2X(St)H 10C1.5	10x1x1.5	0.6	1.1	13.7	268
RE-2X(St)H 12C1.5	12x1x1.5	0.6	1.1	14.1	315
RE-2X(St)H 14C1.5	14x1x1.5	0.6	1.1	14.8	341
RE-2X(St)H 16C1.5	16x1x1.5	0.6	1.1	15.6	392
RE-2X(St)H 20C1.5	20x1x1.5	0.6	1.2	17.6	484
RE-2X(St)H 24C1.5	24x1x1.5	0.6	1.3	19.6	579
RE-2X(St)H 27C1.5	27x1x1.5	0.6	1.3	20.1	626
RE-2X(St)H 30C1.5	30x1x1.5	0.6	1.3	20.8	685
RE-2X(St)H 37C1.5	37x1x1.5	0.6	1.4	22.6	834
RE-2X(St)H 40C1.5	40x1x1.5	0.6	1.4	23.6	898
2.5mm ² , Multicore					
RE-2X(St)H 2C2.5	2x1x2.5	0.7	0.9	8.9	111
RE-2X(St)H 3C2.5	3x1x2.5	0.7	1.0	9.7	132
RE-2X(St)H 4C2.5	4x1x2.5	0.7	1.0	10.5	169
RE-2X(St)H 5C2.5	5x1x2.5	0.7	1.0	11.9	209
RE-2X(St)H 8C2.5	8x1x2.5	0.7	1.1	13.9	321



Caledonian Cable Code	RE-2X(St)H				
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 10C2.5	10x1x2.5	0.7	1.2	16.3	386
RE-2X(St)H 12C2.5	12x1x2.5	0.7	1.2	16.9	447
RE-2X(St)H 14C2.5	14x1x2.5	0.7	1.2	17.7	509
RE-2X(St)H 16C2.5	16x1x2.5	0.7	1.3	18.9	585
RE-2X(St)H 20C2.5	20x1x2.5	0.7	1.3	21.1	712
RE-2X(St)H 24C2.5	24x1x2.5	0.7	1.4	23.6	855
RE-2X(St)H 27C2.5	27x1x2.5	0.7	1.4	24.1	956
RE-2X(St)H 30C2.5	30x1x2.5	0.7	1.5	25.2	1049
RE-2X(St)H 37C2.5	37x1x2.5	0.7	1.5	27.2	1277
RE-2X(St)H 40C2.5	40x1x2.5	0.7	1.6	28.5	1370

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



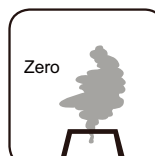
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

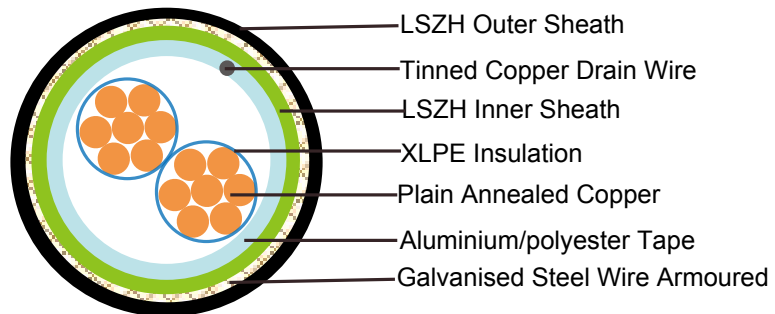


Zero

Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Multicore)

RE-2X(St)HSAWAH 90°C / 500V



APPLICATION

The LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)***	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance**	ICEA S-73-532

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.



VOLTAGE RATING

500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH compound

Armouring: Galvanised steel wire

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black numbered

Outer Sheath: Black, blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5	2.5
Insulation thickness (nominal)	mm	0.55	0.55	0.55	0.6	0.6	0.7
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3	7.4
Insulation resistance (20°C)	MΩ.km(Min.)	5000					
Mutual Capacitance (1 kHz)	pF/m(Max.)	250					
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500					
Inductance	mH/km(Max.)	1					
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40	40
Operating voltage	V	500					
Test Voltage U _{rms}	Core to Core	V					
	Core to Screen	V					

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Core x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multicore								
RE-2X(St)HSAWAH 2C0.5	2x1x0.5	0.55	0.9	6.2	0.9	1.3	10.6	210
RE-2X(St)HSAWAH 3C0.5	3x1x0.5	0.55	0.9	6.5	0.9	1.3	10.9	230
RE-2X(St)HSAWAH 4C0.5	4x1x0.5	0.55	0.9	7.0	0.9	1.3	11.4	253
RE-2X(St)HSAWAH 5C0.5	5x1x0.5	0.55	0.9	7.6	0.9	1.3	12.0	283
RE-2X(St)HSAWAH 8C0.5	8x1x0.5	0.55	1.0	9.1	0.9	1.4	13.7	344
RE-2X(St)HSAWAH 10C0.5	10x1x0.5	0.55	1.0	10.4	0.9	1.4	15.0	399
RE-2X(St)HSAWAH 12C0.5	12x1x0.5	0.55	1.0	10.7	0.9	1.4	15.3	442
RE-2X(St)HSAWAH 14C0.5	14x1x0.5	0.55	1.0	11.3	0.9	1.4	15.9	474
RE-2X(St)HSAWAH 16C0.5	16x1x0.5	0.55	1.1	11.8	0.9	1.4	16.4	505
RE-2X(St)HSAWAH 20C0.5	20x1x0.5	0.55	1.1	13.3	0.9	1.5	18.1	569
RE-2X(St)HSAWAH 24C0.5	24x1x0.5	0.55	1.1	14.7	0.9	1.5	19.5	642
RE-2X(St)HSAWAH 27C0.5	27x1x0.5	0.55	1.2	15.0	0.9	1.5	19.8	808
RE-2X(St)HSAWAH 30C0.5	30x1x0.5	0.55	1.2	15.7	0.9	1.5	20.5	848
RE-2X(St)HSAWAH 37C0.5	37x1x0.5	0.55	1.2	16.9	0.9	1.6	21.9	963
RE-2X(St)HSAWAH 40C0.5	40x1x0.5	0.55	1.2	17.6	1.25	1.6	23.3	1014
0.75mm ² , Multicore								
RE-2X(St)HSAWAH 2C0.75	2x1x0.75	0.55	0.9	6.5	0.9	1.3	10.9	230
RE-2X(St)HSAWAH 3C0.75	3x1x0.75	0.55	0.9	6.9	0.9	1.3	11.3	247
RE-2X(St)HSAWAH 4C0.75	4x1x0.75	0.55	0.9	7.4	0.9	1.3	11.8	278
RE-2X(St)HSAWAH 5C0.75	5x1x0.75	0.55	0.9	8.1	0.9	1.4	12.7	322
RE-2X(St)HSAWAH 8C0.75	8x1x0.75	0.55	1.0	9.7	0.9	1.4	14.3	383
RE-2X(St)HSAWAH 10C0.75	10x1x0.75	0.55	1.0	11.1	0.9	1.4	15.7	461
RE-2X(St)HSAWAH 12C0.75	12x1x0.75	0.55	1.0	11.5	0.9	1.4	16.1	477
RE-2X(St)HSAWAH 14C0.75	14x1x0.75	0.55	1.1	12.2	0.9	1.5	17.0	527
RE-2X(St)HSAWAH 16C0.75	16x1x0.75	0.55	1.1	12.9	0.9	1.5	17.7	572
RE-2X(St)HSAWAH 20C0.75	20x1x0.75	0.55	1.1	14.3	0.9	1.5	19.1	669
RE-2X(St)HSAWAH 24C0.75	24x1x0.75	0.55	1.2	16.0	0.9	1.5	20.8	877
RE-2X(St)HSAWAH 27C0.75	27x1x0.75	0.55	1.2	16.3	0.9	1.6	21.3	929



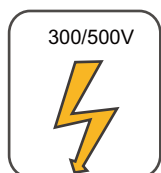
Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Core x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 30C0.75	30x1x0.75	0.55	1.2	16.9	0.9	1.6	21.9	986
RE-2X(St)HSAWAH 37C0.75	37x1x0.75	0.55	1.2	18.2	1.25	1.6	23.9	1102
RE-2X(St)HSAWAH 40C0.75	40x1x0.75	0.55	1.3	19.1	1.25	1.6	24.8	1181
1.0mm ² , Multicore								
RE-2X(St)HSAWAH 2C1.0	2x1x1.0	0.55	0.9	6.9	0.9	1.3	11.3	247
RE-2X(St)HSAWAH 3C1.0	3x1x1.0	0.55	0.9	7.3	0.9	1.3	11.7	270
RE-2X(St)HSAWAH 4C1.0	4x1x1.0	0.55	0.9	7.9	0.9	1.4	12.5	299
RE-2X(St)HSAWAH 5C1.0	5x1x1.0	0.55	0.9	8.6	0.9	1.4	13.2	342
RE-2X(St)HSAWAH 8C1.0	8x1x1.0	0.55	1.0	10.3	0.9	1.4	14.9	424
RE-2X(St)HSAWAH 10C1.0	10x1x1.0	0.55	1.0	11.9	0.9	1.4	16.5	514
RE-2X(St)HSAWAH 12C1.0	12x1x1.0	0.55	1.0	12.2	0.9	1.5	17.0	548
RE-2X(St)HSAWAH 14C1.0	14x1x1.0	0.55	1.1	13.0	0.9	1.5	17.8	590
RE-2X(St)HSAWAH 16C1.0	16x1x1.0	0.55	1.1	13.7	0.9	1.5	18.5	649
RE-2X(St)HSAWAH 20C1.0	20x1x1.0	0.55	1.1	15.2	0.9	1.5	20.0	864
RE-2X(St)HSAWAH 24C1.0	24x1x1.0	0.55	1.2	17.0	0.9	1.6	22.0	1005
RE-2X(St)HSAWAH 27C1.0	27x1x1.0	0.55	1.2	17.4	1.25	1.6	23.1	1058
RE-2X(St)HSAWAH 30C1.0	30x1x1.0	0.55	1.2	18.0	1.25	1.6	23.7	1113
RE-2X(St)HSAWAH 37C1.0	37x1x1.0	0.55	1.2	19.6	1.25	1.6	25.3	1271
RE-2X(St)HSAWAH 40C1.0	40x1x1.0	0.55	1.3	20.4	1.25	1.7	26.3	1351
1.3mm ² , Multicore								
RE-2X(St)HSAWAH 2C1.3	2x1x1.3	0.6	0.9	7.4	0.9	1.3	11.8	275
RE-2X(St)HSAWAH 3C1.3	3x1x1.3	0.6	0.9	7.9	0.9	1.3	12.3	??
RE-2X(St)HSAWAH 4C1.3	4x1x1.3	0.6	0.9	8.5	0.9	1.4	13.1	340
RE-2X(St)HSAWAH 5C1.3	5x1x1.3	0.6	1.0	9.5	0.9	1.4	14.1	383
RE-2X(St)HSAWAH 8C1.3	8x1x1.3	0.6	1.0	11.2	0.9	1.4	15.8	483
RE-2X(St)HSAWAH 10C1.3	10x1x1.3	0.6	1.1	13.2	0.9	1.5	18.0	578
RE-2X(St)HSAWAH 12C1.3	12x1x1.3	0.6	1.1	13.6	0.9	1.5	18.4	633
RE-2X(St)HSAWAH 14C1.3	14x1x1.3	0.6	1.1	14.3	0.9	1.5	19.1	698
RE-2X(St)HSAWAH 16C1.3	16x1x1.3	0.6	1.1	15.0	0.9	1.5	19.8	870
RE-2X(St)HSAWAH 20C1.3	20x1x1.3	0.6	1.2	16.9	0.9	1.6	21.9	1014
RE-2X(St)HSAWAH 24C1.3	24x1x1.3	0.6	1.2	18.7	1.25	1.6	24.4	1163

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Core x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 27C1.3	27x1x1.3	0.6	1.3	19.3	1.25	1.6	25.0	1227
RE-2X(St)HSAWAH 30C1.3	30x1x1.3	0.6	1.3	20.0	1.25	1.6	25.7	1305
RE-2X(St)HSAWAH 37C1.3	37x1x1.3	0.6	1.3	21.6	1.25	1.7	27.5	1504
RE-2X(St)HSAWAH 40C1.3	40x1x1.3	0.6	1.4	22.7	1.25	1.7	28.6	1584
1.5mm ² , Multicore								
RE-2X(St)HSAWAH 2C1.5	2x1x1.5	0.6	0.9	7.7	0.9	1.3	12.1	279
RE-2X(St)HSAWAH 3C1.5	3x1x1.5	0.6	0.9	8.1	0.9	1.4	12.7	322
RE-2X(St)HSAWAH 4C1.5	4x1x1.5	0.6	0.9	8.8	0.9	1.4	13.4	347
RE-2X(St)HSAWAH 5C1.5	5x1x1.5	0.6	1.0	9.8	0.9	1.4	14.4	392
RE-2X(St)HSAWAH 8C1.5	8x1x1.5	0.6	1.0	11.6	0.9	1.4	16.2	518
RE-2X(St)HSAWAH 10C1.5	10x1x1.5	0.6	1.1	13.7	0.9	1.5	18.5	614
RE-2X(St)HSAWAH 12C1.5	12x1x1.5	0.6	1.1	14.1	0.9	1.5	18.9	670
RE-2X(St)HSAWAH 14C1.5	14x1x1.5	0.6	1.1	14.8	0.9	1.5	19.6	742
RE-2X(St)HSAWAH 16C1.5	16x1x1.5	0.6	1.1	15.6	0.9	1.5	20.4	925
RE-2X(St)HSAWAH 20C1.5	20x1x1.5	0.6	1.2	17.6	1.25	1.6	23.3	1062
RE-2X(St)HSAWAH 24C1.5	24x1x1.5	0.6	1.3	19.6	1.25	1.6	25.3	1218
RE-2X(St)HSAWAH 27C1.5	27x1x1.5	0.6	1.3	20.1	1.25	1.6	25.8	1289
RE-2X(St)HSAWAH 30C1.5	30x1x1.5	0.6	1.3	20.8	1.25	1.7	26.7	1418
RE-2X(St)HSAWAH 37C1.5	37x1x1.5	0.6	1.4	22.6	1.25	1.7	28.5	1586
RE-2X(St)HSAWAH 40C1.5	40x1x1.5	0.6	1.4	23.6	1.25	1.7	29.5	1687
2.5mm ² , Multicore								
RE-2X(St)HSAWAH 2C2.5	2x1x2.5	0.7	0.9	8.9	0.9	1.4	13.5	364
RE-2X(St)HSAWAH 3C2.5	3x1x2.5	0.7	1.0	9.7	0.9	1.4	14.3	389
RE-2X(St)HSAWAH 4C2.5	4x1x2.5	0.7	1.0	10.5	0.9	1.4	15.1	430
RE-2X(St)HSAWAH 5C2.5	5x1x2.5	0.7	1.0	11.9	0.9	1.4	16.5	547
RE-2X(St)HSAWAH 8C2.5	8x1x2.5	0.7	1.1	13.9	0.9	1.5	18.7	684
RE-2X(St)HSAWAH 10C2.5	10x1x2.5	0.7	1.2	16.3	0.9	1.6	21.3	952
RE-2X(St)HSAWAH 12C2.5	12x1x2.5	0.7	1.2	16.9	0.9	1.6	21.9	1012
RE-2X(St)HSAWAH 14C2.5	14x1x2.5	0.7	1.2	17.7	1.25	1.6	23.4	1126
RE-2X(St)HSAWAH 16C2.5	16x1x2.5	0.7	1.3	18.9	1.25	1.6	24.6	1252
RE-2X(St)HSAWAH 20C2.5	20x1x2.5	0.7	1.3	21.1	1.25	1.7	27.0	1456



Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Core x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 24C2.5	24x1x2.5	0.7	1.4	23.6	1.25	1.7	29.5	1644
RE-2X(St)HSAWAH 27C2.5	27x1x2.5	0.7	1.4	24.1	1.25	1.8	30.2	1811
RE-2X(St)HSAWAH 30C2.5	30x1x2.5	0.7	1.5	25.2	1.25	1.8	31.3	2154
RE-2X(St)HSAWAH 37C2.5	37x1x2.5	0.7	1.5	27.2	1.25	1.8	33.3	2477
RE-2X(St)HSAWAH 40C2.5	40x1x2.5	0.7	1.6	28.5	1.25	1.9	34.8	2614

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



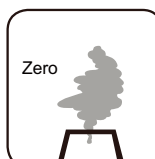
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

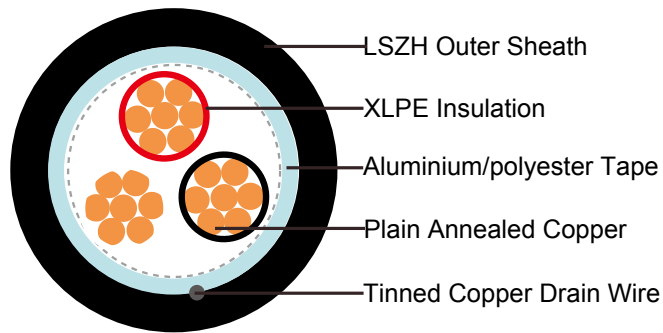


Zero

Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Single Triple)

RE-2X(St)H 90°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*



No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Triple: Three conductors twisted to form a triple

Lay-up: Triples laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitriples.

Outer Sheath: Black or Blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000	5000	5000	5000	5000
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km(Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage	V	300				

Test Voltage U_{rms}	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)YH				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 1T0.5	1x3x0.50	0.35	0.8	5.4	45
RE-2X(St)H 1T0.75	1x3x0.75	0.38	0.9	6.1	59
RE-2X(St)H 1T1.0	1x3x1.0	0.4	0.9	6.6	66
RE-2X(St)H 1T1.3	1x3x1.3	0.45	0.9	7.2	86
RE-2X(St)H 1T1.5	1x3x1.5	0.45	0.9	7.5	95

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



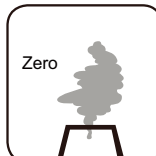
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

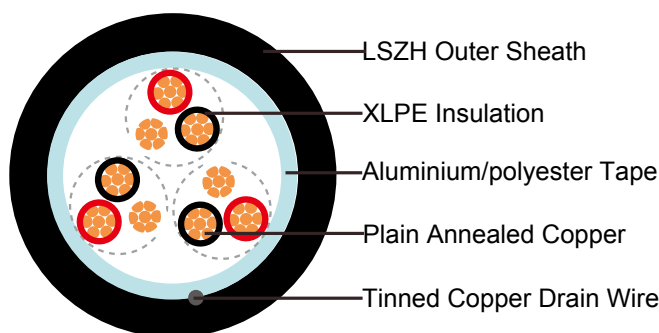


Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multitriples)

RE-2X(St)H 90°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Triple: Three conductors twisted to form a triple

Lay-up: Triples laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				



Inductance		mH/km(Max.)	1				
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Operating voltage		V	300				
Test Voltage U_{rms}	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

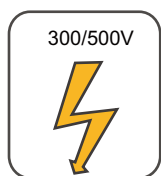
Caledonian Cable Code	RE-2X(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multi-stripe					
RE-2X(St)H 2T0.5	2x3x0.50	0.35	0.9	8.4	91
RE-2X(St)H 4T0.5	4x3x0.50	0.35	1.0	9.8	123
RE-2X(St)H 5T0.5	5x3x0.50	0.35	1.0	10.8	155
RE-2X(St)H 6T0.5	6x3x0.50	0.35	1.0	12.1	185
RE-2X(St)H 8T0.5	8x3x0.50	0.35	1.1	13.1	221
RE-2X(St)H 10T0.5	10x3x0.50	0.35	1.1	14.7	275
RE-2X(St)H 12T0.5	12x3x0.50	0.35	1.1	15.2	316
RE-2X(St)H 16T0.5	16x3x0.50	0.35	1.2	17.4	414
RE-2X(St)H 20T0.5	20x3x0.50	0.35	1.2	19.1	508
RE-2X(St)H 24T0.5	24x3x0.50	0.35	1.3	20.9	594
0.75mm ² , Multi-stripe					
RE-2X(St)H 2T0.75	2x3x0.75	0.38	0.9	9.3	114
RE-2X(St)H 4T0.75	4x3x0.75	0.38	1.0	10.9	163
RE-2X(St)H 5T0.75	5x3x0.75	0.38	1.0	12.0	199
RE-2X(St)H 6T0.75	6x3x0.75	0.38	1.1	13.7	245
RE-2X(St)H 8T0.75	8x3x0.75	0.38	1.1	14.7	296
RE-2X(St)H 10T0.75	10x3x0.75	0.38	1.2	16.7	366
RE-2X(St)H 12T0.75	12x3x0.75	0.38	1.2	17.3	423
RE-2X(St)H 16T0.75	16x3x0.75	0.38	1.3	19.7	555
RE-2X(St)H 20T0.75	20x3x0.75	0.38	1.3	21.7	681
RE-2X(St)H 24T0.75	24x3x0.75	0.38	1.4	23.7	802

Caledonian Cable Code	RE-2X(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
1.0mm ² , Multi-stripe					
RE-2X(St)H 2T1.0	2x3x1.0	0.4	1.0	10.4	135
RE-2X(St)H 4T1.0	4x3x1.0	0.4	1.0	11.9	202
RE-2X(St)H 5T1.0	5x3x1.0	0.4	1.0	13.2	251
RE-2X(St)H 6T1.0	6x3x1.0	0.4	1.1	15.0	303
RE-2X(St)H 8T1.0	8x3x1.0	0.4	1.1	16.1	379
RE-2X(St)H 10T1.0	10x3x1.0	0.4	1.2	18.4	461
RE-2X(St)H 12T1.0	12x3x1.0	0.4	1.2	19.0	544
RE-2X(St)H 16T1.0	16x3x1.0	0.4	1.3	21.7	717
RE-2X(St)H 20T1.0	20x3x1.0	0.4	1.4	24.1	880
RE-2X(St)H 24T1.0	24x3x1.0	0.4	1.4	26.1	1048
1.3mm ² , Multi-stripe					
RE-2X(St)H 2T1.3	2x3x1.3	0.45	1.0	11.5	175
RE-2X(St)H 4T1.3	4x3x1.3	0.45	1.1	13.4	258
RE-2X(St)H 5T1.3	5x3x1.3	0.45	1.1	14.8	318
RE-2X(St)H 6T1.3	6x3x1.3	0.45	1.2	16.9	387
RE-2X(St)H 8T1.3	8x3x1.3	0.45	1.2	18.1	474
RE-2X(St)H 10T1.3	10x3x1.3	0.45	1.3	20.7	589
RE-2X(St)H 12T1.3	12x3x1.3	0.45	1.3	21.4	695
RE-2X(St)H 16T1.3	16x3x1.3	0.45	1.4	24.4	918
RE-2X(St)H 20T1.3	20x3x1.3	0.45	1.5	27.1	1124
RE-2X(St)H 24T1.3	24x3x1.3	0.45	1.6	29.6	1336
1.5mm ² , Multi-stripe					
RE-2X(St)H 2T1.5	2x3x1.5	0.45	1.0	11.9	191
RE-2X(St)H 4T1.5	4x3x1.5	0.45	1.1	14.0	287
RE-2X(St)H 5T1.5	5x3x1.5	0.45	1.1	15.4	355
RE-2X(St)H 6T1.5	6x3x1.5	0.45	1.2	17.6	432
RE-2X(St)H 8T1.5	8x3x1.5	0.45	1.3	19.1	540
RE-2X(St)H 10T1.5	10x3x1.5	0.45	1.3	21.6	672
RE-2X(St)H 12T1.5	12x3x1.5	0.45	1.4	22.5	779



Caledonian Cable Code	RE-2X(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 16T1.5	16x3x1.5	0.45	1.5	25.7	1031
RE-2X(St)H 20T1.5	20x3x1.5	0.45	1.6	28.6	1265
RE-2X(St)H 24T1.5	24x3x1.5	0.45	1.7	31.1	1508

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



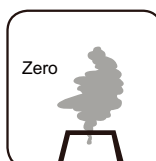
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

