RE-2X(St)HSWAH

Instrumentation Cables HFFR 300 V

CU/XLPE/OSCR/LSZH/SWA/LSZH

XLPE insulated, armoured, HFFR sheathed cable

HALLEY CABLES

www.halleycables.com

Construction:

Conductor	: plain copper wire, stranded.
Insulation	: XLPE compound, (RE-2X….).
Core identification	: black / white / red cores are 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.
Inner sheath	: HFFR compound.
Armour	: galvanized round steel wire.
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	: 10 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 60228 class 2, DIN EN 60228 class 2.
Insulation	: EN 50290-2-29.
Inner sheath	: EN 50290-2-27.
Armour	: EN 10257-1.
Outer sheath	: EN 50290-2-27.
Flame retardancy	: IEC 60332-1 & DIN EN 60332-1, IEC 60332-3 & DIN EN 50266-2-4.
Halogen-free test	: IEC 60754-1/2; DIN EN 50267-2.
Smoke density test	: IEC 61034-2 & 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 must have no corrosive gases 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 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.

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The above values correspond to the manufacturer's specifications and are not guaranteed.
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DIMENSIONS

No. of cores x cross section mm²	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
1x3x0,50	6,0	10,4	19	205
1x3x0,75	6,4	10,8	26	225
1x3x1	6,9	11,3	34	245
1x3x1,3	7,5	12,1	42	280
1x3x1,5	7,7	12,3	48	290
2x3x0,50	9,0	13,6	34	315
2x3x0,75	9,8	14,4	48	350
2x3x1	10,5	15,1	62	380
2x3x1,3	11,7	16,5	80	450
2x3x1,5	12,1	16,9	91	475
4x3x0,50	10,3	14,9	62	390
4x3x0,75	11,2	16,0	91	455
4x3x1	12,1	16,9	120	510
4x3x1,3	13,5	18,3	155	595
4x3x1,5	14,0	18,8	177	630
5x3x0,50	11,0	15,8	77	435
5x3x0,75	12,0	16,8	113	505
5x3x1	13,0	17,8	149	570
5x3x1,3	14,5	20,2	192	775
5x3x1,5	15,0	20,7	220	825
6x3x0,50	11,8	16,6	91	480
6x3x0,75	12,9	17,7	134	555
6x3x1	14,0	18,8	178	635
6x3x1,3	15,7	21,4	230	865
6x3x1,5	16,2	21,9	264	920
8x3x0,50	13,3	18,1	120	560
8x3x0,75	14,5	19,5	177	665
8x3x1	15,8	21,5	235	875
8x3x1,3	17,7	23,6	304	1040
8x3x1,5	18,4	24,3	350	1110
10x3x0,50	14,5	19,5	149	640
10x3x0,75	16,0	21,7	221	870
10x3x1	17,4	23,3	293	1010
10x3x1,3	19,6	25,5	379	1195
10x3x1,5	20,3	26,2	436	1280
12x3x0,50	15,7	21,4	178	820
12x3x0,75	17,3	23,2	264	980
12x3x1	18,8	24,7	350	1135
12x3x1,3	21,2	27,3	454	1360
12x3x1,5	22,0	28,1	523	1460
16x3x0,50	17,8	23,7	235	980
16x3x0,75	19,6	25,5	350	1170

IEC CE DVE RoHS PG TSE

DIMENSIONS

No. of cores x cross section mm²	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
16x3x1	21,4	27,5	466	1380
16x3x1,3	24,5	31,5	604	1860
16x3x1,5	25,4	32,4	696	1995
20x3x0,50	19,6	25,5	293	1125
20x3x0,75	21,6	27,7	437	1365
20x3x1	24,0	30,1	581	1635
20x3x1,3	27,1	34,3	754	2175
20x3x1,5	28,1	35,3	868	2340
24x3x0,50	21,2	27,3	350	1270
24x3x0,75	23,8	29,9	523	1575
24x3x1	26,1	33,1	696	2040
24x3x1,3	29,4	36,6	903	2460
24x3x1,5	30,5	37,7	1041	2655