



# HALLEY CABLES

# RE-2X(St)YSWAY-fl PIMF 90° C

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

### Instrumentation Cables PVC DK PE 500 V

XLPE insulated, screened, armoured, PVC sheathed cable



### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : XLPE compound, (RE-2X....).
- 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<sup>2</sup> copper drain wire.
- Lay-up : PIMF 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, 90° 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 ~ + 90° C;  
installation : - 5° C ~ + 50° C.
- Min. bending radius : 10 x D.
- Capacitance unbalanced : (1 kHz) : max. 500 pF/500 m.

### Standards:

- Design : 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
2x2x0,50	10,3	14,9	34	335
2x2x0,75	11,1	15,9	43	375
2x2x1	11,9	16,7	53	405
2x2x1,3	12,8	17,6	64	445
2x2x1,5	13,4	18,2	72	470
4x2x0,50	11,9	16,7	62	425
4x2x0,75	12,9	17,7	82	475
4x2x1	13,8	18,6	101	525
4x2x1,3	15,0	20,7	123	690
4x2x1,5	15,7	20,7	139	630
5x2x0,50	12,7	17,5	77	470
5x2x0,75	13,8	18,6	101	525
5x2x1	14,8	20,5	125	685
5x2x1,3	16,1	21,8	153	765
5x2x1,5	16,9	21,9	173	705
6x2x0,50	13,7	18,5	91	515
6x2x0,75	14,8	20,5	120	690
6x2x1	16,0	21,7	149	760
6x2x1,3	17,4	23,3	183	860
6x2x1,5	18,2	24,1	206	915
8x2x0,50	15,5	21,2	120	715
8x2x0,75	16,8	22,5	158	800
8x2x1	18,1	24,0	197	905
8x2x1,3	19,7	25,6	242	1015
8x2x1,5	20,7	26,8	274	1100
10x2x0,50	17,0	22,9	149	815
10x2x0,75	18,5	24,4	197	925
10x2x1	19,9	25,8	245	1030
10x2x1,3	21,8	27,9	302	1175
10x2x1,5	22,9	29,0	341	1260
12x2x0,50	18,4	24,3	178	905
12x2x0,75	20,0	25,9	235	1025
12x2x1	21,6	27,7	293	1160
12x2x1,3	24,0	30,1	361	1345
12x2x1,5	25,2	31,5	408	1460
16x2x0,50	20,9	27,0	235	1080
16x2x0,75	22,7	28,8	312	1230





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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
16x2x1	25,0	32,0	389	1600
16x2x1,3	27,3	34,5	480	1825
16x2x1,5	28,7	35,9	542	1960
20x2x0,50	23,5	29,6	293	1270
20x2x0,75	25,5	32,5	389	1691
20x2x1	27,6	34,8	485	1850
20x2x1,3	30,2	37,4	600	2100
20x2x1,5	31,7	39,1	677	2275
24x2x0,50	25,4	32,4	350	1600
24x2x0,75	27,7	34,9	466	1840
24x2x1	30,0	37,2	581	2075
24x2x1,3	33,2	40,6	719	2420
24x2x1,5	34,9	43,3	811	2890