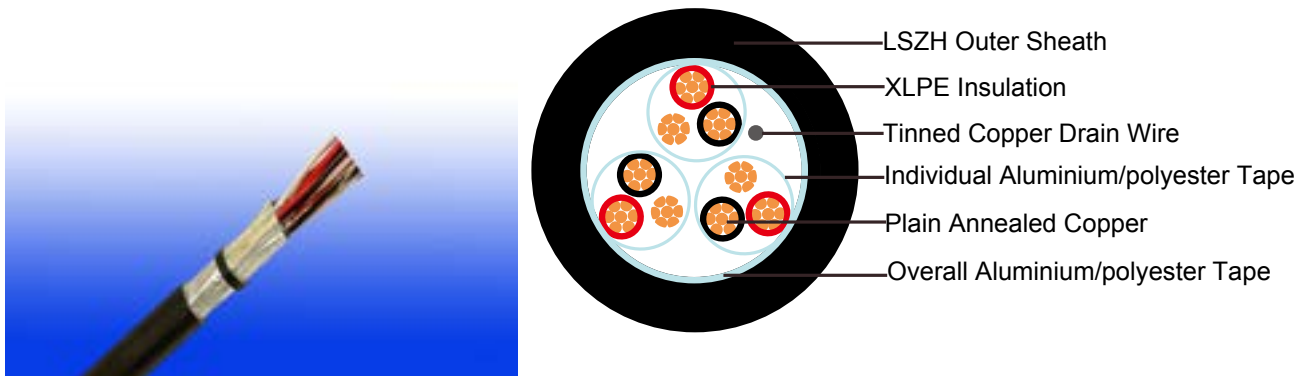


Zero

Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed, Individual & Overall Screened Instrumentation Cables (Multitriples)

RE-2X(St)H-TiMF 90°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*



No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Triple: Three conductors twisted to form a triple

****TiMF Construction:** Polyester tape above the triple, AL-PES tape over solid tinned copper drain wire, 0,60 mm

Lay-up: TiMF laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				

Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km(Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multi-stripe					
RE-2X(St)H-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	104
RE-2X(St)H-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	151
RE-2X(St)H-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	183
RE-2X(St)H-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	225
RE-2X(St)H-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	283
RE-2X(St)H-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	348
RE-2X(St)H-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	385
RE-2X(St)H-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	504
RE-2X(St)H-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	616
RE-2X(St)H-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	749
0.75mm ² , Multi-stripe					
RE-2X(St)H-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	121
RE-2X(St)H-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	186
RE-2X(St)H-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	242
RE-2X(St)H-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	280
RE-2X(St)H-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	362
RE-2X(St)H-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	446
RE-2X(St)H-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	495
RE-2X(St)H-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	652
RE-2X(St)H-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	833



Caledonian Cable Code	RE-2X(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2X(St)H-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	966
1.0mm ² , Multi-stripe					
RE-2X(St)H-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	154
RE-2X(St)H-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	227
RE-2X(St)H-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	286
RE-2X(St)H-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	348
RE-2X(St)H-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	443
RE-2X(St)H-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	545
RE-2X(St)H-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	621
RE-2X(St)H-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	836
RE-2X(St)H-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1001
RE-2X(St)H-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1207
1.3mm ² , Multi-stripe					
RE-2X(St)H-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	185
RE-2X(St)H-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	283
RE-2X(St)H-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	357
RE-2X(St)H-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	425
RE-2X(St)H-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	553
RE-2X(St)H-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	682
RE-2X(St)H-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	767
RE-2X(St)H-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1022
RE-2X(St)H-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1252
RE-2X(St)H-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1511
1.5mm ² , Multi-stripe					
RE-2X(St)H-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	207
RE-2X(St)H-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	314
RE-2X(St)H-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	396
RE-2X(St)H-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	482
RE-2X(St)H-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	617
RE-2X(St)H-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	765

Caledonian Cable Code	RE-2X(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2X(St)H-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	867
RE-2X(St)H-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1140
RE-2X(St)H-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1421
RE-2X(St)H-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1691

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



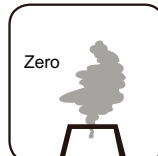
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

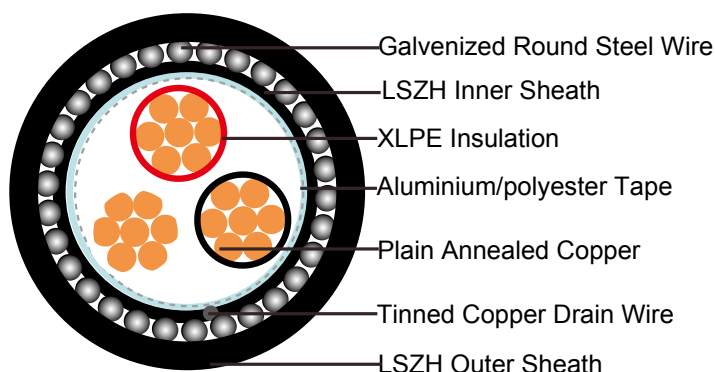


Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Single Triple)

RE-2X(St)HSAH 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petroChemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*

No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				



Capacitance unbalance(1 kHz)		pF/500 m (Max.)	500				
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Inductance		mH/km(Max.)	1				
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

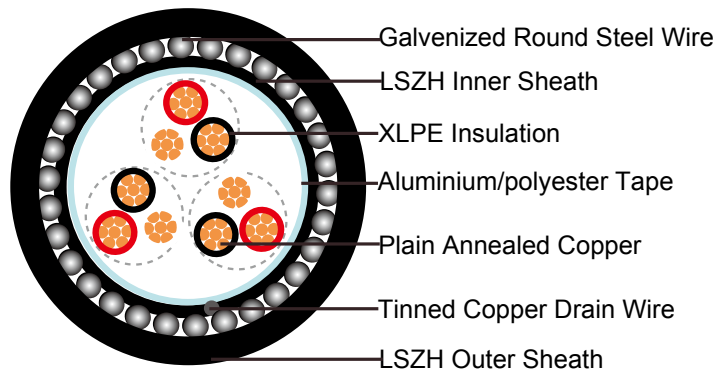
Caledonian Cable Code	RE-2X(St)HSAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAH 1T0.5	1x3x0.50	0.35	0.8	5.4	0.9	1.3	9.8	200
RE-2X(St)HSAH 1T0.75	1x3x0.75	0.38	0.9	6.1	0.9	1.3	10.5	220
RE-2X(St)HSAH 1T1.0	1x3x1.0	0.4	0.9	6.6	0.9	1.3	11.0	244
RE-2X(St)HSAH 1T1.3	1x3x1.3	0.45	0.9	7.2	0.9	1.3	11.6	268
RE-2X(St)HSAH 1T1.5	1x3x1.5	0.45	0.9	7.5	0.9	1.3	11.9	293

Note : Other conductor sizes & core configurations are available upon request.

 300/500V Rated Voltage	 EN 50288-7 Standard	 Flame Retardancy NF C32-070-2.1(C2) IEC60332-1-2/EN50265-2-1	 Reduced Fire Propagation NF C32-070-2.2(C1) IEC60332-3-24 EN50266-2-4
 Low Toxicity NES 02-713/NF C 20-454	 Low Corrosivity IEC60754-2 EN50267-2-2/3 NF C 32-074	 Low Smoke Emission IEC 61034-1&2 EN 50268-1&2/NF C32-073	 Zero Halogen Free IEC60754-1 EN50267-2-1

XLPE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Multitriples)

RE-2XSt)HSAH 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*



No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitriples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				

Capacitance unbalance(1 kHz)		pF/500 m (Max.)	500				
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Inductance		mH/km(Max.)	1				
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multi-stripe								
RE-2X(St)HSAWAH 2T0.5	2x3x0.5	0.35	0.9	8.4	0.9	1.4	13.0	326
RE-2X(St)HSAWAH 4T0.5	4x3x0.5	0.35	1.0	9.8	0.9	1.4	14.4	386
RE-2X(St)HSAWAH 5T0.5	5x3x0.5	0.35	1.0	10.8	0.9	1.4	15.4	454
RE-2X(St)HSAWAH 6T0.5	6x3x0.5	0.35	1.0	12.1	0.9	1.4	16.7	513
RE-2X(St)HSAWAH 8T0.5	8x3x0.5	0.35	1.1	13.1	0.9	1.5	17.9	570
RE-2X(St)HSAWAH 10T0.5	10x3x0.5	0.35	1.1	14.7	0.9	1.5	19.5	658
RE-2X(St)HSAWAH 12T0.5	12x3x0.5	0.35	1.1	15.2	0.9	1.5	20.0	844
RE-2X(St)HSAWAH 16T0.5	16x3x0.5	0.35	1.2	17.4	0.9	1.6	22.4	1001
RE-2X(St)HSAWAH 20T0.5	20x3x0.5	0.35	1.2	19.1	1.25	1.6	24.8	1177
RE-2X(St)HSAWAH 24T0.5	24x3x0.5	0.35	1.3	20.9	1.25	1.7	26.8	1327
0.75mm ² , Multi-stripe								
RE-2X(St)HSAWAH 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4	13.9	369
RE-2X(St)HSAWAH 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.4	15.5	462
RE-2X(St)HSAWAH 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.4	16.6	526
RE-2X(St)HSAWAH 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5	18.5	614
RE-2X(St)HSAWAH 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.5	19.5	697
RE-2X(St)HSAWAH 10T0.75	10x3x0.75	0.38	1.3	19.0	0.9	1.5	21.5	918
RE-2X(St)HSAWAH 12T0.75	12x3x0.75	0.38	1.3	19.7	0.9	1.7	22.3	1027
RE-2X(St)HSAWAH 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.6	25.4	1237



Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.7	27.6	1443
RE-2X(St)HSAWAH 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.7	29.6	1628
1.0mm ² , Multi-stripe								
RE-2X(St)HSAWAH 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4	15.0	403
RE-2X(St)HSAWAH 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.4	16.5	528
RE-2X(St)HSAWAH 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5	18.0	619
RE-2X(St)HSAWAH 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5	19.8	829
RE-2X(St)HSAWAH 8T1.0	8x3x1.0	0.4	1.2	18.1	0.9	1.5	20.9	945
RE-2X(St)HSAWAH 10T1.0	10x3x1.0	0.4	1.3	20.7	0.9	1.6	24.1	1074
RE-2X(St)HSAWAH 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.6	24.7	1212
RE-2X(St)HSAWAH 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7	27.6	1478
RE-2X(St)HSAWAH 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.7	30.0	1736
RE-2X(St)HSAWAH 24T1.0	24x3x1.0	0.4	1.6	29.6	1.25	1.8	32.2	2197
1.3mm ² , Multi-stripe								
RE-2X(St)HSAWAH 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.4	16.1	488
RE-2X(St)HSAWAH 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5	18.2	620
RE-2X(St)HSAWAH 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.5	19.6	720
RE-2X(St)HSAWAH 6T1.3	6x3x1.3	0.45	1.3	18.8	0.9	1.5	21.7	952
RE-2X(St)HSAWAH 8T1.3	8x3x1.3	0.45	1.3	20.1	0.9	1.6	23.8	1076
RE-2X(St)HSAWAH 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.7	26.6	1320
RE-2X(St)HSAWAH 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.7	27.3	1454
RE-2X(St)HSAWAH 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.8	30.5	1785
RE-2X(St)HSAWAH 20T1.3	20x3x1.3	0.45	1.7	30.4	1.25	1.8	33.2	2323
RE-2X(St)HSAWAH 24T1.3	24x3x1.3	0.45	1.8	33.1	1.60	1.9	36.6	2633
1.5mm ² , Multi-stripe								
RE-2X(St)HSAWAH 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.4	16.5	491
RE-2X(St)HSAWAH 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5	18.8	673
RE-2X(St)HSAWAH 5T1.5	5x3x1.5	0.45	1.2	17.1	0.9	1.5	20.2	894

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 6T1.5	6x3x1.5	0.45	1.3	19.5	0.9	1.6	22.6	1021
RE-2X(St)HSAWAH 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.6	24.8	1208
RE-2X(St)HSAWAH 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.7	27.5	1433
RE-2X(St)HSAWAH 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.7	28.4	1565
RE-2X(St)HSAWAH 16T1.5	16x3x1.5	0.45	1.6	28.4	1.25	1.8	31.8	2157
RE-2X(St)HSAWAH 20T1.5	20x3x1.5	0.45	1.7	31.6	1.25	1.9	34.9	2510
RE-2X(St)HSAWAH 24T1.5	24x3x1.5	0.45	1.8	34.4	1.60	2.0	38.3	2873

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



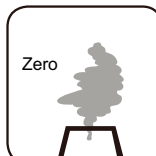
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

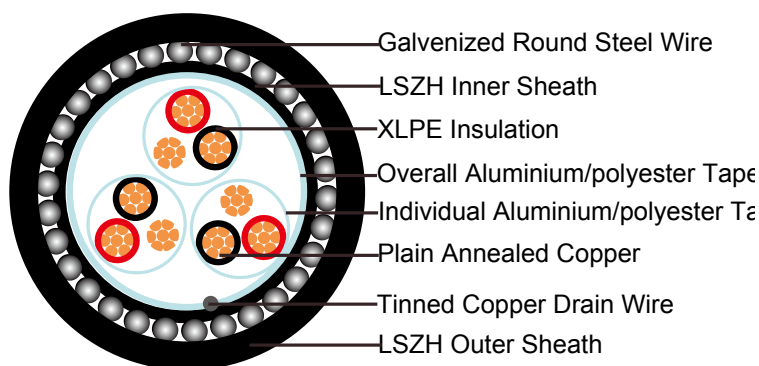


Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed, Individual & Overall Screened, Armoured Instrumentation Cables (Multitriples)

RE-2X(St)HSAH-TiMF 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*

No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3



Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km(Max.)	1				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

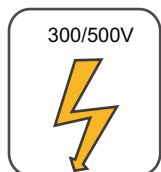
Caledonian Cable Code	RE-2X(St)HSAWAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multi-stripe								
RE-2X(St)HSAWAH-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	0.9	1.4	14.3	363
RE-2X(St)HSAWAH-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	0.9	1.4	15.7	456
RE-2X(St)HSAWAH-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	0.9	1.5	17.2	516
RE-2X(St)HSAWAH-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	0.9	1.5	18.8	611
RE-2X(St)HSAWAH-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	0.9	1.5	19.7	766
RE-2X(St)HSAWAH-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	1.25	1.6	22.7	950
RE-2X(St)HSAWAH-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	1.25	1.6	23.3	975
RE-2X(St)HSAWAH-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	1.25	1.7	26.0	1169
RE-2X(St)HSAWAH-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	1.25	1.7	28.2	1365
RE-2X(St)HSAWAH-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	1.25	1.8	30.5	1604
0.75mm ² , Multi-stripe								
RE-2X(St)HSAWAH-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4	15.2	408
RE-2X(St)HSAWAH-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.5	17.2	521
RE-2X(St)HSAWAH-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.5	18.5	590
RE-2X(St)HSAWAH-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5	20.2	819
RE-2X(St)HSAWAH-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.6	21.7	941
RE-2X(St)HSAWAH-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	1.25	1.6	24.7	1103

Caledonian Cable Code	RE-2X(St)HSAWAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	1.25	1.7	25.6	1176
RE-2X(St)HSAWAH-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.7	28.4	1439
RE-2X(St)HSAWAH-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.8	31.0	1804
RE-2X(St)HSAWAH-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.9	33.5	2164
1.0mm ² , Multi-stripe								
RE-2X(St)HSAWAH-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4	16.1	447
RE-2X(St)HSAWAH-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.5	18.2	579
RE-2X(St)HSAWAH-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5	19.6	688
RE-2X(St)HSAWAH-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5	21.7	913
RE-2X(St)HSAWAH-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	1.25	1.6	23.8	1033
RE-2X(St)HSAWAH-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	1.25	1.7	26.6	1277
RE-2X(St)HSAWAH-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.7	27.3	1380
RE-2X(St)HSAWAH-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7	30.3	1686
RE-2X(St)HSAWAH-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.8	33.2	2200
RE-2X(St)HSAWAH-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1.6	1.9	36.6	2504
1.3mm ² , Multi-stripe								
RE-2X(St)HSAWAH-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.5	17.6	532
RE-2X(St)HSAWAH-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5	19.5	684
RE-2X(St)HSAWAH-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.6	21.5	924
RE-2X(St)HSAWAH-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	1.25	1.6	24.5	1089
RE-2X(St)HSAWAH-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	1.25	1.7	26.0	1249
RE-2X(St)HSAWAH-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.8	29.1	1482
RE-2X(St)HSAWAH-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.8	30.1	1592
RE-2X(St)HSAWAH-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.9	33.7	2222
RE-2X(St)HSAWAH-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1.6	2.0	37.6	2592
RE-2X(St)HSAWAH-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1.6	2.0	40.3	2957
RE-2X(St)HSAWAH-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.5	18.0	531



Caledonian Cable Code	RE-2X(St)HSAWAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5	20.2	817
RE-2X(St)HSAWAH-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	1.25	1.6	22.8	998
RE-2X(St)HSAWAH-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	1.25	1.6	25.2	1162
RE-2X(St)HSAWAH-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.7	27.0	1304
RE-2X(St)HSAWAH-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.8	30.2	1541
RE-2X(St)HSAWAH-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.8	31.0	1952
RE-2X(St)HSAWAH-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1.6	1.9	35.4	2384
RE-2X(St)HSAWAH-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1.6	2.0	38.8	2795
RE-2X(St)HSAWAH-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1.6	2.1	41.8	3093

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



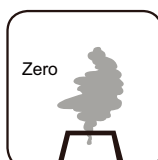
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



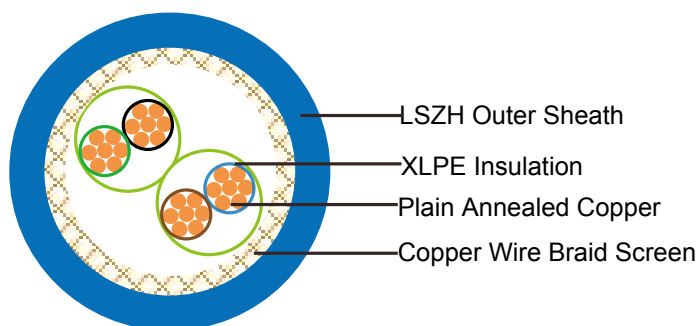
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed, CWB Screened Instrumentation Cables (Single Pair)

RE-2X(C)H 90°C / 300V



APPLICATION

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petr°Chemistry industry plants, power plants, natural gas and petroluem plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet l°Cations; on racks, trays, in conduits.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*



No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Tinned copper wire braid

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	300				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				

Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(C)H		
	No. of Pairs x2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
RE-2X(C)H 1P0.5	1x2x0.50	8.3	110
RE-2X(C)H 1P0.75	1x2x0.75	8.7	119
RE-2X(C)H 1P1.0	1x2x1.0	9.4	135
RE-2X(C)H 1P1.3	1x2x1.3	9.7	140

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



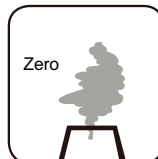
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

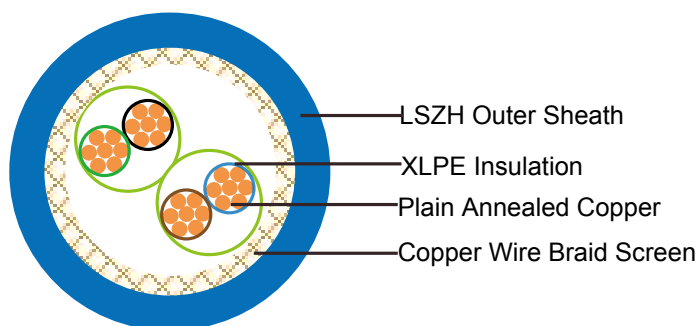


Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed, CWB Screened Instrumentation Cables (Multipair)

RE-2X(C)H 90°C / 300V



APPLICATION

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petr°Chemistry industry plants, power plants, natural gas and petroluem plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet l°Cations; on racks, trays, in conduits.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454

Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Tinned copper wire braid

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	300				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				



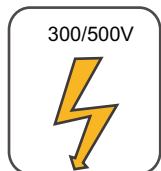
Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(C)H		
	No. of Pairs x2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
0.5mm ² , Multipair			
RE-2X(C)H 2P0.5	2x2x0.50	10.7	143
RE-2X(C)H 3P0.5	3x2x0.50	11.1	159
RE-2X(C)H 4P0.5	4x2x0.50	11.9	181
RE-2X(C)H 6P0.5	6x2x0.50	13.6	230
RE-2X(C)H 8P0.5	8x2x0.50	14.2	264
RE-2X(C)H 12P0.5	12x2x0.50	16.4	343
RE-2X(C)H 16P0.5	16x2x0.50	18.2	418
RE-2X(C)H 20P0.5	20x2x0.50	19.7	487
RE-2X(C)H 24P0.5	24x2x0.50	21.1	557
0.75mm ² , Multipair			
RE-2X(C)H 2P0.75	2x2x0.75	11.4	160
RE-2X(C)H 3P0.75	3x2x0.75	11.9	185
RE-2X(C)H 4P0.75	4x2x0.75	12.7	214
RE-2X(C)H 6P0.75	6x2x0.75	14.6	278
RE-2X(C)H 8P0.75	8x2x0.75	15.4	324
RE-2X(C)H 12P0.75	12x2x0.75	17.8	427
RE-2X(C)H 16P0.75	16x2x0.75	19.8	526
RE-2X(C)H 20P0.75	20.x2x0.75	21.5	623
RE-2X(C)H 24P0.75	24x2x0.75	23.1	714
1.0mm ² , Multipair			
RE-2X(C)H 2P1.0	2x2x1.0	12.3	184
RE-2X(C)H 3P1.0	3x2x1.0	12.8	214
RE-2X(C)H 4P1.0	4x2x1.0	13.7	251
RE-2X(C)H 6P1.0	6x2x1.0	15.6	326
RE-2X(C)H 8P1.0	8x2x1.0	16.4	382
RE-2X(C)H 12P1.0	12x2x1.0	19.0	511
RE-2X(C)H 16P1.0	16x2x1.0	21.2	636

Caledonian Cable Code	RE-2X(C)H		
	No. of Pairs x2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
RE-2X(C)H 20P1.0	20x2x1.0	23.5	775
RE-2X(C)H 24P1.0	24x2x1.0	25.3	892
1.3mm ² , Multipair			
RE-2X(C)H 2P1.3	2x2x1.3	12.9	204
RE-2X(C)H 3P1.3	3x2x1.3	13.5	242
RE-2X(C)H 4P1.3	4x2x1.3	14.5	285
RE-2X(C)H 6P1.3	6x2x1.3	16.7	375
RE-2X(C)H 8P1.3	8x2x1.3	17.4	444
RE-2X(C)H 12P1.3	12x2x1.3	20.2	599
RE-2X(C)H 16P1.3	16x2x1.3	22.6	750
RE-2X(C)H 20P1.3	20x2x1.3	25.1	916
RE-2X(C)H 24P1.3	24x2x1.3	27.0	1064

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



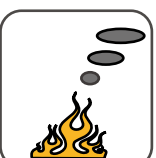
Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



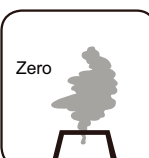
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



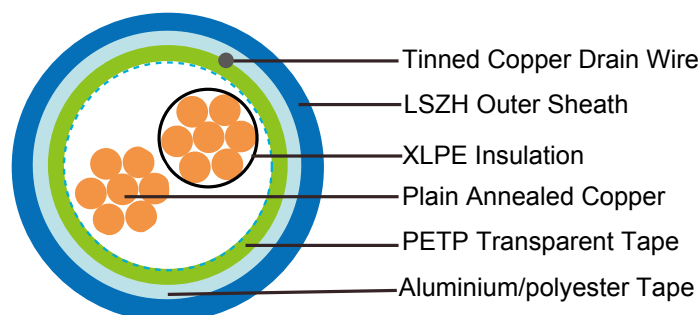
Zero

Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Single Pair)

RE-2X(St)H 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

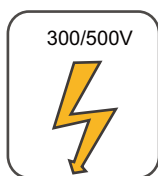
Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS



Caledonian Cable Code	RE-2X(St)H				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 1P0.5	1x2x0.50	0.35	0.8	5.2	38
RE-2X(St)H 1P0.75	1x2x0.75	0.38	0.8	5.6	49
RE-2X(St)H 1P1.0	1x2x1.0	0.40	0.9	6.3	56
RE-2X(St)H 1P1.3	1x2x1.3	0.45	0.9	6.8	65
RE-2X(St)H 1P1.5	1x2x1.5	0.45	0.9	7.1	71

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



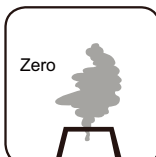
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



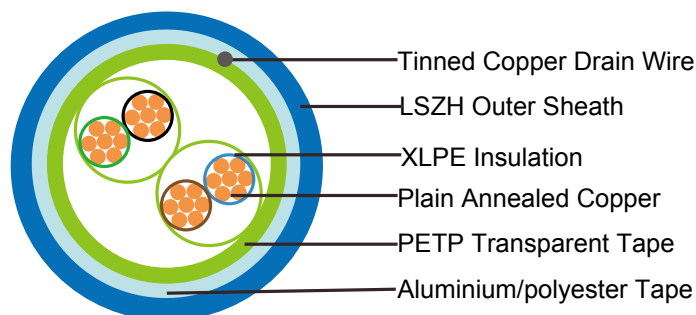
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multipair)

RE-2X(St)H 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.



VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

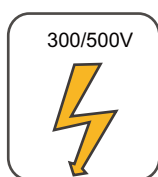
Caledonian Cable Code	RE-2X(St)H				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multipair					
RE-2X(St)H 2P0.5	2x2x0.5	0.35	0.9	7.6	66
RE-2X(St)H 4P0.5	4x2x0.5	0.35	0.9	8.8	98
RE-2X(St)H 5P0.5	5x2x0.5	0.35	1.0	9.8	112
RE-2X(St)H 6P0.5	6x2x0.5	0.35	1.0	10.6	133
RE-2X(St)H 8P0.5	8x2x0.5	0.35	1.0	11.3	161
RE-2X(St)H 10P0.5	10x2x0.5	0.35	1.1	12.9	200
RE-2X(St)H 12P0.5	12x2x0.5	0.35	1.1	13.5	242
RE-2X(St)H 16P0.5	16x2x0.5	0.35	1.1	15.2	288
RE-2X(St)H 20P0.5	20x2x0.5	0.35	1.2	16.9	376
RE-2X(St)H 24P0.5	24x2x0.5	0.35	1.2	18.3	426
0.75mm ² , Multipair					
RE-2X(St)H 2P0.75	2x2x0.75	0.38	0.9	8.5	87
RE-2X(St)H 4P0.75	4x2x0.75	0.38	1.0	10.0	122
RE-2X(St)H 5P0.75	5x2x0.75	0.38	1.0	10.9	154
RE-2X(St)H 6P0.75	6x2x0.75	0.38	1.0	11.8	174
RE-2X(St)H 8P0.75	8x2x0.75	0.38	1.1	12.8	213
RE-2X(St)H 10P0.75	10x2x0.75	0.38	1.1	14.5	266
RE-2X(St)H 12P0.75	12x2x0.75	0.38	1.1	15.1	304
RE-2X(St)H 16P0.75	16x2x0.75	0.38	1.2	17.3	398
RE-2X(St)H 20P0.75	20x2x0.75	0.38	1.3	19.2	478
RE-2X(St)H 24P0.75	24x2x0.75	0.38	1.3	20.8	559
1.0mm ² , Multipair					
RE-2X(St)H 2P1.0	2x2x1.0	0.4	0.9	9.2	101
RE-2X(St)H 4P1.0	4x2x1.0	0.4	1.0	10.9	157



Caledonian Cable Code	RE-2X(St)H				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 5P1.0	5x2x1.0	0.4	1.0	11.9	194
RE-2X(St)H 6P1.0	6x2x1.0	0.4	1.0	13.0	223
RE-2X(St)H 8P1.0	8x2x1.0	0.4	1.1	14.0	272
RE-2X(St)H 10P1.0	10x2x1.0	0.4	1.1	15.9	334
RE-2X(St)H 12P1.0	12x2x1.0	0.4	1.2	16.8	390
RE-2X(St)H 16P1.0	16x2x1.0	0.4	1.2	19.0	511
RE-2X(St)H 20P1.0	20x2x1.0	0.4	1.3	21.1	617
RE-2X(St)H 24P1.0	24x2x1.0	0.4	1.4	23.1	749
1.3mm ² , Multipair					
RE-2X(St)H 2P1.3	2x2x1.3	0.45	1.0	10.4	124
RE-2X(St)H 4P1.3	4x2x1.3	0.45	1.0	12.0	184
RE-2X(St)H 5P1.3	5x2x1.3	0.45	1.1	13.4	226
RE-2X(St)H 6P1.3	6x2x1.3	0.45	1.1	14.6	289
RE-2X(St)H 8P1.3	8x2x1.3	0.45	1.2	15.7	337
RE-2X(St)H 10P1.3	10x2x1.3	0.45	1.2	17.9	411
RE-2X(St)H 12P1.3	12x2x1.3	0.45	1.3	18.9	495
RE-2X(St)H 16P1.3	16x2x1.3	0.45	1.3	21.4	651
RE-2X(St)H 20P1.3	20x2x1.3	0.45	1.4	23.8	772
RE-2X(St)H 24P1.3	24x2x1.3	0.45	1.5	25.9	933
1.5mm ² , Multipair					
RE-2X(St)H 2P1.5	2x2x1.5	0.45	1.0	10.8	139*
RE-2X(St)H 4P1.5	4x2x1.5	0.45	1.1	12.7	214
RE-2X(St)H 5P1.5	5x2x1.5	0.45	1.1	14.0	259
RE-2X(St)H 6P1.5	6x2x1.5	0.45	1.2	15.2	305
RE-2X(St)H 8P1.5	8x2x1.5	0.45	1.2	16.4	385
RE-2X(St)H 10P1.5	10x2x1.5	0.45	1.3	18.8	460
RE-2X(St)H 12P1.5	12x2x1.5	0.45	1.3	19.7	558

Caledonian Cable Code	RE-2X(St)H				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2X(St)H 16P1.5	16x2x1.5	0.45	1.4	22.5	725
RE-2X(St)H 20P1.5	20x2x1.5	0.45	1.5	25.0	881
RE-2X(St)H 24P1.5	24x2x1.5	0.45	1.5	27.1	147

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



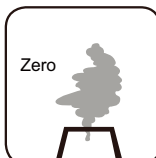
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

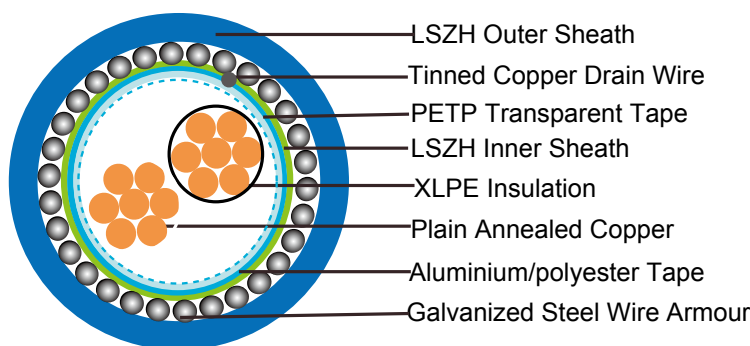


Halogen Free
IEC60754-1
EN50267-2-1



XLPE Insulated, LSZH Sheathed & Overall Screened, Armoured Instrumentation Cables (Single Pair)

RE-2X(St)HSAWH 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200

Oil Resistance	ICEA S-73-532**
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Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH compound

Armouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 6 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				



Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 1P0.5	1x2x0.50	0.35	0.8	5.2	0.9	1.3	9.6	179
RE-2X(St)HSAWAH 1P0.75	1x2x0.75	0.38	0.8	5.6	0.9	1.3	10.0	199
RE-2X(St)HSAWAH 1P1.0	1x2x1.0	0.40	0.9	6.3	0.9	1.3	10.7	220
RE-2X(St)HSAWAH 1P1.3	1x2x1.3	0.45	0.9	6.8	0.9	1.3	11.2	241
RE-2X(St)HSAWAH 1P1.5	1x2x1.5	0.45	0.9	7.1	0.9	1.3	11.5	259

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



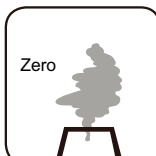
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



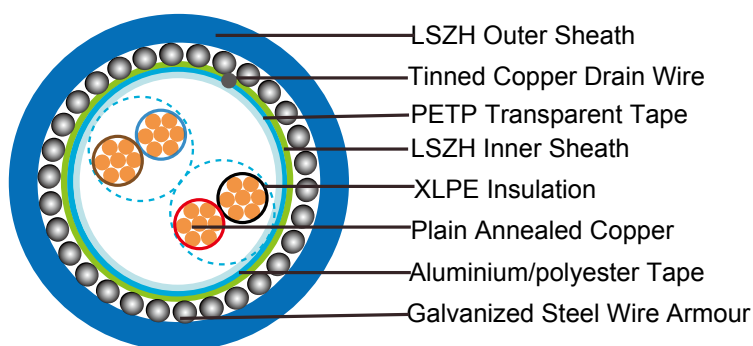
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Zero
Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed & Overall Screened, Armoured Instrumentation Cables (Multipair)

RE-2X(St)HSAWAH 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention:



min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH compound

Amouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multipair								
RE-2X(St)HSAWAH 2P0.5	2x2x0.5	0.35	0.9	7.6	0.9	1.3	12.0	269
RE-2X(St)HSAWAH 4P0.5	4x2x0.5	0.35	0.9	8.8	0.9	1.4	13.4	325
RE-2X(St)HSAWAH 5P0.5	5x2x0.5	0.35	1.0	9.8	0.9	1.4	14.4	375
RE-2X(St)HSAWAH 6P0.5	6x2x0.5	0.35	1.0	10.6	0.9	1.4	15.2	423
RE-2X(St)HSAWAH 8P0.5	8x2x0.5	0.35	1.0	11.3	0.9	1.4	15.9	473
RE-2X(St)HSAWAH 10P0.5	10x2x0.5	0.35	1.1	12.9	0.9	1.5	17.7	521
RE-2X(St)HSAWAH 12P0.5	12x2x0.5	0.35	1.1	13.5	0.9	1.5	18.3	592
RE-2X(St)HSAWAH 16P0.5	16x2x0.5	0.35	1.1	15.2	0.9	1.5	20.0	823
RE-2X(St)HSAWAH 20P0.5	20x2x0.5	0.35	1.2	16.9	0.9	1.6	21.9	920
RE-2X(St)HSAWAH 24P0.5	24x2x0.5	0.35	1.2	18.3	1.25	1.6	24.0	1028
0.75mm ² , Multipair								
RE-2X(St)HSAWAH 2P0.75	2x2x0.75	0.38	0.9	8.5	0.9	1.4	13.1	308
RE-2X(St)HSAWAH 4P0.75	4x2x0.75	0.38	1.0	10.0	0.9	1.4	14.6	371
RE-2X(St)HSAWAH 5P0.75	5x2x0.75	0.38	1.0	10.9	0.9	1.4	15.5	436
RE-2X(St)HSAWAH 6P0.75	6x2x0.75	0.38	1.0	11.8	0.9	1.4	16.4	495
RE-2X(St)HSAWAH 8P0.75	8x2x0.75	0.38	1.1	12.8	0.9	1.5	17.6	533
RE-2X(St)HSAWAH 10P0.75	10x2x0.75	0.38	1.1	14.5	0.9	1.5	19.3	637
RE-2X(St)HSAWAH 12P0.75	12x2x0.75	0.38	1.1	15.1	0.9	1.5	19.9	825
RE-2X(St)HSAWAH 16P0.75	16x2x0.75	0.38	1.2	17.3	0.9	1.6	22.3	965
RE-2X(St)HSAWAH 20P0.75	20x2x0.75	0.38	1.3	19.2	1.25	1.6	24.9	1116
RE-2X(St)HSAWAH 24P0.75	24x2x0.75	0.38	1.3	20.8	1.25	1.6	26.7	1257
1.0mm ² , Multipair								
RE-2X(St)HSAWAH 2P1.0	2x2x1.0	0.4	0.9	9.2	0.9	1.4	13.8	336
RE-2X(St)HSAWAH 4P1.0	4x2x1.0	0.4	1.0	10.9	0.9	1.4	15.5	436
RE-2X(St)HSAWAH 5P1.0	5x2x1.0	0.4	1.0	11.9	0.9	1.4	16.5	494



Caledonian Cable Code	RE-2X(St)HSAWAH							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH 6P1.0	6x2x1.0	0.4	1.0	13.0	0.9	1.4	17.6	550
RE-2X(St)HSAWAH 8P1.0	8x2x1.0	0.4	1.1	14.0	0.9	1.5	18.8	633
RE-2X(St)HSAWAH 10P1.0	10x2x1.0	0.4	1.1	15.9	0.9	1.5	20.7	859
RE-2X(St)HSAWAH 12P1.0	12x2x1.0	0.4	1.2	16.8	0.9	1.5	21.6	972
RE-2X(St)HSAWAH 16P1.0	16x2x1.0	0.4	1.2	19.0	1.25	1.6	24.7	1171
RE-2X(St)HSAWAH 20P1.0	20x2x1.0	0.4	1.3	21.1	1.25	1.7	27.0	1316
RE-2X(St)HSAWAH 24P1.0	24x2x1.0	0.4	1.4	23.1	1.25	1.7	29.0	1520
1.3mm ² , Multipair								
RE-2X(St)HSAWAH 2P1.3	2x2x1.3	0.45	1.0	10.4	0.9	1.4	15.0	382
RE-2X(St)HSAWAH 4P1.3	4x2x1.3	0.45	1.0	12.0	0.9	1.4	16.6	510
RE-2X(St)HSAWAH 5P1.3	5x2x1.3	0.45	1.1	13.4	0.9	1.5	18.2	595
RE-2X(St)HSAWAH 6P1.3	6x2x1.3	0.45	1.1	14.6	0.9	1.5	19.4	657
RE-2X(St)HSAWAH 8P1.3	8x2x1.3	0.45	1.2	15.7	0.9	1.5	20.5	869
RE-2X(St)HSAWAH 10P1.3	10x2x1.3	0.45	1.2	17.9	0.9	1.6	23.6	1011
RE-2X(St)HSAWAH 12P1.3	12x2x1.3	0.45	1.3	18.9	1.25	1.6	24.6	1110
RE-2X(St)HSAWAH 16P1.3	16x2x1.3	0.45	1.3	21.4	1.25	1.7	27.3	1361
RE-2X(St)HSAWAH 20P1.3	20x2x1.3	0.45	1.4	23.8	1.25	1.8	29.9	1599
RE-2X(St)HSAWAH 24P1.3	24x2x1.3	0.45	1.5	25.9	1.25	1.8	32.0	1960
1.5mm ² , Multipair								
RE-2X(St)HSAWAH 2P1.5	2x2x1.5	0.45	1.0	10.8	0.9	1.4	15.4	419
RE-2X(St)HSAWAH 4P1.5	4x2x1.5	0.45	1.1	12.7	0.9	1.5	17.5	544
RE-2X(St)HSAWAH 5P1.5	5x2x1.5	0.45	1.1	14.0	0.9	1.5	18.8	627
RE-2X(St)HSAWAH 6P1.5	6x2x1.5	0.45	1.2	15.2	0.9	1.5	20.0	833
RE-2X(St)HSAWAH 8P1.5	8x2x1.5	0.45	1.2	16.4	0.9	1.6	21.4	943
RE-2X(St)HSAWAH 10P1.5	10x2x1.5	0.45	1.3	18.8	1.25	1.6	24.5	1095
RE-2X(St)HSAWAH 12P1.5	12x2x1.5	0.45	1.3	19.7	1.25	1.7	25.6	1197
RE-2X(St)HSAWAH 16P1.5	16x2x1.5	0.45	1.4	22.5	1.25	1.7	28.4	1511
RE-2X(St)HSAWAH 20P1.5	20x2x1.5	0.45	1.5	25.0	1.25	1.8	31.1	1968
RE-2X(St)HSAWAH 24P1.5	24x2x1.5	0.45	1.5	27.1	1.25	1.8	33.2	2247

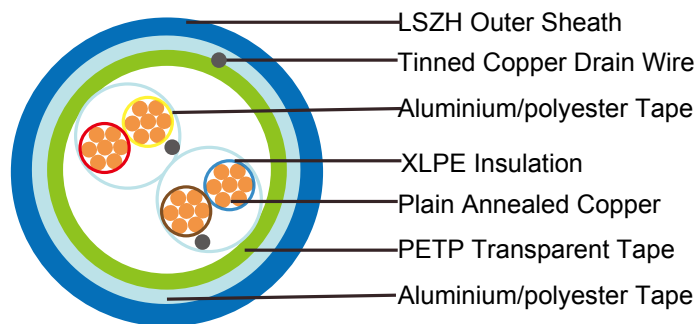
Note : Other conductor sizes & core configurations are available upon request.

 300/500V	 EN 50288-7		
Rated Voltage	Standard	Flame Retardancy NF C32-070-2.1(C2) IEC60332-1-2/EN50265-2-1	Reduced Fire Propagation NF C32-070-2.2(C1) IEC60332-3-24 EN50266-2-4
			
Low Toxicity NES 02-713/NF C 20-454	Low Corrosivity IEC60754-2 EN50267-2-2/3 NF C 32-074	Low Smoke Emission IEC 61034-1&2 EN 50268-1&2/NF C32-073	Halogen Free IEC60754-1 EN50267-2-1



XLPE Insulated, LSZH Sheathed, Individual and Overall Screened Instrumentation Cables (Multipair)

RE-2X(St)H PiMF 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min

60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				



Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

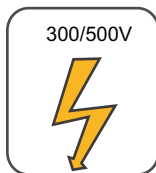
Caledonian Cable Code	RE-2X(St)H PiMF				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multipair					
RE-2X(St)H PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	85
RE-2X(St)H PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	120
RE-2X(St)H PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	145
RE-2X(St)H PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	170
RE-2X(St)H PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	214
RE-2X(St)H PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	265
RE-2X(St)H PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	286
RE-2X(St)H PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	380
RE-2X(St)H PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	475
RE-2X(St)H PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	561
0.75mm ² , Multipair					
RE-2X(St)H PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	101
RE-2X(St)H PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	159
RE-2X(St)H PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	183
RE-2X(St)H PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	215
RE-2X(St)H PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	272
RE-2X(St)H PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	333
RE-2X(St)H PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	383
RE-2X(St)H PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	492
RE-2X(St)H PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	603
RE-2X(St)H PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	704
1.0mm ² , Multipair					
RE-2X(St)H PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	112
RE-2X(St)H PiMF 4P1.0	4x2x1.0	0.4	1.0	12.1	179

Caledonian Cable Code	RE-2X(St)H PiMF				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2X(St)H PiMF 5P1.0	5x2x1.0	0.4	1.1	13.5	220
RE-2X(St)H PiMF 6P1.0	6x2x1.0	0.4	1.1	14.7	256
RE-2X(St)H PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	323
RE-2X(St)H PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	401
RE-2X(St)H PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	454
RE-2X(St)H PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	601
RE-2X(St)H PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	719
RE-2X(St)H PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	884
1.3mm ² , Multipair					
RE-2X(St)H PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	153
RE-2X(St)H PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	208
RE-2X(St)H PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	263
RE-2X(St)H PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	318
RE-2X(St)H PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	406
RE-2X(St)H PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	501
RE-2X(St)H PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	552
RE-2X(St)H PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	728
RE-2X(St)H PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	892
RE-2X(St)H PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1067
1.5mm ² , Multipair					
RE-2X(St)H PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	164
RE-2X(St)H PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	235
RE-2X(St)H PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	289
RE-2X(St)H PiMF 6P1.5	5x2x1.5	0.45	1.2	16.9	366
RE-2X(St)H PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	446
RE-2X(St)H PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	565
RE-2X(St)H PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	637



Caledonian Cable Code	RE-2X(St)H PiMF				
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2X(St)H PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	828
RE-2X(St)H PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1024
RE-2X(St)H PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1219

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



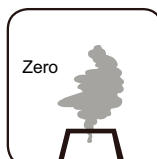
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



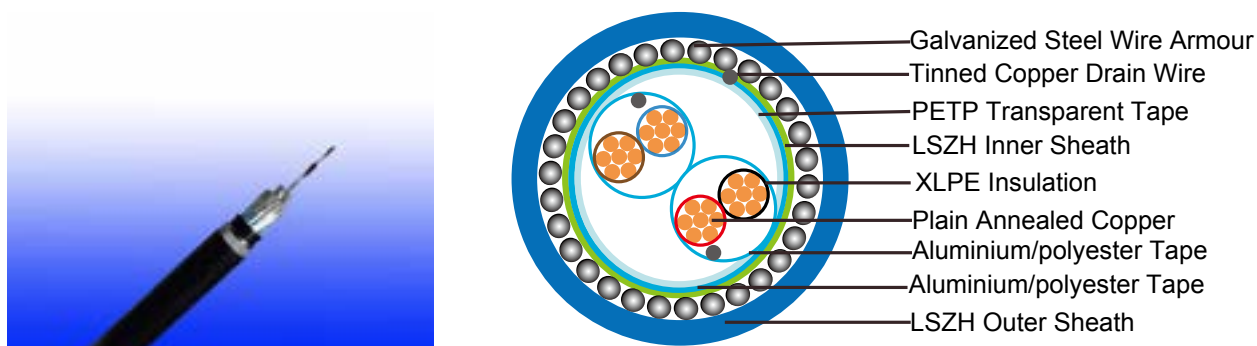
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

XLPE Insulated, LSZH Sheathed, Individual and Overall Screened & Armoured Instrumentation Cables (Multipair)

RE-2X(St)HSAH PIMF 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention:



min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: Extruded cross-linked XLPE compound, EN 50290. 2-29.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Individual Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH(Low Smoke Zero Halogen) sheath

Armouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -20°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				

Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

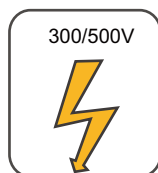
Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	0.9	1.4	13.3	311
RE-2X(St)HSAWAH PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	0.9	1.4	14.8	373
RE-2X(St)HSAWAH PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	0.9	1.4	15.8	451
RE-2X(St)HSAWAH PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	0.9	1.6	16.9	483
RE-2X(St)HSAWAH PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	0.9	1.6	17.9	537
RE-2X(St)HSAWAH PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	0.9	1.5	19.9	781
RE-2X(St)HSAWAH PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	0.9	1.5	20.5	804
RE-2X(St)HSAWAH PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	1.25	1.6	23.5	968
RE-2X(St)HSAWAH PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	1.25	1.7	25.6	1143
RE-2X(St)HSAWAH PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	1.25	1.7	27.4	1264
0.75mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	0.9	1.4	14.3	342
RE-2X(St)HSAWAH PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	0.9	1.4	15.8	439
RE-2X(St)HSAWAH PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	0.9	1.5	17.3	496
RE-2X(St)HSAWAH PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	0.9	1.5	18.4	578
RE-2X(St)HSAWAH PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	0.9	1.5	19.2	664
RE-2X(St)HSAWAH PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	1.25	1.6	22.3	876
RE-2X(St)HSAWAH PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	1.25	1.6	23.1	942
RE-2X(St)HSAWAH PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	1.25	1.7	25.7	1130
RE-2X(St)HSAWAH PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	1.25	1.7	27.9	1325
RE-2X(St)HSAWAH PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	1.25	1.8	30.1	1490



Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
1.0mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	0.9	1.4	15.0	382
RE-2X(St)HSAWAH PiMF 4P1.0	4x2x1.0	0.4	1.0	12.1	0.9	1.4	16.7	487
RE-2X(St)HSAWAH PiMF 5P1.0	5x2x1.0	0.4	1.1	13.5	0.9	1.5	18.3	566
RE-2X(St)HSAWAH PiMF 6P1.0	6x2x1.0	0.4	1.1	14.7	0.9	1.5	19.5	641
RE-2X(St)HSAWAH PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	0.9	1.5	20.6	718
RE-2X(St)HSAWAH PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	1.25	1.6	23.7	994
RE-2X(St)HSAWAH PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	1.25	1.7	24.7	1083
RE-2X(St)HSAWAH PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	1.25	1.7	27.4	1361
RE-2X(St)HSAWAH PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	1.25	1.7	29.8	1510
RE-2X(St)HSAWAH PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	1.25	1.8	32.2	1902
1.3mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	0.9	1.4	16.0	452
RE-2X(St)HSAWAH PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	0.9	1.5	18.2	576
RE-2X(St)HSAWAH PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	0.9	1.5	19.6	647
RE-2X(St)HSAWAH PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	0.9	1.6	21.3	857
RE-2X(St)HSAWAH PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	1.25	1.6	23.3	980
RE-2X(St)HSAWAH PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	1.25	1.7	25.9	1195
RE-2X(St)HSAWAH PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	1.25	1.7	27.0	1256
RE-2X(St)HSAWAH PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	1.25	1.8	30.2	1562
RE-2X(St)HSAWAH PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	1.25	1.9	33.1	1958
RE-2X(St)HSAWAH PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1.25	2.0	36.4	2251
1.5mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	0.9	1.5	16.6	475
RE-2X(St)HSAWAH PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	0.9	1.5	18.7	599
RE-2X(St)HSAWAH PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	0.9	1.5	20.3	818
RE-2X(St)HSAWAH PiMF 6P1.5	6x2x1.5	0.45	1.2	16.9	1.25	1.6	22.6	940

Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairs x2xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	1.25	1.7	24.1	1037
RE-2X(St)HSAWAH PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	1.25	1.7	26.9	1273
RE-2X(St)HSAWAH PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	1.25	1.7	27.8	1353
RE-2X(St)HSAWAH PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	1.25	1.8	31.2	1932
RE-2X(St)HSAWAH PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1.25	1.9	34.8	2224
RE-2X(St)HSAWAH PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1.25	2.0	37.6	2541

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



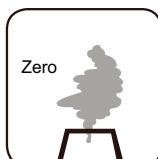
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

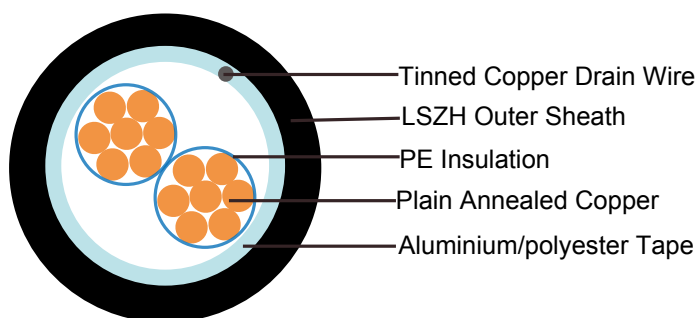
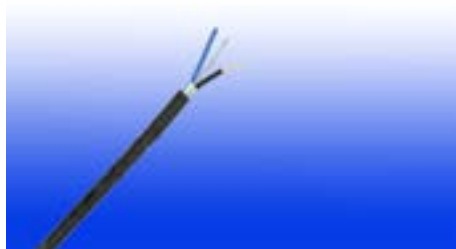


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multicore)

RE-2Y(St)H 90°C / 500V



APPLICATION

The LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Overall Screen: Aluminium/polyester tape with 0.5mm² screen (7/0.3mm) tinned copper drain wire.

