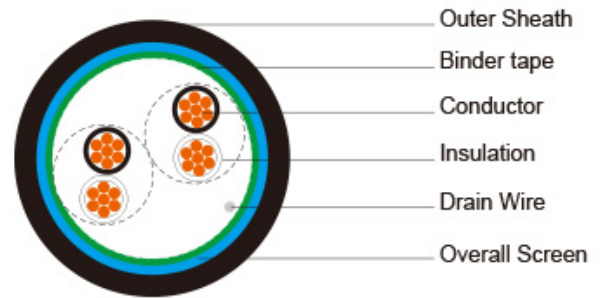


**XLPE Insulated, LSZH sheathed & overall screened  
Instrumentation cables (Multipair)**



RE-2X(st)H 90°C / 300V

**STANDARDS**

Basic design to EN 50288-7

**APPLICATION**

Instrument cable minimizes noise and signal interference, delivering clean signals in harsh environments and general manufacturing operations.

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.

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Note: Asterisk \* denotes superseded standard, \*\* denotes Test temperature +60°C, duration 4h.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

|                        |  |
|------------------------|--|
| <b>Conductor:</b>      | Annealed copper solid or plain copper stranded to IEC 60228 Class 2.   |
| <b>Insulation:</b>     | Extruded cross-linked XLPE compound, EN 50290. 2-29.   |
| <b>Pairs:</b>          | Two insulated conductors uniformly twisted together with a lay not exceeding 100mm   |
| <b>Binder tape:</b>    | PETP transparent tape  |
| <b>Overall Screen:</b> | Aluminium/polyester tape is applied over the laid up pairs metallic side down in contact with tinned copper drain wire, 0.5mm <sup>2</sup>   |
| <b>Outer Sheath:</b>   | 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**

|                      |  |
|----------------------|--|
| <b>Insulation:</b>   | Black / White, continuously numbered on white core(1, 2..)for multipair. |
| <b>Outer Sheath:</b> | Black or blue for intrinsically safe systems                             |

**Physical AND THERMAL PROPERTIES**

|  |                        |
|--|------------------------|
| <b>Temperature Range During Operation (Fixed State):</b>     | -30°C – +90°C          |
| <b>Temperature Range During Installation (Mobile State):</b> | -5°C – +50°C           |
| <b>Minimum Bending Radius:</b>                               | 7.5 X Overall Diameter |

**CONSTRUCTION PARAMETERS**

| Cable Code                     | RE-2X(St)H                       |                                    |                                      |                                |                   |
|--------------------------------|----------------------------------|------------------------------------|--------------------------------------|--------------------------------|-------------------|
|                                | No. of Pairs<br>x2xCross Section | Nominal<br>Insulation<br>Thickness | Nominal<br>Outer Sheath<br>Thickness | Nominal<br>Overall<br>Diameter | Approx.<br>Weight |
|                                | No.x2xmm2                        | mm                                 | mm                                   | mm                             | kg/km             |
| 0.5mm <sup>2</sup> , Multipair |                                  |                                    |                                      |                                |                   |
| RE-2X(St)H 2P0.5               | 2x2x0.5                          | 0.35                               | 0.9                                  | 7.6                            | 66                |
| RE-2X(St)H 4P0.5               | 3x2x0.5                          | 0.35                               | 0.9                                  | 8.8                            | 98                |
| RE-2X(St)H 5P0.5               | 4x2x0.5                          | 0.35                               | 1.0                                  | 9.8                            | 112               |
| RE-2X(St)H 6P0.5               | 5x2x0.5                          | 0.35                               | 1.0                                  | 10.6                           | 133               |
| RE-2X(St)H 8P0.5               | 8x2x0.5                          | 0.35                               | 1.0                                  | 11.3                           | 161               |
| RE-2X(St)H 10P0.5              | 10x2x0.5                         | 0.35                               | 1.1                                  | 12.9                           | 200               |
| RE-2X(St)H 12P0.5              | 12x2x0.5                         | 0.35                               | 1.1                                  | 13.5                           | 242               |

