



# HALLEY CABLES

# RE-2X(St)YSWAY-fI MP

## CU/XLPE/OSCR/PVC/SWA/PVC

### Instrumentation Cables PVC DK PE 500 V

XLPE insulated, screened, armoured, PVC sheathed cable

www.halleycables.com

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### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : XLPE compound, (RE-2X...).
- Core identification : black / blue cores numbered 1-1, 2-2, ... Upon request: colour coded according to IEC 60189-2.
- Pair : two conductors twisted to a pair.
- Lay-up : pairs laid up in layers of optimum pitch.
- Separator : polyester tape.
- Screen : AL-PES tape over tinned copper drain wire 0,50 mm<sup>2</sup>.
- Inner sheath : PVC compound, 90° C.
- Armour : galvanized round steel wire.
- Outer sheath : PVC compound, flame retardant.
- 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 ~ + 90° C;  
installation : - 5° C ~ + 50° C.
- Min. bending radius : 10 x D.
- Capacitance unbalanced : (1 kHz) : max. 500 pF/500 m.

### Standards:

- Standard : DIN EN 50288-7.
- Conductor : IEC 60228 class 2,  
DIN EN 60228 class 2.
- Insulation : EN 50290-2-29.
- Inner/Outer sheath : EN 50290-2-22.
- Armour : EN 10257-1.
- Flame retardancy test : IEC 60332-1 & EN 60332-1.

### Applications:

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... . 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. The armour above the inner sheath protects the cable from mechanical shocks. These cables are 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 (20° C) : 0,50 mm<sup>2</sup> : 36,7 Ω/km;  
0,75 mm<sup>2</sup> : 25,0 Ω/km;  
1,0 mm<sup>2</sup> : 18,5 Ω/km;  
1,3 mm<sup>2</sup> : 14,2 Ω/km;  
1,5 mm<sup>2</sup> : 12,3 Ω/km.
- Insulation resistance (20° C) : min. 5000 MΩ/km.
- Mutual capacitance (1 kHz) : ≤ 4 pairs      all other pairs  
0,50 mm<sup>2</sup> : max. 100 pF/m, max. 65 pF/m;  
0,75 mm<sup>2</sup> : max. 100 pF/m, max. 65 pF/m;  
1,0 mm<sup>2</sup> : max. 100 pF/m, max. 65 pF/m;  
1,3 mm<sup>2</sup> : max. 100 pF/m, max. 75 pF/m;  
1,5 mm<sup>2</sup> : max. 100 pF/m, max. 75 pF/m.
- L/R (ratio) (max) : 0,50 mm<sup>2</sup> : 25 μH/Ω;  
0,75 mm<sup>2</sup> : 25 μH/Ω;  
1,0 mm<sup>2</sup> : 25 μH/Ω;  
1,3 mm<sup>2</sup> : 40 μH/Ω;  
1,5 mm<sup>2</sup> : 40 μH/Ω.





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## DIMENSIONS

No. of cores x cross section no x mm <sup>2</sup>	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
1x2x0,50	6,4	10,8	14	200
1x2x0,75	6,8	11,2	19	215
1x2x1	7,2	11,8	24	240
1x2x1,3	7,7	12,3	30	260
1x2x1,5	8,0	12,6	34	270
2x2x0,50	9,2	13,8	24	295
2x2x0,75	9,8	14,4	34	325
2x2x1	10,5	15,1	43	355
2x2x1,3	11,3	16,1	55	400
2x2x1,5	11,9	16,7	62	420
4x2x0,50	10,7	15,5	43	375
4x2x0,75	11,5	16,3	62	420
4x2x1	12,3	17,1	82	460
4x2x1,3	13,3	18,1	105	520
4x2x1,5	14,0	18,8	120	555
5x2x0,50	11,2	16,0	53	400
5x2x0,75	12,0	16,8	77	455
5x2x1	12,9	17,7	101	505
5x2x1,3	14,0	18,8	130	570
5x2x1,5	14,7	19,7	149	620
6x2x0,50	12,0	16,8	62	440
6x2x0,75	13,0	17,8	91	500
6x2x1	13,9	18,7	120	560
6x2x1,3	15,1	20,8	155	745
6x2x1,5	15,8	21,5	178	795
8x2x0,50	13,5	18,3	82	510
8x2x0,75	14,6	19,6	120	590
8x2x1	15,7	21,4	158	770
8x2x1,3	17,1	23,0	204	885
8x2x1,5	17,9	23,8	235	950
10x2x0,50	14,8	19,8	101	585
10x2x0,75	16,0	21,7	149	780
10x2x1	17,3	23,2	197	890
10x2x1,3	18,8	24,7	254	1010
10x2x1,5	19,8	25,7	293	1090
12x2x0,50	16,0	21,7	120	755
12x2x0,75	17,3	23,2	178	875





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12x2x1	18,7	24,6	235	990
12x2x1,3	20,4	26,3	304	1130
12x2x1,5	21,4	27,5	350	1235
16x2x0,50	18,1	24,0	158	895
16x2x0,75	19,6	25,5	235	1035
16x2x1	21,2	27,3	312	1195
16x2x1,3	23,6	29,7	404	1405
16x2x1,5	24,8	31,8	466	1700
20x2x0,50	19,9	25,8	197	1015
20x2x0,75	21,7	27,8	293	1200
20x2x1	23,8	29,9	389	1405
20x2x1,3	26,0	33,0	504	1810
20x2x1,5	27,3	34,5	581	1975
24x2x0,50	21,6	27,7	235	1145
24x2x0,75	23,9	30,0	350	1375
24x2x1	25,8	32,8	466	1765
24x2x1,3	28,2	35,4	604	2050
24x2x1,5	29,7	36,9	696	2225

