Caledonian

EN 50288-7
Instrumentation Cables

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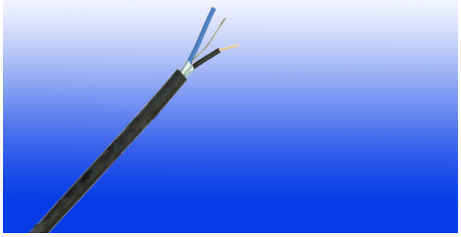
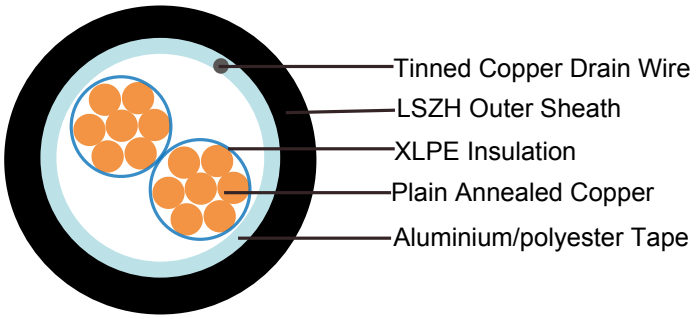
XLPE Insulated, LSZH Sheathed & Overall Screened Instrumentation Cables (Multicore)

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Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h.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, 0.5mm^2
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.)	115					
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-2X(St)H		
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness
	No.x1xmm^2	mm	mm
0.5mm^2, Multicore			
RE-2X(St)H 2C0.5	2x1x0.5	0.55	0.9

Caledonian Cable Code	RE-2X(St)H		
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2X(St)H 3C0.5	3x1x0.5	0.55	0.9
RE-2X(St)H 4C0.5	4x1x0.5	0.55	0.9
RE-2X(St)H 5C0.5	5x1x0.5	0.55	0.9
RE-2X(St)H 8C0.5	8x1x0.5	0.55	1.0
RE-2X(St)H 10C0.5	10x1x0.5	0.55	1.0
RE-2X(St)H 12C0.5	12x1x0.5	0.55	1.0
RE-2X(St)H 14C0.5	14x1x0.5	0.55	1.0
RE-2X(St)H 16C0.5	16x1x0.5	0.55	1.1
RE-2X(St)H 20C0.5	20x1x0.5	0.55	1.1
RE-2X(St)H 24C0.5	24x1x0.5	0.55	1.1
RE-2X(St)H 27C0.5	27x1x0.5	0.55	1.2
RE-2X(St)H 30C0.5	30x1x0.5	0.55	1.2
RE-2X(St)H 37C0.5	37x1x0.5	0.55	1.2
RE-2X(St)H 40C0.5	40x1x0.5	0.55	1.2
0.75mm^2, Multicore			
RE-2X(St)H 2C0.75	2x1x0.75	0.55	0.9
RE-2X(St)H 3C0.75	3x1x0.75	0.55	0.9
RE-2X(St)H 4C0.75	4x1x0.75	0.55	0.9
RE-2X(St)H 5C0.75	5x1x0.75	0.55	0.9
RE-2X(St)H 8C0.75	8x1x0.75	0.55	1.0
RE-2X(St)H 10C0.75	10x1x0.75	0.55	1.0
RE-2X(St)H 12C0.75	12x1x0.75	0.55	1.0
RE-2X(St)H 14C0.75	14x1x0.75	0.55	1.1
RE-2X(St)H 16C0.75	16x1x0.75	0.55	1.1
RE-2X(St)H 20C0.75	20x1x0.75	0.55	1.1
RE-2X(St)H 24C0.75	24x1x0.75	0.55	1.2
RE-2X(St)H 27C0.75	27x1x0.75	0.55	1.2
RE-2X(St)H 30C0.75	30x1x0.75	0.55	1.2

Caledonian Cable Code	RE-2X(St)H		
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2X(St)H 37C0.75	37x1x0.75	0.55	1.2
RE-2X(St)H 40C0.75	40x1x0.75	0.55	1.3
1.0mm^2, Multicore			
RE-2X(St)H 2C1.0	2x1x1.0	0.55	0.9
RE-2X(St)H 3C1.0	3x1x1.0	0.55	0.9
RE-2X(St)H 4C1.0	4x1x1.0	0.55	0.9
RE-2X(St)H 5C1.0	5x1x1.0	0.55	0.9
RE-2X(St)H 8C1.0	8x1x1.0	0.55	1.0
RE-2X(St)H 10C1.0	10x1x1.0	0.55	1.0
RE-2X(St)H 12C1.0	12x1x1.0	0.55	1.0
RE-2X(St)H 14C1.0	14x1x1.0	0.55	1.1
RE-2X(St)H 16C1.0	16x1x1.0	0.55	1.1
RE-2X(St)H 20C1.0	20x1x1.0	0.55	1.1
RE-2X(St)H 24C1.0	24x1x1.0	0.55	1.2
RE-2X(St)H 27C1.0	27x1x1.0	0.55	1.2
RE-2X(St)H 30C1.0	30x1x1.0	0.55	1.2
RE-2X(St)H 37C1.0	37x1x1.0	0.55	1.2
RE-2X(St)H 40C1.0	40x1x1.0	0.55	1.3
1.3mm^2, Multicore			
RE-2X(St)H 2C1.3	2x1x1.3	0.6	0.9
RE-2X(St)H 3C1.3	3x1x1.3	0.6	0.9
RE-2X(St)H 4C1.3	4x1x1.3	0.6	0.9
RE-2X(St)H 5C1.3	5x1x1.3	0.6	1.0
RE-2X(St)H 8C1.3	8x1x1.3	0.6	1.0
RE-2X(St)H 10C1.3	10x1x1.3	0.6	1.1
RE-2X(St)H 12C1.3	12x1x1.3	0.6	1.1
RE-2X(St)H 14C1.3	14x1x1.3	0.6	1.1
RE-2X(St)H 16C1.3	16x1x1.3	0.6	1.1

Caledonian Cable Code	RE-2X(St)H		
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2X(St)H 20C1.3	20x1x1.3	0.6	1.2
RE-2X(St)H 24C1.3	24x1x1.3	0.6	1.2
RE-2X(St)H 27C1.3	27x1x1.3	0.6	1.3
RE-2X(St)H 30C1.3	30x1x1.3	0.6	1.3
RE-2X(St)H 37C1.3	37x1x1.3	0.6	1.3
RE-2X(St)H 40C1.3	40x1x1.3	0.6	1.4
1.5mm^2, Multicore			
RE-2X(St)H 2C1.5	2x1x1.5	0.6	0.9
RE-2X(St)H 3C1.5	3x1x1.5	0.6	0.9
RE-2X(St)H 4C1.5	4x1x1.5	0.6	0.9
RE-2X(St)H 5C1.5	5x1x1.5	0.6	1.0
RE-2X(St)H 8C1.5	8x1x1.5	0.6	1.0
RE-2X(St)H 10C1.5	10x1x1.5	0.6	1.1
RE-2X(St)H 12C1.5	12x1x1.5	0.6	1.1
RE-2X(St)H 14C1.5	14x1x1.5	0.6	1.1
RE-2X(St)H 16C1.5	16x1x1.5	0.6	1.1
RE-2X(St)H 20C1.5	20x1x1.5	0.6	1.2
RE-2X(St)H 24C1.5	24x1x1.5	0.6	1.3
RE-2X(St)H 27C1.5	27x1x1.5	0.6	1.3
RE-2X(St)H 30C1.5	30x1x1.5	0.6	1.3
RE-2X(St)H 37C1.5	37x1x1.5	0.6	1.4
RE-2X(St)H 40C1.5	40x1x1.5	0.6	1.4
2.5mm^2, Multicore			
RE-2X(St)H 2C2.5	2x1x2.5	0.7	0.9
RE-2X(St)H 3C2.5	3x1x2.5	0.7	1.0
RE-2X(St)H 4C2.5	4x1x2.5	0.7	1.0
RE-2X(St)H 5C2.5	5x1x2.5	0.7	1.0
RE-2X(St)H 8C2.5	8x1x2.5	0.7	1.1

Caledonian Cable Code	RE-2X(St)H		
	No. of Core x1xCross Section	Nominal Insulation Thickness	Nominal Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2X(St)H 10C2.5	10x1x2.5	0.7	1.2
RE-2X(St)H 12C2.5	12x1x2.5	0.7	1.2
RE-2X(St)H 14C2.5	14x1x2.5	0.7	1.2
RE-2X(St)H 16C2.5	16x1x2.5	0.7	1.3
RE-2X(St)H 20C2.5	20x1x2.5	0.7	1.3
RE-2X(St)H 24C2.5	24x1x2.5	0.7	1.4
RE-2X(St)H 27C2.5	27x1x2.5	0.7	1.4
RE-2X(St)H 30C2.5	30x1x2.5	0.7	1.5
RE-2X(St)H 37C2.5	37x1x2.5	0.7	1.5
RE-2X(St)H 40C2.5	40x1x2.5	0.7	1.6

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

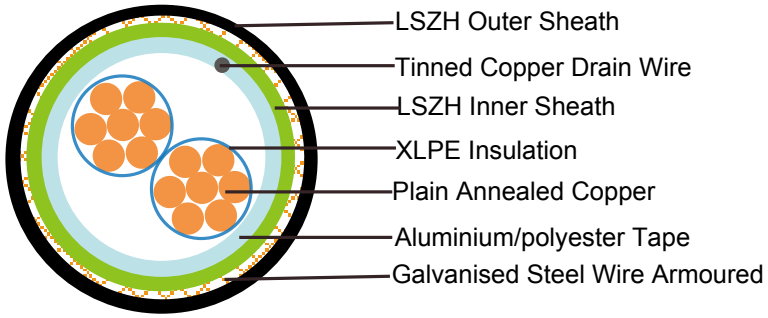

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 (Multicore)

RE-2X(St)HSWAH 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, 0.5mm^2
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.)	115					
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	2000					
	Core to Screen	V	2000					

CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multicore						
RE-2X(St)HSWAH 2C0.5	2x1x0.5	0.55	0.9	6.2	0.9	1.3
RE-2X(St)HSWAH 3C0.5	3x1x0.5	0.55	0.9	6.5	0.9	1.3
RE-2X(St)HSWAH 4C0.5	4x1x0.5	0.55	0.9	7.0	0.9	1.3
RE-2X(St)HSWAH 5C0.5	5x1x0.5	0.55	0.9	7.6	0.9	1.3
RE-2X(St)HSWAH 8C0.5	8x1x0.5	0.55	1.0	9.1	0.9	1.4
RE-2X(St)HSWAH 10C0.5	10x1x0.5	0.55	1.0	10.4	0.9	1.4
RE-2X(St)HSWAH 12C0.5	12x1x0.5	0.55	1.0	10.7	0.9	1.4
RE-2X(St)HSWAH 14C0.5	14x1x0.5	0.55	1.0	11.3	0.9	1.4
RE-2X(St)HSWAH 16C0.5	16x1x0.5	0.55	1.1	11.8	0.9	1.4
RE-2X(St)HSWAH 20C0.5	20x1x0.5	0.55	1.1	13.3	0.9	1.5
RE-2X(St)HSWAH 24C0.5	24x1x0.5	0.55	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH 27C0.5	27x1x0.5	0.55	1.2	15.0	0.9	1.5
RE-2X(St)HSWAH 30C0.5	30x1x0.5	0.55	1.2	15.7	0.9	1.5
RE-2X(St)HSWAH 37C0.5	37x1x0.5	0.55	1.2	16.9	0.9	1.6
RE-2X(St)HSWAH 40C0.5	40x1x0.5	0.55	1.2	17.6	1.25	1.6
0.75mm^2, Multicore						
RE-2X(St)HSWAH 2C0.75	2x1x0.75	0.55	0.9	6.5	0.9	1.3
RE-2X(St)HSWAH 3C0.75	3x1x0.75	0.55	0.9	6.9	0.9	1.3
RE-2X(St)HSWAH 4C0.75	4x1x0.75	0.55	0.9	7.4	0.9	1.3
RE-2X(St)HSWAH 5C0.75	5x1x0.75	0.55	0.9	8.1	0.9	1.4
RE-2X(St)HSWAH 8C0.75	8x1x0.75	0.55	1.0	9.7	0.9	1.4
RE-2X(St)HSWAH 10C0.75	10x1x0.75	0.55	1.0	11.1	0.9	1.4
RE-2X(St)HSWAH 12C0.75	12x1x0.75	0.55	1.0	11.5	0.9	1.4
RE-2X(St)HSWAH 14C0.75	14x1x0.75	0.55	1.1	12.2	0.9	1.5
RE-2X(St)HSWAH 16C0.75	16x1x0.75	0.55	1.1	12.9	0.9	1.5
RE-2X(St)HSWAH 20C0.75	20x1x0.75	0.55	1.1	14.3	0.9	1.5
RE-2X(St)HSWAH 24C0.75	24x1x0.75	0.55	1.2	16.0	0.9	1.5
RE-2X(St)HSWAH 27C0.75	27x1x0.75	0.55	1.2	16.3	0.9	1.6

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 30C0.75	30x1x0.75	0.55	1.2	16.9	0.9	1.6
RE-2X(St)HSWAH 37C0.75	37x1x0.75	0.55	1.2	18.2	1.25	1.6
RE-2X(St)HSWAH 40C0.75	40x1x0.75	0.55	1.3	19.1	1.25	1.6
1.0mm^2, Multicore						
RE-2X(St)HSWAH 2C1.0	2x1x1.0	0.55	0.9	6.9	0.9	1.3
RE-2X(St)HSWAH 3C1.0	3x1x1.0	0.55	0.9	7.3	0.9	1.3
RE-2X(St)HSWAH 4C1.0	4x1x1.0	0.55	0.9	7.9	0.9	1.4
RE-2X(St)HSWAH 5C1.0	5x1x1.0	0.55	0.9	8.6	0.9	1.4
RE-2X(St)HSWAH 8C1.0	8x1x1.0	0.55	1.0	10.3	0.9	1.4
RE-2X(St)HSWAH 10C1.0	10x1x1.0	0.55	1.0	11.9	0.9	1.4
RE-2X(St)HSWAH 12C1.0	12x1x1.0	0.55	1.0	12.2	0.9	1.5
RE-2X(St)HSWAH 14C1.0	14x1x1.0	0.55	1.1	13.0	0.9	1.5
RE-2X(St)HSWAH 16C1.0	16x1x1.0	0.55	1.1	13.7	0.9	1.5
RE-2X(St)HSWAH 20C1.0	20x1x1.0	0.55	1.1	15.2	0.9	1.5
RE-2X(St)HSWAH 24C1.0	24x1x1.0	0.55	1.2	17.0	0.9	1.6
RE-2X(St)HSWAH 27C1.0	27x1x1.0	0.55	1.2	17.4	1.25	1.6
RE-2X(St)HSWAH 30C1.0	30x1x1.0	0.55	1.2	18.0	1.25	1.6
RE-2X(St)HSWAH 37C1.0	37x1x1.0	0.55	1.2	19.6	1.25	1.6
RE-2X(St)HSWAH 40C1.0	40x1x1.0	0.55	1.3	20.4	1.25	1.7
1.3mm^2, Multicore						
RE-2X(St)HSWAH 2C1.3	2x1x1.3	0.6	0.9	7.4	0.9	1.3
RE-2X(St)HSWAH 3C1.3	3x1x1.3	0.6	0.9	7.9	0.9	1.3
RE-2X(St)HSWAH 4C1.3	4x1x1.3	0.6	0.9	8.5	0.9	1.4
RE-2X(St)HSWAH 5C1.3	5x1x1.3	0.6	1.0	9.5	0.9	1.4
RE-2X(St)HSWAH 8C1.3	8x1x1.3	0.6	1.0	11.2	0.9	1.4
RE-2X(St)HSWAH 10C1.3	10x1x1.3	0.6	1.1	13.2	0.9	1.5
RE-2X(St)HSWAH 12C1.3	12x1x1.3	0.6	1.1	13.6	0.9	1.5
RE-2X(St)HSWAH 14C1.3	14x1x1.3	0.6	1.1	14.3	0.9	1.5
RE-2X(St)HSWAH 16C1.3	16x1x1.3	0.6	1.1	15.0	0.9	1.5
RE-2X(St)HSWAH 20C1.3	20x1x1.3	0.6	1.2	16.9	0.9	1.6
RE-2X(St)HSWAH 24C1.3	24x1x1.3	0.6	1.2	18.7	1.25	1.6

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 27C1.3	27x1x1.3	0.6	1.3	19.3	1.25	1.6
RE-2X(St)HSWAH 30C1.3	30x1x1.3	0.6	1.3	20.0	1.25	1.6
RE-2X(St)HSWAH 37C1.3	37x1x1.3	0.6	1.3	21.6	1.25	1.7
RE-2X(St)HSWAH 40C1.3	40x1x1.3	0.6	1.4	22.7	1.25	1.7
1.5mm^2, Multicore						
RE-2X(St)HSWAH 2C1.5	2x1x1.5	0.6	0.9	7.7	0.9	1.3
RE-2X(St)HSWAH 3C1.5	3x1x1.5	0.6	0.9	8.1	0.9	1.4
RE-2X(St)HSWAH 4C1.5	4x1x1.5	0.6	0.9	8.8	0.9	1.4
RE-2X(St)HSWAH 5C1.5	5x1x1.5	0.6	1.0	9.8	0.9	1.4
RE-2X(St)HSWAH 8C1.5	8x1x1.5	0.6	1.0	11.6	0.9	1.4
RE-2X(St)HSWAH 10C1.5	10x1x1.5	0.6	1.1	13.7	0.9	1.5
RE-2X(St)HSWAH 12C1.5	12x1x1.5	0.6	1.1	14.1	0.9	1.5
RE-2X(St)HSWAH 14C1.5	14x1x1.5	0.6	1.1	14.8	0.9	1.5
RE-2X(St)HSWAH 16C1.5	16x1x1.5	0.6	1.1	15.6	0.9	1.5
RE-2X(St)HSWAH 20C1.5	20x1x1.5	0.6	1.2	17.6	1.25	1.6
RE-2X(St)HSWAH 24C1.5	24x1x1.5	0.6	1.3	19.6	1.25	1.6
RE-2X(St)HSWAH 27C1.5	27x1x1.5	0.6	1.3	20.1	1.25	1.6
RE-2X(St)HSWAH 30C1.5	30x1x1.5	0.6	1.3	20.8	1.25	1.7
RE-2X(St)HSWAH 37C1.5	37x1x1.5	0.6	1.4	22.6	1.25	1.7
RE-2X(St)HSWAH 40C1.5	40x1x1.5	0.6	1.4	23.6	1.25	1.7
2.5mm^2, Multicore						
RE-2X(St)HSWAH 2C2.5	2x1x2.5	0.7	0.9	8.9	0.9	1.4
RE-2X(St)HSWAH 3C2.5	3x1x2.5	0.7	1.0	9.7	0.9	1.4
RE-2X(St)HSWAH 4C2.5	4x1x2.5	0.7	1.0	10.5	0.9	1.4
RE-2X(St)HSWAH 5C2.5	5x1x2.5	0.7	1.0	11.9	0.9	1.4
RE-2X(St)HSWAH 8C2.5	8x1x2.5	0.7	1.1	13.9	0.9	1.5
RE-2X(St)HSWAH 10C2.5	10x1x2.5	0.7	1.2	16.3	0.9	1.6
RE-2X(St)HSWAH 12C2.5	12x1x2.5	0.7	1.2	16.9	0.9	1.6
RE-2X(St)HSWAH 14C2.5	14x1x2.5	0.7	1.2	17.7	1.25	1.6
RE-2X(St)HSWAH 16C2.5	16x1x2.5	0.7	1.3	18.9	1.25	1.6
RE-2X(St)HSWAH 20C2.5	20x1x2.5	0.7	1.3	21.1	1.25	1.7

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 24C2.5	24x1x2.5	0.7	1.4	23.6	1.25	1.7
RE-2X(St)HSWAH 27C2.5	27x1x2.5	0.7	1.4	24.1	1.25	1.8
RE-2X(St)HSWAH 30C2.5	30x1x2.5	0.7	1.5	25.2	1.25	1.8
RE-2X(St)HSWAH 37C2.5	37x1x2.5	0.7	1.5	27.2	1.25	1.8
RE-2X(St)HSWAH 40C2.5	40x1x2.5	0.7	1.6	28.5	1.25	1.9

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

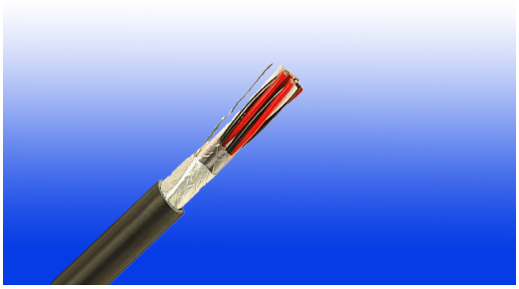

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

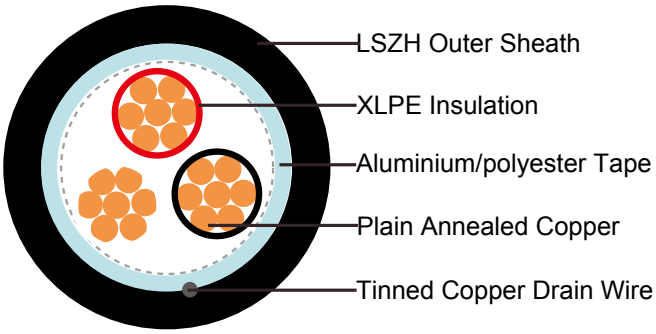

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)H 90°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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.
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, 0.5mm^2
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.
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.)	115				
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
	No.x3xmm^2	mm	mm
RE-2X(St)H 1T0.5	1x3x0.50	0.35	0.8
RE-2X(St)H 1T0.75	1x3x0.75	0.38	0.9
RE-2X(St)H 1T1.0	1x3x1.0	0.4	0.9
RE-2X(St)H 1T1.3	1x3x1.3	0.45	0.9
RE-2X(St)H 1T1.5	1x3x1.5	0.45	0.9