|                                 |           |      |     |      |      |
|---------------------------------|-----------|------|-----|------|------|
| RE-2X(St)H 16P0.5               | 16x2x0.5  | 0.35 | 1.1 | 15.2 | 288  |
| RE-2X(St)H 20P0.5               | 20x2x0.5  | 0.35 | 1.2 | 16.9 | 376  |
| RE-2X(St)H 24P0.5               | 24x2x0.5  | 0.35 | 1.2 | 18.3 | 426  |
| 0.75mm <sup>2</sup> , Multipair |           |      |     |      |      |
| RE-2X(St)H 2P0.75               | 2x2x0.75  | 0.38 | 0.9 | 8.5  | 87   |
| RE-2X(St)H 4P0.75               | 3x2x0.75  | 0.38 | 1.0 | 10.0 | 122  |
| RE-2X(St)H 5P0.75               | 4x2x0.75  | 0.38 | 1.0 | 10.9 | 154  |
| RE-2X(St)H 6P0.75               | 5x2x0.75  | 0.38 | 1.0 | 11.8 | 174  |
| RE-2X(St)H 8P0.75               | 8x2x0.75  | 0.38 | 1.1 | 12.8 | 213  |
| RE-2X(St)H 10P0.75              | 10x2x0.75 | 0.38 | 1.1 | 14.5 | 266  |
| RE-2X(St)H 12P0.75              | 12x2x0.75 | 0.38 | 1.1 | 15.1 | 304  |
| RE-2X(St)H 16P0.75              | 16x2x0.75 | 0.38 | 1.2 | 17.3 | 398  |
| RE-2X(St)H 20P0.75              | 20x2x0.75 | 0.38 | 1.3 | 19.2 | 478  |
| RE-2X(St)H 24P0.75              | 24x2x0.75 | 0.38 | 1.3 | 20.8 | 559  |
| 1.0mm <sup>2</sup> , Multipair  |           |      |     |      |      |
| RE-2X(St)H 2P1.0                | 2x2x1.0   | 0.4  | 0.9 | 9.2  | 101  |
| RE-2X(St)H 4P1.0                | 3x2x1.0   | 0.4  | 1.0 | 10.9 | 157  |
| RE-2X(St)H 5P1.0                | 4x2x1.0   | 0.4  | 1.0 | 11.9 | 194  |
| RE-2X(St)H 6P1.0                | 5x2x1.0   | 0.4  | 1.0 | 13.0 | 223  |
| RE-2X(St)H 8P1.0                | 8x2x1.0   | 0.4  | 1.1 | 14.0 | 272  |
| RE-2X(St)H 10P1.0               | 10x2x1.0  | 0.4  | 1.1 | 15.9 | 334  |
| RE-2X(St)H 12P1.0               | 12x2x1.0  | 0.4  | 1.2 | 16.8 | 390  |
| RE-2X(St)H 16P1.0               | 16x2x1.0  | 0.4  | 1.2 | 19.0 | 511  |
| RE-2X(St)H 20P1.0               | 20x2x1.0  | 0.4  | 1.3 | 21.1 | 617  |
| RE-2X(St)H 24P1.0               | 24x2x1.0  | 0.4  | 1.4 | 23.1 | 749  |
| 1.3mm <sup>2</sup> , Multipair  |           |      |     |      |      |
| RE-2X(St)H 2P1.3                | 2x2x1.3   | 0.45 | 1.0 | 10.4 | 124  |
| RE-2X(St)H 4P1.3                | 3x2x1.3   | 0.45 | 1.0 | 12.0 | 184  |
| RE-2X(St)H 5P1.3                | 4x2x1.3   | 0.45 | 1.1 | 13.4 | 226  |
| RE-2X(St)H 6P1.3                | 5x2x1.3   | 0.45 | 1.1 | 14.6 | 289  |
| RE-2X(St)H 8P1.3                | 8x2x1.3   | 0.45 | 1.2 | 15.7 | 337  |
| RE-2X(St)H 10P1.3               | 10x2x1.3  | 0.45 | 1.2 | 17.9 | 411  |
| RE-2X(St)H 12P1.3               | 12x2x1.3  | 0.45 | 1.3 | 18.9 | 495  |
| RE-2X(St)H 16P1.3               | 16x2x1.3  | 0.45 | 1.3 | 21.4 | 651  |
| RE-2X(St)H 20P1.3               | 20x2x1.3  | 0.45 | 1.4 | 23.8 | 772  |
| RE-2X(St)H 24P1.3               | 24x2x1.3  | 0.45 | 1.5 | 25.9 | 933  |
| 1.5mm <sup>2</sup> , Multipair  |           |      |     |      |      |
| RE-2X(St)H 2P1.5                | 2x2x1.5   | 0.45 | 1.0 | 10.8 | 139* |

