MEDIUM VOLTAGE CABLES TYPE NA2XS2Y

6/10(12) 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

MEDIUM VOLTAGE CABLES TYPE NA2XS2Y

Lowest temperature of cable installation	-20°C
Impuls voltage	75 kV
Test voltage	21 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 $^{+0.10}$	3.4	16.3	16	20.2	24.9	630	1.5	0.37
1x70RM	9.5 $^{+0.20}$	3.4	17.7	16	21.6	26.4	720	2.1	0.40
1x95RM	11.3 $^{+0.20}$	3.4	19.3	16	23.2	28.0	820	2.85	0.42
1x120RM	12.5 $^{+0.20}$	3.4	20.5	16	24.4	29.2	910	3.6	0.44
1x150RM	14.2 $^{+0.20}$	3.4	22.2	16	26.1	30.9	1020	4.5	0.46
1x185RM	15.8 $^{+0.20}$	3.4	23.8	16	27.7	32.5	1150	5.55	0.49
1x240RM	17.9 $^{+0.10}$	3.4	25.9	16	29.8	34.6	1350	7.2	0.52
1x150RM	14.2 $^{+0.20}$	3.4	22.2	25	26.1	30.9	1100	4.5	0.46
1x185RM	15.8 $^{+0.20}$	3.4	23.8	25	27.7	32.5	1230	5.55	0.49
1x240RM	17.9 $^{+0.10}$	3.4	25.9	25	29.8	34.6	1420	7.2	0.52
1x300RM	20.0 $^{+0.30}$	3.4	28.4	25	32.3	37.1	1640	9	0.56
1x400RM	22.9 $^{+0.30}$	3.4	31.7	35	35.6	40.4	2050	12	0.61
1x500RM	25.7 $^{+0.40}$	3.4	34.5	35	38.6	43.4	2420	15	0.65
1x630RM	29.3 $^{+0.50}$	3.4	38.0	35	42.1	46.9	2870	18.9	0.70
1x800RM	33.0 $^{+0.50}$	3.4	42.1	35	46.2	51.2	3450	24	0.77
1x1000RM	38.0 $^{+0.50}$	3.4	47.1	35	51.2	56.6	4160	30	0.85

MEDIUM VOLTAGE CABLES TYPE NA2XS2Y

Current Carrying Capacity [1]

Cross-sectional area		mm²	50	70	95	120	150	185	240	300	400	500	630	800	1000
GROUND	FLAT	A	194	236	281	318	350	394	452	506	558	627	675	735	810
	TREFOIL		171	208	248	283	315	357	413	466	529	602	670	740	820
AIR	FLAT		219	273	333	384	432	496	583	666	755	868	975	1090	1220
	TREFOIL		183	228	278	321	364	418	494	568	660	767	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

MEDIUM VOLTAGE CABLES TYPE NA2XS2Y

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	0.0802	0.51	0.63	47.3 / 7.1
1x630RM/35	0.0469	0.0637	0.51	0.63	59.5 / 7.1
1x800RM/35	0.0367	0.0516	0.51	0.63	75.6 / 7.1
1x1000RM/35	0.0291	0.0430	0.51	0.63	94.5 / 7.1