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

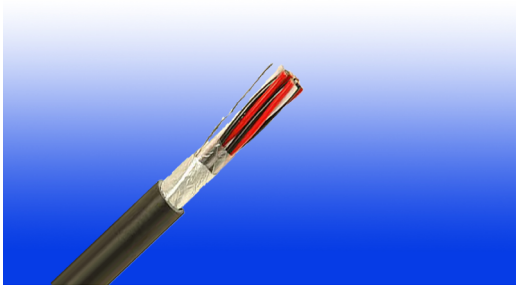

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

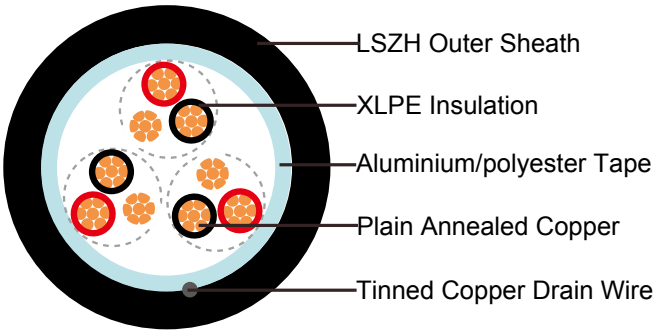

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)H 90°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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.
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, 0.5mm^2
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				
Mutual Capacitance (1 kHz)	up to 4 triple pF/m(Max.)	90	90	90	102	102

	above 4 triple pF/m(Max.)	75	75	75	85	85
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				
Test Voltage U_{rms} 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
	No.x3xmm^2	mm	mm
0.5mm^2 , Multi-striple			
RE-2X(St)H 2T0.5	2x3x0.50	0.35	0.9
RE-2X(St)H 4T0.5	4x3x0.50	0.35	1.0
RE-2X(St)H 5T0.5	5x3x0.50	0.35	1.0
RE-2X(St)H 6T0.5	6x3x0.50	0.35	1.0
RE-2X(St)H 8T0.5	8x3x0.50	0.35	1.1
RE-2X(St)H 10T0.5	10x3x0.50	0.35	1.1
RE-2X(St)H 12T0.5	12x3x0.50	0.35	1.1
RE-2X(St)H 16T0.5	16x3x0.50	0.35	1.2
RE-2X(St)H 20T0.5	20x3x0.50	0.35	1.2
RE-2X(St)H 24T0.5	24x3x0.50	0.35	1.3
0.75mm^2 , Multi-striple			
RE-2X(St)H 2T0.75	2x3x0.75	0.38	0.9
RE-2X(St)H 4T0.75	4x3x0.75	0.38	1.0
RE-2X(St)H 5T0.75	5x3x0.75	0.38	1.0
RE-2X(St)H 6T0.75	6x3x0.75	0.38	1.1
RE-2X(St)H 8T0.75	8x3x0.75	0.38	1.1
RE-2X(St)H 10T0.75	10x3x0.75	0.38	1.2
RE-2X(St)H 12T0.75	12x3x0.75	0.38	1.2
RE-2X(St)H 16T0.75	16x3x0.75	0.38	1.3
RE-2X(St)H 20T0.75	20x3x0.75	0.38	1.3
RE-2X(St)H 24T0.75	24x3x0.75	0.38	1.4

Caledonian Cable Code	RE-2X(St)H		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
1.0mm^2 , Multi-striple			
RE-2X(St)H 2T1.0	2x3x1.0	0.4	1.0
RE-2X(St)H 4T1.0	4x3x1.0	0.4	1.0
RE-2X(St)H 5T1.0	5x3x1.0	0.4	1.0
RE-2X(St)H 6T1.0	6x3x1.0	0.4	1.1
RE-2X(St)H 8T1.0	8x3x1.0	0.4	1.1
RE-2X(St)H 10T1.0	10x3x1.0	0.4	1.2
RE-2X(St)H 12T1.0	12x3x1.0	0.4	1.2
RE-2X(St)H 16T1.0	16x3x1.0	0.4	1.3
RE-2X(St)H 20T1.0	20x3x1.0	0.4	1.4
RE-2X(St)H 24T1.0	24x3x1.0	0.4	1.4
1.3mm^2 , Multi-striple			
RE-2X(St)H 2T1.3	2x3x1.3	0.45	1.0
RE-2X(St)H 4T1.3	4x3x1.3	0.45	1.1
RE-2X(St)H 5T1.3	5x3x1.3	0.45	1.1
RE-2X(St)H 6T1.3	6x3x1.3	0.45	1.2
RE-2X(St)H 8T1.3	8x3x1.3	0.45	1.2
RE-2X(St)H 10T1.3	10x3x1.3	0.45	1.3
RE-2X(St)H 12T1.3	12x3x1.3	0.45	1.3
RE-2X(St)H 16T1.3	16x3x1.3	0.45	1.4
RE-2X(St)H 20T1.3	20x3x1.3	0.45	1.5
RE-2X(St)H 24T1.3	24x3x1.3	0.45	1.6
1.5mm^2 , Multi-striple			
RE-2X(St)H 2T1.5	2x3x1.5	0.45	1.0
RE-2X(St)H 4T1.5	4x3x1.5	0.45	1.1
RE-2X(St)H 5T1.5	5x3x1.5	0.45	1.1
RE-2X(St)H 6T1.5	6x3x1.5	0.45	1.2
RE-2X(St)H 8T1.5	8x3x1.5	0.45	1.3
RE-2X(St)H 10T1.5	10x3x1.5	0.45	1.3
RE-2X(St)H 12T1.5	12x3x1.5	0.45	1.4

Caledonian Cable Code	RE-2X(St)H		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2X(St)H 16T1.5	16x3x1.5	0.45	1.5
RE-2X(St)H 20T1.5	20x3x1.5	0.45	1.6
RE-2X(St)H 24T1.5	24x3x1.5	0.45	1.7

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

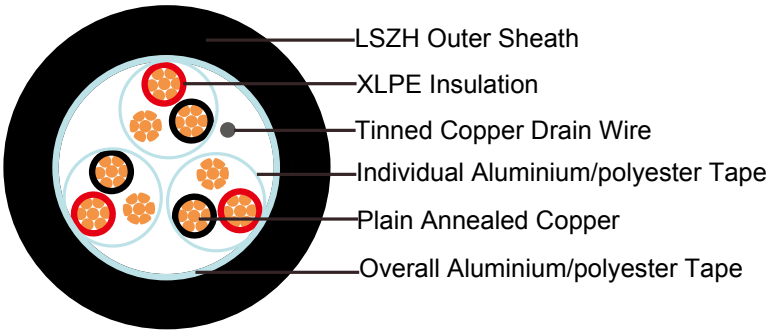

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 Instrumentation Cables (Multitriple)

RE-2X(St)H-TiMF 90°C / 300 V



APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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 th e 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 not 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 triple metallic side down in contact with tinned copper drain wire, 0.5mm²
Triple: Three conductors twisted to form a triple
Lay-up: TiMF laid up in layers of optimum pitch
Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm^2
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	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	115				

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)H-TiMF		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
0.5mm^2, Multi-striple			
RE-2X(St)H-TiMF 2T0.5	2x3x0.5	0.35	1.0
RE-2X(St)H-TiMF 4T0.5	4x3x0.5	0.35	1.0
RE-2X(St)H-TiMF 5T0.5	5x3x0.5	0.35	1.1
RE-2X(St)H-TiMF 6T0.5	6x3x0.5	0.35	1.1
RE-2X(St)H-TiMF 8T0.5	8x3x0.5	0.35	1.1
RE-2X(St)H-TiMF 10T0.5	10x3x0.5	0.35	1.2
RE-2X(St)H-TiMF 12T0.5	12x3x0.5	0.35	1.2
RE-2X(St)H-TiMF 16T0.5	16x3x0.5	0.35	1.3
RE-2X(St)H-TiMF 20T0.5	20x3x0.5	0.35	1.4
RE-2X(St)H-TiMF 24T0.5	24x3x0.5	0.35	1.5
0.75mm^2, Multi-striple			
RE-2X(St)H-TiMF 2T0.75	2x3x0.75	0.38	1.0
RE-2X(St)H-TiMF 4T0.75	4x3x0.75	0.38	1.1
RE-2X(St)H-TiMF 5T0.75	5x3x0.75	0.38	1.1
RE-2X(St)H-TiMF 6T0.75	6x3x0.75	0.38	1.1
RE-2X(St)H-TiMF 8T0.75	8x3x0.75	0.38	1.2
RE-2X(St)H-TiMF 10T0.75	10x3x0.75	0.38	1.3
RE-2X(St)H-TiMF 12T0.75	12x3x0.75	0.38	1.3
RE-2X(St)H-TiMF 16T0.75	16x3x0.75	0.38	1.4
RE-2X(St)H-TiMF 20T0.75	20x3x0.75	0.38	1.5

Caledonian Cable Code	RE-2X(St)H-TiMF		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2X(St)H-TiMF 24T0.75	24x3x0.75	0.38	1.6
1.0mm^2, Multi-striple			
RE-2X(St)H-TiMF 2T1.0	2x3x1.0	0.4	1.0
RE-2X(St)H-TiMF 4T1.0	4x3x1.0	0.4	1.1
RE-2X(St)H-TiMF 5T1.0	5x3x1.0	0.4	1.1
RE-2X(St)H-TiMF 6T1.0	6x3x1.0	0.4	1.2
RE-2X(St)H-TiMF 8T1.0	8x3x1.0	0.4	1.2
RE-2X(St)H-TiMF 10T1.0	10x3x1.0	0.4	1.3
RE-2X(St)H-TiMF 12T1.0	12x3x1.0	0.4	1.3
RE-2X(St)H-TiMF 16T1.0	16x3x1.0	0.4	1.4
RE-2X(St)H-TiMF 20T1.0	20x3x1.0	0.4	1.5
RE-2X(St)H-TiMF 24T1.0	24x3x1.0	0.4	1.6
1.3mm^2, Multi-striple			
RE-2X(St)H-TiMF 2T1.3	2x3x1.3	0.45	1.1
RE-2X(St)H-TiMF 4T1.3	4x3x1.3	0.45	1.1
RE-2X(St)H-TiMF 5T1.3	5x3x1.3	0.45	1.2
RE-2X(St)H-TiMF 6T1.3	6x3x1.3	0.45	1.3
RE-2X(St)H-TiMF 8T1.3	8x3x1.3	0.45	1.3
RE-2X(St)H-TiMF 10T1.3	10x3x1.3	0.45	1.4
RE-2X(St)H-TiMF 12T1.3	12x3x1.3	0.45	1.5
RE-2X(St)H-TiMF 16T1.3	16x3x1.3	0.45	1.6
RE-2X(St)H-TiMF 20T1.3	20x3x1.3	0.45	1.7
RE-2X(St)H-TiMF 24T1.3	24x3x1.3	0.45	1.8
1.5mm^2, Multi-striple			
RE-2X(St)H-TiMF 2T1.5	2x3x1.5	0.45	1.1
RE-2X(St)H-TiMF 4T1.5	4x3x1.5	0.45	1.2
RE-2X(St)H-TiMF 5T1.5	5x3x1.5	0.45	1.2
RE-2X(St)H-TiMF 6T1.5	6x3x1.5	0.45	1.3
RE-2X(St)H-TiMF 8T1.5	8x3x1.5	0.45	1.4
RE-2X(St)H-TiMF 10T1.5	10x3x1.5	0.45	1.5

Caledonian Cable Code	RE-2X(St)H-TiMF		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2X(St)H-TiMF 12T1.5	12x3x1.5	0.45	1.5
RE-2X(St)H-TiMF 16T1.5	16x3x1.5	0.45	1.6
RE-2X(St)H-TiMF 20T1.5	20x3x1.5	0.45	1.7
RE-2X(St)H-TiMF 24T1.5	24x3x1.5	0.45	1.8

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

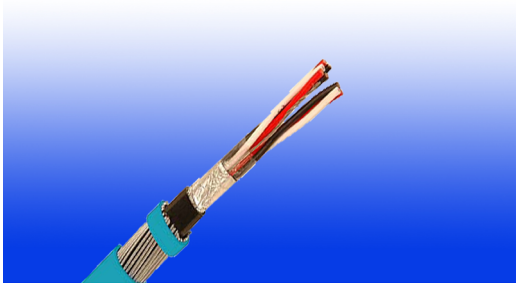

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

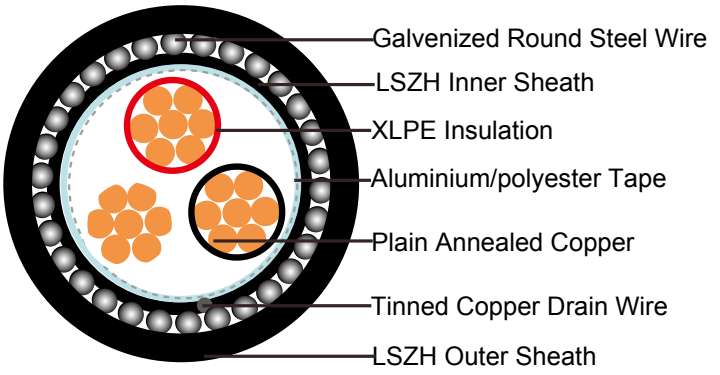

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)HSWAH 70°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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.
Triple: Three conductors twisted to form a triple
Lay-up: Triples laid up in layers of optimum pitch
Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm^2
Inner sheath: LSZH compound
Armour: Galvenized 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.
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.)	115				

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)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 1T0.5	1x3x0.50	0.35	0.8	5.4	0.9	1.3
RE-2X(St)HSWAH 1T0.75	1x3x0.75	0.38	0.9	6.1	0.9	1.3
RE-2X(St)HSWAH 1T1.0	1x3x1.0	0.4	0.9	6.6	0.9	1.3
RE-2X(St)HSWAH 1T1.3	1x3x1.3	0.45	0.9	7.2	0.9	1.3
RE-2X(St)HSWAH 1T1.5	1x3x1.5	0.45	0.9	7.5	0.9	1.3

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

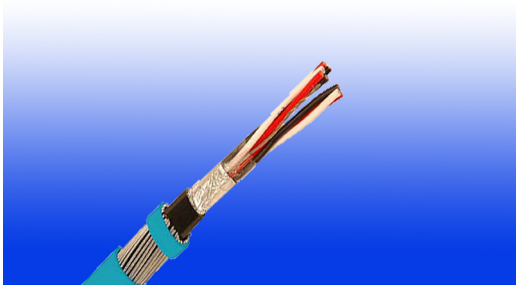

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

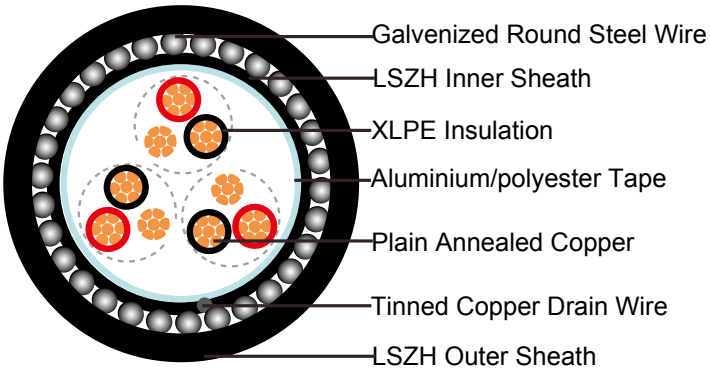

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2XSt)HSWAH 70°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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.
Triple: Three conductors twisted to form a triple
Lay-up: Triples laid up in layers of optimum pitch
Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm²
Inner sheath: LSZH compound
Armour: Galvenized 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.)					

		≤ 4 pairs	90	90	90	102	102
		all other pairs	75	75	75	85	85
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)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multi-striple						
RE-2X(St)HSWAH 2T0.5	2x3x0.5	0.35	0.9	8.4	0.9	1.4
RE-2X(St)HSWAH 4T0.5	4x3x0.5	0.35	1.0	9.8	0.9	1.4
RE-2X(St)HSWAH 5T0.5	5x3x0.5	0.35	1.0	10.8	0.9	1.4
RE-2X(St)HSWAH 6T0.5	6x3x0.5	0.35	1.0	12.1	0.9	1.4
RE-2X(St)HSWAH 8T0.5	8x3x0.5	0.35	1.1	13.1	0.9	1.5
RE-2X(St)HSWAH 10T0.5	10x3x0.5	0.35	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH 12T0.5	12x3x0.5	0.35	1.1	15.2	0.9	1.5
RE-2X(St)HSWAH 16T0.5	16x3x0.5	0.35	1.2	17.4	0.9	1.6
RE-2X(St)HSWAH 20T0.5	20x3x0.5	0.35	1.2	19.1	1.25	1.6
RE-2X(St)HSWAH 24T0.5	24x3x0.5	0.35	1.3	20.9	1.25	1.7
0.75mm^2, Multi-striple						
RE-2X(St)HSWAH 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4
RE-2X(St)HSWAH 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.4
RE-2X(St)HSWAH 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.4
RE-2X(St)HSWAH 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5
RE-2X(St)HSWAH 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.5
RE-2X(St)HSWAH 10T0.75	10x3x0.75	0.38	1.3	19.0	0.9	1.5

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 12T0.75	12x3x0.75	0.38	1.3	19.7	0.9	1.7
RE-2X(St)HSWAH 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.6
RE-2X(St)HSWAH 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.7
RE-2X(St)HSWAH 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.7
1.0mm^2, Multi-striple						
RE-2X(St)HSWAH 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4
RE-2X(St)HSWAH 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.4
RE-2X(St)HSWAH 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5
RE-2X(St)HSWAH 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5
RE-2X(St)HSWAH 8T1.0	8x3x1.0	0.4	1.2	18.1	0.9	1.5
RE-2X(St)HSWAH 10T1.0	10x3x1.0	0.4	1.3	20.7	0.9	1.6
RE-2X(St)HSWAH 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.6
RE-2X(St)HSWAH 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7
RE-2X(St)HSWAH 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.7
RE-2X(St)HSWAH 24T1.0	24x3x1.0	0.4	1.6	29.6	1.25	1.8
1.3mm^2, Multi-striple						
RE-2X(St)HSWAH 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.4
RE-2X(St)HSWAH 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.5
RE-2X(St)HSWAH 6T1.3	6x3x1.3	0.45	1.3	18.8	0.9	1.5
RE-2X(St)HSWAH 8T1.3	8x3x1.3	0.45	1.3	20.1	0.9	1.6
RE-2X(St)HSWAH 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.7
RE-2X(St)HSWAH 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.7
RE-2X(St)HSWAH 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.8
RE-2X(St)HSWAH 20T1.3	20x3x1.3	0.45	1.7	30.4	1.25	1.8
RE-2X(St)HSWAH 24T1.3	24x3x1.3	0.45	1.8	33.1	1.60	1.9
1.5mm^2, Multi-striple						
RE-2X(St)HSWAH 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.4

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5
RE-2X(St)HSWAH 5T1.5	5x3x1.5	0.45	1.2	17.1	0.9	1.5
RE-2X(St)HSWAH 6T1.5	6x3x1.5	0.45	1.3	19.5	0.9	1.6
RE-2X(St)HSWAH 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.6
RE-2X(St)HSWAH 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.7
RE-2X(St)HSWAH 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.7
RE-2X(St)HSWAH 16T1.5	16x3x1.5	0.45	1.6	28.4	1.25	1.8
RE-2X(St)HSWAH 20T1.5	20x3x1.5	0.45	1.7	31.6	1.25	1.9
RE-2X(St)HSWAH 24T1.5	24x3x1.5	0.45	1.8	34.4	1.60	2.0