|                   |          |      |     |      |     |
|-------------------|----------|------|-----|------|-----|
| RE-2X(St)H 4P1.5  | 3x2x1.5  | 0.45 | 1.1 | 12.7 | 214 |
| RE-2X(St)H 5P1.5  | 4x2x1.5  | 0.45 | 1.1 | 14.0 | 259 |
| RE-2X(St)H 6P1.5  | 5x2x1.5  | 0.45 | 1.2 | 15.2 | 305 |
| RE-2X(St)H 8P1.5  | 8x2x1.5  | 0.45 | 1.2 | 16.4 | 385 |
| RE-2X(St)H 10P1.5 | 10x2x1.5 | 0.45 | 1.3 | 18.8 | 460 |
| RE-2X(St)H 12P1.5 | 12x2x1.5 | 0.45 | 1.3 | 19.7 | 558 |
| RE-2X(St)H 16P1.5 | 16x2x1.5 | 0.45 | 1.4 | 22.5 | 725 |
| RE-2X(St)H 20P1.5 | 20x2x1.5 | 0.45 | 1.5 | 25.0 | 881 |
| RE-2X(St)H 24P1.5 | 24x2x1.5 | 0.45 | 1.5 | 27.1 | 147 |

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

**Electrical PROPERTIES**

|                                       |                        |      |      |      |      |      |
|---------------------------------------|------------------------|------|------|------|------|------|
| <b>Conductor Area Size</b>            | mm <sup>2</sup>        | 0.5  | 0.75 | 1.0  | 1.3  | 1.5  |
| <b>Insulation thickness (nominal)</b> | mm                     | 0.35 | 0.38 | 0.4  | 0.45 | 0.45 |
| <b>Conductor resistance (20°C)</b>    | Ω/km                   | 36.7 | 25   | 18.5 | 14.2 | 12.3 |
| <b>Insulation resistance (20°C)</b>   | MΩ.km(Min.)            | 5000 |      |      |      |      |
| <b>Mutual Capacitance (1 kHz)</b>     | pF/m(Max.)             |      |      |      |      |      |
|                                       | <u>≤ 4 pairs</u>       | 90   | 90   | 90   | 102  | 102  |
|                                       | <u>all other pairs</u> | 75   | 75   | 75   | 85   | 85   |
| <b>Capacitance unbalance(1 kHz)</b>   | pF/500 m (Max.)        | 500  |      |      |      |      |
| <b>Inductance</b>                     | mH/km (Max.)           | 1    |      |      |      |      |
| <b>L / R (ratio) (max.)</b>           | μH/Ω                   | 25   | 25   | 25   | 40   | 40   |
| <b>Operating voltage Urms</b>         | V                      | 300  |      |      |      |      |
| <b>Test Voltage</b>                   | Core to Core           | V    | 1500 |      |      |      |
|                                       | Core to Screen         | V    | 1500 |      |      |      |