MEDIUM VOLTAGE CABLES TYPE NA2XS2Y

12/20(24) kV

DIN VDE 0276-620 / HD 620 S2: PART 10 C

XLPE insulated single core cables with stranded aluminium conductors

CONSTRUCTION

Conductor	Circular, stranded aluminium, comply with EN 60228 class 2
Conductor Screen	Extruded layer of semi-conducting crosslinkable compound applied under simultaneous triple extrusion process over conductor
Conductor Cross-sectional Area	50–1000 mm^2
Insulation	Extruded layer of XLPE applied over conductor screen under triple extrusion process
Insulation Screen	Extruded layer of semi-conducting crosslinkable compound applied by triple extrusion process over the insulation
Metallic Screen	Copper wires with copper binder tape
Oversheath	Extruded layer of HDPE applied over the core

CHARACTERISTIC

Operating conductor temperature	
maximum permissible temperature	+90 °C
Short circuit conductor temperature	
initial	+90 °C
final	+250 °C
Short circuit metallic screen temperature	
initial	+80 °C
final	+350 °C

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Lowest temperature of cable installation	-20°C
Impuls voltage	125 kV
Test voltage	42 kV

Dimensional Data

Nominal cross-sectional area	Conductor diameter	Insulation		Metallic screen Cu		Diameter over complete cable	Weight of complete cable	Maksimum cable pulling force	Minimum bending radius
		Nominal thickness	Diameter over insulation	Cross section	Diameter over metallic screen				
mm²	**mm**	**mm**		**mm²**	**mm**	**mm**	**kg/km**	**kN**	**m**
1x50RM	8.25 $^{+0.10}$	5.5	20.5	16	24.4	29.1	780	1.5	0.44
1x70RM	9.5 $^{+0.20}$	5.5	21.9	16	25.8	30.6	880	2.1	0.46
1x95RM	11.3 $^{+0.20}$	5.5	23.5	16	27.4	32.2	990	2.85	0.48
1x120RM	12.5 $^{+0.20}$	5.5	24.7	16	28.6	33.4	1090	3.6	0.50
1x150RM	14.2 $^{+0.20}$	5.5	26.4	16	30.3	35.1	1200	4.5	0.53
1x185RM	15.8 $^{+0.20}$	5.5	28.0	16	31.4	36.2	1340	5.55	0.54
1x240RM	17.9 $^{+0.10}$	5.5	30.1	16	33.5	38.3	1550	7.2	0.57
1x150RM	14.2 $^{+0.20}$	5.5	26.4	25	30.3	35.1	1280	4.5	0.53
1x185RM	15.8 $^{+0.20}$	5.5	28.0	25	31.9	36.7	1430	5.55	0.55
1x240RM	17.9 $^{+0.10}$	5.5	30.1	25	34.0	38.8	1630	7.2	0.58
1x300RM	20.0 $^{+0.30}$	5.5	32.2	25	36.1	40.9	1850	9	0.61
1x400RM	22.9 $^{+0.30}$	5.5	35.1	35	39.0	43.8	2250	12	0.66
1x500RM	25.7 $^{+0.40}$	5.5	38.4	35	42.5	47.3	2670	15	0.71
1x630RM	29.3 $^{+0.50}$	5.5	42.2	35	46.3	51.3	3170	18.9	0.77
1x800RM	33.0 $^{+0.50}$	5.5	46.3	35	50.4	55.8	3790	24	0.84
1x1000RM	38.0 $^{+0.50}$	5.5	51.3	35	55.4	61.0	4520	30	0.92

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Current Carrying Capacity [1]

Cross-sectional area		mm²	50	70	95	120	150	185	240	300	400	500	630	800	1000
GROUND	FLAT	A	195	237	282	319	352	396	455	510	564	634	685	745	820
	TREFOIL		172	210	251	285	319	361	417	471	535	609	675	750	830
AIR	FLAT		219	273	332	384	432	494	581	663	753	866	975	1090	1220
	TREFOIL		185	231	280	323	366	420	496	569	660	766	890	1015	1130

[1 STANDARD SERVICE CONDITIONS: BE (BOTH-ENDS BONDING)

GROUND
Temperature at laying depth = 20°C
Laying depth = 0.7 m
Thermal resistivity of soil = 1.0 K· m / W
Load factor = 0.7

AIR
Temperature = 30°C
Load factor = 1.0

TREFOIL formation – spacing between centers of adjacent phases = diameter of cable

FLAT formation in ground – spacing between centers of adjacent phases = diameter of cable + 70 mm

*FLAT formation in air – spacing between centers of adjacent phases = 2 * diameter of cable*

Electrical Data

Conductor and metallic screen cross-sectional area	Conductor resistance		Metallic screen resistance		Short circuit ratings
	DC 20°C	AC 90°C	DC 20°C	AC 80°C	Conductor / metallic screen
mm²	**Ω/km**				**kA/s**
1x50RM/16	0.641	0.822	1.12	1.38	4.7 / 3.7
1x70RM/16	0.443	0.568	1.12	1.38	6.6 / 3.7
1x95RM/16	0.320	0.411	1.12	1.38	9.0 / 3.7
1x120RM/16	0.253	0.325	1.12	1.38	11.3 / 3.7
1x150RM/16	0.206	0.265	1.12	1.38	14.2 / 3.7
1x185RM/16	0.164	0.211	1.12	1.38	17.5 / 3.7
1x240RM/16	0.125	0.161	1.12	1.38	22.7 / 3.7
1x150RM/25	0.206	0.265	0.72	0.88	14.2 / 5.3

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Conductor and metallic screen cross-sectional area	Conductor resistance		Metallic screen resistance		Short circuit ratings
	DC 20°C	AC 90°C	DC 20°C	AC 80°C	Conductor / metallic screen
mm²	**Ω/km**				**kA/s**
1x185RM/25	0.164	0.211	0.72	0.88	17.5 / 5.3
1x240RM/25	0.125	0.161	0.72	0.88	22.7 / 5.3
1x300RM/25	0.100	0.130	0.72	0.88	28.4 / 5.3
1x400RM/35	0.0778	0.102	0.51	0.63	37.8 / 7.1
1x500RM/35	0.0605	0.0799	0.51	0.63	47.3 / 7.1
1x630RM/35	0.0469	0.0633	0.51	0.63	59.5 / 7.1
1x800RM/35	0.0367	0.0511	0.51	0.63	75.6 / 7.1
1x1000RM/35	0.0291	0.0425	0.51	0.63	94.5 / 7.1