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

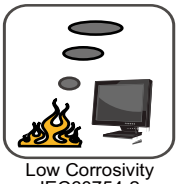
Rated Voltage

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

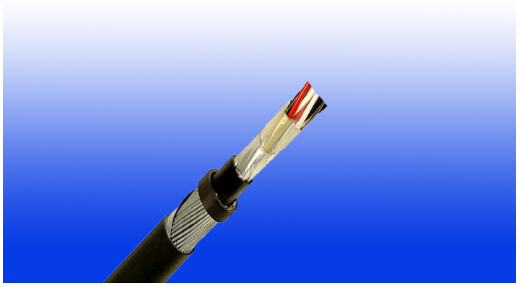

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

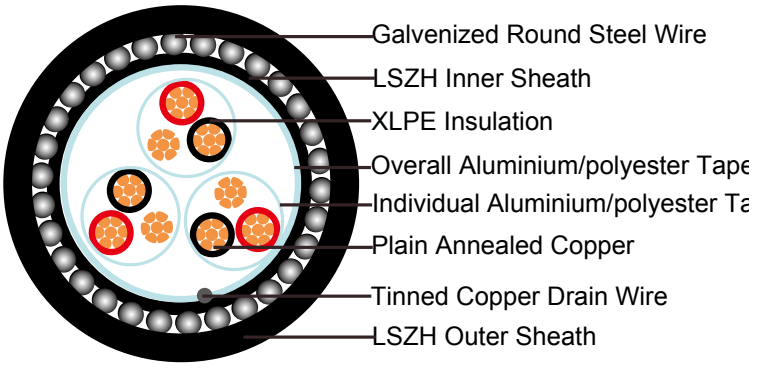

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)HSWAH-TiMF 70°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 triple metallic side down in contact with tinned copper drain wire, 0.5mm²
Triple: Three conductors twisted to form a triple
Lay-up: triples laid up in layers of optimum pitch
Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm^2
Inner sheath: LSZH compound
Armour: Galvenized 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.)	115					
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-2X(St)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multi-striple						
RE-2X(St)HSWAH-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	0.9	1.4
RE-2X(St)HSWAH-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	0.9	1.4
RE-2X(St)HSWAH-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	0.9	1.5
RE-2X(St)HSWAH-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	0.9	1.5
RE-2X(St)HSWAH-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	0.9	1.5
RE-2X(St)HSWAH-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	1.25	1.6
RE-2X(St)HSWAH-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	1.25	1.6
RE-2X(St)HSWAH-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	1.25	1.7
RE-2X(St)HSWAH-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	1.25	1.7
RE-2X(St)HSWAH-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	1.25	1.8
0.75mm^2, Multi-striple						
RE-2X(St)HSWAH-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4
RE-2X(St)HSWAH-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.5
RE-2X(St)HSWAH-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.5
RE-2X(St)HSWAH-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5
RE-2X(St)HSWAH-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.6
RE-2X(St)HSWAH-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	1.25	1.6

Caledonian Cable Code	RE-2X(St)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	1.25	1.7
RE-2X(St)HSWAH-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.7
RE-2X(St)HSWAH-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.8
RE-2X(St)HSWAH-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.9
1.0mm^2, Multi-striple						
RE-2X(St)HSWAH-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4
RE-2X(St)HSWAH-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.5
RE-2X(St)HSWAH-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5
RE-2X(St)HSWAH-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5
RE-2X(St)HSWAH-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	1.25	1.6
RE-2X(St)HSWAH-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	1.25	1.7
RE-2X(St)HSWAH-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.7
RE-2X(St)HSWAH-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7
RE-2X(St)HSWAH-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.8
RE-2X(St)HSWAH-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1.6	1.9
1.3mm^2, Multi-striple						
RE-2X(St)HSWAH-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.5
RE-2X(St)HSWAH-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.6
RE-2X(St)HSWAH-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	1.25	1.6
RE-2X(St)HSWAH-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	1.25	1.7
RE-2X(St)HSWAH-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.8
RE-2X(St)HSWAH-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.8
RE-2X(St)HSWAH-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.9
RE-2X(St)HSWAH-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1.6	2.0
RE-2X(St)HSWAH-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1.6	2.0
1.5mm^2, Multi-striple						
RE-2X(St)HSWAH-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.5

Caledonian Cable Code	RE-2X(St)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2X(St)HSWAH-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5
RE-2X(St)HSWAH-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	1.25	1.6
RE-2X(St)HSWAH-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	1.25	1.6
RE-2X(St)HSWAH-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.7
RE-2X(St)HSWAH-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.8
RE-2X(St)HSWAH-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.8
RE-2X(St)HSWAH-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1.6	1.9
RE-2X(St)HSWAH-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1.6	2.0
RE-2X(St)HSWAH-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1.6	2.1

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

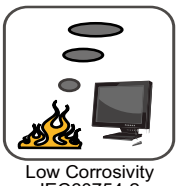
Rated Voltage

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

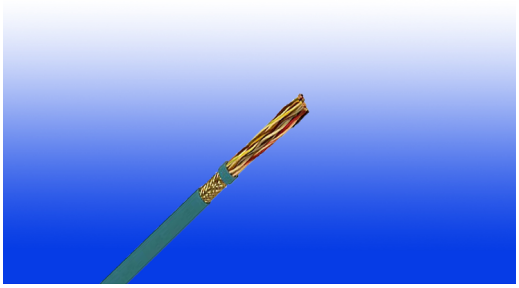

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

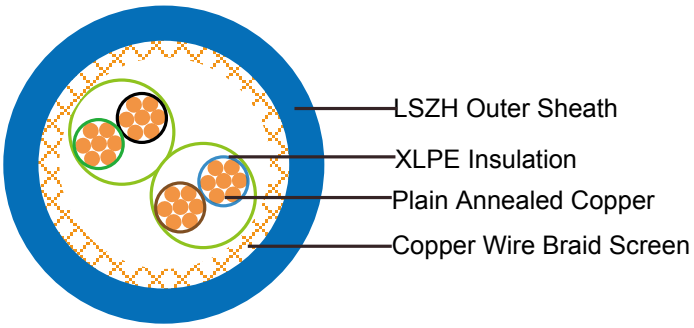

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(C)H 90°C / 300V





APPLICATION

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 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
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.
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.)	115				
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
	No.x2xmm^2	Kg/km
RE-2X(C)H 1P0.5	1x2x0.50	8.3
RE-2X(C)H 1P0.75	1x2x0.75	8.7
RE-2X(C)H 1P1.0	1x2x1.0	9.4
RE-2X(C)H 1P1.3	1x2x1.3	9.7

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

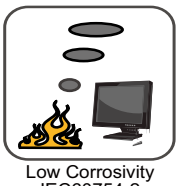
Rated Voltage

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

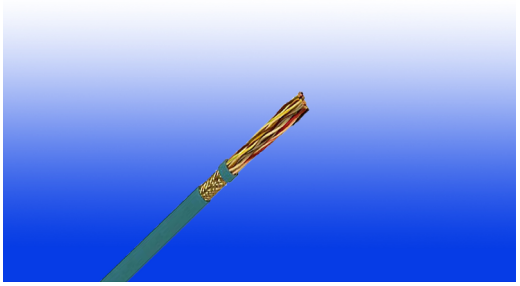

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

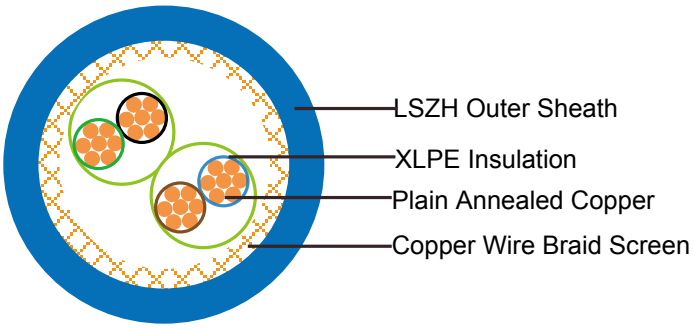

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

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 analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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 o fire. In case o fire, these cables inhibit the propagation o 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 not 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 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
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 – +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.)					
	≤ 4 pairs	115	115	115	120	120
	all other pairs	90	90	90	105	105
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
	No.x2xmm^2	Kg/km
0.5mm^2, Multipair		
RE-2X(C)H 2P0.5	2x2x0.50	10.7
RE-2X(C)H 3P0.5	3x2x0.50	11.1
RE-2X(C)H 4P0.5	4x2x0.50	11.9
RE-2X(C)H 6P0.5	6x2x0.50	13.6
RE-2X(C)H 8P0.5	8x2x0.50	14.2
RE-2X(C)H 12P0.5	12x2x0.50	16.4
RE-2X(C)H 16P0.5	16x2x0.50	18.2
RE-2X(C)H 20P0.5	20x2x0.50	19.7
RE-2X(C)H 24P0.5	24x2x0.50	21.1
0.75mm^2, Multipair		
RE-2X(C)H 2P0.75	2x2x0.75	11.4
RE-2X(C)H 3P0.75	3x2x0.75	11.9
RE-2X(C)H 4P0.75	4x2x0.75	12.7
RE-2X(C)H 6P0.75	6x2x0.75	14.6
RE-2X(C)H 8P0.75	8x2x0.75	15.4
RE-2X(C)H 12P0.75	12x2x0.75	17.8
RE-2X(C)H 16P0.75	16x2x0.75	19.8
RE-2X(C)H 20P0.75	20.x2x0.75	21.5
RE-2X(C)H 24P0.75	24x2x0.75	23.1
1.0mm^2, Multipair		
RE-2X(C)H 2P1.0	2x2x1.0	12.3
RE-2X(C)H 3P1.0	3x2x1.0	12.8
RE-2X(C)H 4P1.0	4x2x1.0	13.7
RE-2X(C)H 6P1.0	6x2x1.0	15.6
RE-2X(C)H 8P1.0	8x2x1.0	16.4

Caledonian Cable Code	RE-2X(C)H	
	No. of Pairs x2xCross Section	Copper Weight
	No.x2xmm^2	Kg/km
RE-2X(C)H 12P1.0	12x2x1.0	19.0
RE-2X(C)H 16P1.0	16x2x1.0	21.2
RE-2X(C)H 20P1.0	20x2x1.0	23.5
RE-2X(C)H 24P1.0	24x2x1.0	25.3
1.3mm^2, Multipair		
RE-2X(C)H 2P1.3	2x2x1.3	12.9
RE-2X(C)H 3P1.3	3x2x1.3	13.5
RE-2X(C)H 4P1.3	4x2x1.3	14.5
RE-2X(C)H 6P1.3	6x2x1.3	16.7
RE-2X(C)H 8P1.3	8x2x1.3	17.4
RE-2X(C)H 12P1.3	12x2x1.3	20.2
RE-2X(C)H 16P1.3	16x2x1.3	22.6
RE-2X(C)H 20P1.3	20x2x1.3	25.1
RE-2X(C)H 24P1.3	24x2x1.3	27.0

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

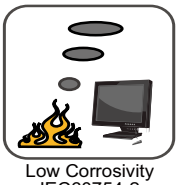
Rated Voltage

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

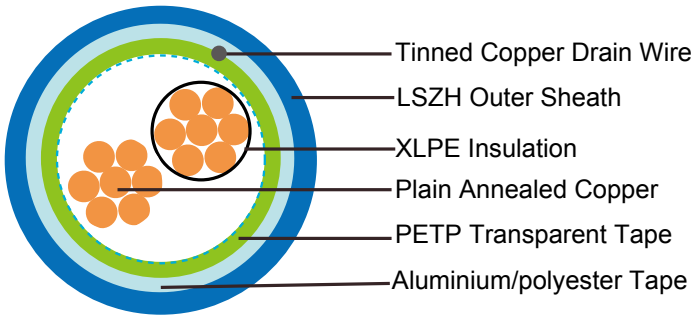

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 (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 specified length lay.
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
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.)	115				
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)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.

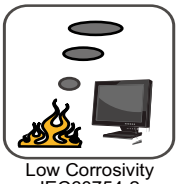
Rated Voltage

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

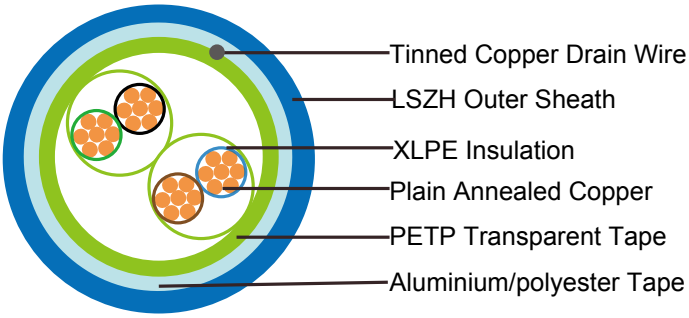

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 specified length lay.
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.)					
	≤ 4 pairs	90	90	90	102	102
	all other pairs	75	75	75	85	85
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)H		
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
0.5mm^2, Multipair			
RE-2X(St)H 2P0.5	2x2x0.5	0.35	0.9
RE-2X(St)H 4P0.5	4x2x0.5	0.35	0.9
RE-2X(St)H 5P0.5	5x2x0.5	0.35	1.0
RE-2X(St)H 6P0.5	6x2x0.5	0.35	1.0
RE-2X(St)H 8P0.5	8x2x0.5	0.35	1.0
RE-2X(St)H 10P0.5	10x2x0.5	0.35	1.1
RE-2X(St)H 12P0.5	12x2x0.5	0.35	1.1
RE-2X(St)H 16P0.5	16x2x0.5	0.35	1.1
RE-2X(St)H 20P0.5	20x2x0.5	0.35	1.2
RE-2X(St)H 24P0.5	24x2x0.5	0.35	1.2
0.75mm^2, Multipair			
RE-2X(St)H 2P0.75	2x2x0.75	0.38	0.9
RE-2X(St)H 4P0.75	4x2x0.75	0.38	1.0
RE-2X(St)H 5P0.75	5x2x0.75	0.38	1.0
RE-2X(St)H 6P0.75	6x2x0.75	0.38	1.0
RE-2X(St)H 8P0.75	8x2x0.75	0.38	1.1
RE-2X(St)H 10P0.75	10x2x0.75	0.38	1.1
RE-2X(St)H 12P0.75	12x2x0.75	0.38	1.1
RE-2X(St)H 16P0.75	16x2x0.75	0.38	1.2
RE-2X(St)H 20P0.75	20x2x0.75	0.38	1.3
RE-2X(St)H 24P0.75	24x2x0.75	0.38	1.3

Caledonian Cable Code	RE-2X(St)H		
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
1.0mm^2, Multipair			
RE-2X(St)H 2P1.0	2x2x1.0	0.4	0.9
RE-2X(St)H 4P1.0	4x2x1.0	0.4	1.0
RE-2X(St)H 5P1.0	5x2x1.0	0.4	1.0
RE-2X(St)H 6P1.0	6x2x1.0	0.4	1.0
RE-2X(St)H 8P1.0	8x2x1.0	0.4	1.1
RE-2X(St)H 10P1.0	10x2x1.0	0.4	1.1
RE-2X(St)H 12P1.0	12x2x1.0	0.4	1.2
RE-2X(St)H 16P1.0	16x2x1.0	0.4	1.2
RE-2X(St)H 20P1.0	20x2x1.0	0.4	1.3
RE-2X(St)H 24P1.0	24x2x1.0	0.4	1.4
1.3mm^2, Multipair			
RE-2X(St)H 2P1.3	2x2x1.3	0.45	1.0
RE-2X(St)H 4P1.3	4x2x1.3	0.45	1.0
RE-2X(St)H 5P1.3	5x2x1.3	0.45	1.1
RE-2X(St)H 6P1.3	6x2x1.3	0.45	1.1
RE-2X(St)H 8P1.3	8x2x1.3	0.45	1.2
RE-2X(St)H 10P1.3	10x2x1.3	0.45	1.2
RE-2X(St)H 12P1.3	12x2x1.3	0.45	1.3
RE-2X(St)H 16P1.3	16x2x1.3	0.45	1.3
RE-2X(St)H 20P1.3	20x2x1.3	0.45	1.4
RE-2X(St)H 24P1.3	24x2x1.3	0.45	1.5
1.5mm^2, Multipair			
RE-2X(St)H 2P1.5	2x2x1.5	0.45	1.0
RE-2X(St)H 4P1.5	4x2x1.5	0.45	1.1
RE-2X(St)H 5P1.5	5x2x1.5	0.45	1.1
RE-2X(St)H 6P1.5	6x2x1.5	0.45	1.2

Caledonian Cable Code	RE-2X(St)H		
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2X(St)H 8P1.5	8x2x1.5	0.45	1.2
RE-2X(St)H 10P1.5	10x2x1.5	0.45	1.3
RE-2X(St)H 12P1.5	12x2x1.5	0.45	1.3
RE-2X(St)H 16P1.5	16x2x1.5	0.45	1.4
RE-2X(St)H 20P1.5	20x2x1.5	0.45	1.5
RE-2X(St)H 24P1.5	24x2x1.5	0.45	1.5

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

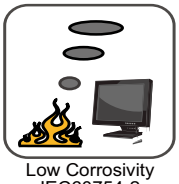
Rated Voltage

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

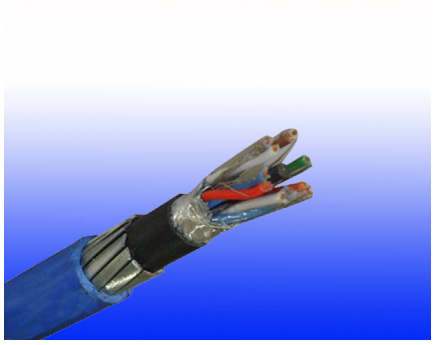

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

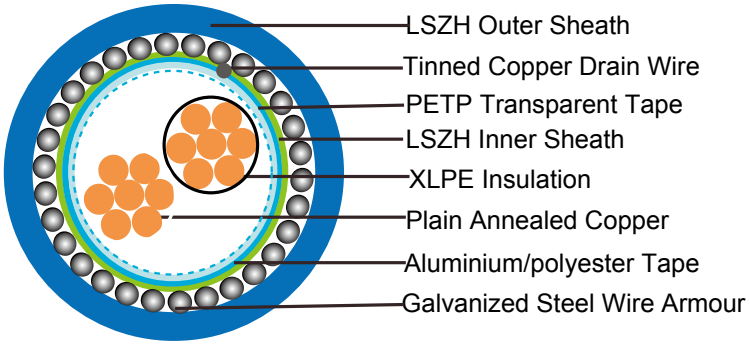

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)HSWAH 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 specified length lay.
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
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.)	115				
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)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2X(St)HSWAH 1P0.5	1x2x0.50	0.35	0.8	5.2	0.9	1.3
RE-2X(St)HSWAH 1P0.75	1x2x0.75	0.38	0.8	5.6	0.9	1.3
RE-2X(St)HSWAH 1P1.0	1x2x1.0	0.40	0.9	6.3	0.9	1.3
RE-2X(St)HSWAH 1P1.3	1x2x1.3	0.45	0.9	6.8	0.9	1.3
RE-2X(St)HSWAH 1P1.5	1x2x1.5	0.45	0.9	7.1	0.9	1.3

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

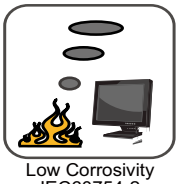
Rated Voltage

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

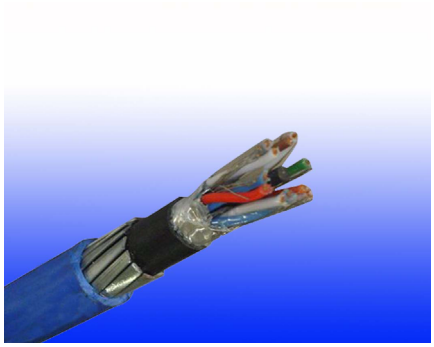

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

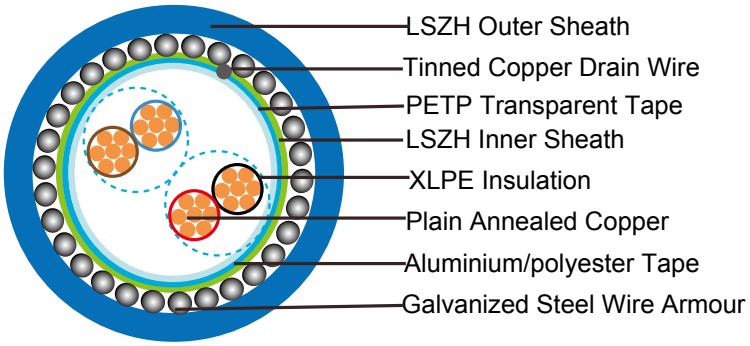

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2X(St)HSWAH 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 specified length lay.
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.)					
	up to 4 pairs	90	90	90	102	102
	above 4 pairs	75	75	75	85	85
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

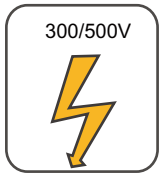
CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
0.5mm^2, Multipair						
RE-2X(St)HSWAH 2P0.5	2x2x0.5	0.35	0.9	7.6	0.9	1.3
RE-2X(St)HSWAH 4P0.5	4x2x0.5	0.35	0.9	8.8	0.9	1.4
RE-2X(St)HSWAH 5P0.5	5x2x0.5	0.35	1.0	9.8	0.9	1.4
RE-2X(St)HSWAH 6P0.5	6x2x0.5	0.35	1.0	10.6	0.9	1.4
RE-2X(St)HSWAH 8P0.5	8x2x0.5	0.35	1.0	11.3	0.9	1.4
RE-2X(St)HSWAH 10P0.5	10x2x0.5	0.35	1.1	12.9	0.9	1.5
RE-2X(St)HSWAH 12P0.5	12x2x0.5	0.35	1.1	13.5	0.9	1.5
RE-2X(St)HSWAH 16P0.5	16x2x0.5	0.35	1.1	15.2	0.9	1.5
RE-2X(St)HSWAH 20P0.5	20x2x0.5	0.35	1.2	16.9	0.9	1.6
RE-2X(St)HSWAH 24P0.5	24x2x0.5	0.35	1.2	18.3	1.25	1.6
0.75mm^2, Multipair						
RE-2X(St)HSWAH 2P0.75	2x2x0.75	0.38	0.9	8.5	0.9	1.4
RE-2X(St)HSWAH 4P0.75	4x2x0.75	0.38	1.0	10.0	0.9	1.4
RE-2X(St)HSWAH 5P0.75	5x2x0.75	0.38	1.0	10.9	0.9	1.4
RE-2X(St)HSWAH 6P0.75	6x2x0.75	0.38	1.0	11.8	0.9	1.4
RE-2X(St)HSWAH 8P0.75	8x2x0.75	0.38	1.1	12.8	0.9	1.5
RE-2X(St)HSWAH 10P0.75	10x2x0.75	0.38	1.1	14.5	0.9	1.5
RE-2X(St)HSWAH 12P0.75	12x2x0.75	0.38	1.1	15.1	0.9	1.5
RE-2X(St)HSWAH 16P0.75	16x2x0.75	0.38	1.2	17.3	0.9	1.6
RE-2X(St)HSWAH 20P0.75	20x2x0.75	0.38	1.3	19.2	1.25	1.6
RE-2X(St)HSWAH 24P0.75	24x2x0.75	0.38	1.3	20.8	1.25	1.6
1.0mm^2, Multipair						