Inner Sheath(optional): LSZH compound

Armouring(optional): Galvanised steel wire

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / Blue, continuously numbered on blue core(1, 2..) for wrapped conductor

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size		mm ²	0.5	0.75	1.0	1.3	1.5	2.5
Insulation thickness (nominal)		mm	0.55	0.55	0.55	0.6	0.6	0.7
Conductor resistance (20°C)		Ω/km	36.0	24.5	18.1	13.9	12.1	7.4
Insulation resistance (20°C)		MΩ.km(Min.)	5000					
Mutual Capacitance (1 kHz)		pF/m(Max.)	250					
Capacitance unbalance(1 kHz)		pF/500 m (Max.)	500					
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40	60
Operating voltage		V	500					
Test Voltage U _{rms}	Core to Core	V	2000					
	Core to Screen	V	2000					



CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)H				
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multicore					
RE-2Y(St)H 2C0.5	2x1x0.5	0.55	0.9	6.2	45
RE-2Y(St)H 3C0.5	3x1x0.5	0.55	0.9	6.5	53
RE-2Y(St)H 4C0.5	4x1x0.5	0.55	0.9	7.0	60
RE-2Y(St)H 5C0.5	5x1x0.5	0.55	0.9	7.6	71
RE-2Y(St)H 8C0.5	8x1x0.5	0.55	1.0	9.1	95
RE-2Y(St)H 10C0.5	10x1x0.5	0.55	1.0	10.4	122
RE-2Y(St)H 12C0.5	12x1x0.5	0.55	1.0	10.7	145
RE-2Y(St)H 14C0.5	14x1x0.5	0.55	1.0	11.3	162
RE-2Y(St)H 16C0.5	16x1x0.5	0.55	1.1	11.8	180
RE-2Y(St)H 20C0.5	20x1x0.5	0.55	1.1	13.3	214
RE-2Y(St)H 24C0.5	24x1x0.5	0.55	1.1	14.7	258
RE-2Y(St)H 27C0.5	27x1x0.5	0.55	1.2	15.0	282
RE-2Y(St)H 30C0.5	30x1x0.5	0.55	1.2	15.7	308
RE-2Y(St)H 37C0.5	37x1x0.5	0.55	1.2	16.9	372
RE-2Y(St)H 40C0.5	40x1x0.5	0.55	1.2	17.6	398
0.75mm ² , Multicore					
RE-2Y(St)H 2C0.75	2x1x0.75	0.55	0.9	6.5	
RE-2Y(St)H 3C0.75	3x1x0.75	0.55	0.9	6.9	
RE-2Y(St)H 4C0.75	4x1x0.75	0.55	0.9	7.4	
RE-2Y(St)H 5C0.75	5x1x0.75	0.55	0.9	8.1	
RE-2Y(St)H 8C0.75	8x1x0.75	0.55	1.0	9.7	
RE-2Y(St)H 10C0.75	10x1x0.75	0.55	1.0	11.1	
RE-2Y(St)H 12C0.75	12x1x0.75	0.55	1.0	11.5	
RE-2Y(St)H 14C0.75	14x1x0.75	0.55	1.1	12.2	
RE-2Y(St)H 16C0.75	16x1x0.75	0.55	1.1	12.9	
RE-2Y(St)H 20C0.75	20x1x0.75	0.55	1.1	14.3	
RE-2Y(St)H 24C0.75	24x1x0.75	0.55	1.2	16.0	

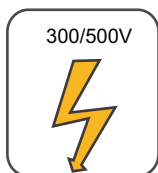
Caledonian Cable Code	RE-2Y(St)H				
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 27C0.75	27x1x0.75	0.55	1.2	16.3	
RE-2Y(St)H 30C0.75	30x1x0.75	0.55	1.2	16.9	
RE-2Y(St)H 37C0.75	37x1x0.75	0.55	1.2	18.2	
RE-2Y(St)H 40C0.75	40x1x0.75	0.55	1.3	19.1	
1.0mm ² , Multicore					
RE-2Y(St)H 2C1.0	2x1x1.0	0.55	0.9	6.9	58
RE-2Y(St)H 3C1.0	3x1x1.0	0.55	0.9	7.3	70
RE-2Y(St)H 4C1.0	4x1x1.0	0.55	0.9	7.9	85
RE-2Y(St)H 5C1.0	5x1x1.0	0.55	0.9	8.6	98
RE-2Y(St)H 8C1.0	8x1x1.0	0.55	1.0	10.3	136
RE-2Y(St)H 10C1.0	10x1x1.0	0.55	1.0	11.9	194
RE-2Y(St)H 12C1.0	12x1x1.0	0.55	1.0	12.2	214
RE-2Y(St)H 14C1.0	14x1x1.0	0.55	1.1	13.0	243
RE-2Y(St)H 16C1.0	16x1x1.0	0.55	1.1	13.7	280
RE-2Y(St)H 20C1.0	20x1x1.0	0.55	1.1	15.2	336
RE-2Y(St)H 24C1.0	24x1x1.0	0.55	1.2	17.0	404
RE-2Y(St)H 27C1.0	27x1x1.0	0.55	1.2	17.4	443
RE-2Y(St)H 30C1.0	30x1x1.0	0.55	1.2	18.0	484
RE-2Y(St)H 37C1.0	37x1x1.0	0.55	1.2	19.6	590
RE-2Y(St)H 40C1.0	40x1x1.0	0.55	1.3	20.4	632
1.3mm ² , Multicore					
RE-2Y(St)H 2C1.3	2x1x1.3	0.6	0.9	7.4	72
RE-2Y(St)H 3C1.3	3x1x1.3	0.6	0.9	7.9	86
RE-2Y(St)H 4C1.3	4x1x1.3	0.6	0.9	8.5	105
RE-2Y(St)H 5C1.3	5x1x1.3	0.6	1.0	9.5	135
RE-2Y(St)H 8C1.3	8x1x1.3	0.6	1.0	11.2	176
RE-2Y(St)H 10C1.3	10x1x1.3	0.6	1.1	13.2	228



Caledonian Cable Code	RE-2Y(St)H				
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 12C1.3	12x1x1.3	0.6	1.1	13.6	269
RE-2Y(St)H 14C1.3	14x1x1.3	0.6	1.1	14.3	305
RE-2Y(St)H 16C1.3	16x1x1.3	0.6	1.1	15.0	351
RE-2Y(St)H 20C1.3	20x1x1.3	0.6	1.2	16.9	423
RE-2Y(St)H 24C1.3	24x1x1.3	0.6	1.2	18.7	507
RE-2Y(St)H 27C1.3	27x1x1.3	0.6	1.3	19.3	558
RE-2Y(St)H 30C1.3	30x1x1.3	0.6	1.3	20.0	611
RE-2Y(St)H 37C1.3	37x1x1.3	0.6	1.3	21.6	743
RE-2Y(St)H 40C1.3	40x1x1.3	0.6	1.4	22.7	796
1.5mm ² , Multicore					
RE-2Y(St)H 2C1.5	2x1x1.5	0.6	0.9	7.7	78
RE-2Y(St)H 3C1.5	3x1x1.5	0.6	0.9	8.1	94
RE-2Y(St)H 4C1.5	4x1x1.5	0.6	0.9	8.8	116
RE-2Y(St)H 5C1.5	5x1x1.5	0.6	1.0	9.8	149
RE-2Y(St)H 8C1.5	8x1x1.5	0.6	1.0	11.6	196
RE-2Y(St)H 10C1.5	10x1x1.5	0.6	1.1	13.7	261
RE-2Y(St)H 12C1.5	12x1x1.5	0.6	1.1	14.1	300
RE-2Y(St)H 14C1.5	14x1x1.5	0.6	1.1	14.8	340
RE-2Y(St)H 16C1.5	16x1x1.5	0.6	1.1	15.6	392
RE-2Y(St)H 20C1.5	20x1x1.5	0.6	1.2	17.6	474
RE-2Y(St)H 24C1.5	24x1x1.5	0.6	1.3	19.6	567
RE-2Y(St)H 27C1.5	27x1x1.5	0.6	1.3	20.1	625
RE-2Y(St)H 30C1.5	30x1x1.5	0.6	1.3	20.8	685
RE-2Y(St)H 37C1.5	37x1x1.5	0.6	1.4	22.6	834
RE-2Y(St)H 40C1.5	40x1x1.5	0.6	1.4	23.6	898
2.5mm ² , Multicore					
RE-2Y(St)H 2C2.5	2x1x2.5	0.7	0.9	8.9	113

Caledonian Cable Code	RE-2Y(St)H				
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 3C2.5	3x1x2.5	0.7	1.0	9.7	145
RE-2Y(St)H 4C2.5	4x1x2.5	0.7	1.0	10.5	178
RE-2Y(St)H 5C2.5	5x1x2.5	0.7	1.0	11.9	285
RE-2Y(St)H 8C2.5	8x1x2.5	0.7	1.1	13.9	376
RE-2Y(St)H 10C2.5	10x1x2.5	0.7	1.2	16.3	426
RE-2Y(St)H 12C2.5	12x1x2.5	0.7	1.2	16.9	537
RE-2Y(St)H 14C2.5	14x1x2.5	0.7	1.2	17.7	609
RE-2Y(St)H 16C2.5	16x1x2.5	0.7	1.3	18.9	711
RE-2Y(St)H 20C2.5	20x1x2.5	0.7	1.3	21.1	826
RE-2Y(St)H 24C2.5	24x1x2.5	0.7	1.4	23.6	930
RE-2Y(St)H 27C2.5	27x1x2.5	0.7	1.4	24.1	1040
RE-2Y(St)H 30C2.5	30x1x2.5	0.7	1.5	25.2	1142
RE-2Y(St)H 37C2.5	37x1x2.5	0.7	1.5	27.2	1392
RE-2Y(St)H 40C2.5	40x1x2.5	0.7	1.6	28.5	1494

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



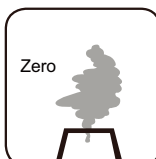
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



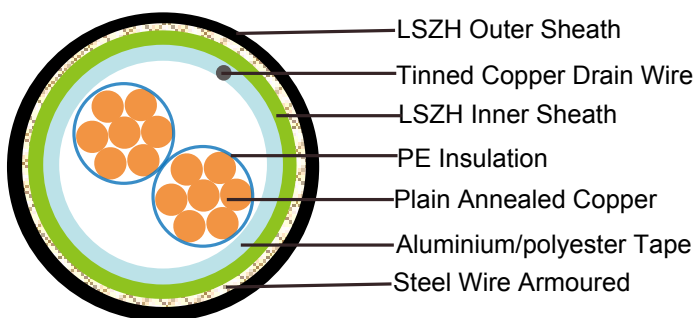
Zero

Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Multicore)

RE-2Y(St)HSAH 90°C / 500V



APPLICATION

The LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of

tensile strength/min.60% of elongation.

VOLTAGE RATING

500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Overall Screen: Aluminium/polyester tape with 0.5mm² screen (7/0.3mm) tinned copper drain wire.

Inner Sheath: LSZH compound

Armouring: Galvanised steel wire

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / Blue, continuously numbered on blue core(1, 2..) for wrapped conductor

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size		mm ²	0.5	0.75	1.0	1.3	1.5	2.5
Insulation thickness (nominal)		mm	0.55	0.55	0.55	0.6	0.6	0.7
Conductor resistance (20°C)		Ω/km	36.0	24.5	18.1	13.9	12.1	7.4
Insulation resistance (20°C)		MΩ.km(Min.)	5000	5000	5000	5000	5000	2000
Mutual Capacitance (1 kHz)		pF/m(Max.)	250					
Inductance		mH/km(Max.)	1	1	1	1	1	1
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40	10
Operating voltage		V	500					
Test Voltage U _{rms}	Core to Core	V	2000					
	Core to Screen	V	2000					



CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Cores x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multicore								
RE-2Y(St)HSAWAH 2C0.5	2x1x0.5	0.55	0.9	6.2	0.9	1.3	10.6	217
RE-2Y(St)HSAWAH 3C0.5	3x1x0.5	0.55	0.9	6.5	0.9	1.3	10.9	230
RE-2Y(St)HSAWAH 4C0.5	4x1x0.5	0.55	0.9	7.0	0.9	1.3	11.4	253
RE-2Y(St)HSAWAH 5C0.5	5x1x0.5	0.55	0.9	7.6	0.9	1.3	12.0	283
RE-2Y(St)HSAWAH 8C0.5	8x1x0.5	0.55	1.0	9.1	0.9	1.4	13.7	337
RE-2Y(St)HSAWAH 10C0.5	10x1x0.5	0.55	1.0	10.4	0.9	1.4	15.0	399
RE-2Y(St)HSAWAH 12C0.5	12x1x0.5	0.55	1.0	10.7	0.9	1.4	15.3	442
RE-2Y(St)HSAWAH 14C0.5	14x1x0.5	0.55	1.0	11.3	0.9	1.4	15.9	474
RE-2Y(St)HSAWAH 16C0.5	16x1x0.5	0.55	1.1	11.8	0.9	1.4	16.4	505
RE-2Y(St)HSAWAH 20C0.5	20x1x0.5	0.55	1.1	13.3	0.9	1.5	18.1	569
RE-2Y(St)HSAWAH 24C0.5	24x1x0.5	0.55	1.1	14.7	0.9	1.5	19.5	659
RE-2Y(St)HSAWAH 27C0.5	27x1x0.5	0.55	1.2	15.0	0.9	1.5	19.8	808
RE-2Y(St)HSAWAH 30C0.5	30x1x0.5	0.55	1.2	15.7	0.9	1.5	20.5	848
RE-2Y(St)HSAWAH 37C0.5	37x1x0.5	0.55	1.2	16.9	0.9	1.6	21.9	963
RE-2Y(St)HSAWAH 40C0.5	40x1x0.5	0.55	1.2	17.6	1.25	1.6	23.3	1014
0.75mm ² , Multicore								
RE-2Y(St)HSAWAH 2C0.75	2x1x0.75	0.55	0.9	6.5	0.9	1.3	10.9	345
RE-2Y(St)HSAWAH 3C0.75	3x1x0.75	0.55	0.9	6.9	0.9	1.3	11.3	420
RE-2Y(St)HSAWAH 4C0.75	4x1x0.75	0.55	0.9	7.4	0.9	1.3	11.8	507
RE-2Y(St)HSAWAH 5C0.75	5x1x0.75	0.55	0.9	8.1	0.9	1.4	12.7	609
RE-2Y(St)HSAWAH 8C0.75	8x1x0.75	0.55	1.0	9.7	0.9	1.4	14.3	846
RE-2Y(St)HSAWAH 10C0.75	10x1x0.75	0.55	1.0	11.1	0.9	1.4	15.7	1035
RE-2Y(St)HSAWAH 12C0.75	12x1x0.75	0.55	1.0	11.5	0.9	1.4	16.1	1183
RE-2Y(St)HSAWAH 14C0.75	14x1x0.75	0.55	1.1	12.2	0.9	1.5	17.0	1334
RE-2Y(St)HSAWAH 16C0.75	16x1x0.75	0.55	1.1	12.9	0.9	1.5	17.7	1495
RE-2Y(St)HSAWAH 20C0.75	20x1x0.75	0.55	1.1	14.3	0.9	1.5	19.1	1823
RE-2Y(St)HSAWAH 24C0.75	24x1x0.75	0.55	1.2	16.0	0.9	1.5	20.8	2258
RE-2Y(St)HSAWAH 27C0.75	27x1x0.75	0.55	1.2	16.3	0.9	1.6	21.3	2482
RE-2Y(St)HSAWAH 30C0.75	30x1x0.75	0.55	1.2	16.9	0.9	1.6	21.9	2713

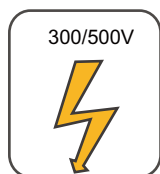
Caledonian Cable Code	RE-2Y(St)HSAH							
	No. of Cores x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH 37C0.75	37x1x0.75	0.55	1.2	18.2	1.25	1.6	23.9	3231
RE-2Y(St)HSAH 40C0.75	40x1x0.75	0.55	1.3	19.1	1.25	1.6	24.8	3483
1.0mm ² , Multicore								
RE-2Y(St)HSAH 2C1.0	2x1x1.0	0.55	0.9	6.9	0.9	1.3	11.3	247
RE-2Y(St)HSAH 3C1.0	3x1x1.0	0.55	0.9	7.3	0.9	1.3	11.7	270
RE-2Y(St)HSAH 4C1.0	4x1x1.0	0.55	0.9	7.9	0.9	1.4	12.5	299
RE-2Y(St)HSAH 5C1.0	5x1x1.0	0.55	0.9	8.6	0.9	1.4	13.2	342
RE-2Y(St)HSAH 8C1.0	8x1x1.0	0.55	1.0	10.3	0.9	1.4	14.9	417
RE-2Y(St)HSAH 10C1.0	10x1x1.0	0.55	1.0	11.9	0.9	1.4	16.5	514
RE-2Y(St)HSAH 12C1.0	12x1x1.0	0.55	1.0	12.2	0.9	1.5	17.0	548
RE-2Y(St)HSAH 14C1.0	14x1x1.0	0.55	1.1	13.0	0.9	1.5	17.8	590
RE-2Y(St)HSAH 16C1.0	16x1x1.0	0.55	1.1	13.7	0.9	1.5	18.5	649
RE-2Y(St)HSAH 20C1.0	20x1x1.0	0.55	1.1	15.2	0.9	1.5	20.0	864
RE-2Y(St)HSAH 24C1.0	24x1x1.0	0.55	1.2	17.0	0.9	1.6	22.0	1005
RE-2Y(St)HSAH 27C1.0	27x1x1.0	0.55	1.2	17.4	1.25	1.6	23.1	1058
RE-2Y(St)HSAH 30C1.0	30x1x1.0	0.55	1.2	18.0	1.25	1.6	23.7	1113
RE-2Y(St)HSAH 37C1.0	37x1x1.0	0.55	1.2	19.6	1.25	1.6	25.3	1271
RE-2Y(St)HSAH 40C1.0	40x1x1.0	0.55	1.3	20.4	1.25	1.7	26.3	1351
1.3mm ² , Multicore								
RE-2Y(St)HSAH 2C1.3	2x1x1.3	0.6	0.9	7.4	0.9	1.3	11.8	275
RE-2Y(St)HSAH 3C1.3	3x1x1.3	0.6	0.9	7.9	0.9	1.3	12.3	301
RE-2Y(St)HSAH 4C1.3	4x1x1.3	0.6	0.9	8.5	0.9	1.4	13.1	340
RE-2Y(St)HSAH 5C1.3	5x1x1.3	0.6	1.0	9.5	0.9	1.4	14.1	383
RE-2Y(St)HSAH 8C1.3	8x1x1.3	0.6	1.0	11.2	0.9	1.4	15.8	436
RE-2Y(St)HSAH 10C1.3	10x1x1.3	0.6	1.1	13.2	0.9	1.5	18.0	578
RE-2Y(St)HSAH 12C1.3	12x1x1.3	0.6	1.1	13.6	0.9	1.5	18.4	633
RE-2Y(St)HSAH 14C1.3	14x1x1.3	0.6	1.1	14.3	0.9	1.5	19.1	698
RE-2Y(St)HSAH 16C1.3	16x1x1.3	0.6	1.1	15.0	0.9	1.5	19.8	870
RE-2Y(St)HSAH 20C1.3	20x1x1.3	0.6	1.2	16.9	0.9	1.6	21.9	1014
RE-2Y(St)HSAH 24C1.3	24x1x1.3	0.6	1.2	18.7	1.25	1.6	24.4	1163
RE-2Y(St)HSAH 27C1.3	27x1x1.3	0.6	1.3	19.3	1.25	1.6	25.0	1227



Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Cores x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAWAH 30C1.3	30x1x1.3	0.6	1.3	20.0	1.25	1.6	25.7	1305
RE-2Y(St)HSAWAH 37C1.3	37x1x1.3	0.6	1.3	21.6	1.25	1.7	27.5	1504
RE-2Y(St)HSAWAH 40C1.3	40x1x1.3	0.6	1.4	22.7	1.25	1.7	28.6	1584
1.5mm ² , Multicore								
RE-2Y(St)HSAWAH 2C1.5	2x1x1.5	0.6	0.9	7.7	0.9	1.3	12.1	279
RE-2Y(St)HSAWAH 3C1.5	3x1x1.5	0.6	0.9	8.1	0.9	1.4	12.7	312
RE-2Y(St)HSAWAH 4C1.5	4x1x1.5	0.6	0.9	8.8	0.9	1.4	13.4	358
RE-2Y(St)HSAWAH 5C1.5	5x1x1.5	0.6	1.0	9.8	0.9	1.4	14.4	403
RE-2Y(St)HSAWAH 8C1.5	8x1x1.5	0.6	1.0	11.6	0.9	1.4	16.2	526
RE-2Y(St)HSAWAH 10C1.5	10x1x1.5	0.6	1.1	13.7	0.9	1.5	18.5	630
RE-2Y(St)HSAWAH 12C1.5	12x1x1.5	0.6	1.1	14.1	0.9	1.5	18.9	669
RE-2Y(St)HSAWAH 14C1.5	14x1x1.5	0.6	1.1	14.8	0.9	1.5	19.6	742
RE-2Y(St)HSAWAH 16C1.5	16x1x1.5	0.6	1.1	15.6	0.9	1.5	20.4	925
RE-2Y(St)HSAWAH 20C1.5	20x1x1.5	0.6	1.2	17.6	1.25	1.6	23.3	1090
RE-2Y(St)HSAWAH 24C1.5	24x1x1.5	0.6	1.3	19.6	1.25	1.6	25.3	1218
RE-2Y(St)HSAWAH 27C1.5	27x1x1.5	0.6	1.3	20.1	1.25	1.6	25.8	1320
RE-2Y(St)HSAWAH 30C1.5	30x1x1.5	0.6	1.3	20.8	1.25	1.7	26.7	1385
RE-2Y(St)HSAWAH 37C1.5	37x1x1.5	0.6	1.4	22.6	1.25	1.7	28.5	1586
RE-2Y(St)HSAWAH 40C1.5	40x1x1.5	0.6	1.4	23.6	1.25	1.7	29.5	1723
2.5mm ² , Multicore								
RE-2Y(St)HSAWAH 2C2.5	2x1x2.5	0.7	0.9	8.9	0.9	1.4	13.5	370
RE-2Y(St)HSAWAH 3C2.5	3x1x2.5	0.7	1.0	9.7	0.9	1.4	14.3	387
RE-2Y(St)HSAWAH 4C2.5	4x1x2.5	0.7	1.0	10.5	0.9	1.4	15.1	442
RE-2Y(St)HSAWAH 5C2.5	5x1x2.5	0.7	1.0	11.9	0.9	1.4	16.5	568
RE-2Y(St)HSAWAH 8C2.5	8x1x2.5	0.7	1.1	13.9	0.9	1.5	18.7	729
RE-2Y(St)HSAWAH 10C2.5	10x1x2.5	0.7	1.2	16.3	0.9	1.6	21.3	957
RE-2Y(St)HSAWAH 12C2.5	12x1x2.5	0.7	1.2	16.9	0.9	1.6	21.9	1049
RE-2Y(St)HSAWAH 14C2.5	14x1x2.5	0.7	1.2	17.7	1.25	1.6	23.4	1198
RE-2Y(St)HSAWAH 16C2.5	16x1x2.5	0.7	1.3	18.9	1.25	1.6	24.6	1302
RE-2Y(St)HSAWAH 20C2.5	20x1x2.5	0.7	1.3	21.1	1.25	1.7	27.0	1485

Caledonian Cable Code	RE-2Y(St)HSAH							
	No. of Cores x1xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x1xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH 24C2.5	24x1x2.5	0.7	1.4	23.6	1.25	1.7	29.5	1718
RE-2Y(St)HSAH 27C2.5	27x1x2.5	0.7	1.4	24.1	1.25	1.8	30.2	1895
RE-2Y(St)HSAH 30C2.5	30x1x2.5	0.7	1.5	25.2	1.25	1.8	31.3	2166
RE-2Y(St)HSAH 37C2.5	37x1x2.5	0.7	1.5	27.2	1.25	1.8	33.3	2505
RE-2Y(St)HSAH 40C2.5	40x1x2.5	0.7	1.6	28.5	1.25	1.9	34.8	

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



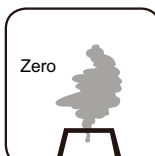
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

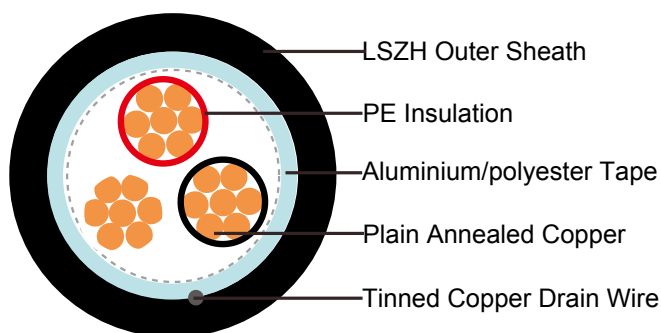


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Single Triple)

RE-2Y(St)H 90°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4

Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Triple: Three conductors twisted to form a triple

Lay-up: Triples laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or Blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000	5000	5000	5000	5000
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	0	0	0	0	0
Inductance	mH/km(Max.)	1	1	1	1	1



L / R (ratio) (max.)		$\mu\text{H}/\Omega$	25	25	25	40	40
Operating voltage		V	300				
Test Voltage U_{rms}	Core to Core	V	1500	1500	1500	1500	1500
	Core to Screen	V	1500	1500	1500	1500	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 1T0.5	1x3x0.50	0.35	0.8	5.4	49
RE-2Y(St)H 1T0.75	1x3x0.75	0.38	0.9	6.1	60
RE-2Y(St)H 1T1.0	1x3x1.0	0.4	0.9	6.6	71
RE-2Y(St)H 1T1.3	1x3x1.3	0.45	0.9	7.2	86
RE-2Y(St)H 1T1.5	1x3x1.5	0.45	0.9	7.5	97

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



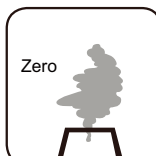
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



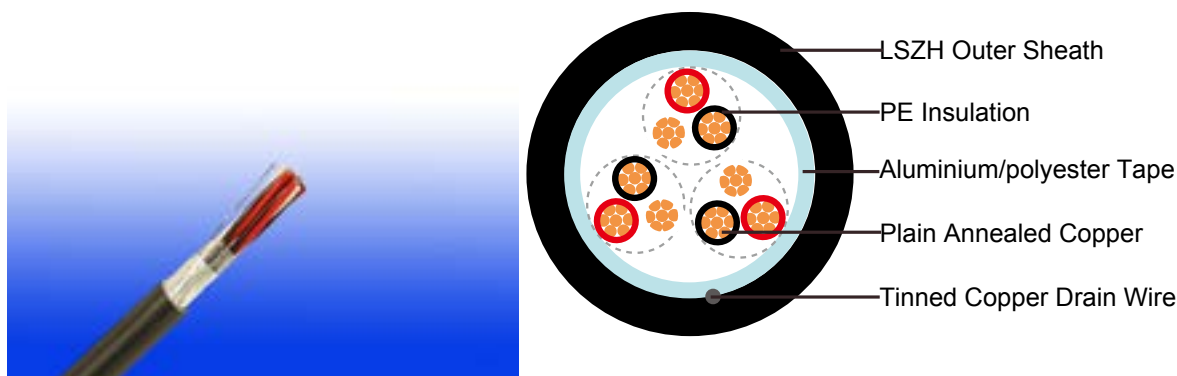
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multitriples)

RE-2Y(St)H 90°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*



No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Triple: Three conductors twisted to form a triple

Lay-up: Triples laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black/White/Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or Blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.0	24.5	18.1	13.9	12.1
Insulation resistance (20°C)	MΩ.km(Min.)	5000	5000	5000	5000	5000
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km(Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40

Operating voltage		V	300
Test Voltage U_{rms}	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

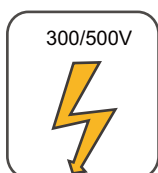
Caledonian Cable Code	RE-2Y(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multitriples					
RE-2Y(St)H 2T0.5	2x3x0.50	0.35	0.9	8.4	92
RE-2Y(St)H 4T0.5	4x3x0.50	0.35	1.0	9.8	124
RE-2Y(St)H 5T0.5	5x3x0.50	0.35	1.0	10.8	155
RE-2Y(St)H 6T0.5	6x3x0.50	0.35	1.0	12.1	186
RE-2Y(St)H 8T0.5	8x3x0.50	0.35	1.1	13.1	222
RE-2Y(St)H 10T0.5	10x3x0.50	0.35	1.1	14.7	276
RE-2Y(St)H 12T0.5	12x3x0.50	0.35	1.1	15.2	325
RE-2Y(St)H 16T0.5	16x3x0.50	0.35	1.2	17.4	416
RE-2Y(St)H 20T0.5	20x3x0.50	0.35	1.2	19.1	510
RE-2Y(St)H 24T0.5	24x3x0.50	0.35	1.3	20.9	597
0.75mm ² , Multitriples					
RE-2Y(St)H 2T0.75	2x3x0.75	0.38	0.9	9.3	114
RE-2Y(St)H 4T0.75	4x3x0.75	0.38	1.0	10.9	163
RE-2Y(St)H 5T0.75	5x3x0.75	0.38	1.0	12.0	199
RE-2Y(St)H 6T0.75	6x3x0.75	0.38	1.1	13.7	246
RE-2Y(St)H 8T0.75	8x3x0.75	0.38	1.1	14.7	297
RE-2Y(St)H 10T0.75	10x3x0.75	0.38	1.2	16.7	368
RE-2Y(St)H 12T0.75	12x3x0.75	0.38	1.2	17.3	425
RE-2Y(St)H 16T0.75	16x3x0.75	0.38	1.3	19.7	558
RE-2Y(St)H 20T0.75	20x3x0.75	0.38	1.3	21.7	685
RE-2Y(St)H 24T0.75	24x3x0.75	0.38	1.4	23.7	806
1.0mm ² , Multitriples					
RE-2Y(St)H 2T1.0	2x3x1.0	0.4	1.0	10.4	135
RE-2Y(St)H 4T1.0	4x3x1.0	0.4	1.0	11.9	203



Caledonian Cable Code	RE-2Y(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 5T1.0	5x3x1.0	0.4	1.0	13.2	252
RE-2Y(St)H 6T1.0	6x3x1.0	0.4	1.1	15.0	304
RE-2Y(St)H 8T1.0	8x3x1.0	0.4	1.1	16.1	381
RE-2Y(St)H 10T1.0	10x3x1.0	0.4	1.2	18.4	463
RE-2Y(St)H 12T1.0	12x3x1.0	0.4	1.2	19.0	546
RE-2Y(St)H 16T1.0	16x3x1.0	0.4	1.3	21.7	720
RE-2Y(St)H 20T1.0	20x3x1.0	0.4	1.4	24.1	884
RE-2Y(St)H 24T1.0	24x3x1.0	0.4	1.4	26.1	1053
1.3mm ² , Multitriples					
RE-2Y(St)H 2T1.3	2x3x1.3	0.45	1.0	11.5	175
RE-2Y(St)H 4T1.3	4x3x1.3	0.45	1.1	13.4	252
RE-2Y(St)H 5T1.3	5x3x1.3	0.45	1.1	14.8	319
RE-2Y(St)H 6T1.3	6x3x1.3	0.45	1.2	16.9	388
RE-2Y(St)H 8T1.3	8x3x1.3	0.45	1.2	18.1	476
RE-2Y(St)H 10T1.3	10x3x1.3	0.45	1.3	20.7	591
RE-2Y(St)H 12T1.3	12x3x1.3	0.45	1.3	21.4	697
RE-2Y(St)H 16T1.3	16x3x1.3	0.45	1.4	24.4	921
RE-2Y(St)H 20T1.3	20x3x1.3	0.45	1.5	27.1	1128
RE-2Y(St)H 24T1.3	24x3x1.3	0.45	1.6	29.6	1341
1.5mm ² , Multitriples					
RE-2Y(St)H 2T1.5	2x3x1.5	0.45	1.0	11.9	192
RE-2Y(St)H 4T1.5	4x3x1.5	0.45	1.1	14.0	288
RE-2Y(St)H 5T1.5	5x3x1.5	0.45	1.1	15.4	356
RE-2Y(St)H 6T1.5	6x3x1.5	0.45	1.2	17.6	433
RE-2Y(St)H 8T1.5	8x3x1.5	0.45	1.3	19.1	543
RE-2Y(St)H 10T1.5	10x3x1.5	0.45	1.3	21.6	675
RE-2Y(St)H 12T1.5	12x3x1.5	0.45	1.4	22.5	782
RE-2Y(St)H 16T1.5	16x3x1.5	0.45	1.5	25.7	1035
RE-2Y(St)H 20T1.5	20x3x1.5	0.45	1.6	28.6	1271

Caledonian Cable Code	RE-2Y(St)H				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 24T1.5	24x3x1.5	0.45	1.7	31.1	1514

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



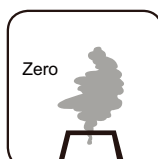
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

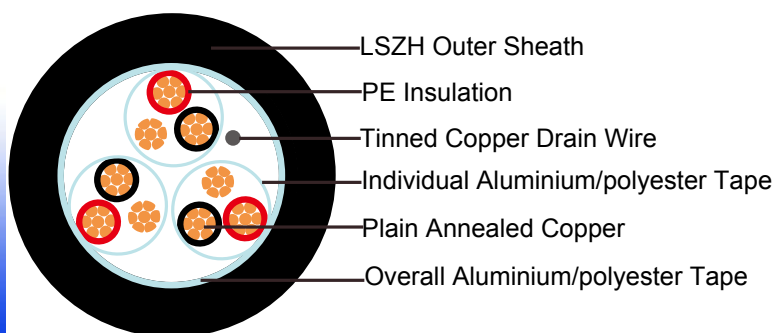


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, Individual & Overall Screened Instrumentation Cables (Multitriples)

RE-2Y(St)H-TiMF 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petr°Chemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet l°Cations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*

Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Triple: Three conductors twisted to form a triple

****TiMF Construction:** Polyester tape above the triple, AL-PES tape over solid tinned copper drain wire, 0.60 mm

Lay-up: TiMF laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black / White / Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				



Inductance		mH/km(Max.)	1	1	1	1	1
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

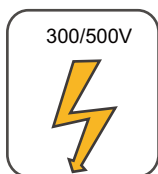
Caledonian Cable Code	RE-2Y(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multitriples					
RE-2Y(St)H-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	104
RE-2Y(St)H-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	156
RE-2Y(St)H-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	183
RE-2Y(St)H-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	236
RE-2Y(St)H-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	288
RE-2Y(St)H-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	350
RE-2Y(St)H-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	386
RE-2Y(St)H-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	506
RE-2Y(St)H-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	619
RE-2Y(St)H-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	752
0.75mm ² , Multitriples					
RE-2Y(St)H-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	125
RE-2Y(St)H-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	187
RE-2Y(St)H-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	238
RE-2Y(St)H-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	281
RE-2Y(St)H-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	364
RE-2Y(St)H-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	448
RE-2Y(St)H-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	497
RE-2Y(St)H-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	655
RE-2Y(St)H-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	802
RE-2Y(St)H-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	970

Caledonian Cable Code	RE-2Y(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
1.0mm ² , Multitriples					
RE-2Y(St)H-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	154
RE-2Y(St)H-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	228
RE-2Y(St)H-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	287
RE-2Y(St)H-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	350
RE-2Y(St)H-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	445
RE-2Y(St)H-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	547
RE-2Y(St)H-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	624
RE-2Y(St)H-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	822
RE-2Y(St)H-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1005
RE-2Y(St)H-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1212
1.3mm ² , Multitriples					
RE-2Y(St)H-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	186
RE-2Y(St)H-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	284
RE-2Y(St)H-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	358
RE-2Y(St)H-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	427
RE-2Y(St)H-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	551
RE-2Y(St)H-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	684
RE-2Y(St)H-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	769
RE-2Y(St)H-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1025
RE-2Y(St)H-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1256
RE-2Y(St)H-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1516
1.5mm ² , Multitriples					
RE-2Y(St)H-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	199
RE-2Y(St)H-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	322
RE-2Y(St)H-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	397
RE-2Y(St)H-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	484
RE-2Y(St)H-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	616
RE-2Y(St)H-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	768



Caledonian Cable Code	RE-2Y(St)H-TiMF				
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	870
RE-2Y(St)H-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1144
RE-2Y(St)H-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1404
RE-2Y(St)H-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1698

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



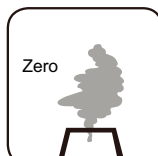
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

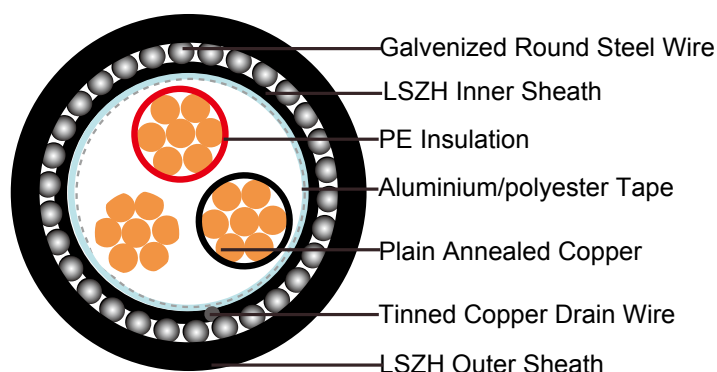


Zero

Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Single Triple)

RE-2Y(St)HSAWAH 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*



No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black / White / Red, continuously numbered on white core(1, 2..)for multitriples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

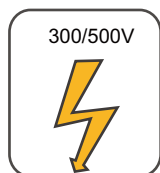
Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				

L / R (ratio) (max.)		$\mu\text{H}/\Omega$	25	25	25	40	40
Inductance		mH/km(Max.)	1	1	1	1	1
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAWAH 1T0.5	1x3x0.50	0.35	0.8	5.4	0.9	1.3	9.8	200
RE-2Y(St)HSAWAH 1T0.75	1x3x0.75	0.38	0.9	6.1	0.9	1.3	10.5	220
RE-2Y(St)HSAWAH 1T1.0	1x3x1.0	0.4	0.9	6.6	0.9	1.3	11.0	244
RE-2Y(St)HSAWAH 1T1.3	1x3x1.3	0.45	0.9	7.2	0.9	1.3	11.6	268
RE-2Y(St)HSAWAH 1T1.5	1x3x1.5	0.45	0.9	7.5	0.9	1.3	11.9	277

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



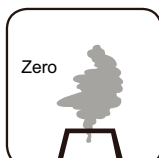
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

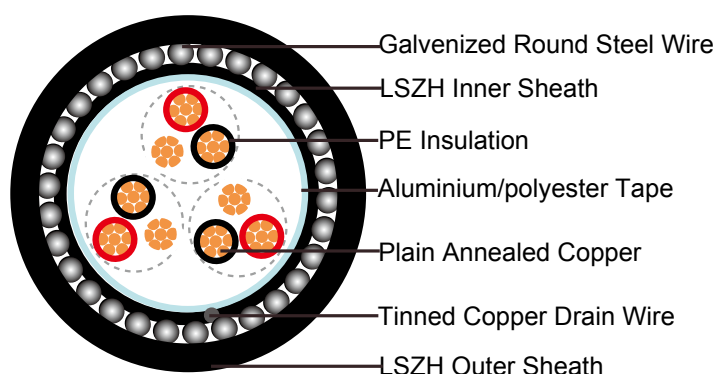


Zero
Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Multitriples)

RE-2Y(St)HSAWAH 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*

No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black / White / Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				



L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Inductance		mH/km(Max.)	1				
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

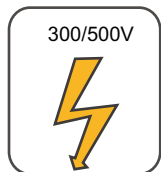
Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multitriples								
RE-2Y(St)HSAWAH 2T0.5	2x3x0.5	0.35	0.9	8.4	0.9	1.4	13.0	326
RE-2Y(St)HSAWAH 4T0.5	4x3x0.5	0.35	1.0	9.8	0.9	1.4	14.4	386
RE-2Y(St)HSAWAH 5T0.5	5x3x0.5	0.35	1.0	10.8	0.9	1.4	15.4	454
RE-2Y(St)HSAWAH 6T0.5	6x3x0.5	0.35	1.0	12.1	0.9	1.4	16.7	513
RE-2Y(St)HSAWAH 8T0.5	8x3x0.5	0.35	1.1	13.1	0.9	1.5	17.9	571
RE-2Y(St)HSAWAH 10T0.5	10x3x0.5	0.35	1.1	14.7	0.9	1.5	19.5	677
RE-2Y(St)HSAWAH 12T0.5	12x3x0.5	0.35	1.1	15.2	0.9	1.5	20.0	845
RE-2Y(St)HSAWAH 16T0.5	16x3x0.5	0.35	1.2	17.4	0.9	1.6	22.4	1031
RE-2Y(St)HSAWAH 20T0.5	20x3x0.5	0.35	1.2	19.1	1.25	1.6	24.8	1179
RE-2Y(St)HSAWAH 24T0.5	24x3x0.5	0.35	1.3	20.9	1.25	1.7	26.8	1330
0.75mm ² , Multitriples								
RE-2Y(St)HSAWAH 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4	13.9	370
RE-2Y(St)HSAWAH 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.4	15.5	462
RE-2Y(St)HSAWAH 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.4	16.6	526
RE-2Y(St)HSAWAH 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5	18.5	615
RE-2Y(St)HSAWAH 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.5	19.5	698
RE-2Y(St)HSAWAH 10T0.75	10x3x0.75	0.38	1.3	19.0	0.9	1.5	21.5	947
RE-2Y(St)HSAWAH 12T0.75	12x3x0.75	0.38	1.3	19.7	0.9	1.7	22.3	1029
RE-2Y(St)HSAWAH 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.6	25.4	1240

Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAWAH 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.7	27.6	1446
RE-2Y(St)HSAWAH 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.7	29.6	1632
1.0mm ² , Multitriples								
RE-2Y(St)HSAWAH 2T1.0	2x3x1	0.4	1.0	11.5	0.9	1.4	15.0	412
RE-2Y(St)HSAWAH 4T1.0	4x3x1	0.4	1.1	13.4	0.9	1.4	16.5	529
RE-2Y(St)HSAWAH 5T1.0	5x3x1	0.4	1.1	14.8	0.9	1.5	18.0	620
RE-2Y(St)HSAWAH 6T1.0	6x3x1	0.4	1.2	16.9	0.9	1.5	19.8	830
RE-2Y(St)HSAWAH 8T1.0	8x3x1	0.4	1.2	18.1	0.9	1.5	20.9	946
RE-2Y(St)HSAWAH 10T1.0	10x3x1	0.4	1.3	20.7	0.9	1.6	24.1	1105
RE-2Y(St)HSAWAH 12T1.0	12x3x1	0.4	1.3	21.4	1.25	1.6	24.7	1215
RE-2Y(St)HSAWAH 16T1.0	16x3x1	0.4	1.4	24.4	1.25	1.7	27.6	1482
RE-2Y(St)HSAWAH 20T1.0	20x3x1	0.4	1.5	27.1	1.25	1.7	30.0	1740
RE-2Y(St)HSAWAH 24T1.0	24x3x1	0.4	1.6	29.6	1.25	1.8	32.2	2202
1.3mm ² , Multitriples								
RE-2Y(St)HSAWAH 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.4	16.1	463
RE-2Y(St)HSAWAH 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5	18.2	621
RE-2Y(St)HSAWAH 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.5	19.6	721
RE-2Y(St)HSAWAH 6T1.3	6x3x1.3	0.45	1.3	18.8	0.9	1.5	21.7	979
RE-2Y(St)HSAWAH 8T1.3	8x3x1.3	0.45	1.3	20.1	0.9	1.6	23.8	1105
RE-2Y(St)HSAWAH 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.7	26.6	1322
RE-2Y(St)HSAWAH 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.7	27.3	1456
RE-2Y(St)HSAWAH 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.8	30.5	1788
RE-2Y(St)HSAWAH 20T1.3	20x3x1.3	0.45	1.7	30.4	1.25	1.8	33.2	2327
RE-2Y(St)HSAWAH 24T1.3	24x3x1.3	0.45	1.8	33.1	1.60	1.9	36.6	2637
1.5mm ² , Multitriples								
RE-2Y(St)HSAWAH 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.4	16.5	518
RE-2Y(St)HSAWAH 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5	18.8	674
RE-2Y(St)HSAWAH 5T1.5	5x3x1.5	0.45	1.2	17.1	0.9	1.5	20.2	869



Caledonian Cable Code	RE-2Y(St)HSAH							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH 6T1.5	6x3x1.5	0.45	1.3	19.5	0.9	1.6	22.6	1049
RE-2Y(St)HSAH 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.6	24.8	1210
RE-2Y(St)HSAH 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.7	27.5	1435
RE-2Y(St)HSAH 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.7	28.4	1569
RE-2Y(St)HSAH 16T1.5	16x3x1.5	0.45	1.6	28.4	1.25	1.8	31.8	2162
RE-2Y(St)HSAH 20T1.5	20x3x1.5	0.45	1.7	31.6	1.25	1.9	34.9	2515
RE-2Y(St)HSAH 24T1.5	24x3x1.5	0.45	1.8	34.4	1.60	2.0	38.3	2879

Note : Other conductor sizes & core configurations are available upon request.



