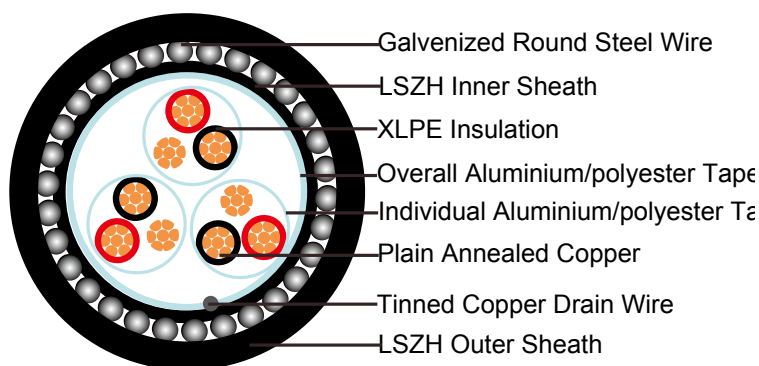
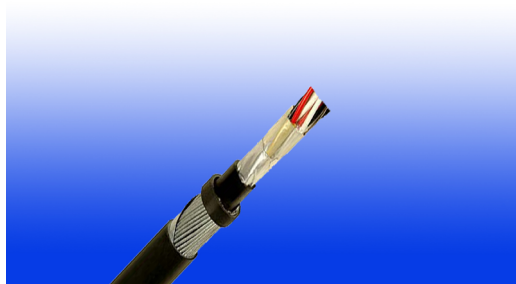




XLPE Insulated, LSZH Sheathed, Individual & Overall Screened, Armoured Instrumentation Cables (Multitriples)

RE-2X(St)HSAH-TiMF 70°C / 300 V



APPLICATION:

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

These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, e.g. public mains electricity supply. With blue sheath it is suitable for intrinsically safe systems. These cables are 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Note: Asterisk * denotes superseded standard, ** denotes Test temperature +60°C, duration 4h.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, 0.5mm²

Inner sheath: LSZH compound

Armour: Galvanized round steel wire, EN 10257-1

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

COLOUR CODE

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

Outer Sheath: Black or blue for intrinsically safe systems

PHYSICAL AND THERMAL PROPERTIES

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

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

Minimum Bending Radius: 7.5 X Overall Diameter

ELECTRICAL PROPERTIES

Conductor Area Size	mm ²	0.5	0.75	1.0	1.3	1.5
Insulation thickness (nominal)	mm	0.35	0.38	0.4	0.45	0.45
Conductor resistance (20°C)	Ω/km	36.7	25	18.5	14.2	12.3



Insulation resistance (20°C)	MΩ.km(Min.)	5000				
Mutual Capacitance (1 kHz)	pF/m(Max.)	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	1500				
	Core to Screen	1500				

CONSTRUCTION PARAMETERS

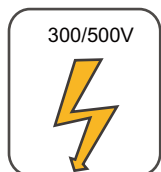
Caledonian Cable Code	RE-2X(St)HSAWAH-TiMF					
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness
	No.x3xmm ²	mm	mm	mm	mm	mm
0.5mm ² , Multi-stripe						
RE-2X(St)HSAWAH-TiMF 2T0.5	2x3x0.5	0.35	1.0	9.7	0.9	1.4
RE-2X(St)HSAWAH-TiMF 4T0.5	4x3x0.5	0.35	1.0	11.1	0.9	1.4
RE-2X(St)HSAWAH-TiMF 5T0.5	5x3x0.5	0.35	1.1	12.4	0.9	1.5
RE-2X(St)HSAWAH-TiMF 6T0.5	6x3x0.5	0.35	1.1	14.0	0.9	1.5
RE-2X(St)HSAWAH-TiMF 8T0.5	8x3x0.5	0.35	1.1	14.9	0.9	1.5
RE-2X(St)HSAWAH-TiMF 10T0.5	10x3x0.5	0.35	1.2	17.0	1.25	1.6
RE-2X(St)HSAWAH-TiMF 12T0.5	12x3x0.5	0.35	1.2	17.6	1.25	1.6
RE-2X(St)HSAWAH-TiMF 16T0.5	16x3x0.5	0.35	1.3	20.1	1.25	1.7
RE-2X(St)HSAWAH-TiMF 20T0.5	20x3x0.5	0.35	1.4	22.3	1.25	1.7
RE-2X(St)HSAWAH-TiMF 24T0.5	24x3x0.5	0.35	1.5	24.4	1.25	1.8
0.75mm ² , Multi-stripe						
RE-2X(St)HSAWAH-TiMF 2T0.75	2x3x0.75	0.38	1.0	10.6	0.9	1.4
RE-2X(St)HSAWAH-TiMF 4T0.75	4x3x0.75	0.38	1.1	12.4	0.9	1.5
RE-2X(St)HSAWAH-TiMF 5T0.75	5x3x0.75	0.38	1.1	13.7	0.9	1.5
RE-2X(St)HSAWAH-TiMF 6T0.75	6x3x0.75	0.38	1.1	15.4	0.9	1.5
RE-2X(St)HSAWAH-TiMF 8T0.75	8x3x0.75	0.38	1.2	16.7	0.9	1.6
RE-2X(St)HSAWAH-TiMF 10T0.75	10x3x0.75	0.38	1.3	19.0	1.25	1.6