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2X(St)HSWAH 2P1.0	2x2x1.0	0.4	0.9	9.2	0.9	1.4
RE-2X(St)HSWAH 4P1.0	4x2x1.0	0.4	1.0	10.9	0.9	1.4
RE-2X(St)HSWAH 5P1.0	5x2x1.0	0.4	1.0	11.9	0.9	1.4
RE-2X(St)HSWAH 6P1.0	6x2x1.0	0.4	1.0	13.0	0.9	1.4
RE-2X(St)HSWAH 8P1.0	8x2x1.0	0.4	1.1	14.0	0.9	1.5
RE-2X(St)HSWAH 10P1.0	10x2x1.0	0.4	1.1	15.9	0.9	1.5
RE-2X(St)HSWAH 12P1.0	12x2x1.0	0.4	1.2	16.8	0.9	1.5
RE-2X(St)HSWAH 16P1.0	16x2x1.0	0.4	1.2	19.0	1.25	1.6
RE-2X(St)HSWAH 20P1.0	20x2x1.0	0.4	1.3	21.1	1.25	1.7
RE-2X(St)HSWAH 24P1.0	24x2x1.0	0.4	1.4	23.1	1.25	1.7
1.3mm^2, Multipair						
RE-2X(St)HSWAH 2P1.3	2x2x1.3	0.45	1.0	10.4	0.9	1.4
RE-2X(St)HSWAH 4P1.3	4x2x1.3	0.45	1.0	12.0	0.9	1.4
RE-2X(St)HSWAH 5P1.3	5x2x1.3	0.45	1.1	13.4	0.9	1.5
RE-2X(St)HSWAH 6P1.3	6x2x1.3	0.45	1.1	14.6	0.9	1.5
RE-2X(St)HSWAH 8P1.3	8x2x1.3	0.45	1.2	15.7	0.9	1.5
RE-2X(St)HSWAH 10P1.3	10x2x1.3	0.45	1.2	17.9	0.9	1.6
RE-2X(St)HSWAH 12P1.3	12x2x1.3	0.45	1.3	18.9	1.25	1.6
RE-2X(St)HSWAH 16P1.3	16x2x1.3	0.45	1.3	21.4	1.25	1.7
RE-2X(St)HSWAH 20P1.3	20x2x1.3	0.45	1.4	23.8	1.25	1.8
RE-2X(St)HSWAH 24P1.3	24x2x1.3	0.45	1.5	25.9	1.25	1.8
1.5mm^2, Multipair						
RE-2X(St)HSWAH 2P1.5	2x2x1.5	0.45	1.0	10.8	0.9	1.4
RE-2X(St)HSWAH 4P1.5	4x2x1.5	0.45	1.1	12.7	0.9	1.5
RE-2X(St)HSWAH 5P1.5	5x2x1.5	0.45	1.1	14.0	0.9	1.5
RE-2X(St)HSWAH 6P1.5	6x2x1.5	0.45	1.2	15.2	0.9	1.5
RE-2X(St)HSWAH 8P1.5	8x2x1.5	0.45	1.2	16.4	0.9	1.6
RE-2X(St)HSWAH 10P1.5	10x2x1.5	0.45	1.3	18.8	1.25	1.6
RE-2X(St)HSWAH 12P1.5	12x2x1.5	0.45	1.3	19.7	1.25	1.7

Caledonian Cable Code	RE-2X(St)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2X(St)HSWAH 16P1.5	16x2x1.5	0.45	1.4	22.5	1.25	1.7
RE-2X(St)HSWAH 20P1.5	20x2x1.5	0.45	1.5	25.0	1.25	1.8
RE-2X(St)HSWAH 24P1.5	24x2x1.5	0.45	1.5	27.1	1.25	1.8

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



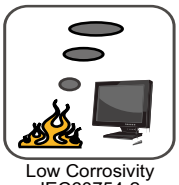
Rated Voltage

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

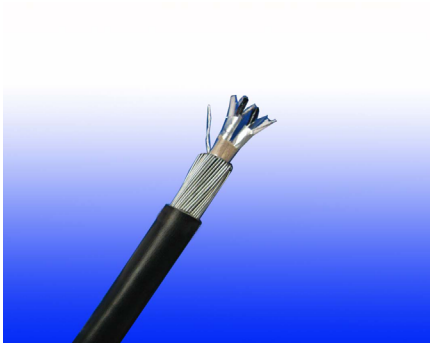

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

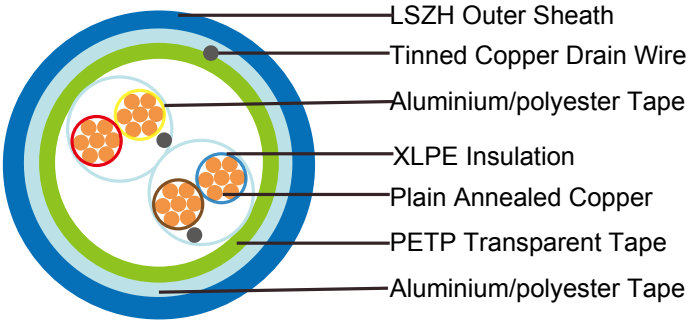

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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 specified length lay.
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	0.35	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.)	115				
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
	No.x2xmm^2	mm	mm
0.5mm^2, Multipair			
RE-2X(St)H PiMF 2P0.5	2x2x0.5	0.35	0.9
RE-2X(St)H PiMF 4P0.5	4x2x0.5	0.35	1.0
RE-2X(St)H PiMF 5P0.5	5x2x0.5	0.35	1.0
RE-2X(St)H PiMF 6P0.5	6x2x0.5	0.35	1.0
RE-2X(St)H PiMF 8P0.5	8x2x0.5	0.35	1.1
RE-2X(St)H PiMF 10P0.5	10x2x0.5	0.35	1.2
RE-2X(St)H PiMF 12P0.5	12x2x0.5	0.35	1.2
RE-2X(St)H PiMF 16P0.5	16x2x0.5	0.35	1.2
RE-2X(St)H PiMF 20P0.5	20x2x0.5	0.35	1.3
RE-2X(St)H PiMF 24P0.5	24x2x0.5	0.35	1.4
0.75mm^2, Multipair			
RE-2X(St)H PiMF 2P0.75	2x2x0.75	0.38	1.0
RE-2X(St)H PiMF 4P0.75	4x2x0.75	0.38	1.0
RE-2X(St)H PiMF 5P0.75	5x2x0.75	0.38	1.1
RE-2X(St)H PiMF 6P0.75	6x2x0.75	0.38	1.1
RE-2X(St)H PiMF 8P0.75	8x2x0.75	0.38	1.1
RE-2X(St)H PiMF 10P0.75	10x2x0.75	0.38	1.2
RE-2X(St)H PiMF 12P0.75	12x2x0.75	0.38	1.2
RE-2X(St)H PiMF 16P0.75	16x2x0.75	0.38	1.3
RE-2X(St)H PiMF 20P0.75	20x2x0.75	0.38	1.4
RE-2X(St)H PiMF 24P0.75	24x2x0.75	0.38	1.5
1.0mm^2, Multipair			
RE-2X(St)H PiMF 2P1.0	2x2x1.0	0.4	1.0
RE-2X(St)H PiMF 4P1.0	4x2x1.0	0.4	1.0

Caledonian Cable Code	RE-2X(St)H PiMF		
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2X(St)H PiMF 5P1.0	5x2x1.0	0.4	1.1
RE-2X(St)H PiMF 6P1.0	6x2x1.0	0.4	1.1
RE-2X(St)H PiMF 8P1.0	8x2x1.0	0.4	1.2
RE-2X(St)H PiMF 10P1.0	10x2x1.0	0.4	1.2
RE-2X(St)H PiMF 12P1.0	12x2x1.0	0.4	1.3
RE-2X(St)H PiMF 16P1.0	16x2x1.0	0.4	1.3
RE-2X(St)H PiMF 20P1.0	20x2x1.0	0.4	1.4
RE-2X(St)H PiMF 24P1.0	24x2x1.0	0.4	1.5
1.3mm^2, Multipair			
RE-2X(St)H PiMF 2P1.3	2x2x1.3	0.45	1.0
RE-2X(St)H PiMF 4P1.3	4x2x1.3	0.45	1.1
RE-2X(St)H PiMF 5P1.3	5x2x1.3	0.45	1.1
RE-2X(St)H PiMF 6P1.3	6x2x1.3	0.45	1.2
RE-2X(St)H PiMF 8P1.3	8x2x1.3	0.45	1.3
RE-2X(St)H PiMF 10P1.3	10x2x1.3	0.45	1.3
RE-2X(St)H PiMF 12P1.3	12x2x1.3	0.45	1.4
RE-2X(St)H PiMF 16P1.3	16x2x1.3	0.45	1.5
RE-2X(St)H PiMF 20P1.3	20x2x1.3	0.45	1.6
RE-2X(St)H PiMF 24P1.3	24x2x1.3	0.45	1.7
1.5mm^2, Multipair			
RE-2X(St)H PiMF 2P1.5	2x2x1.5	0.45	1.0
RE-2X(St)H PiMF 4P1.5	4x2x1.5	0.45	1.1
RE-2X(St)H PiMF 5P1.5	5x2x1.5	0.45	1.2
RE-2X(St)H PiMF 6P1.5	6x2x1.5	0.45	1.2
RE-2X(St)H PiMF 8P1.5	8x2x1.5	0.45	1.3
RE-2X(St)H PiMF 10P1.5	10x2x1.5	0.45	1.4
RE-2X(St)H PiMF 12P1.5	12x2x1.5	0.45	1.4

Caledonian Cable Code	RE-2X(St)H PiMF		
	No. of Pairs x2xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2X(St)H PiMF 16P1.5	16x2x1.5	0.45	1.5
RE-2X(St)H PiMF 20P1.5	20x2x1.5	0.45	1.6
RE-2X(St)H PiMF 24P1.5	24x2x1.5	0.45	1.7

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

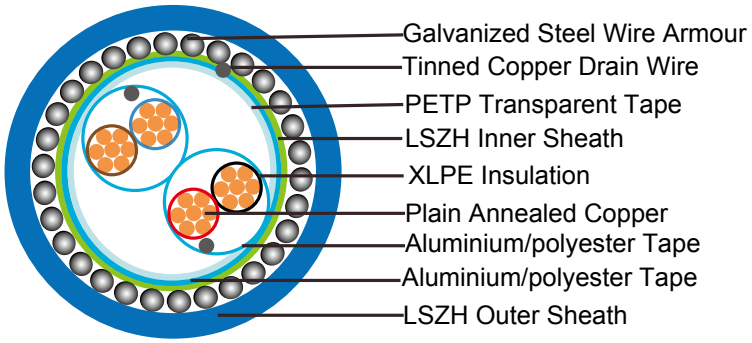

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 and Overall Screened & Armoured Instrumentation Cables (Multipair)

RE-2X(St)HSWAH 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 specified length lay.
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
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): -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.)	115				
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)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
0.5mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	0.9	1.4
RE-2X(St)HSWAH PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	0.9	1.4
RE-2X(St)HSWAH PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	0.9	1.4
RE-2X(St)HSWAH PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	0.9	1.5
RE-2X(St)HSWAH PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	0.9	1.5
RE-2X(St)HSWAH PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	0.9	1.5
RE-2X(St)HSWAH PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	0.9	1.5
RE-2X(St)HSWAH PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	1.25	1.6
RE-2X(St)HSWAH PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	1.25	1.7
RE-2X(St)HSWAH PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	1.25	1.7
0.75mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	0.9	1.4
RE-2X(St)HSWAH PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	0.9	1.4
RE-2X(St)HSWAH PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	0.9	1.5
RE-2X(St)HSWAH PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	0.9	1.5
RE-2X(St)HSWAH PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	1.25	1.6
RE-2X(St)HSWAH PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	1.25	1.6
RE-2X(St)HSWAH PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	1.25	1.7
RE-2X(St)HSWAH PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	1.25	1.7
RE-2X(St)HSWAH PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	1.25	1.8

Caledonian Cable Code	RE-2X(St)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
1.0mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	0.9	1.4
RE-2X(St)HSWAH PiMF 4P1.0	4x2x1.0	0.4	1.0	12.1	0.9	1.4
RE-2X(St)HSWAH PiMF 5P1.0	5x2x1.0	0.4	1.1	13.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.0	6x2x1.0	0.4	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	0.9	1.5
RE-2X(St)HSWAH PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	1.25	1.6
RE-2X(St)HSWAH PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	1.25	1.7
RE-2X(St)HSWAH PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	1.25	1.7
RE-2X(St)HSWAH PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	1.25	1.8
1.3mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	0.9	1.4
RE-2X(St)HSWAH PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	0.9	1.5
RE-2X(St)HSWAH PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	0.9	1.6
RE-2X(St)HSWAH PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	1.25	1.6
RE-2X(St)HSWAH PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	1.25	1.7
RE-2X(St)HSWAH PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	1.25	1.8
RE-2X(St)HSWAH PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	1.25	1.9
RE-2X(St)HSWAH PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1.25	2.0
1.5mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	0.9	1.5
RE-2X(St)HSWAH PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	0.9	1.5
RE-2X(St)HSWAH PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.5	6x2x1.5	0.45	1.2	16.9	1.25	1.6

Caledonian Cable Code	RE-2X(St)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2X(St)HSWAH PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	1.25	1.7
RE-2X(St)HSWAH PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	1.25	1.7
RE-2X(St)HSWAH PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	1.25	1.8
RE-2X(St)HSWAH PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1.25	1.9
RE-2X(St)HSWAH PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1.25	2.0

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

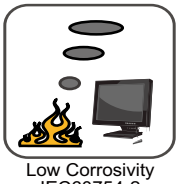
Rated Voltage

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

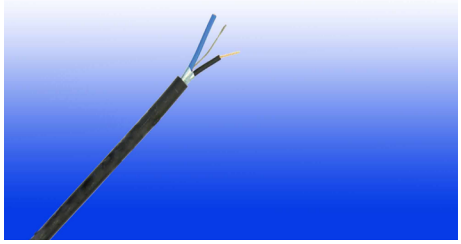

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

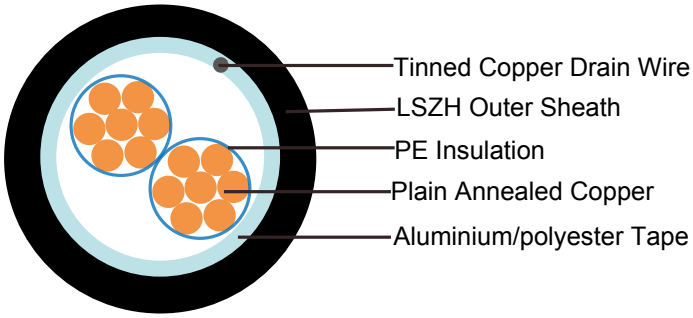

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

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 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 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	18.5	13.9	12.1	7.4
Insulation resistance (20°C)		MΩ.km(Min.)	5000					
Mutual Capacitance (1 kHz)		pF/m(Max.)	115					
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

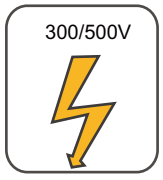
Caledonian Cable Code	RE-2Y(St)H		
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x1xmm^2	mm	mm
0.5mm^2, Multicore			
RE-2Y(St)H 2C0.5	2x1x0.5	0.55	0.9
RE-2Y(St)H 3C0.5	3x1x0.5	0.55	0.9
RE-2Y(St)H 4C0.5	4x1x0.5	0.55	0.9
RE-2Y(St)H 5C0.5	5x1x0.5	0.55	0.9
RE-2Y(St)H 8C0.5	8x1x0.5	0.55	1.0
RE-2Y(St)H 10C0.5	10x1x0.5	0.55	1.0
RE-2Y(St)H 12C0.5	12x1x0.5	0.55	1.0
RE-2Y(St)H 14C0.5	14x1x0.5	0.55	1.0
RE-2Y(St)H 16C0.5	16x1x0.5	0.55	1.1
RE-2Y(St)H 20C0.5	20x1x0.5	0.55	1.1
RE-2Y(St)H 24C0.5	24x1x0.5	0.55	1.1
RE-2Y(St)H 27C0.5	27x1x0.5	0.55	1.2
RE-2Y(St)H 30C0.5	30x1x0.5	0.55	1.2
RE-2Y(St)H 37C0.5	37x1x0.5	0.55	1.2
RE-2Y(St)H 40C0.5	40x1x0.5	0.55	1.2
0.75mm^2, Multicore			
RE-2Y(St)H 2C0.75	2x1x0.75	0.55	0.9
RE-2Y(St)H 3C0.75	3x1x0.75	0.55	0.9
RE-2Y(St)H 4C0.75	4x1x0.75	0.55	0.9
RE-2Y(St)H 5C0.75	5x1x0.75	0.55	0.9
RE-2Y(St)H 8C0.75	8x1x0.75	0.55	1.0
RE-2Y(St)H 10C0.75	10x1x0.75	0.55	1.0
RE-2Y(St)H 12C0.75	12x1x0.75	0.55	1.0
RE-2Y(St)H 14C0.75	14x1x0.75	0.55	1.1
RE-2Y(St)H 16C0.75	16x1x0.75	0.55	1.1
RE-2Y(St)H 20C0.75	20x1x0.75	0.55	1.1
RE-2Y(St)H 24C0.75	24x1x0.75	0.55	1.2

Caledonian Cable Code	RE-2Y(St)H		
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2Y(St)H 27C0.75	27x1x0.75	0.55	1.2
RE-2Y(St)H 30C0.75	30x1x0.75	0.55	1.2
RE-2Y(St)H 37C0.75	37x1x0.75	0.55	1.2
RE-2Y(St)H 40C0.75	40x1x0.75	0.55	1.3
1.0mm^2, Multicore			
RE-2Y(St)H 2C1.0	2x1x1.0	0.55	0.9
RE-2Y(St)H 3C1.0	3x1x1.0	0.55	0.9
RE-2Y(St)H 4C1.0	4x1x1.0	0.55	0.9
RE-2Y(St)H 5C1.0	5x1x1.0	0.55	0.9
RE-2Y(St)H 8C1.0	8x1x1.0	0.55	1.0
RE-2Y(St)H 10C1.0	10x1x1.0	0.55	1.0
RE-2Y(St)H 12C1.0	12x1x1.0	0.55	1.0
RE-2Y(St)H 14C1.0	14x1x1.0	0.55	1.1
RE-2Y(St)H 16C1.0	16x1x1.0	0.55	1.1
RE-2Y(St)H 20C1.0	20x1x1.0	0.55	1.1
RE-2Y(St)H 24C1.0	24x1x1.0	0.55	1.2
RE-2Y(St)H 27C1.0	27x1x1.0	0.55	1.2
RE-2Y(St)H 30C1.0	30x1x1.0	0.55	1.2
RE-2Y(St)H 37C1.0	37x1x1.0	0.55	1.2
RE-2Y(St)H 40C1.0	40x1x1.0	0.55	1.3
1.3mm^2, Multicore			
RE-2Y(St)H 2C1.3	2x1x1.3	0.6	0.9
RE-2Y(St)H 3C1.3	3x1x1.3	0.6	0.9
RE-2Y(St)H 4C1.3	4x1x1.3	0.6	0.9
RE-2Y(St)H 5C1.3	5x1x1.3	0.6	1.0
RE-2Y(St)H 8C1.3	8x1x1.3	0.6	1.0
RE-2Y(St)H 10C1.3	10x1x1.3	0.6	1.1

Caledonian Cable Code	RE-2Y(St)H		
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2Y(St)H 12C1.3	12x1x1.3	0.6	1.1
RE-2Y(St)H 14C1.3	14x1x1.3	0.6	1.1
RE-2Y(St)H 16C1.3	16x1x1.3	0.6	1.1
RE-2Y(St)H 20C1.3	20x1x1.3	0.6	1.2
RE-2Y(St)H 24C1.3	24x1x1.3	0.6	1.2
RE-2Y(St)H 27C1.3	27x1x1.3	0.6	1.3
RE-2Y(St)H 30C1.3	30x1x1.3	0.6	1.3
RE-2Y(St)H 37C1.3	37x1x1.3	0.6	1.3
RE-2Y(St)H 40C1.3	40x1x1.3	0.6	1.4
1.5mm^2, Multicore			
RE-2Y(St)H 2C1.5	2x1x1.5	0.6	0.9
RE-2Y(St)H 3C1.5	3x1x1.5	0.6	0.9
RE-2Y(St)H 4C1.5	4x1x1.5	0.6	0.9
RE-2Y(St)H 5C1.5	5x1x1.5	0.6	1.0
RE-2Y(St)H 8C1.5	8x1x1.5	0.6	1.0
RE-2Y(St)H 10C1.5	10x1x1.5	0.6	1.1
RE-2Y(St)H 12C1.5	12x1x1.5	0.6	1.1
RE-2Y(St)H 14C1.5	14x1x1.5	0.6	1.1
RE-2Y(St)H 16C1.5	16x1x1.5	0.6	1.1
RE-2Y(St)H 20C1.5	20x1x1.5	0.6	1.2
RE-2Y(St)H 24C1.5	24x1x1.5	0.6	1.3
RE-2Y(St)H 27C1.5	27x1x1.5	0.6	1.3
RE-2Y(St)H 30C1.5	30x1x1.5	0.6	1.3
RE-2Y(St)H 37C1.5	37x1x1.5	0.6	1.4
RE-2Y(St)H 40C1.5	40x1x1.5	0.6	1.4
2.5mm^2, Multicore			
RE-2Y(St)H 2C2.5	2x1x2.5	0.7	0.9