300/500V

Rated Voltage



EN 50288-7

Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



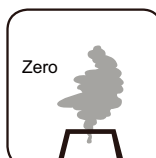
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

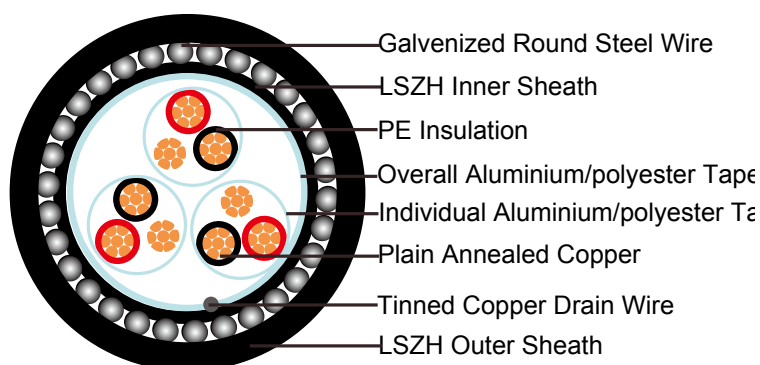


Zero

Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed, Individual & Overall Screened, Armoured Instrumentation Cables (Multitriples)

RE-2Y(St)HSAH-TiMF 70°C / 300 V



APPLICATION:

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are recommended for direct burial. They are for indoor and outdoor installation, in dry and wet locations; on racks, trays, in conduits.

STANDARDS

Basic design to EN50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4



Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²

Inner sheath: HFFR compound, EN 50290-2-27

Armour: Galvanized round steel wire, EN 10257-1

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black / White / Red, continuously numbered on white core(1, 2..)for multitruples.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3

Insulation resistance (20°C)		MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)		pF/m(Max.)	250				
Inductance		mH/km(Max.)	1				
Capacitance unbalance(1 kHz)		pF/500 m (Max.)	500				
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

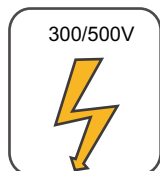
Caledonian Cable Code	RE-2Y(St)HSAWAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multitriples								
RE-2Y(St)HSAWAH-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	0.9	1.4	14.3	363
RE-2Y(St)HSAWAH-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	0.9	1.4	15.7	456
RE-2Y(St)HSAWAH-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	0.9	1.5	17.2	517
RE-2Y(St)HSAWAH-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	0.9	1.5	18.8	612
RE-2Y(St)HSAWAH-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	0.9	1.5	19.7	800
RE-2Y(St)HSAWAH-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	1.25	1.6	22.7	951
RE-2Y(St)HSAWAH-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	1.25	1.6	23.3	978
RE-2Y(St)HSAWAH-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	1.25	1.7	26.0	1201
RE-2Y(St)HSAWAH-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	1.25	1.7	28.2	1394
RE-2Y(St)HSAWAH-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	1.25	1.8	30.5	1607
0.75mm ² , Multitriples								
RE-2Y(St)HSAWAH-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4	15.2	418
RE-2Y(St)HSAWAH-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.5	17.2	521
RE-2Y(St)HSAWAH-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.5	18.5	608
RE-2Y(St)HSAWAH-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5	20.2	820



Caledonian Cable Code	RE-2Y(St)HSAWAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAWAH-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.6	21.7	942
RE-2Y(St)HSAWAH-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	1.25	1.6	24.7	1104
RE-2Y(St)HSAWAH-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	1.25	1.7	25.6	1178
RE-2Y(St)HSAWAH-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.7	28.4	1441
RE-2Y(St)HSAWAH-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.8	31.0	1888
RE-2Y(St)HSAWAH-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.9	33.5	2168
1.0mm ² , Multitriples								
RE-2Y(St)HSAWAH-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4	16.1	472
RE-2Y(St)HSAWAH-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.5	18.2	597
RE-2Y(St)HSAWAH-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5	19.6	689
RE-2Y(St)HSAWAH-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5	21.7	940
RE-2Y(St)HSAWAH-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	1.25	1.6	23.8	1035
RE-2Y(St)HSAWAH-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	1.25	1.7	26.6	1279
RE-2Y(St)HSAWAH-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.7	27.3	1383
RE-2Y(St)HSAWAH-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7	30.3	1689
RE-2Y(St)HSAWAH-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.8	33.2	2204
RE-2Y(St)HSAWAH-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1.6	1.9	36.6	2509
1.3mm ² , Multitriples								
RE-2Y(St)HSAWAH-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.5	17.6	532
RE-2Y(St)HSAWAH-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5	19.5	685
RE-2Y(St)HSAWAH-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.6	21.5	925
RE-2Y(St)HSAWAH-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	1.25	1.6	24.5	1090
RE-2Y(St)HSAWAH-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	1.25	1.7	26.0	1250
RE-2Y(St)HSAWAH-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.8	29.1	1484
RE-2Y(St)HSAWAH-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.8	30.1	1595
RE-2Y(St)HSAWAH-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.9	33.7	2225
RE-2Y(St)HSAWAH-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1.6	2.0	37.6	2596
RE-2Y(St)HSAWAH-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1.6	2.0	40.3	2962

Caledonian Cable Code	RE-2Y(St)HSAH-TiMF							
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x3xmm ²	mm	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.5	18.0	561
RE-2Y(St)HSAH-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5	20.2	818
RE-2Y(St)HSAH-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	1.25	1.6	22.8	999
RE-2Y(St)HSAH-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	1.25	1.6	25.2	1164
RE-2Y(St)HSAH-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.7	27.0	1354
RE-2Y(St)HSAH-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.8	30.2	1596
RE-2Y(St)HSAH-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.8	31.0	1953
RE-2Y(St)HSAH-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1.6	1.9	35.4	2388
RE-2Y(St)HSAH-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1.6	2.0	38.8	2800
RE-2Y(St)HSAH-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1.6	2.1	41.8	3100

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



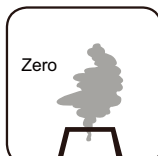
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

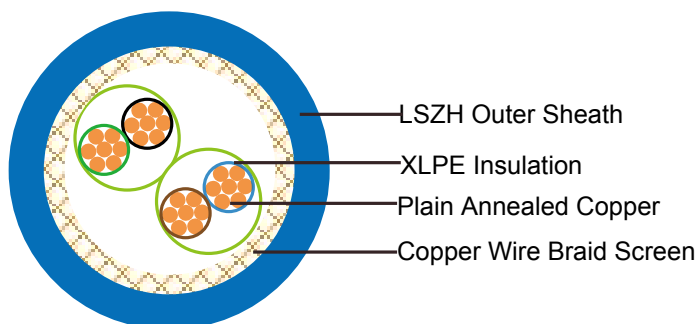


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, CWB Screened Instrumentation Cables (Single Pair)

RE-2Y(C)H 90°C / 300V



APPLICATION

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petr°Chemistry industry plants, power plants, natural gas and petroluem plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet l°Cations; on racks, trays, in conduits.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*

Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation, *** denotes optional.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Tinned copper wire braid

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	300				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40

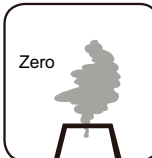


Operating voltage Urms		V	300
Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

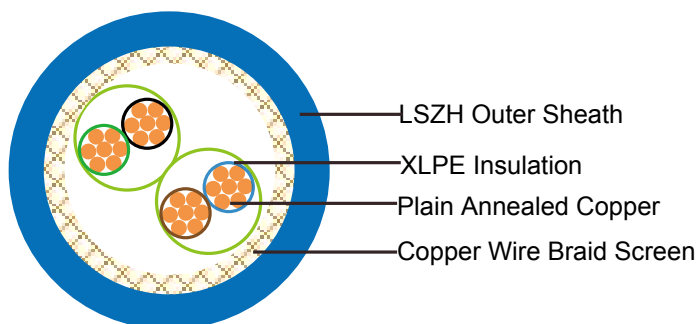
Caledonian Cable Code	RE-2Y(C)H		
	No. of Pairs x2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
RE-2Y(C)H 1P0.5	1x2x0.50	8.3	110
RE-2Y(C)H 1P0.75	1x2x0.75	8.7	119
RE-2Y(C)H 1P1.0	1x2x1.0	9.4	135
RE-2Y(C)H 1P1.3	1x2x1.3	9.7	140

Note : Other conductor sizes & core configurations are available upon request.

 300/500V Rated Voltage	 EN 50288-7 Standard	 Flame Retardancy NF C32-070-2.1(C2) IEC60332-1-2/EN50265-2-1	 Reduced Fire Propagation NF C32-070-2.2(C1) IEC60332-3-24 EN50266-2-4
 Low Toxicity NES 02-713/NF C 20-454	 Low Corrosivity IEC60754-2 EN50267-2-2/3 NF C 32-074	 Low Smoke Emission IEC 61034-1&2 EN 50268-1&2/NF C32-073	 Zero Halogen Free IEC60754-1 EN50267-2-1

PE Insulated, LSZH Sheathed, CWB Screened Instrumentation Cables (Multipair)

RE-2Y(C)H 90°C / 300V



APPLICATION

These cables are used for transmission of analogue and digital signals in instrument and control systems at chemistry and petr°Chemistry industry plants, power plants, natural gas and petroluem plants, etc...

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. They are for indoor and outdoor installation, in dry and wet l°Cations; on racks, trays, in conduits.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*



No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pair: Two conductors twisted to form a pair

Lay-up: Pairs laid up in layers of optimum pitch

Separator: Polyester tape

Overall Screen: Tinned copper wire braid

Outer Sheath: Thermoplastic LSZH compound type to EN 50290-2-27.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +70°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300	300	300	300	300

Test Voltage	Core to Core	V	1500	1500	1500	1500	1500
	Core to Screen	V	1500	1500	1500	1500	1500

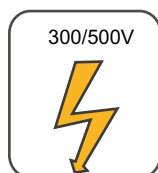
CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(C)H		
	No. of Pairsx2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
0.5mm ² , Multipair			
RE-2Y(C)H 1P0.5	1x2x0.50	8.3	110
RE-2Y(C)H 2P0.5	2x2x0.50	10.7	143
RE-2Y(C)H 3P0.5	3x2x0.50	11.1	158
RE-2Y(C)H 4P0.5	4x2x0.50	11.9	181
RE-2Y(C)H 6P0.5	6x2x0.50	13.6	230
RE-2Y(C)H 8P0.5	8x2x0.50	14.2	264
RE-2Y(C)H 12P0.5	12x2x0.50	16.4	343
RE-2Y(C)H 16P0.5	16x2x0.50	18.2	418
RE-2Y(C)H 20P0.5	20x2x0.50	19.7	487
RE-2Y(C)H 24P0.5	24x2x0.50	21.1	557
0.75mm ² , Multipair			
RE-2Y(C)H 1P0.75	1x2x0.75	8.7	119
RE-2Y(C)H 2P0.75	2x2x0.75	11.4	161
RE-2Y(C)H 3P0.75	3x2x0.75	11.9	185
RE-2Y(C)H 4P0.75	4x2x0.75	12.7	214
RE-2Y(C)H 6P0.75	6x2x0.75	14.6	278
RE-2Y(C)H 8P0.75	8x2x0.75	15.4	324
RE-2Y(C)H 12P0.75	12x2x0.75	17.8	427
RE-2Y(C)H 16P0.75	16x2x0.75	19.8	526
RE-2Y(C)H 20P0.75	20.x2x0.75	21.5	623
RE-2Y(C)H 24P0.75	24x2x0.75	23.1	714
1.0mm ² , Multipair			
RE-2Y(C)H 1P1.0	1x2x1.0	9.4	13.5
RE-2Y(C)H 2P1.0	2x2x1.0	12.3	184
RE-2Y(C)H 3P1.0	3x2x1.0	12.8	214
RE-2Y(C)H 4P1.0	4x2x1.0	13.7	251



Caledonian Cable Code	RE-2Y(C)H		
	No. of Pairsx2xCross Section	Copper Weight	Approx. Weight
	No.x2xmm ²	Kg/km	Kg/km
RE-2Y(C)H 6P1.0	6x2x1.0	15.6	326
RE-2Y(C)H 8P1.0	8x2x1.0	16.4	382
RE-2Y(C)H 12P1.0	12x2x1.0	19.0	511
RE-2Y(C)H 16P1.0	16x2x1.0	21.2	636
RE-2Y(C)H 20P1.0	20x2x1.0	23.5	775
RE-2Y(C)H 24P1.0	24x2x1.0	25.3	892
1.3mm ² , Multipair			
RE-2Y(C)H 1P1.3	1x2x1.3	9.7	140
RE-2Y(C)H 2P1.3	2x2x1.3	12.9	204
RE-2Y(C)H 3P1.3	3x2x1.3	13.5	242
RE-2Y(C)H 4P1.3	4x2x1.3	14.5	285
RE-2Y(C)H 6P1.3	6x2x1.3	16.7	375
RE-2Y(C)H 8P1.3	8x2x1.3	17.4	444
RE-2Y(C)H 12P1.3	12x2x1.3	20.2	599
RE-2Y(C)H 16P1.3	16x2x1.3	22.6	750
RE-2Y(C)H 20P1.3	20x2x1.3	25.1	916
RE-2Y(C)H 24P1.3	24x2x1.3	27.0	1064

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



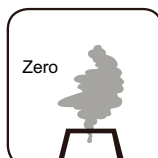
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



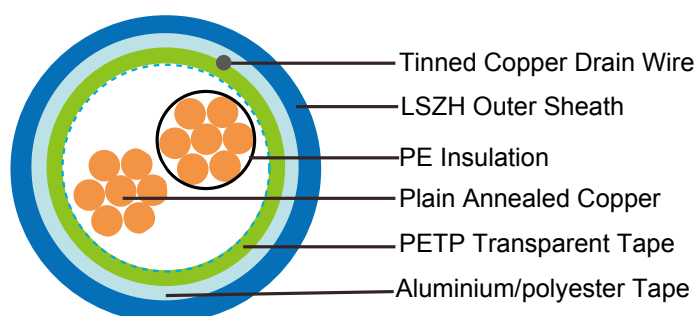
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Single Pair)

RE-2Y(St)H 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**



Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -20°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)H				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 1P0.5	1x2x0.50	0.35	0.8	5.2	38
RE-2Y(St)H 1P0.75	1x2x0.75	0.38	0.8	5.6	49
RE-2Y(St)H 1P1.0	1x2x1.0	0.40	0.9	6.3	56
RE-2Y(St)H 1P1.3	1x2x1.3	0.45	0.9	6.8	65
RE-2Y(St)H 1P1.5	1x2x1.5	0.45	0.9	7.1	74

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



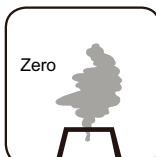
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

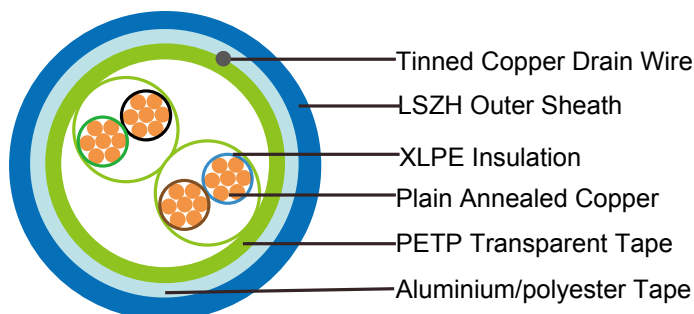


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multipair)

RE-2Y(St)H 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				
Test Voltage	Core to Core	1500				
	Core to Screen	1500				



CONSTRUCTION PARAMETERS

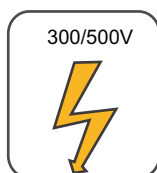
Caledonian Cable Code	RE-2Y(St)H				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multipair					
RE-2Y(St)H 2P0.5	2x2x0.5	0.35	0.9	7.6	66
RE-2Y(St)H 4P0.5	4x2x0.5	0.35	0.9	8.8	98
RE-2Y(St)H 5P0.5	5x2x0.5	0.35	1.0	9.8	118
RE-2Y(St)H 6P0.5	6x2x0.5	0.35	1.0	10.6	138
RE-2Y(St)H 8P0.5	8x2x0.5	0.35	1.0	11.3	160
RE-2Y(St)H 10P0.5	10x2x0.5	0.35	1.1	12.9	201
RE-2Y(St)H 12P0.5	12x2x0.5	0.35	1.1	13.5	236
RE-2Y(St)H 16P0.5	16x2x0.5	0.35	1.1	15.2	300
RE-2Y(St)H 20P0.5	20x2x0.5	0.35	1.2	16.9	367
RE-2Y(St)H 24P0.5	24x2x0.5	0.35	1.2	18.3	419
0.75mm ² , Multipair					
RE-2Y(St)H 2P0.75	2x2x0.75	0.38	0.9	8.5	87
RE-2Y(St)H 4P0.75	4x2x0.75	0.38	1.0	10.0	123
RE-2Y(St)H 5P0.75	5x2x0.75	0.38	1.0	10.9	150
RE-2Y(St)H 6P0.75	6x2x0.75	0.38	1.0	11.8	175
RE-2Y(St)H 8P0.75	8x2x0.75	0.38	1.1	12.8	220
RE-2Y(St)H 10P0.75	10x2x0.75	0.38	1.1	14.5	267
RE-2Y(St)H 12P0.75	12x2x0.75	0.38	1.1	15.1	298
RE-2Y(St)H 16P0.75	16x2x0.75	0.38	1.2	17.3	409
RE-2Y(St)H 20P0.75	20x2x0.75	0.38	1.3	19.2	480
RE-2Y(St)H 24P0.75	24x2x0.75	0.38	1.3	20.8	561
1.0mm ² , Multipair					
RE-2Y(St)H 2P1.0	2x2x1.0	0.4	0.9	9.2	102
RE-2Y(St)H 4P1.0	4x2x1.0	0.4	1.0	10.9	156

Caledonian Cable Code	RE-2Y(St)H				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 5P1.0	5x2x1.0	0.4	1.0	11.9	183
RE-2Y(St)H 6P1.0	6x2x1.0	0.4	1.0	13.0	224
RE-2Y(St)H 8P1.0	8x2x1.0	0.4	1.1	14.0	273
RE-2Y(St)H 10P1.0	10x2x1.0	0.4	1.1	15.9	324
RE-2Y(St)H 12P1.0	12x2x1.0	0.4	1.2	16.8	383
RE-2Y(St)H 16P1.0	16x2x1.0	0.4	1.2	19.0	513
RE-2Y(St)H 20P1.0	20x2x1.0	0.4	1.3	21.1	619
RE-2Y(St)H 24P1.0	24x2x1.0	0.4	1.4	23.1	738
1.3mm ² , Multipair					
RE-2Y(St)H 2P1.3	2x2x1.3	0.45	1.0	10.4	122
RE-2Y(St)H 4P1.3	4x2x1.3	0.45	1.0	12.0	190
RE-2Y(St)H 5P1.3	5x2x1.3	0.45	1.1	13.4	233
RE-2Y(St)H 6P1.3	6x2x1.3	0.45	1.1	14.6	273
RE-2Y(St)H 8P1.3	8x2x1.3	0.45	1.2	15.7	330
RE-2Y(St)H 10P1.3	10x2x1.3	0.45	1.2	17.9	422
RE-2Y(St)H 12P1.3	12x2x1.3	0.45	1.3	18.9	487
RE-2Y(St)H 16P1.3	16x2x1.3	0.45	1.3	21.4	678
RE-2Y(St)H 20P1.3	20x2x1.3	0.45	1.4	23.8	790
RE-2Y(St)H 24P1.3	24x2x1.3	0.45	1.5	25.9	921
1.5mm ² , Multipair					
RE-2Y(St)H 2P1.5	2x2x1.5	0.45	1.0	10.8	139
RE-2Y(St)H 4P1.5	4x2x1.5	0.45	1.1	12.7	212
RE-2Y(St)H 5P1.5	5x2x1.5	0.45	1.1	14.0	259
RE-2Y(St)H 6P1.5	6x2x1.5	0.45	1.2	15.2	312
RE-2Y(St)H 8P1.5	8x2x1.5	0.45	1.2	16.4	378
RE-2Y(St)H 10P1.5	10x2x1.5	0.45	1.3	18.8	473
RE-2Y(St)H 12P1.5	12x2x1.5	0.45	1.3	19.7	548



Caledonian Cable Code	RE-2Y(St)H				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H 16P1.5	16x2x1.5	0.45	1.4	22.5	727
RE-2Y(St)H 20P1.5	20x2x1.5	0.45	1.5	25.0	903
RE-2Y(St)H 24P1.5	24x2x1.5	0.45	1.5	27.1	1051

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



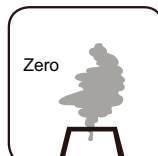
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



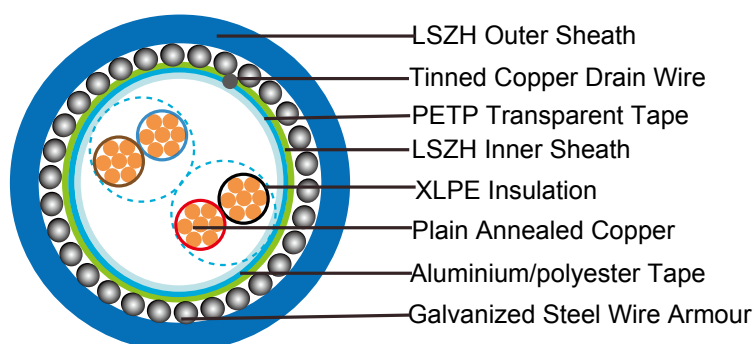
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed & Overall Screened, Armoured Instrumentation Cables (Single Pair)

RE-2Y(St)HSAWAH 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200



Oil Resistance	ICEA S-73-532**
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Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH compound

Armouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -5°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				

Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)HSAH							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH 1P0.5	1x2x0.50	0.35	0.8	5.2	0.9	1.3	9.6	177
RE-2Y(St)HSAH 1P0.75	1x2x0.75	0.38	0.8	5.6	0.9	1.3	10.0	199
RE-2Y(St)HSAH 1P1.0	1x2x1.0	0.40	0.9	6.3	0.9	1.3	10.7	219
RE-2Y(St)HSAH 1P1.3	1x2x1.3	0.45	0.9	6.8	0.9	1.3	11.2	241
RE-2Y(St)HSAH 1P1.5	1x2x1.5	0.45	0.9	7.1	0.9	1.3	11.5	255

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



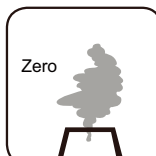
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

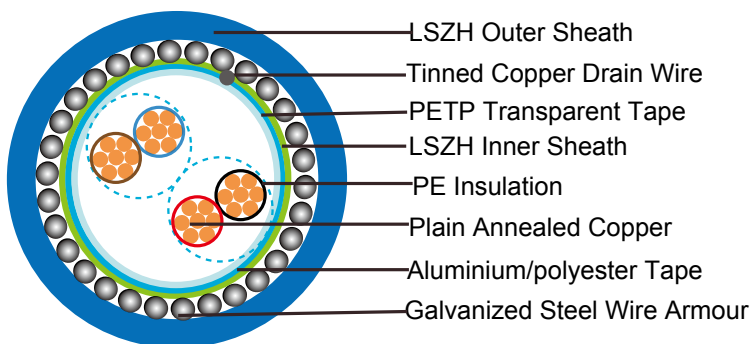


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, Overall Screened & Armoured Instrumentation Cables (Multipair)

