



HALLEY CABLES

RE-2Y(St)H 90° C

CU/PE/OSCR/LSZH

Instrumentation Cables HFFR 300 V

PE insulated, collective screened, HFFR sheathed cable



Construction:

- Conductor : plain copper wire, stranded.
- Insulation : PE compound, (RE-2Y....).
- Core identification : black / white / red cores numbered 1-1-1, 2-2-2,... Upon request : colour coded according to IEC 60189-2.
- 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 tinned copper drain wire 0,50 mm².
- Outer sheath : HFFR compound.
- Sheath colour : RAL 9005, black or RAL 5015, blue.

Technical data and tests:

- Rated voltage : 300 V.
- Test voltage : Urms core-core : 1500 V;
Urms core-screen : 1500 V.
- Temperature range : operation : - 30° C ~ + 90° C;
installation : - 5° C ~ + 50° C.
- Min. bending radius : 7,5 x D.
- Insulation resistance : min. 5000 MΩ/km.
- Capacitance unbalanced : (1 kHz) : max. 500 pF/500 m.

Standards:

- Design : DIN EN 50288-7.
- Conductor : IEC 6022 class 2, DIN EN 60228 class 2.
- Insulation : EN 50290-2-23.
- Outer sheath : EN 50290-2-27.
- Flame retardancy : IEC 60332-1 & DIN EN 60332-1,
IEC 60332-3 & DIN EN50266-2-4.
- Halogen-free test : IEC 60754-1/2;
DIN EN 50267-2.
- Smoke density test : IEC 61034-2 & TS/DIN EN 61034-2.

Technical data and tests:

- Insulation thickness : 0,50 mm² : 0,40 mm;
0,75 mm² : 0,40 mm;
1,0 mm² : 0,40 mm;
1,3 mm² : 0,45 mm;
1,50 mm² : 0,45 mm;
- Conductor resistance : 0,50 mm² : 36,7 Ω/km;
0,75 mm² : 25,0 Ω/km;
1,0 mm² : 18,5 Ω/km;
1,3 mm² : 14,2 Ω/km;
1,5 mm² : 12,3 Ω/km.
- L/R (ratio) (max) : 0,50 mm² : 25 μH/Ω;
0,75 mm² : 25 μH/Ω;
1,0 mm² : 25 μH/Ω;
1,3 mm² : 40 μH/Ω;
1,5 mm² : 40 μH/Ω.
- Mutual capacitance (1 kHz) : ≤ 4 pairs all other pairs
0,50 mm² : max. 115 pF/m, max. 90 pF/m;
0,75 mm² : max. 115 pF/m, max. 90 pF/m;
1,0 mm² : max. 115 pF/m, max. 90 pF/m;
1,3 mm² : max. 120 pF/m, max. 105 pF/m;
1,5 mm² : max. 120 pF/m, max. 105 pF/m.

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... These cables are used in the environments which have no corrosive gases are emitted in the event of fire. In case of fire, these cables inhibit the propagation of the flames whereby the development of smoke is extremely low. Instrumentation cables are not allowed for direct connection to a low impedance sources, 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.





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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	5,8	19	45
1x3x0,75	6,2	26	55
1x3x1	6,7	34	65
1x3x1,3	7,3	42	85
1x3x1,5	7,5	48	90
2x3x0,50	9,0	34	85
2x3x0,75	9,8	48	105
2x3x1	10,5	62	125
2x3x1,3	11,9	80	155
2x3x1,5	12,3	91	170
4x3x0,50	10,3	62	130
4x3x0,75	11,4	91	170
4x3x1	12,3	120	210
4x3x1,3	13,9	155	265
4x3x1,5	14,4	177	290
5x3x0,50	11,2	77	155
5x3x0,75	12,2	113	200
5x3x1	13,2	149	250
5x3x1,3	14,9	192	315
5x3x1,5	15,4	220	350
6x3x0,50	12,0	91	180
6x3x0,75	13,1	134	235
6x3x1	14,4	178	295
6x3x1,3	16,3	230	375
6x3x1,5	16,8	264	415
8x3x0,50	13,7	120	235
8x3x0,75	14,9	177	305
8x3x1	16,4	235	385
8x3x1,3	18,3	304	480
8x3x1,5	19,2	350	545
10x3x0,50	14,9	149	280
10x3x0,75	16,6	221	375
10x3x1	18,0	293	465
10x3x1,3	20,4	379	595
10x3x1,5	21,1	436	660
12x3x0,50	16,3	178	335
12x3x0,75	17,9	264	435
12x3x1	19,6	350	555
12x3x1,3	22,2	454	710
12x3x1,5	23,0	523	785
16x3x0,50	18,4	235	425
16x3x0,75	20,4	350	570

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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
16x3x1	22,4	466	725
16x3x1,3	25,3	604	925
16x3x1,5	26,2	696	1030
20x3x0,50	20,4	293	520
20x3x0,75	22,6	437	705
20x3x1	24,8	581	890
20x3x1,3	28,1	754	1140
20x3x1,5	29,1	868	1270
24x3x0,50	22,2	350	620
24x3x0,75	24,6	523	840
24x3x1	27,1	696	1060
24x3x1,3	30,6	903	1360
24x3x1,5	31,7	1041	1515

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