Caledonian Cable Code	RE-2Y(St)H		
	No. of Cores x1xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x1xmm^2	mm	mm
RE-2Y(St)H 3C2.5	3x1x2.5	0.7	1.0
RE-2Y(St)H 4C2.5	4x1x2.5	0.7	1.0
RE-2Y(St)H 5C2.5	5x1x2.5	0.7	1.0
RE-2Y(St)H 8C2.5	8x1x2.5	0.7	1.1
RE-2Y(St)H 10C2.5	10x1x2.5	0.7	1.2
RE-2Y(St)H 12C2.5	12x1x2.5	0.7	1.2
RE-2Y(St)H 14C2.5	14x1x2.5	0.7	1.2
RE-2Y(St)H 16C2.5	16x1x2.5	0.7	1.3
RE-2Y(St)H 20C2.5	20x1x2.5	0.7	1.3
RE-2Y(St)H 24C2.5	24x1x2.5	0.7	1.4
RE-2Y(St)H 27C2.5	27x1x2.5	0.7	1.4
RE-2Y(St)H 30C2.5	30x1x2.5	0.7	1.5
RE-2Y(St)H 37C2.5	37x1x2.5	0.7	1.5
RE-2Y(St)H 40C2.5	40x1x2.5	0.7	1.6

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



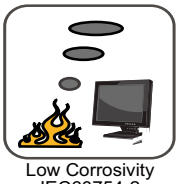
Rated Voltage

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

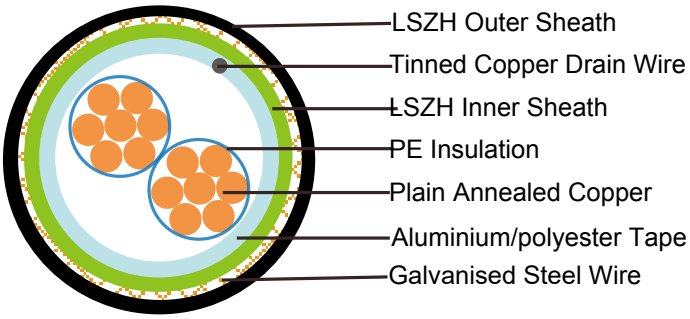

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 (Multicore)

RE-2Y(St)HSWAH 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

tensite 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 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 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	5000
Mutual Capacitance (1 kHz)		pF/m(Max.)	115	115	115	115	115	115
Inductance		mH/km(Max.)	1	1	1	1	1	1
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)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multicore						
RE-2Y(St)HSWAH 2C0.5	2x1x0.5	0.55	0.9	6.2	0.9	1.3
RE-2Y(St)HSWAH 3C0.5	3x1x0.5	0.55	0.9	6.5	0.9	1.3
RE-2Y(St)HSWAH 4C0.5	4x1x0.5	0.55	0.9	7.0	0.9	1.3
RE-2Y(St)HSWAH 5C0.5	5x1x0.5	0.55	0.9	7.6	0.9	1.3
RE-2Y(St)HSWAH 8C0.5	8x1x0.5	0.55	1.0	9.1	0.9	1.4
RE-2Y(St)HSWAH 10C0.5	10x1x0.5	0.55	1.0	10.4	0.9	1.4
RE-2Y(St)HSWAH 12C0.5	12x1x0.5	0.55	1.0	10.7	0.9	1.4
RE-2Y(St)HSWAH 14C0.5	14x1x0.5	0.55	1.0	11.3	0.9	1.4
RE-2Y(St)HSWAH 16C0.5	16x1x0.5	0.55	1.1	11.8	0.9	1.4
RE-2Y(St)HSWAH 20C0.5	20x1x0.5	0.55	1.1	13.3	0.9	1.5
RE-2Y(St)HSWAH 24C0.5	24x1x0.5	0.55	1.1	14.7	0.9	1.5
RE-2Y(St)HSWAH 27C0.5	27x1x0.5	0.55	1.2	15.0	0.9	1.5
RE-2Y(St)HSWAH 30C0.5	30x1x0.5	0.55	1.2	15.7	0.9	1.5
RE-2Y(St)HSWAH 37C0.5	37x1x0.5	0.55	1.2	16.9	0.9	1.6
RE-2Y(St)HSWAH 40C0.5	40x1x0.5	0.55	1.2	17.6	1.25	1.6
0.75mm^2, Multicore						
RE-2Y(St)HSWAH 2C0.75	2x1x0.75	0.55	0.9	6.5	0.9	1.3
RE-2Y(St)HSWAH 3C0.75	3x1x0.75	0.55	0.9	6.9	0.9	1.3
RE-2Y(St)HSWAH 4C0.75	4x1x0.75	0.55	0.9	7.4	0.9	1.3
RE-2Y(St)HSWAH 5C0.75	5x1x0.75	0.55	0.9	8.1	0.9	1.4
RE-2Y(St)HSWAH 8C0.75	8x1x0.75	0.55	1.0	9.7	0.9	1.4
RE-2Y(St)HSWAH 10C0.75	10x1x0.75	0.55	1.0	11.1	0.9	1.4
RE-2Y(St)HSWAH 12C0.75	12x1x0.75	0.55	1.0	11.5	0.9	1.4
RE-2Y(St)HSWAH 14C0.75	14x1x0.75	0.55	1.1	12.2	0.9	1.5
RE-2Y(St)HSWAH 16C0.75	16x1x0.75	0.55	1.1	12.9	0.9	1.5
RE-2Y(St)HSWAH 20C0.75	20x1x0.75	0.55	1.1	14.3	0.9	1.5
RE-2Y(St)HSWAH 24C0.75	24x1x0.75	0.55	1.2	16.0	0.9	1.5
RE-2Y(St)HSWAH 27C0.75	27x1x0.75	0.55	1.2	16.3	0.9	1.6
RE-2Y(St)HSWAH 30C0.75	30x1x0.75	0.55	1.2	16.9	0.9	1.6

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 37C0.75	37x1x0.75	0.55	1.2	18.2	1.25	1.6
RE-2Y(St)HSWAH 40C0.75	40x1x0.75	0.55	1.3	19.1	1.25	1.6
1.0mm^2, Multicore						
RE-2Y(St)HSWAH 2C1.0	2x1x1.0	0.55	0.9	6.9	0.9	1.3
RE-2Y(St)HSWAH 3C1.0	3x1x1.0	0.55	0.9	7.3	0.9	1.3
RE-2Y(St)HSWAH 4C1.0	4x1x1.0	0.55	0.9	7.9	0.9	1.4
RE-2Y(St)HSWAH 5C1.0	5x1x1.0	0.55	0.9	8.6	0.9	1.4
RE-2Y(St)HSWAH 8C1.0	8x1x1.0	0.55	1.0	10.3	0.9	1.4
RE-2Y(St)HSWAH 10C1.0	10x1x1.0	0.55	1.0	11.9	0.9	1.4
RE-2Y(St)HSWAH 12C1.0	12x1x1.0	0.55	1.0	12.2	0.9	1.5
RE-2Y(St)HSWAH 14C1.0	14x1x1.0	0.55	1.1	13.0	0.9	1.5
RE-2Y(St)HSWAH 16C1.0	16x1x1.0	0.55	1.1	13.7	0.9	1.5
RE-2Y(St)HSWAH 20C1.0	20x1x1.0	0.55	1.1	15.2	0.9	1.5
RE-2Y(St)HSWAH 24C1.0	24x1x1.0	0.55	1.2	17.0	0.9	1.6
RE-2Y(St)HSWAH 27C1.0	27x1x1.0	0.55	1.2	17.4	1.25	1.6
RE-2Y(St)HSWAH 30C1.0	30x1x1.0	0.55	1.2	18.0	1.25	1.6
RE-2Y(St)HSWAH 37C1.0	37x1x1.0	0.55	1.2	19.6	1.25	1.6
RE-2Y(St)HSWAH 40C1.0	40x1x1.0	0.55	1.3	20.4	1.25	1.7
1.3mm^2, Multicore						
RE-2Y(St)HSWAH 2C1.3	2x1x1.3	0.6	0.9	7.4	0.9	1.3
RE-2Y(St)HSWAH 3C1.3	3x1x1.3	0.6	0.9	7.9	0.9	1.3
RE-2Y(St)HSWAH 4C1.3	4x1x1.3	0.6	0.9	8.5	0.9	1.4
RE-2Y(St)HSWAH 5C1.3	5x1x1.3	0.6	1.0	9.5	0.9	1.4
RE-2Y(St)HSWAH 8C1.3	8x1x1.3	0.6	1.0	11.2	0.9	1.4
RE-2Y(St)HSWAH 10C1.3	10x1x1.3	0.6	1.1	13.2	0.9	1.5
RE-2Y(St)HSWAH 12C1.3	12x1x1.3	0.6	1.1	13.6	0.9	1.5
RE-2Y(St)HSWAH 14C1.3	14x1x1.3	0.6	1.1	14.3	0.9	1.5
RE-2Y(St)HSWAH 16C1.3	16x1x1.3	0.6	1.1	15.0	0.9	1.5
RE-2Y(St)HSWAH 20C1.3	20x1x1.3	0.6	1.2	16.9	0.9	1.6
RE-2Y(St)HSWAH 24C1.3	24x1x1.3	0.6	1.2	18.7	1.25	1.6
RE-2Y(St)HSWAH 27C1.3	27x1x1.3	0.6	1.3	19.3	1.25	1.6

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 30C1.3	30x1x1.3	0.6	1.3	20.0	1.25	1.6
RE-2Y(St)HSWAH 37C1.3	37x1x1.3	0.6	1.3	21.6	1.25	1.7
RE-2Y(St)HSWAH 40C1.3	40x1x1.3	0.6	1.4	22.7	1.25	1.7
1.5mm^2, Multicore						
RE-2Y(St)HSWAH 2C1.5	2x1x1.5	0.6	0.9	7.7	0.9	1.3
RE-2Y(St)HSWAH 3C1.5	3x1x1.5	0.6	0.9	8.1	0.9	1.4
RE-2Y(St)HSWAH 4C1.5	4x1x1.5	0.6	0.9	8.8	0.9	1.4
RE-2Y(St)HSWAH 5C1.5	5x1x1.5	0.6	1.0	9.8	0.9	1.4
RE-2Y(St)HSWAH 8C1.5	8x1x1.5	0.6	1.0	11.6	0.9	1.4
RE-2Y(St)HSWAH 10C1.5	10x1x1.5	0.6	1.1	13.7	0.9	1.5
RE-2Y(St)HSWAH 12C1.5	12x1x1.5	0.6	1.1	14.1	0.9	1.5
RE-2Y(St)HSWAH 14C1.5	14x1x1.5	0.6	1.1	14.8	0.9	1.5
RE-2Y(St)HSWAH 16C1.5	16x1x1.5	0.6	1.1	15.6	0.9	1.5
RE-2Y(St)HSWAH 20C1.5	20x1x1.5	0.6	1.2	17.6	1.25	1.6
RE-2Y(St)HSWAH 24C1.5	24x1x1.5	0.6	1.3	19.6	1.25	1.6
RE-2Y(St)HSWAH 27C1.5	27x1x1.5	0.6	1.3	20.1	1.25	1.6
RE-2Y(St)HSWAH 30C1.5	30x1x1.5	0.6	1.3	20.8	1.25	1.7
RE-2Y(St)HSWAH 37C1.5	37x1x1.5	0.6	1.4	22.6	1.25	1.7
RE-2Y(St)HSWAH 40C1.5	40x1x1.5	0.6	1.4	23.6	1.25	1.7
2.5mm^2, Multicore						
RE-2Y(St)HSWAH 2C2.5	2x1x2.5	0.7	0.9	8.9	0.9	1.4
RE-2Y(St)HSWAH 3C2.5	3x1x2.5	0.7	1.0	9.7	0.9	1.4
RE-2Y(St)HSWAH 4C2.5	4x1x2.5	0.7	1.0	10.5	0.9	1.4
RE-2Y(St)HSWAH 5C2.5	5x1x2.5	0.7	1.0	11.9	0.9	1.4
RE-2Y(St)HSWAH 8C2.5	8x1x2.5	0.7	1.1	13.9	0.9	1.5
RE-2Y(St)HSWAH 10C2.5	10x1x2.5	0.7	1.2	16.3	0.9	1.6
RE-2Y(St)HSWAH 12C2.5	12x1x2.5	0.7	1.2	16.9	0.9	1.6
RE-2Y(St)HSWAH 14C2.5	14x1x2.5	0.7	1.2	17.7	1.25	1.6
RE-2Y(St)HSWAH 16C2.5	16x1x2.5	0.7	1.3	18.9	1.25	1.6
RE-2Y(St)HSWAH 20C2.5	20x1x2.5	0.7	1.3	21.1	1.25	1.7

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x1xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 24C2.5	24x1x2.5	0.7	1.4	23.6	1.25	1.7
RE-2Y(St)HSWAH 27C2.5	27x1x2.5	0.7	1.4	24.1	1.25	1.8
RE-2Y(St)HSWAH 30C2.5	30x1x2.5	0.7	1.5	25.2	1.25	1.8
RE-2Y(St)HSWAH 37C2.5	37x1x2.5	0.7	1.5	27.2	1.25	1.8
RE-2Y(St)HSWAH 40C2.5	40x1x2.5	0.7	1.6	28.5	1.25	1.9

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

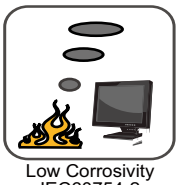
Rated Voltage

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

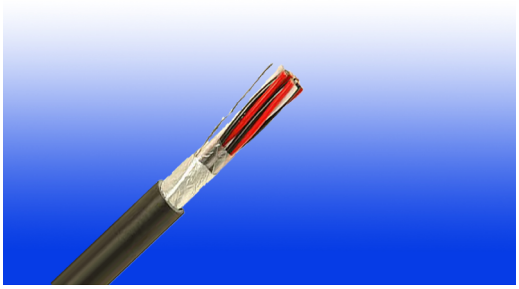

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

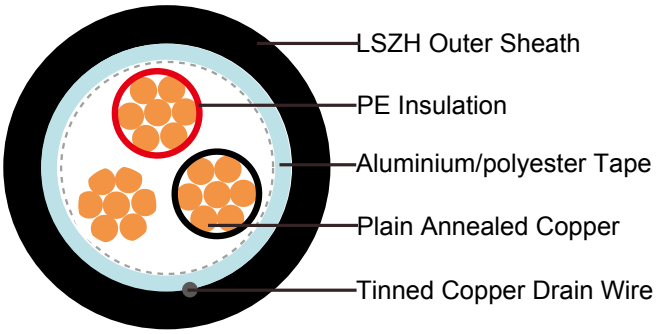

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

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 analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 tensite 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, 0.5mm^2
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 – +90°C
Temperature Range During Installation (Mobile State): -5°C – +50°C
Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

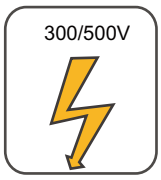
Conductor Area Size	mm^2	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.40	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25.0	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000	5000	5000	5000	5000
Mutual Capacitance (1 kHz)	pF/m(Max.)	115	115	115	115	115
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	0	0	0	0	0
Inductance	mH/km(Max.)	1	1	1	1	1

L / R (ratio) (max.)		µH/Ω	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
	No.x3xmm^2	mm	mm
RE-2Y(St)H 1T0.5	1x3x0.50	0.35	0.8
RE-2Y(St)H 1T0.75	1x3x0.75	0.38	0.9
RE-2Y(St)H 1T1.0	1x3x1.0	0.40	0.9
RE-2Y(St)H 1T1.3	1x3x1.3	0.45	0.9
RE-2Y(St)H 1T1.5	1x3x1.5	0.45	0.9

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



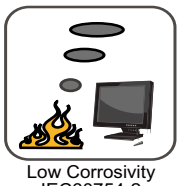
Rated Voltage

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

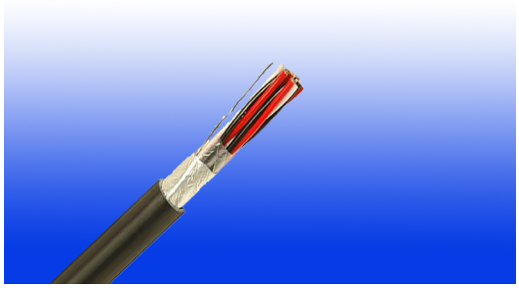

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

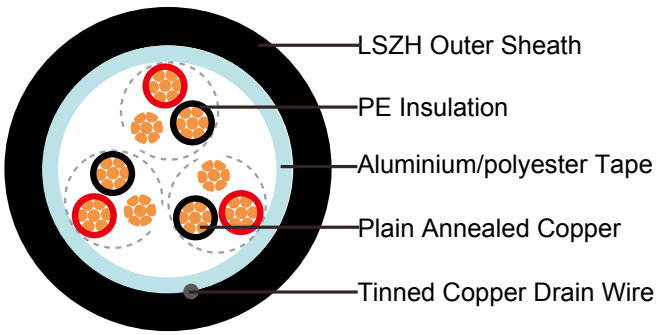

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)H 90°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 tensite 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, 0.5mm^2
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 – +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	5000	5000	5000	5000
Mutual Capacitance (1 kHz)	up to 4 trples pF/m(Max.)	90	90	90	102	102
	above 4 trples pF/m(Max.)	75	75	75	85	85
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
	No.x3xmm^2	mm	mm
0.5mm^2 , Multitriple			
RE-2Y(St)H 2T0.5	2x3x0.50	0.35	0.9
RE-2Y(St)H 4T0.5	4x3x0.50	0.35	1.0
RE-2Y(St)H 5T0.5	5x3x0.50	0.35	1.0
RE-2Y(St)H 6T0.5	6x3x0.50	0.35	1.0
RE-2Y(St)H 8T0.5	8x3x0.50	0.35	1.1
RE-2Y(St)H 10T0.5	10x3x0.50	0.35	1.1
RE-2Y(St)H 12T0.5	12x3x0.50	0.35	1.1
RE-2Y(St)H 16T0.5	16x3x0.50	0.35	1.2
RE-2Y(St)H 20T0.5	20x3x0.50	0.35	1.2
RE-2Y(St)H 24T0.5	24x3x0.50	0.35	1.3
0.75mm^2 , Multitriple			
RE-2Y(St)H 2T0.75	2x3x0.75	0.38	0.9
RE-2Y(St)H 4T0.75	4x3x0.75	0.38	1.0
RE-2Y(St)H 5T0.75	5x3x0.75	0.38	1.0
RE-2Y(St)H 6T0.75	6x3x0.75	0.38	1.1
RE-2Y(St)H 8T0.75	8x3x0.75	0.38	1.1
RE-2Y(St)H 10T0.75	10x3x0.75	0.38	1.2
RE-2Y(St)H 12T0.75	12x3x0.75	0.38	1.2
RE-2Y(St)H 16T0.75	16x3x0.75	0.38	1.3
RE-2Y(St)H 20T0.75	20x3x0.75	0.38	1.3
RE-2Y(St)H 24T0.75	24x3x0.75	0.38	1.4
1.0mm^2 , Multitriple			
RE-2Y(St)H 2T1.0	2x3x1.0	0.4	1.0

Caledonian Cable Code	RE-2Y(St)H		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2Y(St)H 4T1.0	4x3x1.0	0.4	1.0
RE-2Y(St)H 5T1.0	5x3x1.0	0.4	1.0
RE-2Y(St)H 6T1.0	6x3x1.0	0.4	1.1
RE-2Y(St)H 8T1.0	8x3x1.0	0.4	1.1
RE-2Y(St)H 10T1.0	10x3x1.0	0.4	1.2
RE-2Y(St)H 12T1.0	12x3x1.0	0.4	1.2
RE-2Y(St)H 16T1.0	16x3x1.0	0.4	1.3
RE-2Y(St)H 20T1.0	20x3x1.0	0.4	1.4
RE-2Y(St)H 24T1.0	24x3x1.0	0.4	1.4
1.3mm^2 , Multitriple			
RE-2Y(St)H 2T1.3	2x3x1.3	0.45	1.0
RE-2Y(St)H 4T1.3	4x3x1.3	0.45	1.1
RE-2Y(St)H 5T1.3	5x3x1.3	0.45	1.1
RE-2Y(St)H 6T1.3	6x3x1.3	0.45	1.2
RE-2Y(St)H 8T1.3	8x3x1.3	0.45	1.2
RE-2Y(St)H 10T1.3	10x3x1.3	0.45	1.3
RE-2Y(St)H 12T1.3	12x3x1.3	0.45	1.3
RE-2Y(St)H 16T1.3	16x3x1.3	0.45	1.4
RE-2Y(St)H 20T1.3	20x3x1.3	0.45	1.5
RE-2Y(St)H 24T1.3	24x3x1.3	0.45	1.6
1.5mm^2 , Multitriple			
RE-2Y(St)H 2T1.5	2x3x1.5	0.45	1.0
RE-2Y(St)H 4T1.5	4x3x1.5	0.45	1.1
RE-2Y(St)H 5T1.5	5x3x1.5	0.45	1.1
RE-2Y(St)H 6T1.5	6x3x1.5	0.45	1.2
RE-2Y(St)H 8T1.5	8x3x1.5	0.45	1.3
RE-2Y(St)H 10T1.5	10x3x1.5	0.45	1.3
RE-2Y(St)H 12T1.5	12x3x1.5	0.45	1.4
RE-2Y(St)H 16T1.5	16x3x1.5	0.45	1.5

