



HALLEY CABLES

RE-Yw(St)Yw-fl 105° C

CU/PVC/OSCR/PVC

Instrumentation Cables PVC DK PVC 500 V

PVC insulated, collective screened, PVC sheathed cable

Construction:

Conductor	: plain copper wire, stranded.
Insulation	: PVC compound, 105° C.
Core identification	: black / blue / red cores 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 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.
Capacitance unbalance	: (1 kHz) : max. 500 pF/500 m.
Insulation resistance (20° C)	: min. 100 MΩ/km.

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 (20° C)	: 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 (1kHz)	: <u>≤ 4 pairs</u> <u>all other pairs</u> 0,50 mm ² : max. 160 pF/m max. 120 pF/m; 0,75 mm ² : max. 160 pF/m max. 120 pF/m; 1,0 mm ² : max. 160 pF/m max. 120 pF/m; 1,3 mm ² : max. 170 pF/m max. 130 pF/m; 1,5 mm ² : max. 170 pF/m max. 130 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; 1,30 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
1x3x0,50	6,5	19	50
1x3x0,75	6,9	26	60
1x3x1	7,3	34	70
1x3x1,3	8,0	42	85
1x3x1,5	8,4	48	95
2x3x0,50	10,2	34	90
2x3x0,75	11,1	48	115
2x3x1	11,9	62	135
2x3x1,3	12,9	80	160
2x3x1,5	13,7	91	180
4x3x0,50	11,9	62	150
4x3x0,75	12,8	91	190
4x3x1	13,9	120	235
4x3x1,3	15,1	155	285
4x3x1,5	15,8	177	315
5x3x0,50	12,7	77	180
5x3x0,75	13,9	113	230
5x3x1	14,9	149	280
5x3x1,3	16,4	192	345
5x3x1,5	17,1	220	385
6x3x0,50	13,9	91	215
6x3x0,75	15,0	134	270
6x3x1	16,3	178	335
6x3x1,3	17,7	230	405
6x3x1,5	18,5	264	455
8x3x0,50	15,6	120	270
8x3x0,75	17,1	177	350
8x3x1	18,3	235	430
8x3x1,3	20,1	304	535
8x3x1,5	21,1	350	595
10x3x0,50	17,3	149	335
10x3x0,75	18,7	221	425
10x3x1	20,4	293	530
10x3x1,3	22,3	379	660
10x3x1,5	23,4	436	740
12x3x0,50	18,7	178	390

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No. of cores x cross section mm ²	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
12x3x0,75	20,4	264	510
12x3x1	22,2	350	630
12x3x1,3	24,3	454	785
12x3x1,5	25,5	523	880
16x3x0,50	21,3	235	510
16x3x0,75	23,3	350	665
16x3x1	25,3	466	825
16x3x1,3	27,8	604	1030
16x3x1,5	29,1	696	1155
20x3x0,50	23,6	293	635
20x3x0,75	25,8	437	825
20x3x1	28,1	581	1025
20x3x1,3	30,8	754	1275
20x3x1,5	32,5	868	1445
24x3x0,50	25,7	350	755
24x3x0,75	28,2	523	980
24x3x1	30,6	696	1220
24x3x1,3	33,5	903	1520
24x3x1,5	35,4	1041	1720

