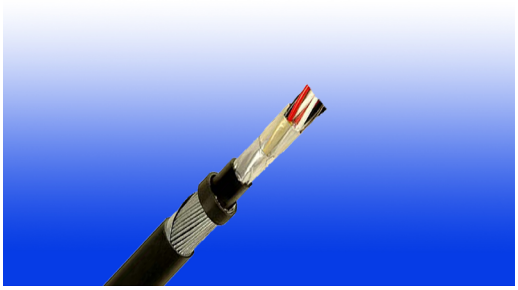
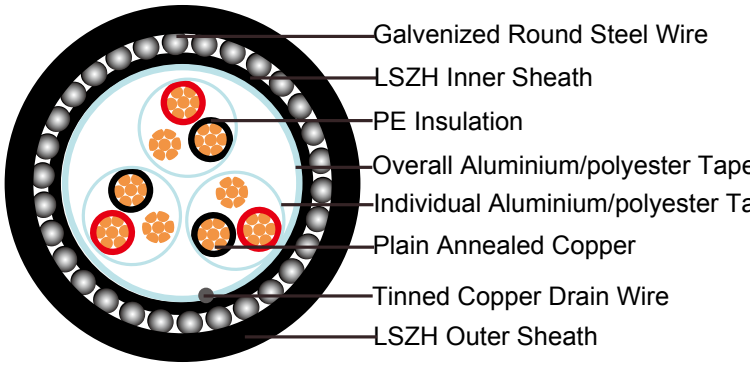
## PE Insulated, LSZH Sheathed, Individual & Overall Screened, Armoured Instrumentation Cables (Multitriple)

**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Note: Asterisk * denotes superseded standard, **Test temperature +60°C, duration 4h.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.x3x$mm^2$ | mm | mm | mm | mm | mm |
| 0.5$mm^2$, 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 |
| 0.75$mm^2$, 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.x3x$mm^2$ | 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 |
| 1.0$mm^2$, 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 |
| 1.3$mm^2$, 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.x3x$mm^2$ | mm | mm | mm | mm | mm |
| 1.5$mm^2$, 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