



# HALLEY CABLES

# RE-Yw(St)YwSWAYw-fl MP 105° C

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

### Instrumentation Cables PVC DK PVC 500 V

PVC insulated, screened, armoured, PVC sheathed cable

RE-Yw(St)YwSWAYw-fl MP

### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : PVC compound, 105° C.
- Core identification : black / blue cores numbered 1-1, 2-2,... Upon request: colour coded according to IEC 60189-2. Other core configurations manufactured upon request.
- 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 stranded tinned copper drain wire 0,50 mm<sup>2</sup>.
- Inner sheath : PVC compound 105° C.
- Armour : galvanized round steel wire.
- 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 : 10 x D.
- Insulation resistance (20° C) : min. 100 MΩ/km.
- 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 50290-2-21.
- Inner sheath : EN 50290-2-22.
- Armour : EN 10257-1.
- 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<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.
- Mutual capacitance (1 kHz) : 0,50 mm<sup>2</sup> : max. 120 pF/m;  
0,75 mm<sup>2</sup> : max. 120 pF/m;  
1,0 mm<sup>2</sup> : max. 120 pF/m;  
1,3 mm<sup>2</sup> : max. 130 pF/m;  
1,5 mm<sup>2</sup> : max. 130 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 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	195
1x2x0,75	6,8	11,2	19	210
1x2x1	7,2	11,8	24	230
1x2x1,3	7,7	12,3	30	250
1x2x1,5	8,0	12,6	34	265
2x2x0,50	9,2	13,8	24	285
2x2x0,75	9,8	14,4	34	315
2x2x1	10,5	15,1	43	345
2x2x1,3	11,3	16,1	55	385
2x2x1,5	11,9	16,7	62	410
4x2x0,50	10,7	15,5	43	365
4x2x0,75	11,5	16,3	62	410
4x2x1	12,3	17,1	82	450
4x2x1,3	13,3	18,1	105	510
4x2x1,5	14,0	18,8	120	545
5x2x0,50	11,2	16,0	53	395
5x2x0,75	12,0	16,8	77	445
5x2x1	12,9	17,7	101	495
5x2x1,3	14,0	18,8	130	560
5x2x1,5	14,7	19,7	149	610
6x2x0,50	12,0	16,8	62	430
6x2x0,75	13,0	17,8	91	490
6x2x1	13,9	18,7	120	550
6x2x1,3	15,1	20,8	155	735
6x2x1,5	15,8	21,5	178	790
8x2x0,50	13,5	18,3	82	505
8x2x0,75	14,6	19,6	120	585
8x2x1	15,7	21,4	158	765
8x2x1,3	17,1	23,0	204	880
8x2x1,5	17,9	23,8	235	945
10x2x0,50	14,8	19,8	101	575
10x2x0,75	16,0	21,7	149	775
10x2x1	17,3	23,2	197	880
10x2x1,3	18,8	24,7	254	1005
10x2x1,5	19,8	25,7	293	1085
12x2x0,50	16,0	21,7	120	745
12x2x0,75	17,3	23,2	178	870

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12x2x1	18,7	24,6	235	985
12x2x1,3	20,4	26,3	304	1130
12x2x1,5	21,4	27,5	350	1230
16x2x0,50	18,1	24,0	158	890
16x2x0,75	19,6	25,5	235	1035
16x2x1	21,2	27,3	312	1190
16x2x1,3	23,6	29,7	404	1405
16x2x1,5	24,8	31,8	466	1695
20x2x0,50	19,9	25,8	197	1020
20x2x0,75	21,7	27,8	293	1200
20x2x1	23,8	29,9	389	1410
20x2x1,3	26,0	33,0	504	1815
20x2x1,5	27,3	34,5	581	1980
24x2x0,50	21,6	27,7	235	1150
24x2x0,75	23,9	30,0	350	1385
24x2x1	25,8	32,8	466	1770
24x2x1,3	28,2	35,4	604	2060
24x2x1,5	29,7	36,9	696	2240