Caledonian Cable Code	RE-2Y(St)H		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2Y(St)H 20T1.5	20x3x1.5	0.45	1.6
RE-2Y(St)H 24T1.5	24x3x1.5	0.45	1.7

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

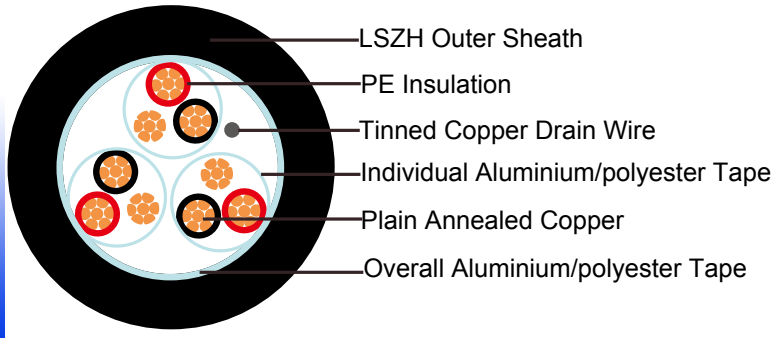

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 (Multitriple)

RE-2Y(St)H-TiMF 70°C / 300 V



APPLICATION:

These cables are used for transmission of analoge 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. These cables are not recommended for direct burial. 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 tensite 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 triple metallic side down in contact with tinned copper drain wire, 0.5mm²
Triple: Three conductors twisted to form a triple
Lay-up: TiMF laid up in layers of optimum pitch
Separator: Polyester tape
Overall Screen: Aluminium/polyester tape with tinned copper drain wire, 0.5mm^2
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: 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.)	115				
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
	No.x3xmm^2	mm	mm
0.5mm^2 , Multitriple			
RE-2Y(St)H-TiMF 2T0.5	2x3x0.5	0.35	1.0
RE-2Y(St)H-TiMF 4T0.5	4x3x0.5	0.35	1.0
RE-2Y(St)H-TiMF 5T0.5	5x3x0.5	0.35	1.1
RE-2Y(St)H-TiMF 6T0.5	6x3x0.5	0.35	1.1
RE-2Y(St)H-TiMF 8T0.5	8x3x0.5	0.35	1.1
RE-2Y(St)H-TiMF 10T0.5	10x3x0.5	0.35	1.2
RE-2Y(St)H-TiMF 12T0.5	12x3x0.5	0.35	1.2
RE-2Y(St)H-TiMF 16T0.5	16x3x0.5	0.35	1.3
RE-2Y(St)H-TiMF 20T0.5	20x3x0.5	0.35	1.4
RE-2Y(St)H-TiMF 24T0.5	24x3x0.5	0.35	1.5
0.75mm^2 , Multitriple			
RE-2Y(St)H-TiMF 2T0.75	2x3x0.75	0.38	1.0
RE-2Y(St)H-TiMF 4T0.75	4x3x0.75	0.38	1.1
RE-2Y(St)H-TiMF 5T0.75	5x3x0.75	0.38	1.1
RE-2Y(St)H-TiMF 6T0.75	6x3x0.75	0.38	1.1
RE-2Y(St)H-TiMF 8T0.75	8x3x0.75	0.38	1.2
RE-2Y(St)H-TiMF 10T0.75	10x3x0.75	0.38	1.3
RE-2Y(St)H-TiMF 12T0.75	12x3x0.75	0.38	1.3
RE-2Y(St)H-TiMF 16T0.75	16x3x0.75	0.38	1.4
RE-2Y(St)H-TiMF 20T0.75	20x3x0.75	0.38	1.5
RE-2Y(St)H-TiMF 24T0.75	24x3x0.75	0.38	1.6

Caledonian Cable Code	RE-2Y(St)H-TiMF		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
1.0mm^2 , Multitriple			
RE-2Y(St)H-TiMF 2T1.0	2x3x1.0	0.4	1.0
RE-2Y(St)H-TiMF 4T1.0	4x3x1.0	0.4	1.1
RE-2Y(St)H-TiMF 5T1.0	5x3x1.0	0.4	1.1
RE-2Y(St)H-TiMF 6T1.0	6x3x1.0	0.4	1.2
RE-2Y(St)H-TiMF 8T1.0	8x3x1.0	0.4	1.2
RE-2Y(St)H-TiMF 10T1.0	10x3x1.0	0.4	1.3
RE-2Y(St)H-TiMF 12T1.0	12x3x1.0	0.4	1.3
RE-2Y(St)H-TiMF 16T1.0	16x3x1.0	0.4	1.4
RE-2Y(St)H-TiMF 20T1.0	20x3x1.0	0.4	1.5
RE-2Y(St)H-TiMF 24T1.0	24x3x1.0	0.4	1.6
1.3mm^2 , Multitriple			
RE-2Y(St)H-TiMF 2T1.3	2x3x1.3	0.45	1.1
RE-2Y(St)H-TiMF 4T1.3	4x3x1.3	0.45	1.1
RE-2Y(St)H-TiMF 5T1.3	5x3x1.3	0.45	1.2
RE-2Y(St)H-TiMF 6T1.3	6x3x1.3	0.45	1.3
RE-2Y(St)H-TiMF 8T1.3	8x3x1.3	0.45	1.3
RE-2Y(St)H-TiMF 10T1.3	10x3x1.3	0.45	1.4
RE-2Y(St)H-TiMF 12T1.3	12x3x1.3	0.45	1.5
RE-2Y(St)H-TiMF 16T1.3	16x3x1.3	0.45	1.6
RE-2Y(St)H-TiMF 20T1.3	20x3x1.3	0.45	1.7
RE-2Y(St)H-TiMF 24T1.3	24x3x1.3	0.45	1.8
1.5mm^2 , Multitriple			
RE-2Y(St)H-TiMF 2T1.5	2x3x1.5	0.45	1.1
RE-2Y(St)H-TiMF 4T1.5	4x3x1.5	0.45	1.2
RE-2Y(St)H-TiMF 5T1.5	5x3x1.5	0.45	1.2
RE-2Y(St)H-TiMF 6T1.5	6x3x1.5	0.45	1.3
RE-2Y(St)H-TiMF 8T1.5	8x3x1.5	0.45	1.4
RE-2Y(St)H-TiMF 10T1.5	10x3x1.5	0.45	1.5

Caledonian Cable Code	RE-2Y(St)H-TiMF		
	No. of Triples x3xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x3xmm^2	mm	mm
RE-2Y(St)H-TiMF 12T1.5	12x3x1.5	0.45	1.5
RE-2Y(St)H-TiMF 16T1.5	16x3x1.5	0.45	1.6
RE-2Y(St)H-TiMF 20T1.5	20x3x1.5	0.45	1.7
RE-2Y(St)H-TiMF 24T1.5	24x3x1.5	0.45	1.8

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

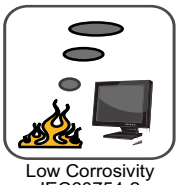
Rated Voltage

Standard

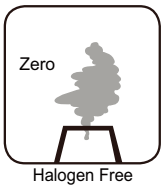

Flame Retardancy
NF C32-070-2.1(C2)
IEC60332-1-2/EN50265-2-1


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

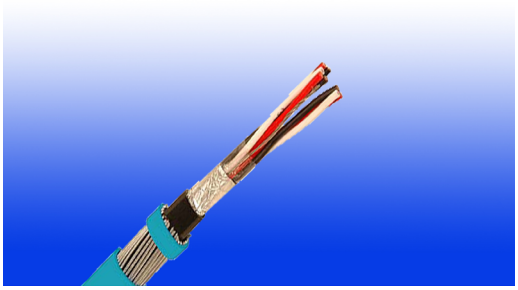

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

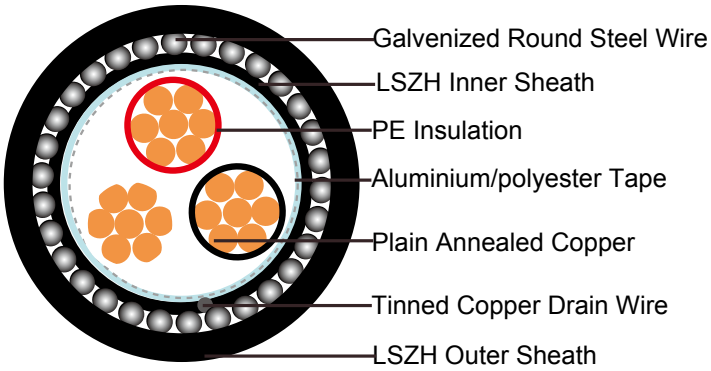


Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)HSWAH 70°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 tensite 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, 0.5mm^2
Inner sheath: LSZH compound
Armour: Galvenized 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

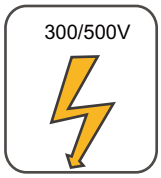
Conductor Area Size	mm^2	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3
Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	115				
Capacitance unbalance(1 kHz)	pF/500 m (Max.)	500				

L / R (ratio) (max.)		µH/Ω	25	25	25	40	40
Inductance		mH/km(Max.)	1	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)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 1T0.5	1x3x0.50	0.35	0.8	5.4	0.9	1.3
RE-2Y(St)HSWAH 1T0.75	1x3x0.75	0.38	0.9	6.1	0.9	1.3
RE-2Y(St)HSWAH 1T1.0	1x3x1.0	0.4	0.9	6.6	0.9	1.3
RE-2Y(St)HSWAH 1T1.3	1x3x1.3	0.45	0.9	7.2	0.9	1.3
RE-2Y(St)HSWAH 1T1.5	1x3x1.5	0.45	0.9	7.5	0.9	1.3

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

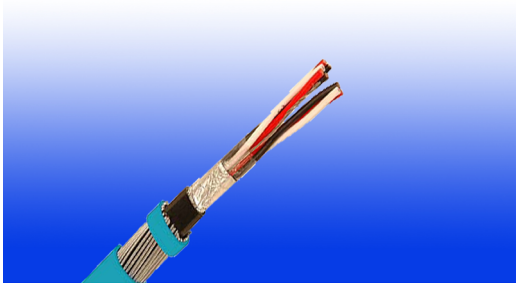

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

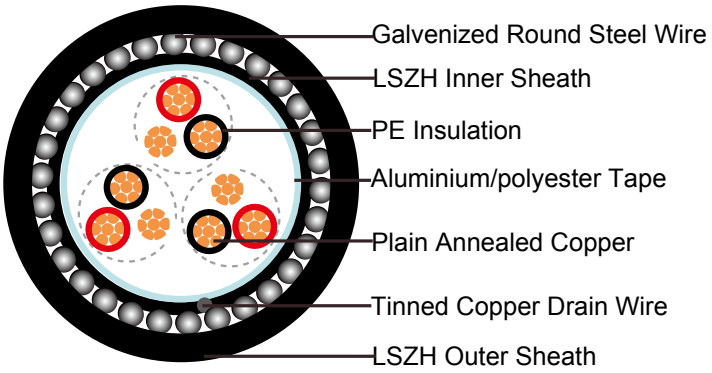

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)HSWAH 70°C / 300 V





APPLICATION:

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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 tensite 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, 0.5mm^2
Inner sheath: LSZH compound
Armour: Galvenized 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.)					
	≤ 4 pairs	90	90	90	102	102

		all other pairs	75	75	75	85	85
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)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multitriple						
RE-2Y(St)HSWAH 2T0.5	2x3x0.5	0.35	0.9	8.4	0.9	1.4
RE-2Y(St)HSWAH 4T0.5	4x3x0.5	0.35	1.0	9.8	0.9	1.4
RE-2Y(St)HSWAH 5T0.5	5x3x0.5	0.35	1.0	10.8	0.9	1.4
RE-2Y(St)HSWAH 6T0.5	6x3x0.5	0.35	1.0	12.1	0.9	1.4
RE-2Y(St)HSWAH 8T0.5	8x3x0.5	0.35	1.1	13.1	0.9	1.5
RE-2Y(St)HSWAH 10T0.5	10x3x0.5	0.35	1.1	14.7	0.9	1.5
RE-2Y(St)HSWAH 12T0.5	12x3x0.5	0.35	1.1	15.2	0.9	1.5
RE-2Y(St)HSWAH 16T0.5	16x3x0.5	0.35	1.2	17.4	0.9	1.6
RE-2Y(St)HSWAH 20T0.5	20x3x0.5	0.35	1.2	19.1	1.25	1.6
RE-2Y(St)HSWAH 24T0.5	24x3x0.5	0.35	1.3	20.9	1.25	1.7
0.75mm^2, Multitriple						
RE-2Y(St)HSWAH 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4
RE-2Y(St)HSWAH 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.4
RE-2Y(St)HSWAH 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.4
RE-2Y(St)HSWAH 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5
RE-2Y(St)HSWAH 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.5
RE-2Y(St)HSWAH 10T0.75	10x3x0.75	0.38	1.3	19.0	0.9	1.5

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 12T0.75	12x3x0.75	0.38	1.3	19.7	0.9	1.7
RE-2Y(St)HSWAH 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.6
RE-2Y(St)HSWAH 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.7
RE-2Y(St)HSWAH 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.7
1.0mm^2, Multitriple						
RE-2Y(St)HSWAH 2T1.0	2x3x1	0.4	1.0	11.5	0.9	1.4
RE-2Y(St)HSWAH 4T1.0	4x3x1	0.4	1.1	13.4	0.9	1.4
RE-2Y(St)HSWAH 5T1.0	5x3x1	0.4	1.1	14.8	0.9	1.5
RE-2Y(St)HSWAH 6T1.0	6x3x1	0.4	1.2	16.9	0.9	1.5
RE-2Y(St)HSWAH 8T1.0	8x3x1	0.4	1.2	18.1	0.9	1.5
RE-2Y(St)HSWAH 10T1.0	10x3x1	0.4	1.3	20.7	0.9	1.6
RE-2Y(St)HSWAH 12T1.0	12x3x1	0.4	1.3	21.4	1.25	1.6
RE-2Y(St)HSWAH 16T1.0	16x3x1	0.4	1.4	24.4	1.25	1.7
RE-2Y(St)HSWAH 20T1.0	20x3x1	0.4	1.5	27.1	1.25	1.7
RE-2Y(St)HSWAH 24T1.0	24x3x1	0.4	1.6	29.6	1.25	1.8
1.3mm^2, Multitriple						
RE-2Y(St)HSWAH 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.4
RE-2Y(St)HSWAH 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5
RE-2Y(St)HSWAH 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.5
RE-2Y(St)HSWAH 6T1.3	6x3x1.3	0.45	1.3	18.8	0.9	1.5
RE-2Y(St)HSWAH 8T1.3	8x3x1.3	0.45	1.3	20.1	0.9	1.6
RE-2Y(St)HSWAH 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.7
RE-2Y(St)HSWAH 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.7
RE-2Y(St)HSWAH 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.8
RE-2Y(St)HSWAH 20T1.3	20x3x1.3	0.45	1.7	30.4	1.25	1.8
RE-2Y(St)HSWAH 24T1.3	24x3x1.3	0.45	1.8	33.1	1.60	1.9
1.5mm^2, Multitriple						
RE-2Y(St)HSWAH 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.4

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5
RE-2Y(St)HSWAH 5T1.5	5x3x1.5	0.45	1.2	17.1	0.9	1.5
RE-2Y(St)HSWAH 6T1.5	6x3x1.5	0.45	1.3	19.5	0.9	1.6
RE-2Y(St)HSWAH 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.6
RE-2Y(St)HSWAH 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.7
RE-2Y(St)HSWAH 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.7
RE-2Y(St)HSWAH 16T1.5	16x3x1.5	0.45	1.6	28.4	1.25	1.8
RE-2Y(St)HSWAH 20T1.5	20x3x1.5	0.45	1.7	31.6	1.25	1.9
RE-2Y(St)HSWAH 24T1.5	24x3x1.5	0.45	1.8	34.4	1.60	2.0

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

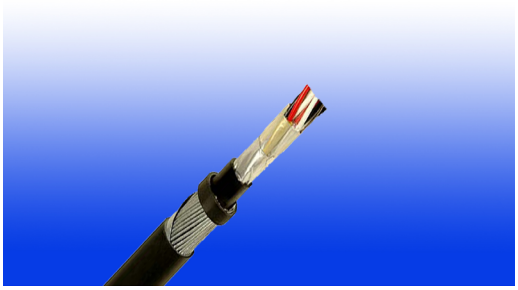

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

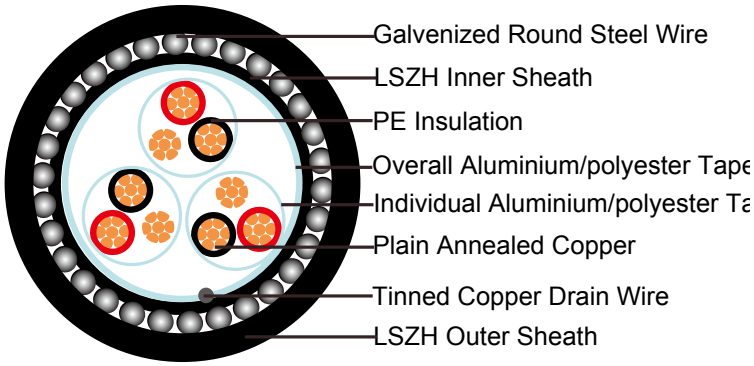

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)HSWAH-TiMF 70°C / 300 V





APPLICATION:

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 tensite 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 triple metallic side down in contact with tinned copper drain wire, 0.5mm²
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, 0.5mm^2
Inner sheath: LSZH compound
Armour: Galvenized 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.)	115					
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)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
0.5mm^2, Multitriple						
RE-2Y(St)HSWAH-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	0.9	1.4
RE-2Y(St)HSWAH-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	0.9	1.4
RE-2Y(St)HSWAH-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	0.9	1.5
RE-2Y(St)HSWAH-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	0.9	1.5
RE-2Y(St)HSWAH-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	0.9	1.5
RE-2Y(St)HSWAH-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	1.25	1.6
RE-2Y(St)HSWAH-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	1.25	1.6
RE-2Y(St)HSWAH-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	1.25	1.7
RE-2Y(St)HSWAH-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	1.25	1.7
RE-2Y(St)HSWAH-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	1.25	1.8
0.75mm^2, Multitriple						
RE-2Y(St)HSWAH-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4
RE-2Y(St)HSWAH-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.5
RE-2Y(St)HSWAH-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.5
RE-2Y(St)HSWAH-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5

Caledonian Cable Code	RE-2Y(St)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
RE-2Y(St)HSWAH-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.6
RE-2Y(St)HSWAH-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	1.25	1.6
RE-2Y(St)HSWAH-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	1.25	1.7
RE-2Y(St)HSWAH-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.7
RE-2Y(St)HSWAH-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.8
RE-2Y(St)HSWAH-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.9
1.0mm^2, Multitriple						
RE-2Y(St)HSWAH-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4
RE-2Y(St)HSWAH-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.5
RE-2Y(St)HSWAH-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5
RE-2Y(St)HSWAH-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5
RE-2Y(St)HSWAH-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	1.25	1.6
RE-2Y(St)HSWAH-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	1.25	1.7
RE-2Y(St)HSWAH-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.7
RE-2Y(St)HSWAH-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7
RE-2Y(St)HSWAH-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.8
RE-2Y(St)HSWAH-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1.6	1.9
1.3mm^2, Multitriple						
RE-2Y(St)HSWAH-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.5
RE-2Y(St)HSWAH-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5
RE-2Y(St)HSWAH-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.6
RE-2Y(St)HSWAH-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	1.25	1.6
RE-2Y(St)HSWAH-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	1.25	1.7
RE-2Y(St)HSWAH-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.8
RE-2Y(St)HSWAH-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.8
RE-2Y(St)HSWAH-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.9
RE-2Y(St)HSWAH-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1.6	2.0
RE-2Y(St)HSWAH-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1.6	2.0

Caledonian Cable Code	RE-2Y(St)HSWAH-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
	No.x3xmm^2	mm	mm	mm	mm	mm
1.5mm^2, Multi-striple						
RE-2Y(St)HSWAH-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.5
RE-2Y(St)HSWAH-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5
RE-2Y(St)HSWAH-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	1.25	1.6
RE-2Y(St)HSWAH-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	1.25	1.6
RE-2Y(St)HSWAH-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.7
RE-2Y(St)HSWAH-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.8
RE-2Y(St)HSWAH-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.8
RE-2Y(St)HSWAH-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1.6	1.9
RE-2Y(St)HSWAH-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1.6	2.0
RE-2Y(St)HSWAH-TiMF 24T1.5	24x3x1.5	0.45	1.8	34.4	1.6	2.1

