

## RE-2Y(St)H



### Areas of Use

Used for communication and instrumentation purposes in industries like oil exploration, cement, paper, steel, power generation as well as in intrinsically safe systems in hazardous areas like petrochemical plants and thermal power plants to monitor measuring equipment in process automation applications. HFFR types are less flammable in case of fire, mostly self-extinguishing, have low smoke density and they do not emit poisonous and corrosive gasses during a fire.

### Cable Construction

|                            |                                                                                                                                             |
|----------------------------|---------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Conductor</b>           | Stranded Annealed Copper (IEC/EN 60228, Class 2)                                                                                            |
| <b>Insulation</b>          | PE (EN 50290-2-23)                                                                                                                          |
| <b>Core Colors</b>         | Multicore: White Numbered Pair: Black / White, Numbered Triples: Balck / White / Red, Numbered Quad: Black / White / Red / Blue, Numbered   |
| <b>Lay-up</b>              | Cores / pairs / triples / quads are stranded in layers                                                                                      |
| <b>Separator</b>           | PET Foil                                                                                                                                    |
| <b>Overall Screen</b>      | Al-PET Foil (with 7x0.3 mm Tinned Copper Drain Wire)                                                                                        |
| <b>Reference Standards</b> | BS/EN 50288-7                                                                                                                               |
| <b>Outer Sheath</b>        | Halogen Free Flame Retardant Compound (HFFR /LSZH/LSOH/FRNC) (EN 50290-2-27), RAL 9005 - Black, RAL 5015 - Blue (other colors upon request) |

### Technical Properties

|                                       |                                                                                                                                                                                                                |
|---------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Operating Voltage</b>              | 500 V*                                                                                                                                                                                                         |
| <b>Test Voltage</b>                   | Core - Core: 2000 V; Core - Screen: 1000 V                                                                                                                                                                     |
| <b>Conductor Resistance</b>           | 0.50 mm <sup>2</sup> - ≤36 Ω/km; 0.75 mm <sup>2</sup> - ≤24.5 Ω/km; 1.00 mm <sup>2</sup> - ≤18.1 Ω/km; 1.30 mm <sup>2</sup> - ≤14.2 Ω/km; 1.50 mm <sup>2</sup> - ≤12.1 Ω/km; 2.50 mm <sup>2</sup> - ≤7.41 Ω/km |
| <b>Insulation Resistance</b>          | >5000 M.Ωxkm                                                                                                                                                                                                   |
| <b>Capacitance Unbalance (800 Hz)</b> | ≤500 pF/500m                                                                                                                                                                                                   |
| <b>Capacitance (@800Hz)</b>           | ≤85 nF/km (Capacitance values may increase by 20% up to 4 pairs)                                                                                                                                               |
| <b>L/R Ratio</b>                      | 0.50 mm <sup>2</sup> ..1.00 mm <sup>2</sup> - ≤25 μH/Ω; 1.30 mm <sup>2</sup> ..1.50 mm <sup>2</sup> - ≤40 μH/Ω; 2.50 mm <sup>2</sup> - ≤60 μH/Ω                                                                |
| <b>Temperature Range</b>              | Fixed: -40 °C .....+70 °C, Flexible: -5 °C .....+50 °C                                                                                                                                                         |
| <b>Flame Retardancy</b>               | IEC/EN 60332-1, IEC/EN 60332-3-24 (CAT C)                                                                                                                                                                      |
| <b>Smoke Density</b>                  | IEC/EN 61034-1                                                                                                                                                                                                 |
| <b>Amount of Halogen Acid Gas</b>     | IEC/EN 60754-1                                                                                                                                                                                                 |
| <b>Corrosive Gases Measurement</b>    | IEC/EN 60754-2                                                                                                                                                                                                 |
| <b>Oil Resistance</b>                 | IEC/EN 60811-404 ASTM No 2 oil 90 °C 168 hours (7x24)                                                                                                                                                          |
| <b>Min. Bending Radius (Fixed)</b>    | 8 x Cable Diameter                                                                                                                                                                                             |

### Cross Section

| Configuration / Cross-Section | Cable Diameter (mm) (± 5%) | Copper Weight (kg / km) | ~ Cable Weight (kg / km) |
|-------------------------------|----------------------------|-------------------------|--------------------------|
|-------------------------------|----------------------------|-------------------------|--------------------------|