RE-2Y(St)HSAW 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200

Oil Resistance	ICEA S-73-532**
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Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH(Low Smoke Zero Halogen) sheath

Armouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -20°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40



Operating voltage Urms		V	300
Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multipair								
RE-2Y(St)HSAWAH 2P0.5	2x2x0.5	0.35	0.9	7.6	0.9	1.3	12.0	262
RE-2Y(St)HSAWAH 4P0.5	4x2x0.5	0.35	0.9	8.8	0.9	1.4	13.4	325
RE-2Y(St)HSAWAH 5P0.5	5x2x0.5	0.35	1.0	9.8	0.9	1.4	14.4	375
RE-2Y(St)HSAWAH 6P0.5	6x2x0.5	0.35	1.0	10.6	0.9	1.4	15.2	411
RE-2Y(St)HSAWAH 8P0.5	8x2x0.5	0.35	1.0	11.3	0.9	1.4	15.9	473
RE-2Y(St)HSAWAH 10P0.5	10x2x0.5	0.35	1.1	12.9	0.9	1.5	17.7	537
RE-2Y(St)HSAWAH 12P0.5	12x2x0.5	0.35	1.1	13.5	0.9	1.5	18.3	576
RE-2Y(St)HSAWAH 16P0.5	16x2x0.5	0.35	1.1	15.2	0.9	1.5	20.0	824
RE-2Y(St)HSAWAH 20P0.5	20x2x0.5	0.35	1.2	16.9	0.9	1.6	21.9	949
RE-2Y(St)HSAWAH 24P0.5	24x2x0.5	0.35	1.2	18.3	1.25	1.6	24.0	1030
0.75mm ² , Multipair								
RE-2Y(St)HSAWAH 2P0.75	2x2x0.75	0.38	0.9	8.5	0.9	1.4	13.1	308
RE-2Y(St)HSAWAH 4P0.75	4x2x0.75	0.38	1.0	10.0	0.9	1.4	14.6	383
RE-2Y(St)HSAWAH 5P0.75	5x2x0.75	0.38	1.0	10.9	0.9	1.4	15.5	448
RE-2Y(St)HSAWAH 6P0.75	6x2x0.75	0.38	1.0	11.8	0.9	1.4	16.4	482
RE-2Y(St)HSAWAH 8P0.75	8x2x0.75	0.38	1.1	12.8	0.9	1.5	17.6	534
RE-2Y(St)HSAWAH 10P0.75	10x2x0.75	0.38	1.1	14.5	0.9	1.5	19.3	654
RE-2Y(St)HSAWAH 12P0.75	12x2x0.75	0.38	1.1	15.1	0.9	1.5	19.9	826
RE-2Y(St)HSAWAH 16P0.75	16x2x0.75	0.38	1.2	17.3	0.9	1.6	22.3	967
RE-2Y(St)HSAWAH 20P0.75	20x2x0.75	0.38	1.3	19.2	1.25	1.6	24.9	1118

Caledonian Cable Code	RE-2Y(St)HSAWAH							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAWAH 24P0.75	24x2x0.75	0.38	1.3	20.8	1.25	1.6	26.7	1294
1.0mm ² , Multipair								
RE-2Y(St)HSAWAH 2P1.0	2x2x1.0	0.4	0.9	9.2	0.9	1.4	13.8	357
RE-2Y(St)HSAWAH 4P1.0	4x2x1.0	0.4	1.0	10.9	0.9	1.4	15.5	450
RE-2Y(St)HSAWAH 5P1.0	5x2x1.0	0.4	1.0	11.9	0.9	1.4	16.5	509
RE-2Y(St)HSAWAH 6P1.0	6x2x1.0	0.4	1.0	13.0	0.9	1.4	17.6	565
RE-2Y(St)HSAWAH 8P1.0	8x2x1.0	0.4	1.1	14.0	0.9	1.5	18.8	651
RE-2Y(St)HSAWAH 10P1.0	10x2x1.0	0.4	1.1	15.9	0.9	1.5	20.7	886
RE-2Y(St)HSAWAH 12P1.0	12x2x1.0	0.4	1.2	16.8	0.9	1.5	21.6	946
RE-2Y(St)HSAWAH 16P1.0	16x2x1.0	0.4	1.2	19.0	1.25	1.6	24.7	1173
RE-2Y(St)HSAWAH 20P1.0	20x2x1.0	0.4	1.3	21.1	1.25	1.7	27.0	1318
RE-2Y(St)HSAWAH 24P1.0	24x2x1.0	0.4	1.4	23.1	1.25	1.7	29.0	1488
1.3mm ² , Multipair								
RE-2Y(St)HSAWAH 2P1.3	2x2x1.3	0.45	1.0	10.4	0.9	1.4	15.0	405
RE-2Y(St)HSAWAH 4P1.3	4x2x1.3	0.45	1.0	12.0	0.9	1.4	16.6	511
RE-2Y(St)HSAWAH 5P1.3	5x2x1.3	0.45	1.1	13.4	0.9	1.5	18.2	595
RE-2Y(St)HSAWAH 6P1.3	6x2x1.3	0.45	1.1	14.6	0.9	1.5	19.4	673
RE-2Y(St)HSAWAH 8P1.3	8x2x1.3	0.45	1.2	15.7	0.9	1.5	20.5	870
RE-2Y(St)HSAWAH 10P1.3	10x2x1.3	0.45	1.2	17.9	0.9	1.6	23.6	1012
RE-2Y(St)HSAWAH 12P1.3	12x2x1.3	0.45	1.3	18.9	1.25	1.6	24.6	1143
RE-2Y(St)HSAWAH 16P1.3	16x2x1.3	0.45	1.3	21.4	1.25	1.7	27.3	1407
RE-2Y(St)HSAWAH 20P1.3	20x2x1.3	0.45	1.4	23.8	1.25	1.8	29.9	1601
RE-2Y(St)HSAWAH 24P1.3	24x2x1.3	0.45	1.5	25.9	1.25	1.8	32.0	2048
1.5mm ² , Multipair								
RE-2Y(St)HSAWAH 2P1.5	2x2x1.5	0.45	1.0	10.8	0.9	1.4	15.4	448
RE-2Y(St)HSAWAH 4P1.5	4x2x1.5	0.45	1.1	12.7	0.9	1.5	17.5	530
RE-2Y(St)HSAWAH 5P1.5	5x2x1.5	0.45	1.1	14.0	0.9	1.5	18.8	628
RE-2Y(St)HSAWAH 6P1.5	6x2x1.5	0.45	1.2	15.2	0.9	1.5	20.0	835
RE-2Y(St)HSAWAH 8P1.5	8x2x1.5	0.45	1.2	16.4	0.9	1.6	21.4	944



Caledonian Cable Code	RE-2Y(St)HSAH							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2Y(St)HSAH 10P1.5	10x2x1.5	0.45	1.3	18.8	1.25	1.6	24.5	1097
RE-2Y(St)HSAH 12P1.5	12x2x1.5	0.45	1.3	19.7	1.25	1.7	25.6	1230
RE-2Y(St)HSAH 16P1.5	16x2x1.5	0.45	1.4	22.5	1.25	1.7	28.4	1471
RE-2Y(St)HSAH 20P1.5	20x2x1.5	0.45	1.5	25.0	1.25	1.8	31.1	1971
RE-2Y(St)HSAH 24P1.5	24x2x1.5	0.45	1.5	27.1	1.25	1.8	33.2	2251

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



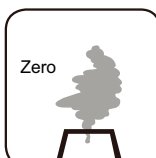
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



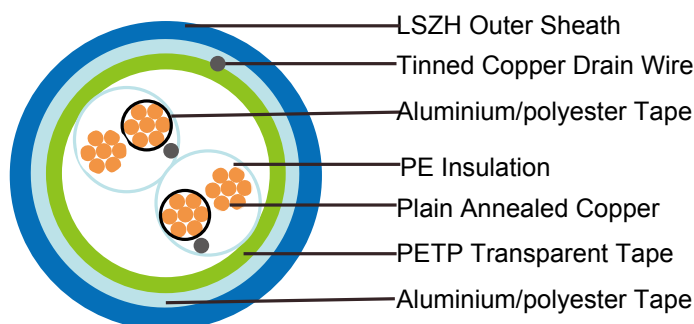
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed, Individual and Overall Screened Instrumentation Cables (Multipair)

RE-2Y(St)H PiMF 90°C / 300V



APPLICATION

The unarmoured LSZH sheathed cables are generally use for indoor installation and suitable for wet and damp areas. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of



tensile strength/min.60% of elongation.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Individual Screen: Aluminium/polyester tape is applied over each pair metallic side down in contact with tinned copper drain wire, 0.5mm²

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -20°C – +50°C

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size		mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)		mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)		Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)		MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)		pF/m(Max.)	250				
Inductance		mH/km (Max.)	1				
L / R (ratio) (max.)		μH/Ω	25	25	25	40	40
Operating voltage Urms		V	300				
Test Voltage	Core to Core	V	1500				
	Core to Screen	V	1500				

CONSTRUCTION PARAMETERS

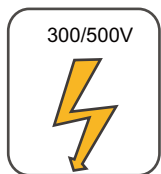
Caledonian Cable Code	RE-2Y(St)H PiMF				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
0.5mm ² , Multipair					
RE-2Y(St)H PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	84
RE-2Y(St)H PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	120
RE-2Y(St)H PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	145
RE-2Y(St)H PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	171
RE-2Y(St)H PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	212
RE-2Y(St)H PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	266
RE-2Y(St)H PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	287
RE-2Y(St)H PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	387
RE-2Y(St)H PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	463
RE-2Y(St)H PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	554
0.75mm ² , Multipair					
RE-2Y(St)H PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	101
RE-2Y(St)H PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	152
RE-2Y(St)H PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	177
RE-2Y(St)H PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	224
RE-2Y(St)H PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	269
RE-2Y(St)H PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	335
RE-2Y(St)H PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	376
RE-2Y(St)H PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	485
RE-2Y(St)H PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	589
RE-2Y(St)H PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	713
1.0mm ² , Multipair					
RE-2Y(St)H PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	117
RE-2Y(St)H PiMF 4P1.0	4x2x1.0	0.4	1.0	12.1	174
RE-2Y(St)H PiMF 5P1.0	5x2x1.0	0.4	1.1	13.5	220



Caledonian Cable Code	RE-2Y(St)H PiMF				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H PiMF 6P1.0	6x2x1.0	0.4	1.1	14.7	257
RE-2Y(St)H PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	324
RE-2Y(St)H PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	403
RE-2Y(St)H PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	456
RE-2Y(St)H PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	603
RE-2Y(St)H PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	721
RE-2Y(St)H PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	866
1.3mm ² , Multipair					
RE-2Y(St)H PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	143
RE-2Y(St)H PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	208
RE-2Y(St)H PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	271
RE-2Y(St)H PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	319
RE-2Y(St)H PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	407
RE-2Y(St)H PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	502
RE-2Y(St)H PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	554
RE-2Y(St)H PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	730
RE-2Y(St)H PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	912
RE-2Y(St)H PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1090
1.5mm ² , Multipair					
RE-2Y(St)H PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	158
RE-2Y(St)H PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	243
RE-2Y(St)H PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	290
RE-2Y(St)H PiMF 6P1.5	6x2x1.5	0.45	1.2	16.9	358
RE-2Y(St)H PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	447
RE-2Y(St)H PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	550
RE-2Y(St)H PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	625
RE-2Y(St)H PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	831

Caledonian Cable Code	RE-2Y(St)H PiMF				
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm	mm	mm	kg/km
RE-2Y(St)H PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1007
RE-2Y(St)H PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1223

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



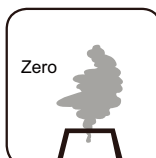
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

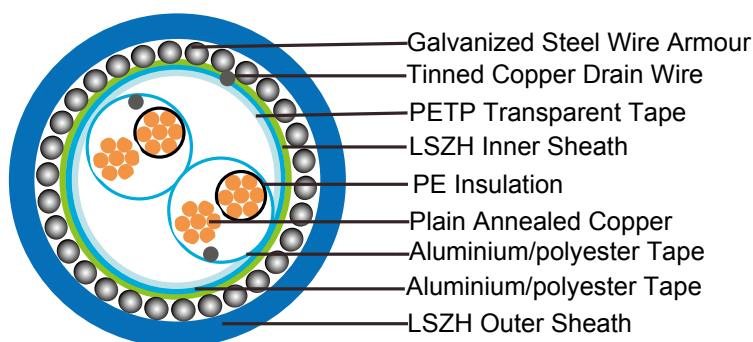


Halogen Free
IEC60754-1
EN50267-2-1



PE Insulated, LSZH Sheathed, Individual and Overall Screened & Armoured Instrumentation Cables (Multipair)

RE-2Y(St)HSAH PIMF 90°C / 300V



APPLICATION

The armoured LSZH sheathed cables are generally used when the risk of mechanical damage is increased. The galvanized steel wire armour provides excellent protection. Generally, the cables are used within industrial process manufacturing plants for communication, data and voice transmission signals and services. Also used for the interconnection of electrical equipment and instruments, the LSZH sheath can reduce toxic smoke and fume emission.

STANDARDS

Basic design to EN 50288-7

FIRE PERFORMANCE

Flame Retardance (Single Vertical Wire Test)	EN 60332-1-2; IEC 60332-1-2; BS EN 60332-1-2; VDE 0482-332-1; NBN C 30-004 (cat. F1); NF C32-070-2.1(C2); CEI 20-35/1-2; EN 50265-2-1*; DIN VDE 0482-265-2-1*
Reduced Fire Propagation (Vertically-mounted bundled wires & cable test)	EN 60332-3-24 (cat. C); IEC 60332-3-24; BS EN 60332-3-24; VDE 0482-332-3; NBN C 30-004 (cat. F2); NF C32-070-2.2(C1); CEI 20-22/3-4; EN 50266-2-4*; DIN VDE 0482-266-2-4
Halogen Free	IEC 60754-1; EN 50267-2-1; DIN VDE 0482-267-2-1; CEI 20-37/2-1 ; BS 6425-1*
No Corrosive Gas Emission	IEC 60754-2; EN 50267-2-2; DIN VDE 0482-267-2-2; CEI 20-37/2-2 ; BS 6425-2*
Minimum Smoke Emission	IEC 61034-1&2; EN 61034 -1&2; DIN VDE 0482-1034-1&2; CEI 20-37/3-1&2; EN 50268-1&2*; BS 7622-1&2*
No Toxic gases	NES 02-713; NF C 20-454
Sunlight Resistance	UL 1581 section 1200
Oil Resistance	ICEA S-73-532**

Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h. Retention: min 60% of tensile strength/min.60% of elongation.

VOLTAGE RATING

300/500V

CABLE CONSTRUCTION

Conductor: Annealed copper solid or plain copper stranded to IEC 60228 Class 2.

Insulation: PE compound, EN 50290. 2-23.

Pairs: Two insulated conductors uniformly twisted together with a lay not exceeding 100mm

Individual Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Binder tape: PETP transparent tape

Overall Screen: Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm²

Inner Sheath: LSZH(Low Smoke Zero Halogen) sheath

Armouring: Galvanized steel wire armour

Outer Sheath: Thermoplastic LSZH compound type LTS3 as per BS 7655-6.1 (Thermosetting LSZH compound type SW2-SW4 as per BS 7655-2.6 can be offered.). UV resistance, hydrocarbon resistance, oil resistance, anti rodent and anti termite properties can be offered as option.

COLOUR CODE

Insulation: Black / White, continuously numbered on white core(1, 2..)for multipair.

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

Temperature Range During Operation (Fixed State): -30°C – +90°C

Temperature Range During Installation (Mobile State): -20°C – +50°C

Minimum Bending Radius: 10 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.4	0.4	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	250				
Inductance	mH/km (Max.)	1				
L / R (ratio) (max.)	μH/Ω	25	25	25	40	40
Operating voltage Urms	V	300				



Test Voltage	Core to Core	V	1500
	Core to Screen	V	1500

CONSTRUCTION PARAMETERS

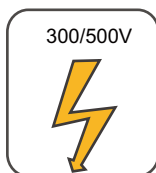
Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
0.5mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	0.9	1.4	13.3	311
RE-2X(St)HSAWAH PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	0.9	1.4	14.8	374
RE-2X(St)HSAWAH PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	0.9	1.4	15.8	451
RE-2X(St)HSAWAH PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	0.9	1.6	16.9	484
RE-2X(St)HSAWAH PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	0.9	1.6	17.9	563
RE-2X(St)HSAWAH PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	0.9	1.5	19.9	782
RE-2X(St)HSAWAH PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	0.9	1.5	20.5	804
RE-2X(St)HSAWAH PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	1.25	1.6	23.5	970
RE-2X(St)HSAWAH PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	1.25	1.7	25.6	1145
RE-2X(St)HSAWAH PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	1.25	1.7	27.4	1272
0.75mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	0.9	1.4	14.3	342
RE-2X(St)HSAWAH PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	0.9	1.4	15.8	439
RE-2X(St)HSAWAH PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	0.9	1.5	17.3	498
RE-2X(St)HSAWAH PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	0.9	1.5	18.4	565
RE-2X(St)HSAWAH PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	0.9	1.5	19.2	639
RE-2X(St)HSAWAH PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	1.25	1.6	22.3	878
RE-2X(St)HSAWAH PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	1.25	1.6	23.1	944
RE-2X(St)HSAWAH PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	1.25	1.7	25.7	1132
RE-2X(St)HSAWAH PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	1.25	1.7	27.9	1329
RE-2X(St)HSAWAH PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	1.25	1.8	30.1	1488

Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
1.0mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	0.9	1.4	15.0	377
RE-2X(St)HSAWAH PiMF 4P1.0	3x2x1.0	0.4	1.0	12.1	0.9	1.4	16.7	502
RE-2X(St)HSAWAH PiMF 5P1.0	4x2x1.0	0.4	1.1	13.5	0.9	1.5	18.3	567
RE-2X(St)HSAWAH PiMF 6P1.0	5x2x1.0	0.4	1.1	14.7	0.9	1.5	19.5	658
RE-2X(St)HSAWAH PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	0.9	1.5	20.6	865
RE-2X(St)HSAWAH PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	1.25	1.6	23.7	994
RE-2X(St)HSAWAH PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	1.25	1.7	24.7	1112
RE-2X(St)HSAWAH PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	1.25	1.7	27.4	1363
RE-2X(St)HSAWAH PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	1.25	1.7	29.8	1512
RE-2X(St)HSAWAH PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	1.25	1.8	32.2	1996
1.3mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	0.9	1.4	16.0	452
RE-2X(St)HSAWAH PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	0.9	1.5	18.2	577
RE-2X(St)HSAWAH PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	0.9	1.5	19.6	647
RE-2X(St)HSAWAH PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	0.9	1.6	21.3	858
RE-2X(St)HSAWAH PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	1.25	1.6	23.3	982
RE-2X(St)HSAWAH PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	1.25	1.7	25.9	1153
RE-2X(St)HSAWAH PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	1.25	1.7	27.0	1287
RE-2X(St)HSAWAH PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	1.25	1.8	30.2	1564
RE-2X(St)HSAWAH PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	1.25	1.9	33.1	1960
RE-2X(St)HSAWAH PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1.25	2.0	36.4	2356
1.5mm ² , Multipair								
RE-2X(St)HSAWAH PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	0.9	1.5	16.6	475
RE-2X(St)HSAWAH PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	0.9	1.5	18.7	616
RE-2X(St)HSAWAH PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	0.9	1.5	20.3	819
RE-2X(St)HSAWAH PiMF 6P1.5	6x2x1.5	0.45	1.2	16.9	1.25	1.6	22.6	941



Caledonian Cable Code	RE-2X(St)HSAWAH PiMF							
	No. of Pairsx2 xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness	Nominal Overall Diameter	Approx. Weight
	No.x2xmm ²	mm ²	mm	mm	mm	mm	mm	kg/km
RE-2X(St)HSAWAH PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	1.25	1.7	24.1	1039
RE-2X(St)HSAWAH PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	1.25	1.7	26.9	1242
RE-2X(St)HSAWAH PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	1.25	1.7	27.8	1387
RE-2X(St)HSAWAH PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	1.25	1.8	31.2	1935
RE-2X(St)HSAWAH PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1.25	1.9	34.8	2227
RE-2X(St)HSAWAH PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1.25	2.0	37.6	2545

Note : Other conductor sizes & core configurations are available upon request.



Rated Voltage



Standard



Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1



Reduced Fire Propagation
NF C32-070-2.2(C1)
IEC60332-3-24
EN50266-2-4



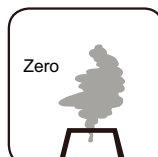
Low Toxicity
NES 02-713/NF C 20-454



Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074



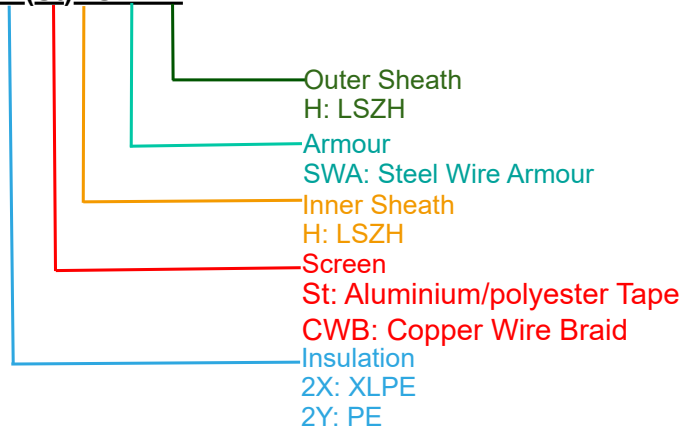
Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073



Halogen Free
IEC60754-1
EN50267-2-1

Type Codes For Fire Retardant Instrumentation Cables

RE-2X(St)HSAH





Technical Information

FLAME RETARDANCE IN ACCORDANCE WITH DIFFERENT STANDARDS

The following standards specify a method for flame propagation test for single core cables. The single cable sample undergoes the flame action of a bunsen burner. The test only lasts few minutes.

The IEC 60332-1 standards are taken over as EN standards and transferred to national standards Example: IEC 60332-1 becomes EN 60332-1 and introduced in Germany as DIN EN 60332-1.

Flame Retardance in accordance with EN 60332:2004

EN 60332:2004 Tests on electrical and optical cables under fire conditions. The standard applies to single insulated wires (cables) and requires a vertical flame test with a maximum flame climb of 450mm. The test lasts between 1 and 8 minutes, depending on the cable diameter.

EN 60332-1-1:2004 / BS EN 60332-1-1:2004 / IEC 60332-1-1:2004 / DIN EN 60332-1-1:2004 / VDE 0482-1-1:2005-06 Test on electrical and optical cables under fire conditions. Test for a vertical flame propagation for a single insulated wire or cables.

EN 60332-1-2:2004 / BS EN 60332-1-2:2004 / IEC 60332-1-2:2004 / DIN EN 60332-1-2:2004 / VDE 0482-1-2:2005-06 / CEI 60332-1-2(CEI 20-35/1-2) Tests on electrical and optical fiber cables under fire conditions. Test for a vertical flame propagation for a single insulated wire or cable – Procedure for 1kW premixed flame.

This standard specifies a method of test for resistance to vertical flame propagation for a single insulated wire or cable. Part 1-1 specifies the test apparatus and Part 1-2 specifies the test procedure.

The cable sample is deemed to pass the test if the distance between the lower edge of the top support and the onset of charring is greater than 50mm. In addition, a failure shall be recorded if burning extends downward to a point greater than 540mm from the lower edge of the top support.