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

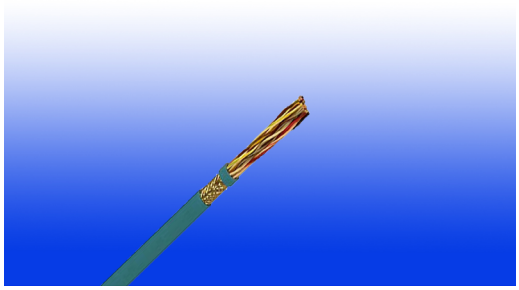

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

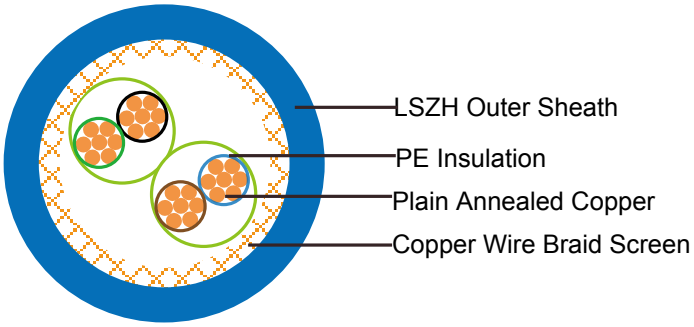

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

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 analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 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 – +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.)	115				
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
	No.x2xmm^2	Kg/km
RE-2Y(C)H 1P0.5	1x2x0.50	8.3
RE-2Y(C)H 1P0.75	1x2x0.75	8.7
RE-2Y(C)H 1P1.0	1x2x1.0	9.4
RE-2Y(C)H 1P1.3	1x2x1.3	9.7

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

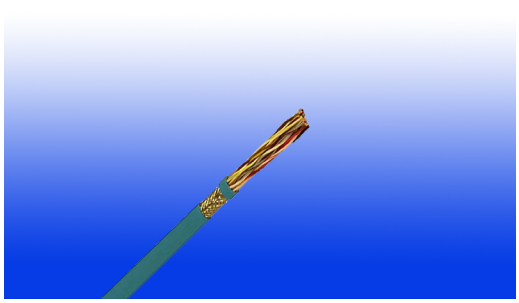

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

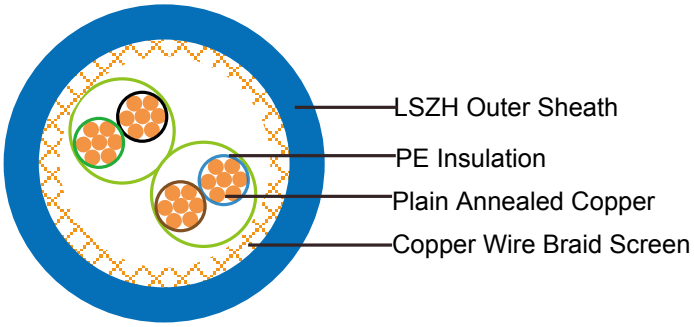

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(C)H 90°C / 300V





APPLICATION

These cables are used for transmission of analoge and digital signals in instrument and control systems at chemistry and petrochemistry 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. These cables are not 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 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 tensite 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 – +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.)					
	≤ 4 pairs	115	115	115	120	120
	all other pairs	90	90	90	105	105
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
	No.x2xmm^2	Kg/km
0.5mm^2, Multipair		
RE-2Y(C)H 2P0.5	2x2x0.50	10.7
RE-2Y(C)H 3P0.5	3x2x0.50	11.1
RE-2Y(C)H 4P0.5	4x2x0.50	11.9
RE-2Y(C)H 6P0.5	6x2x0.50	13.6
RE-2Y(C)H 8P0.5	8x2x0.50	14.2
RE-2Y(C)H 12P0.5	12x2x0.50	16.4
RE-2Y(C)H 16P0.5	16x2x0.50	18.2
RE-2Y(C)H 20P0.5	20x2x0.50	19.7
RE-2Y(C)H 24P0.5	24x2x0.50	21.1
0.75mm^2, Multipair		
RE-2Y(C)H 2P0.75	2x2x0.75	11.4
RE-2Y(C)H 3P0.75	3x2x0.75	11.9
RE-2Y(C)H 4P0.75	4x2x0.75	12.7
RE-2Y(C)H 6P0.75	6x2x0.75	14.6
RE-2Y(C)H 8P0.75	8x2x0.75	15.4
RE-2Y(C)H 12P0.75	12x2x0.75	17.8
RE-2Y(C)H 16P0.75	16x2x0.75	19.8
RE-2Y(C)H 20P0.75	20.x2x0.75	21.5
RE-2Y(C)H 24P0.75	24x2x0.75	23.1
1.0mm^2, Multipair		

Caledonian Cable Code	RE-2Y(C)H	
	No. of Pairsx2xCross Section	Copper Weight
	No.x2xmm^2	Kg/km
RE-2Y(C)H 2P1.0	2x2x1.0	12.3
RE-2Y(C)H 3P1.0	3x2x1.0	12.8
RE-2Y(C)H 4P1.0	4x2x1.0	13.7
RE-2Y(C)H 6P1.0	6x2x1.0	15.6
RE-2Y(C)H 8P1.0	8x2x1.0	16.4
RE-2Y(C)H 12P1.0	12x2x1.0	19.0
RE-2Y(C)H 16P1.0	16x2x1.0	21.2
RE-2Y(C)H 20P1.0	20x2x1.0	23.5
RE-2Y(C)H 24P1.0	24x2x1.0	25.3
1.3mm^2, Multipair		
RE-2Y(C)H 2P1.3	2x2x1.3	12.9
RE-2Y(C)H 3P1.3	3x2x1.3	13.5
RE-2Y(C)H 4P1.3	4x2x1.3	14.5
RE-2Y(C)H 6P1.3	6x2x1.3	16.7
RE-2Y(C)H 8P1.3	8x2x1.3	17.4
RE-2Y(C)H 12P1.3	12x2x1.3	20.2
RE-2Y(C)H 16P1.3	16x2x1.3	22.6
RE-2Y(C)H 20P1.3	20x2x1.3	25.1
RE-2Y(C)H 24P1.3	24x2x1.3	27.0

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

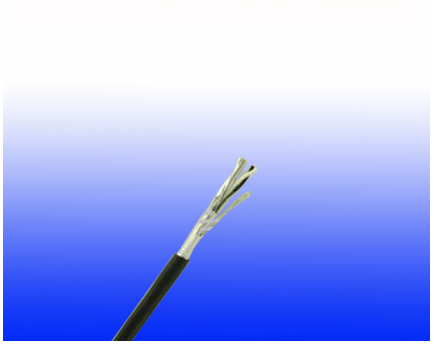

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

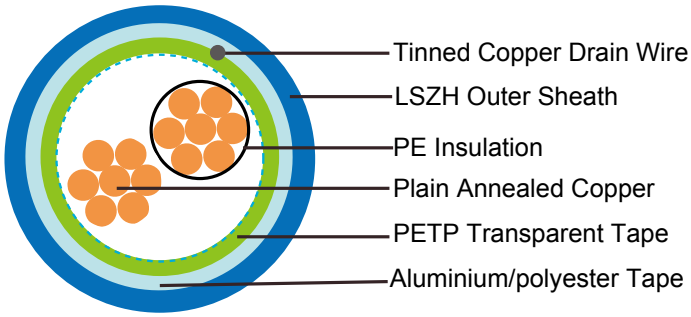

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

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 tensite 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 specified length lay.
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.
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	0.35	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.)	115				
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)H		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2Y(St)H 1P0.5	1x2x0.50	0.35	0.8
RE-2Y(St)H 1P0.75	1x2x0.75	0.38	0.8
RE-2Y(St)H 1P1.0	1x2x1.0	0.40	0.9
RE-2Y(St)H 1P1.3	1x2x1.3	0.45	0.9
RE-2Y(St)H 1P1.5	1x2x1.5	0.45	0.9

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

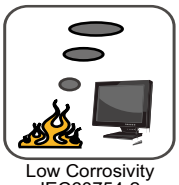
Rated Voltage

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

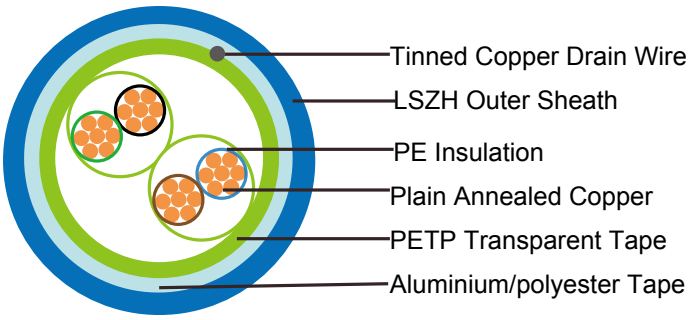

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074


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 tensite 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 specified length lay.
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.)					
	≤ 4 pairs	90	90	90	102	102
	all other pairs	75	75	75	85	85
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)H		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
0.5mm^2, Multipair			
RE-2Y(St)H 2P0.5	2x2x0.5	0.35	0.9
RE-2Y(St)H 4P0.5	4x2x0.5	0.35	0.9
RE-2Y(St)H 5P0.5	5x2x0.5	0.35	1.0
RE-2Y(St)H 6P0.5	6x2x0.5	0.35	1.0
RE-2Y(St)H 8P0.5	8x2x0.5	0.35	1.0
RE-2Y(St)H 10P0.5	10x2x0.5	0.35	1.1
RE-2Y(St)H 12P0.5	12x2x0.5	0.35	1.1
RE-2Y(St)H 16P0.5	16x2x0.5	0.35	1.1
RE-2Y(St)H 20P0.5	20x2x0.5	0.35	1.2
RE-2Y(St)H 24P0.5	24x2x0.5	0.35	1.2
0.75mm^2, Multipair			
RE-2Y(St)H 2P0.75	2x2x0.75	0.38	0.9
RE-2Y(St)H 4P0.75	4x2x0.75	0.38	1.0
RE-2Y(St)H 5P0.75	5x2x0.75	0.38	1.0
RE-2Y(St)H 6P0.75	6x2x0.75	0.38	1.0
RE-2Y(St)H 8P0.75	8x2x0.75	0.38	1.1
RE-2Y(St)H 10P0.75	10x2x0.75	0.38	1.1
RE-2Y(St)H 12P0.75	12x2x0.75	0.38	1.1
RE-2Y(St)H 16P0.75	16x2x0.75	0.38	1.2
RE-2Y(St)H 20P0.75	20x2x0.75	0.38	1.3
RE-2Y(St)H 24P0.75	24x2x0.75	0.38	1.3

Caledonian Cable Code	RE-2Y(St)H		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
1.0mm^2, Multipair			
RE-2Y(St)H 2P1.0	2x2x1.0	0.4	0.9
RE-2Y(St)H 4P1.0	4x2x1.0	0.4	1.0
RE-2Y(St)H 5P1.0	5x2x1.0	0.4	1.0
RE-2Y(St)H 6P1.0	6x2x1.0	0.4	1.0
RE-2Y(St)H 8P1.0	8x2x1.0	0.4	1.1
RE-2Y(St)H 10P1.0	10x2x1.0	0.4	1.1
RE-2Y(St)H 12P1.0	12x2x1.0	0.4	1.2
RE-2Y(St)H 16P1.0	16x2x1.0	0.4	1.2
RE-2Y(St)H 20P1.0	20x2x1.0	0.4	1.3
RE-2Y(St)H 24P1.0	24x2x1.0	0.4	1.4
1.3mm^2, Multipair			
RE-2Y(St)H 2P1.3	2x2x1.3	0.45	1.0
RE-2Y(St)H 4P1.3	4x2x1.3	0.45	1.0
RE-2Y(St)H 5P1.3	5x2x1.3	0.45	1.1
RE-2Y(St)H 6P1.3	6x2x1.3	0.45	1.1
RE-2Y(St)H 8P1.3	8x2x1.3	0.45	1.2
RE-2Y(St)H 10P1.3	10x2x1.3	0.45	1.2
RE-2Y(St)H 12P1.3	12x2x1.3	0.45	1.3
RE-2Y(St)H 16P1.3	16x2x1.3	0.45	1.3
RE-2Y(St)H 20P1.3	20x2x1.3	0.45	1.4
RE-2Y(St)H 24P1.3	24x2x1.3	0.45	1.5
1.5mm^2, Multipair			
RE-2Y(St)H 2P1.5	2x2x1.5	0.45	1.0
RE-2Y(St)H 4P1.5	4x2x1.5	0.45	1.1
RE-2Y(St)H 5P1.5	5x2x1.5	0.45	1.1
RE-2Y(St)H 6P1.5	6x2x1.5	0.45	1.2

Caledonian Cable Code	RE-2Y(St)H		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2Y(St)H 8P1.5	8x2x1.5	0.45	1.2
RE-2Y(St)H 10P1.5	10x2x1.5	0.45	1.3
RE-2Y(St)H 12P1.5	12x2x1.5	0.45	1.3
RE-2Y(St)H 16P1.5	16x2x1.5	0.45	1.4
RE-2Y(St)H 20P1.5	20x2x1.5	0.45	1.5
RE-2Y(St)H 24P1.5	24x2x1.5	0.45	1.5

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

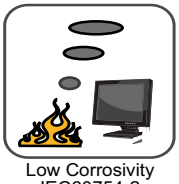
Rated Voltage

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

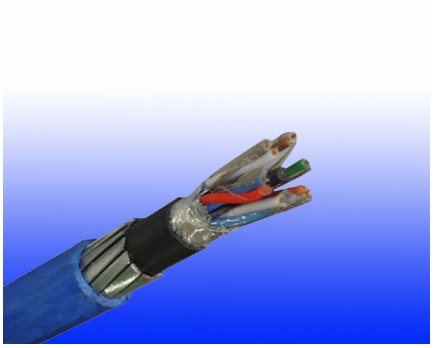

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

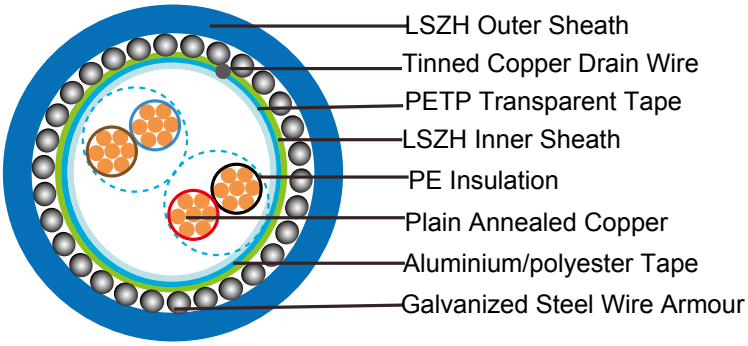

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)HSWAH 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 tensite 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 specified length lay. **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

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.)	115				
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)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2Y(St)HSWAH 1P0.5	1x2x0.50	0.35	0.8	5.2	0.9	1.3
RE-2Y(St)HSWAH 1P0.75	1x2x0.75	0.38	0.8	5.6	0.9	1.3
RE-2Y(St)HSWAH 1P1.0	1x2x1.0	0.40	0.9	6.3	0.9	1.3
RE-2Y(St)HSWAH 1P1.3	1x2x1.3	0.45	0.9	6.8	0.9	1.3
RE-2Y(St)HSWAH 1P1.5	1x2x1.5	0.45	0.9	7.1	0.9	1.3

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

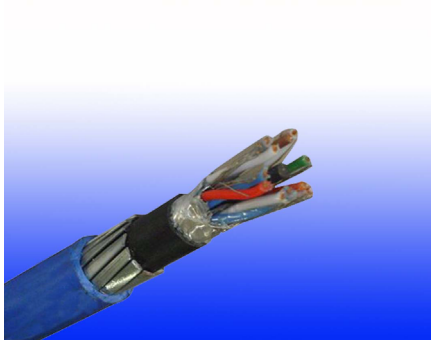

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

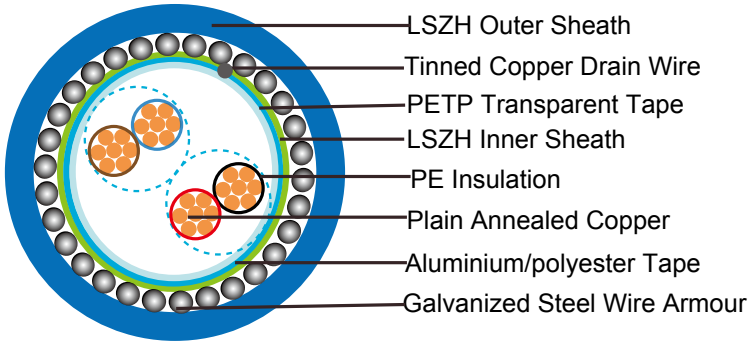

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

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

RE-2Y(St)HSWAH 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 tensite 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 specified length lay.
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
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): -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.)					
	up to 4 pairs	90	90	90	102	102
	above 4 pairs	75	75	75	85	85
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)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
0.5mm^2, Multipair						
RE-2Y(St)HSWAH 2P0.5	2x2x0.5	0.35	0.9	7.6	0.9	1.3
RE-2Y(St)HSWAH 4P0.5	4x2x0.5	0.35	0.9	8.8	0.9	1.4
RE-2Y(St)HSWAH 5P0.5	5x2x0.5	0.35	1.0	9.8	0.9	1.4
RE-2Y(St)HSWAH 6P0.5	6x2x0.5	0.35	1.0	10.6	0.9	1.4
RE-2Y(St)HSWAH 8P0.5	8x2x0.5	0.35	1.0	11.3	0.9	1.4
RE-2Y(St)HSWAH 10P0.5	10x2x0.5	0.35	1.1	12.9	0.9	1.5
RE-2Y(St)HSWAH 12P0.5	12x2x0.5	0.35	1.1	13.5	0.9	1.5
RE-2Y(St)HSWAH 16P0.5	16x2x0.5	0.35	1.1	15.2	0.9	1.5
RE-2Y(St)HSWAH 20P0.5	20x2x0.5	0.35	1.2	16.9	0.9	1.6
RE-2Y(St)HSWAH 24P0.5	24x2x0.5	0.35	1.2	18.3	1.25	1.6
0.75mm^2, Multipair						
RE-2Y(St)HSWAH 2P0.75	2x2x0.75	0.38	0.9	8.5	0.9	1.4
RE-2Y(St)HSWAH 4P0.75	4x2x0.75	0.38	1.0	10.0	0.9	1.4
RE-2Y(St)HSWAH 5P0.75	5x2x0.75	0.38	1.0	10.9	0.9	1.4
RE-2Y(St)HSWAH 6P0.75	6x2x0.75	0.38	1.0	11.8	0.9	1.4
RE-2Y(St)HSWAH 8P0.75	8x2x0.75	0.38	1.1	12.8	0.9	1.5
RE-2Y(St)HSWAH 10P0.75	10x2x0.75	0.38	1.1	14.5	0.9	1.5
RE-2Y(St)HSWAH 12P0.75	12x2x0.75	0.38	1.1	15.1	0.9	1.5

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2Y(St)HSWAH 16P0.75	16x2x0.75	0.38	1.2	17.3	0.9	1.6
RE-2Y(St)HSWAH 20P0.75	20x2x0.75	0.38	1.3	19.2	1.25	1.6
RE-2Y(St)HSWAH 24P0.75	24x2x0.75	0.38	1.3	20.8	1.25	1.6
1.0mm^2, Multipair						
RE-2Y(St)HSWAH 2P1.0	2x2x1.0	0.4	0.9	9.2	0.9	1.4
RE-2Y(St)HSWAH 4P1.0	4x2x1.0	0.4	1.0	10.9	0.9	1.4
RE-2Y(St)HSWAH 5P1.0	5x2x1.0	0.4	1.0	11.9	0.9	1.4
RE-2Y(St)HSWAH 6P1.0	6x2x1.0	0.4	1.0	13.0	0.9	1.4
RE-2Y(St)HSWAH 8P1.0	8x2x1.0	0.4	1.1	14.0	0.9	1.5
RE-2Y(St)HSWAH 10P1.0	10x2x1.0	0.4	1.1	15.9	0.9	1.5
RE-2Y(St)HSWAH 12P1.0	12x2x1.0	0.4	1.2	16.8	0.9	1.5
RE-2Y(St)HSWAH 16P1.0	16x2x1.0	0.4	1.2	19.0	1.25	1.6
RE-2Y(St)HSWAH 20P1.0	20x2x1.0	0.4	1.3	21.1	1.25	1.7
RE-2Y(St)HSWAH 24P1.0	24x2x1.0	0.4	1.4	23.1	1.25	1.7
1.3mm^2, Multipair						
RE-2Y(St)HSWAH 2P1.3	2x2x1.3	0.45	1.0	10.4	0.9	1.4
RE-2Y(St)HSWAH 4P1.3	4x2x1.3	0.45	1.0	12.0	0.9	1.4
RE-2Y(St)HSWAH 5P1.3	5x2x1.3	0.45	1.1	13.4	0.9	1.5
RE-2Y(St)HSWAH 6P1.3	6x2x1.3	0.45	1.1	14.6	0.9	1.5
RE-2Y(St)HSWAH 8P1.3	8x2x1.3	0.45	1.2	15.7	0.9	1.5
RE-2Y(St)HSWAH 10P1.3	10x2x1.3	0.45	1.2	17.9	0.9	1.6
RE-2Y(St)HSWAH 12P1.3	12x2x1.3	0.45	1.3	18.9	1.25	1.6
RE-2Y(St)HSWAH 16P1.3	16x2x1.3	0.45	1.3	21.4	1.25	1.7
RE-2Y(St)HSWAH 20P1.3	20x2x1.3	0.45	1.4	23.8	1.25	1.8
RE-2Y(St)HSWAH 24P1.3	24x2x1.3	0.45	1.5	25.9	1.25	1.8
1.5mm^2, Multipair						
RE-2Y(St)HSWAH 2P1.5	2x2x1.5	0.45	1.0	10.8	0.9	1.4
RE-2Y(St)HSWAH 4P1.5	4x2x1.5	0.45	1.1	12.7	0.9	1.5
RE-2Y(St)HSWAH 5P1.5	5x2x1.5	0.45	1.1	14.0	0.9	1.5