Caledonian Cable Code	RE-2X(St)HSAWAH-TiMF					
	No. of Triples x3xCross Section	Nominal Insulation Thick- ness	Nominal Inner Sheath Thick- ness	Nominal Overall Diameter Over Inner Sheath	Nominal Armour Wire Diameter	Nominal Outer Sheath Thick- ness
	No.x3xmm ²	mm	mm	mm	mm	mm
RE-2X(St)HSAWAH-TiMF 12T0.75	12x3x0.75	0.38	1.3	19.7	1.25	1.7
RE-2X(St)HSAWAH-TiMF 16T0.75	16x3x0.75	0.38	1.4	22.5	1.25	1.7
RE-2X(St)HSAWAH-TiMF 20T0.75	20x3x0.75	0.38	1.5	24.9	1.25	1.8
RE-2X(St)HSAWAH-TiMF 24T0.75	24x3x0.75	0.38	1.6	27.2	1.25	1.9
1.0mm ² , Multi-stripe						
RE-2X(St)HSAWAH-TiMF 2T1.0	2x3x1.0	0.4	1.0	11.5	0.9	1.4
RE-2X(St)HSAWAH-TiMF 4T1.0	4x3x1.0	0.4	1.1	13.4	0.9	1.5
RE-2X(St)HSAWAH-TiMF 5T1.0	5x3x1.0	0.4	1.1	14.8	0.9	1.5
RE-2X(St)HSAWAH-TiMF 6T1.0	6x3x1.0	0.4	1.2	16.9	0.9	1.5
RE-2X(St)HSAWAH-TiMF 8T1.0	8x3x1.0	0.4	1.2	18.1	1.25	1.6
RE-2X(St)HSAWAH-TiMF 10T1.0	10x3x1.0	0.4	1.3	20.7	1.25	1.7
RE-2X(St)HSAWAH-TiMF 12T1.0	12x3x1.0	0.4	1.3	21.4	1.25	1.7
RE-2X(St)HSAWAH-TiMF 16T1.0	16x3x1.0	0.4	1.4	24.4	1.25	1.7
RE-2X(St)HSAWAH-TiMF 20T1.0	20x3x1.0	0.4	1.5	27.1	1.25	1.8
RE-2X(St)HSAWAH-TiMF 24T1.0	24x3x1.0	0.4	1.6	29.6	1.6	1.9
1.3mm ² , Multi-stripe						
RE-2X(St)HSAWAH-TiMF 2T1.3	2x3x1.3	0.45	1.1	12.8	0.9	1.5
RE-2X(St)HSAWAH-TiMF 4T1.3	4x3x1.3	0.45	1.1	14.7	0.9	1.5
RE-2X(St)HSAWAH-TiMF 5T1.3	5x3x1.3	0.45	1.2	16.5	0.9	1.6
RE-2X(St)HSAWAH-TiMF 6T1.3	6x3x1.3	0.45	1.3	18.8	1.25	1.6
RE-2X(St)HSAWAH-TiMF 8T1.3	8x3x1.3	0.45	1.3	20.1	1.25	1.7
RE-2X(St)HSAWAH-TiMF 10T1.3	10x3x1.3	0.45	1.4	23.0	1.25	1.8
RE-2X(St)HSAWAH-TiMF 12T1.3	12x3x1.3	0.45	1.5	24.0	1.25	1.8
RE-2X(St)HSAWAH-TiMF 16T1.3	16x3x1.3	0.45	1.6	27.4	1.25	1.9
RE-2X(St)HSAWAH-TiMF 20T1.3	20x3x1.3	0.45	1.7	30.4	1.6	2.0
RE-2X(St)HSAWAH-TiMF 24T1.3	24x3x1.3	0.45	1.8	33.1	1.6	2.0
1.5mm ² , Multi-stripe						
RE-2X(St)HSAWAH-TiMF 2T1.5	2x3x1.5	0.45	1.1	13.2	0.9	1.5



Caledonian Cable Code	RE-2X(St)HSAWH-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)HSAWH-TiMF 4T1.5	4x3x1.5	0.45	1.2	15.4	0.9	1.5
RE-2X(St)HSAWH-TiMF 5T1.5	5x3x1.5	0.45	1.2	17.1	1.25	1.6
RE-2X(St)HSAWH-TiMF 6T1.5	6x3x1.5	0.45	1.3	19.5	1.25	1.6
RE-2X(St)HSAWH-TiMF 8T1.5	8x3x1.5	0.45	1.4	21.1	1.25	1.7
RE-2X(St)HSAWH-TiMF 10T1.5	10x3x1.5	0.45	1.5	24.1	1.25	1.8
RE-2X(St)HSAWH-TiMF 12T1.5	12x3x1.5	0.45	1.5	24.9	1.25	1.8
RE-2X(St)HSAWH-TiMF 16T1.5	16x3x1.5	0.45	1.6	28.4	1.6	1.9
RE-2X(St)HSAWH-TiMF 20T1.5	20x3x1.5	0.45	1.7	31.6	1.6	2.0
RE-2X(St)HSAWH-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.



300/500V

Rated Voltage



EN 50288-7

Standard



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



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



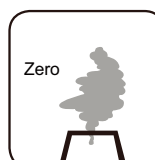
Low Toxicity
NES 02-713/NF C 20-454



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



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



Zero

Halogen Free
IEC60754-1
EN50267-2-1