



HALLEY CABLES

RE-Yw(St)Yw-fl-PIMF 105° C

CU/PVC/ISCR/OSCR/PVC

Instrumentation Cables PVC DK PVC 500 V

Multi-pair, PVC insulated, screened, PVC sheathed cable

RE-Yw(St)Yw-fl-PIMF



Construction:

| | |
|---------------------|---|
| Conductor | : plain copper wire, stranded. |
| Insulation | : PVC compound, 105° C. |
| Core identification | : black / blue, with numbered tape under separator tape of the pair screen. Upon request: black / blue cores numbered 1-1, 2-2,... Other core configurations manufactured upon request. |
| Pair | : two conductors twisted to a pair. |
| PIMF Construction | : polyester tape above the pair, AL-PES tape over solid tinned copper drain wire, 0,60 mm. Upon request: stranded 0,50 mm ² copper drain wire. |
| Lay-up | : PIMF laid up in layers of optimum pitch. |
| Separator | : polyester tape. |
| Screen | : AL-PES tape over stranded tinned copper drain wire 0,50 mm ² . |
| Outer sheath | : PVC compound, 105° C. |
| Sheath colour | : RAL 9005, black or RAL 5015, blue. |

Technical data and tests:

| | |
|-----------------------|---|
| Rated voltage | : 500 V. |
| Test voltage | : Urms core-core : 2000 V; Urms core-screen : 2000 V. |
| Temperature range | : operation : - 30° C ~ + 105° C; installation : - 5° C ~ + 50° C. |
| Min. bending radius | : 7,5 x D. |
| Insulation resistance | : min. 100 MΩ/km. |
| Capacitance unbalance | : (1 kHz) : max. 500 pF/500 m. |

Standards:

| | |
|-----------------------|--|
| Design | : DIN EN 50288-7. |
| Insulation | : EN 50290-2-21. |
| Conductor | : IEC 60228 class 2, DIN EN 60228 class 2. |
| Outer sheath | : EN 50290-2-22. |
| Flame retardance test | : IEC 60332-1 & EN 60332-1. |

Applications:

These cables are used for transmission of analogue and digital signals in instrumentation and control systems at chemistry and petrochemistry industry plants, power plants, natural gas and petroleum plants, etc... . Instrumentation cables are not allowed for direct connection to a low impedance source, 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.

Technical data and tests:

| | |
|----------------------|--|
| Conductor resistance | : 0,50 mm ² : 36,7 Ω/km; 0,75 mm ² : 25,0 Ω/km; 1,0 mm ² : 18,5 Ω/km; 1,3 mm ² : 14,2 Ω/km; 1,5 mm ² : 12,3 Ω/km. |
| Mutual Capacitance | : 0,50 mm ² : max. 190 pF/m; 0,75 mm ² : max. 190 pF/m; 1,0 mm ² : max. 190 pF/m; 1,3 mm ² : max. 200 pF/m; 1,5 mm ² : max. 200 pF/m. |
| L / R (ratio) (max.) | : 0,50 mm ² : 25 μH/Ω; 0,75 mm ² : 25 μH/Ω; 1,0 mm ² : 25 μH/Ω; 1,3 mm ² : 40 μH/Ω; 1,5 mm ² : 40 μH/Ω; |



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DIMENSIONS

| No. of cores x cross section mm ² | Approx. outer diameter mm | Copper weight kg/km | Approx. cable weight kg/km |
|---|------------------------------|------------------------|-------------------------------|
| 2x2x0,50 | 10,3 | 34 | 84 |
| 2x2x0,75 | 11,3 | 43 | 105 |
| 2x2x1 | 12,1 | 53 | 115 |
| 2x2x1,3 | 13,0 | 64 | 135 |
| 2x2x1,5 | 13,8 | 72 | 155 |
| 4x2x0,50 | 12,1 | 62 | 140 |
| 4x2x0,75 | 13,1 | 82 | 165 |
| 4x2x1 | 14,2 | 101 | 195 |
| 4x2x1,3 | 15,4 | 123 | 230 |
| 4x2x1,5 | 16,1 | 139 | 255 |
| 5x2x0,50 | 12,9 | 77 | 160 |
| 5x2x0,75 | 14,2 | 101 | 200 |
| 5x2x1 | 15,2 | 125 | 235 |
| 5x2x1,3 | 16,7 | 153 | 285 |
| 5x2x1,5 | 17,5 | 173 | 310 |
| 6x2x0,50 | 14,1 | 91 | 195 |
| 6x2x0,75 | 15,2 | 120 | 230 |
| 6x2x1 | 16,6 | 149 | 280 |
| 6x2x1,3 | 18,0 | 183 | 330 |
| 6x2x1,5 | 19,0 | 206 | 370 |
| 8x2x0,50 | 15,9 | 120 | 245 |
| 8x2x0,75 | 17,4 | 158 | 305 |
| 8x2x1 | 18,7 | 197 | 355 |
| 8x2x1,3 | 20,5 | 242 | 430 |
| 8x2x1,5 | 21,7 | 274 | 485 |
| 10x2x0,50 | 17,6 | 149 | 300 |
| 10x2x0,75 | 19,3 | 197 | 370 |
| 10x2x1 | 20,7 | 245 | 440 |
| 10x2x1,3 | 22,8 | 302 | 530 |
| 10x2x1,5 | 23,9 | 341 | 585 |
| 12x2x0,50 | 19,2 | 178 | 360 |
| 12x2x0,75 | 20,8 | 235 | 435 |
| 12x2x1 | 22,6 | 293 | 520 |
| 12x2x1,3 | 24,8 | 361 | 635 |
| 12x2x1,5 | 26,0 | 408 | 670 |
| 16x2x0,50 | 21,9 | 235 | 465 |
| 16x2x0,75 | 23,7 | 312 | 565 |





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DIMENSIONS

| No. of cores x cross section mm ² | Approx. outer diameter mm | Copper weight kg/km | Approx. cable weight kg/km |
|---|------------------------------|------------------------|-------------------------------|
| 16x2x1 | 25,8 | 389 | 685 |
| 16x2x1,3 | 28,3 | 480 | 830 |
| 16x2x1,5 | 29,9 | 542 | 925 |
| 20x2x0,50 | 24,1 | 293 | 565 |
| 20x2x0,75 | 26,3 | 389 | 700 |
| 20x2x1 | 28,6 | 485 | 840 |
| 20x2x1,3 | 31,4 | 600 | 1020 |
| 20x2x1,5 | 33,1 | 677 | 1140 |
| 24x2x0,50 | 26,2 | 350 | 670 |
| 24x2x0,75 | 28,7 | 466 | 835 |
| 24x2x1 | 31,2 | 581 | 1000 |
| 24x2x1,3 | 34,2 | 719 | 1215 |
| 24x2x1,5 | 36,1 | 811 | 1355 |

