RE-2X(St)HSWAH-TIMF

Instrumentation Cables HFFR 300 V

CU/XLPE/ISCR/OSCR/LSZH/SWA/LSZH

XLPE insulated, screen, armoured, HFFR sheathed cable

HALLEY CABLES

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Construction:

Conductor	: plain copper wire, stranded.
Insulation	: XLPE compound, (RE-2X….).
Core identification	: black / white /red ; with numbered tape under separator tape of the pair screen. Upon request: black / white / red cores numbered 1-1-1, 2-2-2,…
Triple	: three conductors twisted to a triple.
TIMF construction	: polyester tape above the triple, AL-PES tape over solid tinned copper drain wire, 0,60 mm.
Lay-up	: TIMF 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.

Standards:

Design	: DIN EN 50288-7.
Conductor	: IEC 60228 class 2, DIN EN 60228 class 2.
Insulation	: EN 50290-2-29.
Inner/Outer sheath	: EN 50290-2-27.
Armour	: EN 10257-1.
Flame test	: 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)	: max. 120 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. The armour protects the sheath from mechanical shocks. 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 mm²	Approx. bedding diameter mm	Approx. outer diameter mm	Copper weight kg/km	Approx. cable weight kg/km
2x3x0,50	10,7	15,3	43	370
2x3x0,75	11,7	16,5	58	420
2x3x1	12,6	17,4	72	465
2x3x1,3	14,1	18,9	89	530
2x3x1,5	14,6	19,6	101	565
4x3x0,50	12,2	17,0	82	470
4x3x0,75	13,3	18,1	110	535
4x3x1	14,5	19,5	139	605
4x3x1,3	16,2	21,9	174	810
4x3x1,5	16,8	22,5	197	855
5x3x0,50	12,9	17,7	101	510
5x3x0,75	14,1	18,9	137	585
5x3x1	15,3	21,0	173	775
5x3x1,3	17,2	23,1	216	905
5x3x1,5	17,8	23,7	245	950
6x3x0,50	13,9	18,7	120	565
6x3x0,75	15,2	20,2	163	660
6x3x1	16,5	22,2	206	860
6x3x1,3	18,6	24,5	258	1005
6x3x1,5	19,2	25,1	292	1065
8x3x0,50	15,6	21,3	158	780
8x3x0,75	17,2	22,9	216	895
8x3x1	18,7	24,6	274	1025
8x3x1,3	21,1	27,2	343	1208
8x3x1,5	21,8	27,9	389	1285
10x3x0,50	17,2	23,1	197	890
10x3x0,75	18,9	24,6	267	1020
10x3x1	20,7	26,8	341	1190
10x3x1,3	23,7	29,8	427	1425
10x3x1,5	24,5	31,5	485	1690
12x3x0,50	18,6	24,5	235	990
12x3x0,75	20,5	26,4	322	1155
12x3x1	22,4	28,5	408	1330
12x3x1,3	25,7	32,7	512	1784
12x3x1,5	26,6	33,6	581	1895
16x3x0,50	21,1	27,2	312	1180
16x3x0,75	23,3	29,4	427	1395

IEC CE DVE RoHS

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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	25,9	32,9	542	1830
16x3x1,3	29,2	36,4	681	2160
16x3x1,5	30,3	37,5	773	2305
20x3x0,50	23,7	29,8	389	1400
20x3x0,75	26,2	33,2	533	1840
20x3x1	28,6	35,8	677	2125
20x3x1,3	32,7	40,1	850	2570
20x3x1,5	33,9	42,3	965	3025
24x3x0,50	25,7	32,7	466	1760
24x3x0,75	28,4	35,6	638	2085
24x3x1	31,1	38,5	811	2415
24x3x1,3	35,5	43,9	1019	3190
24x3x1,5	36,9	45,3	1157	3405

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