EN 60332-1-2:2004 specifies the use of 1kW premix flame and is for general use, except that the procedure may not be suitable for the testing of small insulated conductors or cables of less than 0.5mm sq cross section because the conductor melts before the test is completed, or for the testing of small optic fiber cables because the fiber will be broken before the test is completed. In this case, the procedure given by EN 60332-2-1/2 is recommended.

EN 60332-2-1:2004 / BS EN 60332-2-1:2004 / IEC 60332-2-1:2004 / DIN EN 60332-2-1:2004 / VDE 0482-2-1:2005-06 Tests on electrical and optical cables under fire conditions. Test for a vertical flame propagation for a single small insulated wire or cable.

EN 60332-2-2:2004 / BS EN 60332-2-2:2004 / IEC60332-2-2:2004 / DIN EN 60332-2-2:2004 / VDE 0482-2-2:2005-06 / CEI 60332-2-2 (CEI 20-35/2-2) Test on electric and optical fiber cables under fire conditions. Tests for vertical flame propagation for a single small insulated wire or cable. Procedure for diffusion flame.

This test applies to small dimensions cables.

This standard specifies a method of test for resistance to vertical flame propagation for a single insulated wire or cable. Part 2-1 specifies the test apparatus and Part 2-2 specifies the test procedure.

Flame Retardance in accordance with NF C32-070-2.1(C2)

NF C32-070:2001 Insulated conductors and cables for installation - Classification tests on conductors and cables with regard to fire behavior.

NF C32-070 2.1 Procedure for 1 kW pre-mixed flame.

The NF F 32070 2.1 (Category C2) and IEC 60332-1-2 are very similar. The sole difference is the time during which the flame is applied.

Flame Retardance in accordance with EN 50265-1:1999 (replaced by EN 60332)

EN 50265-1:1999 / BS EN 50265-1:1999 / DIN EN 50265-1:1999 / VDE 0482-265-1:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Apparatus (Replaced by EN 60332-1-1:2004 and EN 60332-2-1:2004).

EN 50265-2-1:1999 / BS EN 50265-2-1:1999 / DIN EN 50265-2-1:1999 / VDE 0482-265-2-1:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Part 2-1: Procedure 1kW pre-mixed flame (Replaced by EN 60332-1-2:2004).

EN 50265-2-2:1999 / BS EN 50265-2-2:1999 / DIN EN 50265-2-2:1999 / VDE 0482-265-2-2:1999-04 – Common test methods for cables under fire conditions. Test for resistance to a vertical flame propagation for a single insulated conductor or cable. Part 2-2: Procedure Diffusion flame (Replaced by EN 60332-2-2:2004).

Flame Retardance in accordance with BS 4066 Part 1 & 2 (replaced by EN 60332)

BS 4066-2:1980 (superseded) – Tests on electric cables under fire conditions. Method of test on a single vertical insulated wire or cable.

This standard is no longer in force and is replaced by BS EN 50265-2-1 which was also superseded by BS EN 60332-1:2009.

Flame Retardance in accordance with NBN C 30-004 (cat. F1)

NBN C 32-004 specifies a method of test for measuring the vertical flame propagation characteristics of a single wire or cable. The cable specimen is deemed to have passed the test and categorized as F1 if after burning has ceased, the charred or affected portion does not reach within 50mm of the lower edge of the top clamp which is equivalent to 425mm above the point of flame application.

Flame Retardance in accordance with IEEE 383

In the IEEE 383 test, cables are supported by a one foot wide vertical rack eight feet high. The cables are positioned in the centre six inches of the rack, spaced one-half diameter apart. The rack is centered in an eight foot enclosure. A ten inch ribbon burner ignites the cable with a 21 kW (70000 BTU). The burner is positioned 2 feet above the floor and 9 to 12 inches of cables are exposed to



direct flames for 20 minutes. Cables on which flame extends above the top of the 8 foot rack fail the test.

REDUCED FIRE PROPAGATION IN ACCORDANCE WITH DIFFERENT STANDARDS

These standards specify a method for fire propagation test for vertically mounted bunched cables. These tests simulate the chimney effect in vertical installation of bunch of cables. A certain number of cable sections with a length of 3.5 m is fastened to a vertical ladder in an adapted chamber. The amount of combustible materials for cables and duration of flame application depends on the category the cable has to meet.

Resistance of the wires bundle arranged vertically to the spread of the flame should be such that after a certain time and stopping the source of ignition, flame is extinguished by itself and the length of charred fragments will not exceed 2.5 m in height measured above the lower edge of the burner.



Reduced Fire Propagation in accordance with IEC 60332-3

This test is the most common one to verify the behaviour of a cables for the fire propagation. The cables are installed on a bunch of vertical ladder inside a metal cabinet and undergo the action of a ribbon flame at 750°C. The standard is subdivided in several parts that differ one from the other for the quantity of cable to be installed, the installation mode and the flame application time.

EN 60332-3-10:2009 / BS EN 60332-3-10:2009 / IEC 60332-3-10 ed1.1 / DIN EN 60332-3-10:2009 / VDE 0482-332-3-10:2010-08 – Common test methods for cables under fire conditions. Tests on electric and optical fiber cables under fire conditions - Part 3-10: Test for vertical flame spread of vertically mounted bunched wires or cables.

EN 60332-3-21:2009 / BS EN 60332-3-21:2009 / IEC 60332-3-21 ed1.1 / DIN EN 60332-3-21 / VDE 0482-332-3-21:2010-08 / CEI EN 60332-3-21:2009 (CEI 20-22/3-1)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-21: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category A . F/R

-Installation In one layer (front).

-Installation In two layers (front and rear)

-The quantity of the Installed cable is equal to 7 litres/m of combustible materials for cables

-The time of application of the flame is 40 minutes

EN 60332-3-22:2009 / BS EN 60332-3-22:2009 / IEC 60332-3-22 ed1.1 / DIN EN 60332-3-22:2009 / VDE 0482-332-3-22:2010-08 / CEI EN 60332-3-22:2009 (CEI 20-22/3-2)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted bunched wires or cable - Category A

-Installation In one layer (front).

-The quantity of the installed cable is equal to 7 litres/m of combustible materials for cables

-The time of application of the flame is 40 minutes

EN 60332-3-23:2009 / BS EN 60332-3-23:2009 / IEC 60332-3-23 ed1.1 / DIN EN 60332-3-23:2009 / VDE 0482-332-3-23:2010-08 / CEI EN 60332-3-23:2009 (CEI 20-22/3-3)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-23: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category B

-Installation In one layer (front).

-The quantity of the installed cable is equal to 3.5 litres/m of combustible materials for cables

-The time of application of the flame is 40 minutes

EN 60332-3-24:2009 / BS EN 60332-3-24:2009 / IEC 60332-3-24 ed1.1 / DIN EN 60332-3-24:2009 / VDE 0482-332-3-24:2010-08 / CEI EN 60332-3-24:2009 (CEI 20-22/3-4) – Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-24: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category C

-Installation In one layer (front).

-The quantity of the installed cable is equal to 1.5 litres/m of combustible materials for cables

-The time of application of the flame is 20 minutes



EN 60332-3-25:2009 / BS EN 60332-3-25:2009 / IEC 60332-3-25 ed1.1 / DIN EN 60332-3-25: 2009 / VDE 0482-332-3-25:2010-08 / CEI EN 60332-3-25:2009 (CEI 20-22/3-5)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-25: Test for vertical flame spread of vertically-mounted bunched wires or cables - Category D

-Installation In one layer (front).

-The quantity of the installed cable is equal to 0.5 litres/m of combustible materials for cables

-The time of application of the flame is 20 minutes.

Summary of test condition:

IEC	60332-3-21	60332-3-22		60332-3-23		60332-3-24		60332-3-25	
BS EN 50266	50266-2-1	50266-2-2		50266-2-3		50266-2-4		50266-2-5	
CEI	20-22/3-1	20-22/3-2		20-22/3-3		20-22/3-4		20-22/3-5	
Category	AF/R	A		B		C		D	
Conductor cross-sections mm ²	>35	>35	≤35	>35	≤35	>35	≤35	>35	≤35
NMV(litres per metre of cable)	7	7		3.5		1.5		0.5	
Minimum length of test pieces(m)	3.5	3.5		3.5		3.5		3.5	



Standard ladder (500 mm wide): • number of layers • maximum width of test sample	1front+1rear 300mm	≥1front 300mm	1front 300mm	- -	≥1front 300mm	1front 300mm	≥1front 300mm	1front 300mm	≥1front 300mm
Wide ladder (800 mm wide): • number of layers • maximum width of test sample	- -	- -	- -	1front 600mm	- -	- -	- -	- -	- -
Positioning of test pieces	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Spaced 0.5×Diameter cable (Max.20mm)	Touching	Touching
Number of burners	1	1	1	2	1	1	1	1	1
Ladder mounting	Front and rear	Front, Wider ladder for larger cables			Front	Front	Front	Front	Front
Flame application time(min)	40	40	40	40	40	40	40	40	40
Test conditions	Wind speed: <8 m/s; Temperature: 5°C - +40°C								
Extent of the charred portion	≤2.5m above the bottom edge of the burner, neither at the front nor at the rear of the ladder.								

Reduced fire propagation in accordance with NF C32-070-2.2(C1)

NF C32-070 :2001 Insulated conductors and cables for installation.

-Classification tests on conductors and cables with regard to fire behavior.

A 1600mm vertically installed bundled of cable is exposed to the effects of a radiating oven (approx 830°C) and forced ventilation. Pilot flames arranged above the oven burn off the emitted gases. The test duration is 30 minutes, with the ventilation stopped for every 10 minutes during the flame application period. The cable sample is classified under Category C1 according to NF F 32070-2.2 if the carbonised path the cable sample does not extend more than 0.8m above the upper base of the oven.

Depending on the damaged length, they can be further classified into 4 classes A, B, C and D according to NF F 16-101 as follows:

Category	Test Result
A	No damaged length from top of the oven in upper position.
B	Damaged length from top of oven in upper position not extending more than 50mm.
C	Damaged length from top of oven in upper position not extending more than 300mm
D	Damaged length from top of oven in upper position not extending above the top of the chimney

Reduced Fire Propagation in accordance to EN 50266-1, EN 50266-2-2, EN 50266-2-3, EN 50266-2-4.

EN 50266-1:2001 / BS EN 50266-1:2001 / DIN EN 50266-1:2001 / VDE 0482-266-1:2001-09– Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 1: Apparatus (Replaced by EN 60332-3-10:2009)

EN 50266-2-1:2001 / BS EN 50266-2-1:2001 / DIN EN 50266-2-1:2001 / VDE 0482-266-2-1:2001-09 / CEI EN 50266-2-1– Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-1 : Procedures. Category A F/R (Replaced by EN 60332-3-21:2009)

EN 50266-2-2:2001 / BS EN 50266-2-2:2001 / DIN EN 50266-2-2:2001 / VDE 0482-266-2-2:2001-09 / CEI EN 50266-2-2– Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-2: Procedures. Category A (Replaced by EN 60332-3-22:2009)

EN 50266-2-3:2001 / BS EN 50266-2-3:2001 / DIN EN 50266-2-3:2001 / VDE 0482-266-2-3:2001-09 / CEI EN 50266-2-1– Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-3: Procedures. Category B (Replaced by EN 60332-3-23:2009)



EN 50266-2-4:2001 / BS EN 50266-2-4:2001 / DIN EN 50266-2-4:2001 / VDE 0482-266-2-4:2001-09 / CEI EN 50266-2-4:2001 – Common test methods for cables under fire conditions. Test for vertical flame spread of vertically mounted bunched wires or cables - Part 2-4: Procedures. Category C (Replaced by EN 60332-3-24:2009).

Reduced Fire Propagation in accordance with BS 4066-3

BS 4066-3:1994 (superseded) – Tests on electric cables under fire conditions. Tests on bunched wires or cables.

This standard is no longer in force and is replaced by the BS EN 50266-1:2001

Reduced Fire Propagation in accordance with NBN C 32-004 (F2)

NBN C 32-004 specifies a method of test for measuring the vertical flame propagation characteristics of a bunch of cables. The cable specimen is deemed to have passed the test and categorized as F2 if after burning has ceased, the extent of charred or affected portion does not reach a height exceeding 2.5m above the bottom edge of the burner.

HALOGEN CONTENT TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

In the event of a fire, many fumes are produced. This test is concerned with the possibilities of corrosive acid gases being released from halogen containing cables and the damage such cables can cause (to equipments). These standards specify a method for determination of the amount of halogen acid gas, evolved during combustion of compound.



Halogen Content Test in accordance with EN 50267-2-1



EN 50267-2-1:1998 / BS EN 50267-2-1:1999 / DIN EN 50267-2-1:1999 / VDE 0482-267-2-1:1999-04 / CEI EN 50267-2-1:1999 (CEI 20-37/2-1) Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-1: Procedures. Determination of the amount of halogen acid gas.

This path standard defines the method to measure the amount of halogen acid evolved and which should be expressed in hydrochloric acid. The amount of halogen acid contained in the test solution is determined by a titration method.

If the cables are described as zero halogen or halogen free, it is recommended that the hydrochloric acid yield should be less than 0.5%.

Halogen Content Test in accordance with IEC 60754-1

IEC 60754-1 ed 2.0 Common test methods for cables under fire conditions. Test on gases evolved during combustion of materials from cables. Part 1: Procedures. Determination of the amount of halogen acid gas.

Basically, this is same as EN 50267-2-1.

Halogen Content Test in accordance with BS 6425-1

BS 6425-1:1990(superseded): Test on gases evolved during the combustion of materials from cables. Method for determination of amount of halogen acid gas evolved during combustion of polymeric materials taken from cables.

This standard is no longer in force and is replaced by the EN 50267-2-1.

ACID GAS EMISSION TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The following standards specify a method for determination of acidity of gas evolved during combustion of cables by measuring PH and conductivity. This test allows to determine the corrosivity of the acid gases generally halogens, that develop during the electric cable combustion.

Acid Gas Emission Test in accordance with EN 50267-2-2

EN 50267-2-2:1999 / BS EN 50267-2-2:1999 / DIN EN 50267-2-2:1999 / VDE 0482-267-2-2:1999-04 / CEI EN 50267-2-2:1999 (CEI 20-37/2-2). Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-2: Procedures. Determination of degree of acidity of gases for materials by measuring PH and conductivity

The standard states that the pH and the conductivity of a test solution should be measured, using calibrated PH and conductivity meters.

If the cables are described as zero halogen or halogen free, it is recommended that at least both of the following requirements should be met for each of the individual materials of a cable:

- The PH value should not be less than 4.3 when related to 1 litre of water

- The conductivity should not be less than 10us/mm when related to 1 litre of water



EN 50267-2-3:1999 / BS EN 50267-2-3:1999 / DIN EN 50267-2-3:1999 / VDE 0482-267-2-3:1999-04 / CEI EN 50267-2-3:1999 (CEI 20-37/2-3). Common test methods for cables under fire conditions- Test on gases evolved during combustion of materials from cables- Part 2-3:Procedures. Determination of degree of acidity of gases for cables by determination of the weighted average of pH and conductivity.

The standard states that the pH and the conductivity of a test solution should be measured, using calibrated pH and conductivity meters. The results from the different components of the cable are then weighted.

Acid Gas Emission Test in accordance with IEC 60754-2

IEC 60754-2 ed1.0 Test on gases evolved during combustion of electric cables - Part 2 : Determination of degree of acidity of gases evolved during combustion of materials taken from electric cables by measuring pH and conductivity.

Acid Gas Emission Test in accordance with NF C32-074

NF C32-074 Common test methods for cables under fire conditions - Test on gases evolved during combustion of materials from cables. This standard is equivalent to IEC 60754-2

Acid Gas Emission Test in accordance with BS 6425-2

BS 6425-2:1993 (superseded) Test on gases evolved during the combustion of materials from cables.

Determination of degree of acidity (corrosivity) of gases by measuring pH and conductivity.

This standard is no longer in force and is replaced by the EN 50267-2-2:1999.

Acid Gas Emission Test in accordance with DIN VDE 0472-813 / VDE 0472-813:1994

DIN VDE 0472-813 / VDE 0472-813:1994 Corrosivity of combustion gases.

The standards are no longer in force and are replaced by the EN 50267-2-2 & VDE 0482-267-2-2.

SMOKE DENSITY TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The smoke density measurement taken from a material under fire conditions gives an indication of the visibility through the smoke. This is important as reduced visibility in a real fire situation makes it more difficult to escape from the fire thus increasing the threat to human life from the toxic gas, fumes and heat

The following standards specify the method for measuring the generation of smoke from cables during fire.

Smoke Density Test in accordance with IEC 61034-1 & IEC 61034-2

IEC 61034-1:2005 / EN 61034-1:2005 / BS EN 61034-1:2005 / DIN EN 61034-1:2006 / VDE 0482-1034-1:2006 Measurement of smoke density of cables burning under defined conditions. Part 1: Test apparatus



IEC 61034-2:2005 / EN 61034-2:2005 / BS EN 61034-2:2005 / DIN EN 61034-2:2006 / VDE 0482-1034-2:2006 / CEI EN 61034-2:2006 (CEI 20-37/3-1) Measurement of smoke density of cables burning under defined conditions.



Part 2: Test procedure and requirements.

The standard specifies a method of measurement of smoke density of cables. Part 1 specifies the test apparatus and Part 2 specifies the test procedure.

The test is usually performed inside a chamber of 3m x3m x3m and the test is sometimes described as 3 metre cube test. The test is performed by monitoring the transmittance reduction of a white light beam, running from one side of the chamber to the other, at a set height, thus monitoring the build up of smoke inside the chamber. The minimum percentage of light transmittance is often used to determine if the cable has passed or failed the test, often a minimum light transmittance of 60% is applied in order to classify a cable as low smoke.

Smoke Density Test in accordance with NF C32- 073

NF C32 073 Common test methods for cables under fire conditions.

- Measurement of smoke density of cables burning under defined conditions.

This standard is equivalent to IEC 61034-2

Smoke Density Test in accordance with BS 7622-1 & BS 7622-2

BS 7622-1:1993 (superseded) – Measurement of smoke density of electric cables burning under defined conditions. Test apparatus.

BS 7622-2:1993 (superseded) – Measurement of smoke density of electric cables burning under defined conditions. Test procedure and requirements.

The standards are no longer in force and were replaced by the EN 50268-1:2000 and EN 50268-2:2000 even though they too were superseded by EN 61034-1:2005 and EN 61034-2:2005.

Smoke Density Test in accordance with EN 50268-1 & EN 50268-2

EN 50268-1:2000 / BS EN 50268-1:2000 / DIN EN 50268-1:2000 / VDE 0482-268-1:2000 (superseded) – Common test methods for cables under fire conditions. Measurement of smoke density of cable burning under defined conditions. Part 1: Apparatus

EN 50268-2:2000 / BS EN 50268-2:2000 / DIN EN 50268-2:2000 / VDE 0482-268-2:2000 (superseded) – Common test methods for cables under fire conditions. Measurement of smoke density of cable burning under defined conditions. Part 2: Procedure.

The standards are no longer in force and are replaced by the EN 61034-1:2005 and EN 61034-2:2005. Although these standards have been withdrawn, they are still called upon in some specification documents such as in the London Underground specification 1-085.

Smoke Density Test In Accordance with DIN VDE 0472-816 / VDE 0472-816:1994

DIN VDE 0472-816/VDE 0472-816:1994 Testing of cables, wires and flexible cords. Smoke Density.

The standards are no longer in force and are replaced by the EN 50268-1, VDE 0482-268-1, EN 50268-2 & VDE 0482-268-2 which are also replaced by the EN 61034-1:2005 and EN 61034-2:2005.

OXYGEN INDEX TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

The oxygen index is defined as the minimum concentration of oxygen, expressed as volume percentage, in a mixture of



oxygen and nitrogen that will just support combustion of a material initially at room temperature under specified test conditions.

Oxygen Index Test in accordance with ASTM D 2863

ASTM D 2863-10 Measuring the minimum oxygen concentration to support candle-like combustion of plastics (Oxygen Index).

The test is performed in accordance with the procedure specified in ASTM 2863-95 using test piece cut from the outer sheath of the cable. The apparatus holds a small specimen which is clamped vertically in a tube in an atmosphere where the relative concentration of oxygen and nitrogen can be changed. The aim is to test the flammability of the sample with a small pilot flame to find the minimum oxygen concentration required to just sustain combustion of the sample.

Oxygen Index Test in accordance with ISO 4589-2

ISO4589-2:1996 Determination of burning behaviour by oxygen index Part 2: Ambient temperature test.

Specimens measuring 100mm long by 6mm wide are used for testing. The test is performed in accordance with the procedure specified in the standard.

TEMPERATURE INDEX TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

This is a test for assessing the performance of a material when it is tested in accordance with BS2782: Part 1: Method 143a and 143b. The oxygen index of a material will drop when the temperature rises. When the temperature rises and the oxygen index drops to 21%, the material will burn automatically. This temperature is defined as temperature index. For example, the oxygen index of the coal at room temperature is 50% and when the temperature climbs to 150°C, its oxygen index drops to 21°C and the coal will burn by itself automatically. The temperature index of the coal is defined as 150°C. In general, the temperature index of fire retardant cable exceeds 250°C.



Temperature Index Test in accordance with BS 2782

BS 2782: Part 1:1989 Method 143a and 143b Temperature of materials. Determination of flammability.

Specimens measuring nominally 100mm long by 6.5mm wide by 3mm thick are used for testing. The specimens are then tested in accordance with the test procedure specified in the standard.

Temperature Index Test in accordance with ISO 4589-3

ISO4589-3:1996 Determination of burning behaviour by oxygen index Part 3: Elevated temperature test.

Specimens measuring 100mm long by 6mm wide are used for testing. The test is performed in accordance with the procedure specified in the standard.

TOXICITY TEST IN ACCORDANCE WITH DIFFERENT STANDARDS

Toxicity test in accordance with NES 02-713

Measuring a fume from a material exposed to a controlled fire conditions gives an indication of the



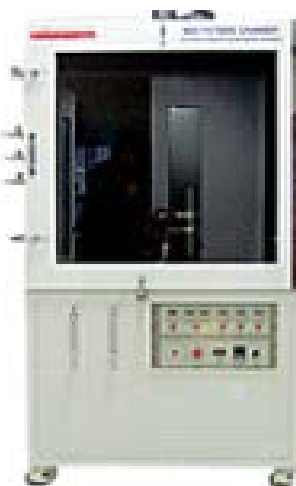
fumes which may be produced in a real fire situation. A standard method of test for determining the toxicity of materials under fire condition is Defense Standard NES 02-713- Toxicity. This method gives the level of toxicity of the fumes produced from the material under test. During the test, the test specimen is heated via direct flame application at 1150°C.

The flame is applied via a bunsen burner with a flame height of between 100mm and 125mm formed with a methane gas and an external supply of compressed air. The specimen toxicity is determined from accurate pre-analysis weight (4pp) colorimetric tubes and ion chromatography.

The test may determine the following species: Hydrogen Bromide, Hydrochloric Acid, Hydrogen Fluoride, Formaldehyde, Nitrous gases, Carbon Monoxide, Carbon Dioxide, Acrylonitrile, Phenol, Hydrogen Sulphide, Sulphur Dioxide, Hydrocyanic Acid, Ammonia. The concentration in ppm for each gas detected are provided. The toxicity index of the specimens summates the toxic gases, taking into account of their level of danger to humans. The smaller the toxicity index, the better the product. A limit of 5 is often applicable.

Toxicity test in accordance with NF C 20-454

NF C 20-454 base environmental testing procedures. Fire behaviour. Analysis and titration of gases evolved during pyrolysis or combustion of materials used in electrotechnics. Exposure to abnormal heat or fire. Tube furnace method.



The test defined by this standard serves to define the conventional toxicity index (cti) of the gases emitted by the insulating or sleeving materials during combustion at 800°C.

Toxicity test in accordance with NF X 70-100

NF X 70-100 Fire Tests; Analysis of gaseous effluents.

The test is conducted within a tube furnace where the temperature is set at either 400°C, 600°C, 800°C (commonly 600°C is used for most of the materials or 800°C for some electrical products) for 40 minutes throughout the test by analysis of the toxicity index of the gases including CO, CO₂, HCL, HBr, HCN, HF and SO₂.



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