



# HALLEY CABLES

# RE-Yw(St)YwSWAYw-fl 105° C

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

### Instrumentation Cables PVC DK PVC 500 V

PVC insulated and sheathed, screened, armoured, PVC sheathed cable



### Construction:

- Conductor : plain copper wire, stranded.
- Insulation : PVC compound, 105° C.
- Core identification : black / blue / red cores are numbered (1-1-1, 2-2-2,...). Upon request: colour coded according to IEC 60189-2. Other core configurations manufactured upon request.
- Triple : three conductors twisted to a triple.
- Lay-up : triples 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.

### 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 : 0,50 mm<sup>2</sup> : max. 160 pF/m;  
0,75 mm<sup>2</sup> : max. 160 pF/m;  
1,0 mm<sup>2</sup> : max. 160 pF/m;  
1,3 mm<sup>2</sup> : max. 170 pF/m;  
1,5 mm<sup>2</sup> : max. 170 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
1x3x0,50	6,7	11,1	19	210
1x3x0,75	7,1	11,7	26	235
1x3x1	7,5	12,1	34	250
1x3x1,3	8,0	12,6	42	275
1x3x1,5	8,4	13,0	48	290
2x3x0,50	10,2	14,8	34	325
2x3x0,75	10,9	15,7	48	370
2x3x1	11,7	16,5	62	405
2x3x1,3	12,7	17,5	80	455
2x3x1,5	13,3	18,1	91	485
4x3x0,50	11,7	16,5	62	425
4x3x0,75	12,6	17,4	91	480
4x3x1	13,5	18,3	120	540
4x3x1,3	14,7	20,4	155	720
4x3x1,5	15,4	21,1	177	770
5x3x0,50	12,5	17,3	77	470
5x3x0,75	13,5	18,3	113	540
5x3x1	14,5	19,5	149	615
5x3x1,3	15,8	21,5	192	810
5x3x1,5	16,5	22,2	220	870
6x3x0,50	13,5	18,3	91	520
6x3x0,75	14,6	19,6	134	605
6x3x1	15,7	21,4	178	795
6x3x1,3	17,1	23,0	230	915
6x3x1,5	17,9	23,8	264	985
8x3x0,50	15,2	20,9	120	720
8x3x0,75	16,5	22,2	177	830
8x3x1	17,7	23,6	235	955
8x3x1,3	19,3	25,2	304	1095
8x3x1,5	20,3	26,2	350	1185
10x3x0,50	16,7	22,4	149	820
10x3x0,75	18,1	24,0	221	965
10x3x1	19,6	25,5	293	1100
10x3x1,3	21,3	27,4	379	1280
10x3x1,5	22,4	28,5	436	1385
12x3x0,50	18,1	24,0	178	925
12x3x0,75	19,6	25,5	264	1080

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12x3x1	21,2	27,3	350	1245
12x3x1,3	23,1	29,2	454	1445
12x3x1,5	24,7	31,7	523	1780
16x3x0,50	20,5	26,4	235	1105
16x3x0,75	22,3	28,4	350	1315
16x3x1	24,5	31,5	466	1715
16x3x1,3	26,8	33,8	604	1990
16x3x1,5	28,1	35,3	696	2175
20x3x0,50	22,6	28,7	293	1285
20x3x0,75	25,0	32,0	437	1730
20x3x1	27,1	34,3	581	2005
20x3x1,3	29,6	36,8	754	2330
20x3x1,5	31,1	38,5	868	2555
24x3x0,50	24,9	31,9	350	1655
24x3x0,75	27,2	34,4	523	1965
24x3x1	29,4	36,6	696	2270
24x3x1,3	32,1	39,5	903	2665
24x3x1,5	34,2	42,6	1041	3225

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