Caledonian Cable Code	RE-2Y(St)HSWAH					
	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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2Y(St)HSWAH 6P1.5	6x2x1.5	0.45	1.2	15.2	0.9	1.5
RE-2Y(St)HSWAH 8P1.5	8x2x1.5	0.45	1.2	16.4	0.9	1.6
RE-2Y(St)HSWAH 10P1.5	10x2x1.5	0.45	1.3	18.8	1.25	1.6
RE-2Y(St)HSWAH 12P1.5	12x2x1.5	0.45	1.3	19.7	1.25	1.7
RE-2Y(St)HSWAH 16P1.5	16x2x1.5	0.45	1.4	22.5	1.25	1.7
RE-2Y(St)HSWAH 20P1.5	20x2x1.5	0.45	1.5	25.0	1.25	1.8
RE-2Y(St)HSWAH 24P1.5	24x2x1.5	0.45	1.5	27.1	1.25	1.8

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

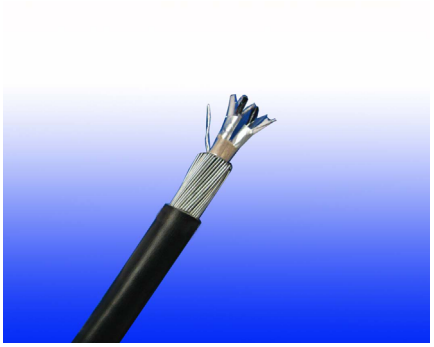

Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

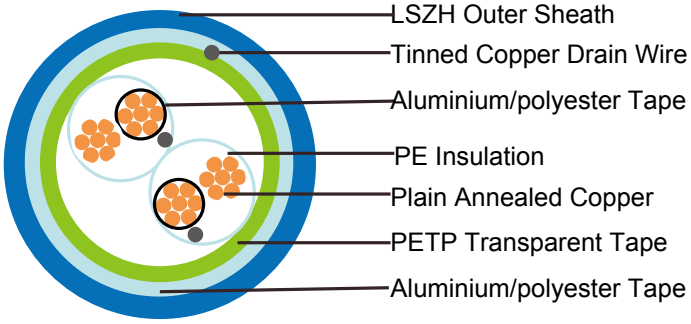

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

PE Insulated, LSZH Sheathed, 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

tensite 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 specified length lay.
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	0.35	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.)	115				
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				

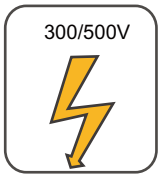
CONSTRUCTION PARAMETERS

Caledonian Cable Code	RE-2Y(St)H PiMF		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
0.5mm^2, Multipair			
RE-2Y(St)H PiMF 2P0.5	2x2x0.5	0.35	0.9
RE-2Y(St)H PiMF 4P0.5	4x2x0.5	0.35	1.0
RE-2Y(St)H PiMF 5P0.5	5x2x0.5	0.35	1.0
RE-2Y(St)H PiMF 6P0.5	6x2x0.5	0.35	1.0
RE-2Y(St)H PiMF 8P0.5	8x2x0.5	0.35	1.1
RE-2Y(St)H PiMF 10P0.5	10x2x0.5	0.35	1.2
RE-2Y(St)H PiMF 12P0.5	12x2x0.5	0.35	1.2
RE-2Y(St)H PiMF 16P0.5	16x2x0.5	0.35	1.2
RE-2Y(St)H PiMF 20P0.5	20x2x0.5	0.35	1.3
RE-2Y(St)H PiMF 24P0.5	24x2x0.5	0.35	1.4
0.75mm^2, Multipair			
RE-2Y(St)H PiMF 2P0.75	2x2x0.75	0.38	1.0
RE-2Y(St)H PiMF 4P0.75	4x2x0.75	0.38	1.0
RE-2Y(St)H PiMF 5P0.75	5x2x0.75	0.38	1.1
RE-2Y(St)H PiMF 6P0.75	6x2x0.75	0.38	1.1
RE-2Y(St)H PiMF 8P0.75	8x2x0.75	0.38	1.1
RE-2Y(St)H PiMF 10P0.75	10x2x0.75	0.38	1.2
RE-2Y(St)H PiMF 12P0.75	12x2x0.75	0.38	1.2
RE-2Y(St)H PiMF 16P0.75	16x2x0.75	0.38	1.3
RE-2Y(St)H PiMF 20P0.75	20x2x0.75	0.38	1.4
RE-2Y(St)H PiMF 24P0.75	24x2x0.75	0.38	1.5
1.0mm^2, Multipair			
RE-2Y(St)H PiMF 2P1.0	2x2x1.0	0.4	1.0
RE-2Y(St)H PiMF 4P1.0	4x2x1.0	0.4	1.0
RE-2Y(St)H PiMF 5P1.0	5x2x1.0	0.4	1.1

Caledonian Cable Code	RE-2Y(St)H PiMF		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2Y(St)H PiMF 6P1.0	6x2x1.0	0.4	1.1
RE-2Y(St)H PiMF 8P1.0	8x2x1.0	0.4	1.2
RE-2Y(St)H PiMF 10P1.0	10x2x1.0	0.4	1.2
RE-2Y(St)H PiMF 12P1.0	12x2x1.0	0.4	1.3
RE-2Y(St)H PiMF 16P1.0	16x2x1.0	0.4	1.3
RE-2Y(St)H PiMF 20P1.0	20x2x1.0	0.4	1.4
RE-2Y(St)H PiMF 24P1.0	24x2x1.0	0.4	1.5
1.3mm^2, Multipair			
RE-2Y(St)H PiMF 2P1.3	2x2x1.3	0.45	1.0
RE-2Y(St)H PiMF 4P1.3	4x2x1.3	0.45	1.1
RE-2Y(St)H PiMF 5P1.3	5x2x1.3	0.45	1.1
RE-2Y(St)H PiMF 6P1.3	6x2x1.3	0.45	1.2
RE-2Y(St)H PiMF 8P1.3	8x2x1.3	0.45	1.3
RE-2Y(St)H PiMF 10P1.3	10x2x1.3	0.45	1.3
RE-2Y(St)H PiMF 12P1.3	12x2x1.3	0.45	1.4
RE-2Y(St)H PiMF 16P1.3	16x2x1.3	0.45	1.5
RE-2Y(St)H PiMF 20P1.3	20x2x1.3	0.45	1.6
RE-2Y(St)H PiMF 24P1.3	24x2x1.3	0.45	1.7
1.5mm^2, Multipair			
RE-2Y(St)H PiMF 2P1.5	2x2x1.5	0.45	1.0
RE-2Y(St)H PiMF 4P1.5	4x2x1.5	0.45	1.1
RE-2Y(St)H PiMF 5P1.5	5x2x1.5	0.45	1.2
RE-2Y(St)H PiMF 6P1.5	6x2x1.5	0.45	1.2
RE-2Y(St)H PiMF 8P1.5	8x2x1.5	0.45	1.3
RE-2Y(St)H PiMF 10P1.5	10x2x1.5	0.45	1.4
RE-2Y(St)H PiMF 12P1.5	12x2x1.5	0.45	1.4
RE-2Y(St)H PiMF 16P1.5	16x2x1.5	0.45	1.5

Caledonian Cable Code	RE-2Y(St)H PiMF		
	No. of Pairsx2 xCross Section	Nominal Insulation Thickness	Nominal Outer Sheath Thickness
	No.x2xmm^2	mm	mm
RE-2Y(St)H PiMF 20P1.5	20x2x1.5	0.45	1.6
RE-2Y(St)H PiMF 24P1.5	24x2x1.5	0.45	1.7

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



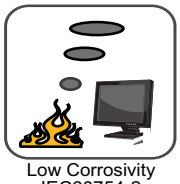
Rated Voltage

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



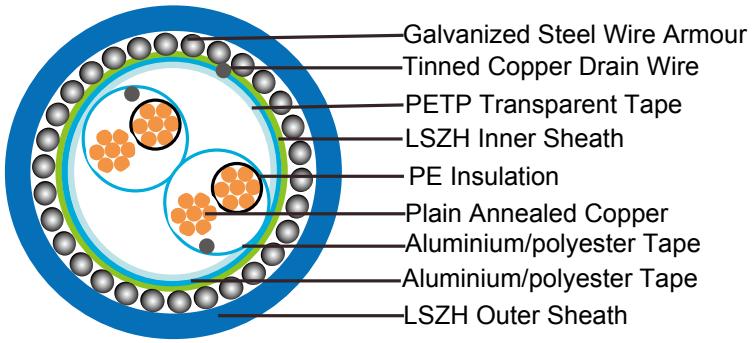
Low Corrosivity
IEC60754-2
EN50267-2-2/3
NF C 32-074

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)HSWAH 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 tensite 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 specified length lay.
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
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): -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.)	115				
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)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
0.5mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P0.5	2x2x0.5	0.35	0.9	8.7	0.9	1.4
RE-2X(St)HSWAH PiMF 4P0.5	4x2x0.5	0.35	1.0	10.2	0.9	1.4
RE-2X(St)HSWAH PiMF 5P0.5	5x2x0.5	0.35	1.0	11.2	0.9	1.4
RE-2X(St)HSWAH PiMF 6P0.5	6x2x0.5	0.35	1.0	12.1	0.9	1.6
RE-2X(St)HSWAH PiMF 8P0.5	8x2x0.5	0.35	1.1	13.1	0.9	1.6
RE-2X(St)HSWAH PiMF 10P0.5	10x2x0.5	0.35	1.2	15.1	0.9	1.5
RE-2X(St)HSWAH PiMF 12P0.5	12x2x0.5	0.35	1.2	15.7	0.9	1.5
RE-2X(St)HSWAH PiMF 16P0.5	16x2x0.5	0.35	1.2	17.8	1.25	1.6
RE-2X(St)HSWAH PiMF 20P0.5	20x2x0.5	0.35	1.3	19.7	1.25	1.7
RE-2X(St)HSWAH PiMF 24P0.5	24x2x0.5	0.35	1.4	21.5	1.25	1.7
0.75mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P0.75	2x2x0.75	0.38	1.0	9.7	0.9	1.4
RE-2X(St)HSWAH PiMF 4P0.75	4x2x0.75	0.38	1.0	11.2	0.9	1.4
RE-2X(St)HSWAH PiMF 5P0.75	5x2x0.75	0.38	1.1	12.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P0.75	6x2x0.75	0.38	1.1	13.6	0.9	1.5
RE-2X(St)HSWAH PiMF 8P0.75	8x2x0.75	0.38	1.1	14.4	0.9	1.5
RE-2X(St)HSWAH PiMF 10P0.75	10x2x0.75	0.38	1.2	16.6	1.25	1.6
RE-2X(St)HSWAH PiMF 12P0.75	12x2x0.75	0.38	1.2	17.4	1.25	1.6
RE-2X(St)HSWAH PiMF 16P0.75	16x2x0.75	0.38	1.3	19.8	1.25	1.7
RE-2X(St)HSWAH PiMF 20P0.75	20x2x0.75	0.38	1.4	22.0	1.25	1.7
RE-2X(St)HSWAH PiMF 24P0.75	24x2x0.75	0.38	1.5	24.0	1.25	1.8

Caledonian Cable Code	RE-2X(St)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
1.0mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.0	2x2x1.0	0.4	1.0	10.4	0.9	1.4
RE-2X(St)HSWAH PiMF 4P1.0	3x2x1.0	0.4	1.0	12.1	0.9	1.4
RE-2X(St)HSWAH PiMF 5P1.0	4x2x1.0	0.4	1.1	13.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.0	5x2x1.0	0.4	1.1	14.7	0.9	1.5
RE-2X(St)HSWAH PiMF 8P1.0	8x2x1.0	0.4	1.2	15.8	0.9	1.5
RE-2X(St)HSWAH PiMF 10P1.0	10x2x1.0	0.4	1.2	18.0	1.25	1.6
RE-2X(St)HSWAH PiMF 12P1.0	12x2x1.0	0.4	1.3	19.0	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.0	16x2x1.0	0.4	1.3	21.5	1.25	1.7
RE-2X(St)HSWAH PiMF 20P1.0	20x2x1.0	0.4	1.4	23.9	1.25	1.7
RE-2X(St)HSWAH PiMF 24P1.0	24x2x1.0	0.4	1.5	26.1	1.25	1.8
1.3mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.3	2x2x1.3	0.45	1.0	11.4	0.9	1.4
RE-2X(St)HSWAH PiMF 4P1.3	4x2x1.3	0.45	1.1	13.4	0.9	1.5
RE-2X(St)HSWAH PiMF 5P1.3	5x2x1.3	0.45	1.1	14.8	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.3	6x2x1.3	0.45	1.2	16.3	0.9	1.6
RE-2X(St)HSWAH PiMF 8P1.3	8x2x1.3	0.45	1.3	17.6	1.25	1.6
RE-2X(St)HSWAH PiMF 10P1.3	10x2x1.3	0.45	1.3	20.0	1.25	1.7
RE-2X(St)HSWAH PiMF 12P1.3	12x2x1.3	0.45	1.4	21.1	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.3	16x2x1.3	0.45	1.5	24.1	1.25	1.8
RE-2X(St)HSWAH PiMF 20P1.3	20x2x1.3	0.45	1.6	26.8	1.25	1.9
RE-2X(St)HSWAH PiMF 24P1.3	24x2x1.3	0.45	1.7	29.2	1.25	2.0
1.5mm^2, Multipair						
RE-2X(St)HSWAH PiMF 2P1.5	2x2x1.5	0.45	1.0	11.8	0.9	1.5
RE-2X(St)HSWAH PiMF 4P1.5	4x2x1.5	0.45	1.1	13.9	0.9	1.5
RE-2X(St)HSWAH PiMF 5P1.5	5x2x1.5	0.45	1.2	15.5	0.9	1.5
RE-2X(St)HSWAH PiMF 6P1.5	6x2x1.5	0.45	1.2	16.9	1.25	1.6

Caledonian Cable Code	RE-2X(St)HSWAH 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
	No.x2xmm^2	mm^2	mm	mm	mm	mm
RE-2X(St)HSWAH PiMF 8P1.5	8x2x1.5	0.45	1.3	18.2	1.25	1.7
RE-2X(St)HSWAH PiMF 10P1.5	10x2x1.5	0.45	1.4	21.0	1.25	1.7
RE-2X(St)HSWAH PiMF 12P1.5	12x2x1.5	0.45	1.4	21.9	1.25	1.7
RE-2X(St)HSWAH PiMF 16P1.5	16x2x1.5	0.45	1.5	25.1	1.25	1.8
RE-2X(St)HSWAH PiMF 20P1.5	20x2x1.5	0.45	1.6	27.8	1.25	1.9
RE-2X(St)HSWAH PiMF 24P1.5	24x2x1.5	0.45	1.7	30.4	1.25	2.0

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

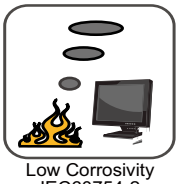
Rated Voltage

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

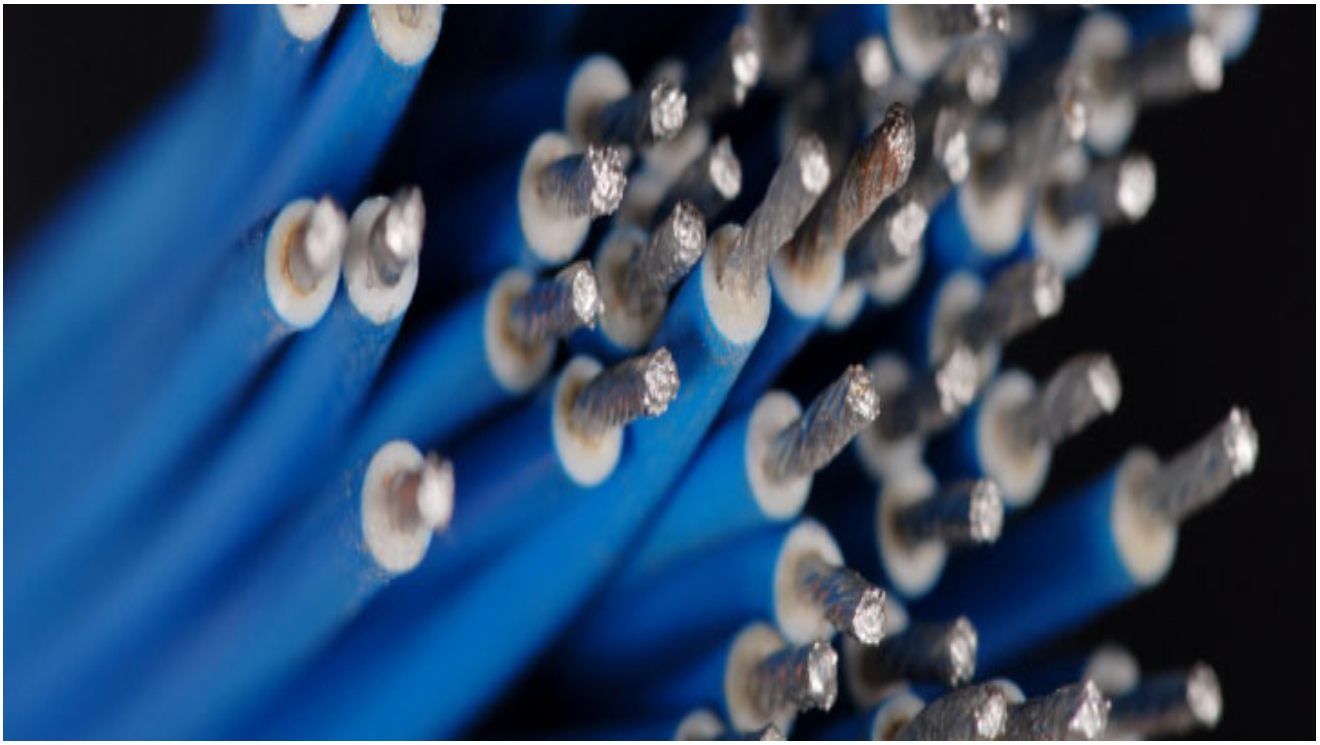

Low Smoke Emission
IEC 61034-1&2
EN 50268-1&2/NF C32-073

Halogen Free
IEC60754-1
EN50267-2-1

Type Codes For Fire Retardant Instrumentation Cables

RE-2X(St)HSWAH

- Outer Sheath
  H: LSZH
- Armour
  SWA: Steel Wire Armour
- Inner Sheath
  H: LSZH
- Screen
  St: Aluminium/polyester Tape
  CWB: Copper Wire Braid
- Insulation
  2X: XLPE
  2Y: PE



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 fo 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 electic 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

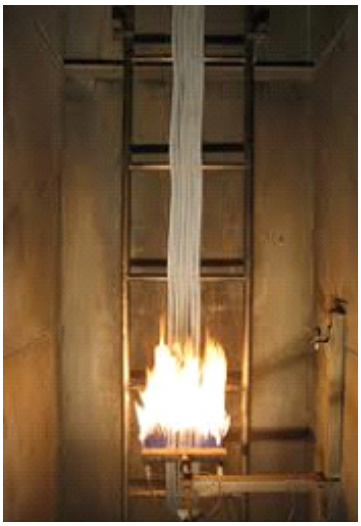
EN 60332-3-22:2009 / BS EN 60332-3-22:2009 / IEC 60332-3-22 ed1.1 / DIN EN 60332-3-22:2009 /VDE 0482-332-3-22:2010-08 / CEI EN 60332-3-22:2009 (CEI 20-22/3-2)– Procedures. Tests on electric and optical fiber cables under fire conditions - Part 3-22: Test for vertical flame spread of vertically-mounted 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-sectionsmm²	＞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
Number of burners	1	1	1	2	1		1		1
Ladder mounting	Front and rear	Front, Wider ladder for larger cables			Front		Front		Front
Flame application time(min)	40	40	40		40		40		40
Test conditions	Wind speed: <8 m/s; Ternperature: 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 pathe 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

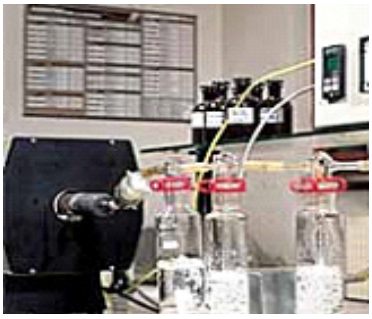
BS 4066-3:1994 (superseded) – Tests on electic cables under fire conditions. Tests on bunched wires or cables.
This standard is no longer in force and is replaced by the BS EN 50266-1:2001

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 pathe 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 hydrochoric 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 polmeric 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 combusion 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 tranmittance 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 condiitions. Test apparatus.
BS 7622-2:1993 (superseded) – Measurement of smoke density of electric cables burning under defined condiitions. 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, it's 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 100m 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 speciments 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, CO_2, HCL, HBr, HCN, HF and SO_2.

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