| (mm/mm <sup>3</sup> ) |      |     |     |
|-----------------------|------|-----|-----|
| 1x2x0.5               | 5.7  | 14  | 52  |
| 2x2x0.5               | 8.4  | 24  | 89  |
| 3x2x0.5               | 8.9  | 33  | 107 |
| 4x2x0.5               | 9.8  | 43  | 131 |
| 5x2x0.5               | 10.7 | 53  | 153 |
| 6x2x0.5               | 11.7 | 62  | 179 |
| 7x2x0.5               | 11.7 | 72  | 193 |
| 8x2x0.5               | 13.2 | 81  | 224 |
| 10x2x0.5              | 15.0 | 100 | 273 |
| 12x2x0.5              | 15.6 | 120 | 312 |
| 14x2x0.5              | 16.4 | 139 | 348 |
| 16x2x0.5              | 17.4 | 158 | 392 |
| 18x2x0.5              | 18.4 | 177 | 436 |
| 20x2x0.5              | 19.6 | 196 | 482 |
| 24x2x0.5              | 21.7 | 234 | 570 |
| 30x2x0.5              | 23.1 | 292 | 679 |
| 1x2x0.75              | 6.2  | 19  | 61  |
| 2x2x0.75              | 9.2  | 34  | 106 |
| 3x2x0.75              | 9.9  | 48  | 134 |
| 4x2x0.75              | 10.8 | 63  | 162 |
| 5x2x0.75              | 11.9 | 78  | 194 |
| 6x2x0.75              | 13.0 | 92  | 227 |
| 7x2x0.75              | 13.0 | 107 | 247 |
| 8x2x0.75              | 14.7 | 121 | 287 |
| 10x2x0.75             | 16.8 | 150 | 350 |
| 12x2x0.75             | 17.4 | 179 | 402 |
| 14x2x0.75             | 18.3 | 208 | 450 |
| 16x2x0.75             | 19.4 | 238 | 507 |
| 18x2x0.75             | 20.6 | 267 | 565 |
| 20x2x0.75             | 21.8 | 296 | 625 |
| 24x2x0.75             | 24.4 | 354 | 749 |
| 30x2x0.75             | 26.0 | 441 | 895 |
| 1x2x1                 | 6.5  | 24  | 68  |
| 2x2x1                 | 9.7  | 44  | 121 |
| 3x2x1                 | 10.4 | 64  | 156 |
| 4x2x1                 | 11.5 | 83  | 193 |
| 5x2x1                 | 12.5 | 103 | 228 |
| 6x2x1                 | 13.8 | 123 | 268 |
| 7x2x1                 | 13.8 | 142 | 293 |
| 8x2x1                 | 15.6 | 162 | 339 |
| 10x2x1                | 17.8 | 201 | 422 |
| 12x2x1                | 18.4 | 241 | 479 |
| 14x2x1                | 19.5 | 280 | 547 |
| 16x2x1                | 20.7 | 319 | 616 |
| 18x2x1                | 21.9 | 359 | 687 |
| 20x2x1                | 23.3 | 398 | 761 |

|          |      |     |      |
|----------|------|-----|------|
| 24x2x1   | 25.9 | 477 | 902  |
| 30x2x1   | 27.6 | 594 | 1093 |
| 1x2x1.3  | 7.0  | 30  | 80   |
| 2x2x1.3  | 10.4 | 56  | 143  |
| 3x2x1.3  | 11.1 | 81  | 180  |
| 4x2x1.3  | 12.3 | 107 | 225  |
| 5x2x1.3  | 13.5 | 132 | 272  |
| 6x2x1.3  | 14.8 | 158 | 319  |
| 7x2x1.3  | 14.8 | 183 | 351  |
| 8x2x1.3  | 16.8 | 209 | 407  |
| 10x2x1.3 | 19.2 | 260 | 505  |
| 12x2x1.3 | 19.9 | 311 | 576  |
| 14x2x1.3 | 21.0 | 362 | 659  |
| 16x2x1.3 | 22.3 | 413 | 743  |
| 18x2x1.3 | 23.6 | 464 | 829  |
| 20x2x1.3 | 25.1 | 515 | 918  |
| 24x2x1.3 | 28.0 | 617 | 1097 |
| 30x2x1.3 | 29.8 | 771 | 1321 |
| 1x2x1.5  | 7.2  | 33  | 85   |
| 2x2x1.5  | 10.8 | 62  | 152  |
| 3x2x1.5  | 11.6 | 91  | 198  |
| 4x2x1.5  | 12.8 | 120 | 247  |
| 5x2x1.5  | 14.0 | 148 | 293  |
| 6x2x1.5  | 15.3 | 177 | 344  |
| 7x2x1.5  | 15.3 | 206 | 380  |
| 8x2x1.5  | 17.5 | 235 | 446  |
| 10x2x1.5 | 20.0 | 292 | 554  |
| 12x2x1.5 | 20.7 | 350 | 633  |
| 14x2x1.5 | 21.9 | 407 | 723  |
| 16x2x1.5 | 23.2 | 465 | 816  |
| 18x2x1.5 | 24.6 | 522 | 910  |
| 20x2x1.5 | 26.1 | 580 | 1007 |
| 24x2x1.5 | 29.1 | 695 | 1203 |
| 30x2x1.5 | 31.0 | 867 | 1450 |
| 1x2x2.5  | 8.5  | 51  | 117  |
| 2x2x2.5  | 12.9 | 97  | 218  |
| 3x2x2.5  | 13.8 | 144 | 282  |
| 4x2x2.5  | 15.3 | 190 | 355  |
| 5x2x2.5  | 16.9 | 236 | 438  |
| 6x2x2.5  | 18.6 | 283 | 516  |
| 7x2x2.5  | 18.6 | 329 | 572  |
| 8x2x2.5  | 21.1 | 375 | 660  |
| 10x2x2.5 | 24.2 | 468 | 828  |
| 12x2x2.5 | 25.1 | 560 | 952  |
| 14x2x2.5 | 26.5 | 653 | 1089 |
| 16x2x2.5 | 28.1 | 746 | 1230 |

|          |      |      |      |
|----------|------|------|------|
| 18x2x2.5 | 29.9 | 838  | 1383 |
| 20x2x2.5 | 31.7 | 931  | 1530 |
| 24x2x2.5 | 35.5 | 1116 | 1840 |
| 30x2x2.5 | 37.8 | 1394 | 2223 |

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