



EUROPE MV Cable



[VOLTAGEENERGY.COM](http://VOLTAGEENERGY.COM)

## // MV CABLE (AL)

NA2XS(F)2Y 12/20kV



## // MV CABLE (CU)

N2XS(F)2Y 12/20kV



### SAMPLE PRINT

VOLTAGE TM XX NA2XS(F)2Y 12/20kV  
1x120RM16 20240603 \*\*\*m

### SAMPLE PRINT

VOLTAGE TM XX N2XS(F)2Y 12/20kV  
1x120RM16 20240603 \*\*\*m

### CONSTRUCTION

- Conductor: 50 mm<sup>2</sup> through 630 mm<sup>2</sup> Class 2 compacted **aluminum** stranded wire
- Conductor Shield: Extruded cross-linked semi-conducting compound
- Insulation: Extruded XLPE compound
- Insulation Shield: Extruded cross-linked semi-conducting compound
- Metal Screen: Single copper wire stranded with counter helix copper tape and longitudinal water blocking
- Outer Sheath: Extruded polyethylene compound

### CONSTRUCTION

- Conductor: 50 mm<sup>2</sup> through 630 mm<sup>2</sup> Class 2 compacted **copper** stranded wire
- Conductor Shield: Extruded cross-linked semi-conducting compound
- Insulation: Extruded XLPE compound
- Insulation Shield: Extruded cross-linked semi-conducting compound
- Metal Screen: Single copper wire stranded with counter helix copper tape and longitudinal water blocking
- Outer Sheath: Extruded polyethylene compound

## APPLICATIONS

- Medium voltage power cables with additional water blocking properties for distribution networks and generation units
- Used for direct burial, underground duct, in air (indoors or outdoors)
- Used at 12/20kV or less (Um=24kV)
- Used at conductor temperatures not to exceed 90°C
- Max. short-circuit temperature 250°C for 5s
- Min. installation temperature: -20°C
- Min. bending radius during installation: 15D (D=diameter of cable)

## OPTIONS

- EPR or HERP insulation
- PVC or PO sheath
- Copper tape shielded screen
- Different screen area and short-circuit current requirement
- Other voltages and sizes
- Conductor longitudinal water blocking
- Longitudinal and transversal water tightness
- Armored with wires or tapes
- Flame retardant and low smoke halogen free

## STANDARDS

- HD620 Distribution cables with extruded insulation for rated voltages from 3.6/6(7.2)kV up to and including 20.8/36(42)kV
- IEC 60502 Power cable with extruded insulation and their accessories for rated voltage 1kV up to 30kV
- IEC 60228 Conductors of insulation cables
- IEC 60949 Calculation of thermally permissible short-circuit currents

# // MV CABLE (AL)

NA2XS(F)2Y 12/20kV

## STRUCTURE PARAMETERS

Size	Screen Area	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Cable Diameter	Total Cable Weight	Max. Pulling Tension	Max. Sidewall Pressure
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	mm	mm	kg/km	kN	N/m
50RM	16	8.2	5.5	20.4	2.5	29.40	822	1.5	3000
70RM	16	9.8	5.5	22.0	2.5	31.00	925	2.1	3000
95RM	16	11.4	5.5	23.6	2.5	32.60	1042	2.9	3000
120RM	16	12.8	5.5	25.0	2.5	34.00	1150	3.6	3000
150RM	25	14.1	5.5	26.3	2.5	35.30	1345	4.5	3000
185RM	25	15.9	5.5	28.1	2.5	37.10	1498	5.6	3000
240RM	25	18.4	5.5	30.6	2.5	39.60	1723	7.2	3000
300RM	25	20.4	5.5	32.8	2.5	41.80	1956	9.0	3000
400RM	35	23.1	5.5	35.5	2.5	45.06	2364	12.0	3000
500RM	35	26.6	5.5	39.0	2.5	48.56	2761	15.0	3000
630RM	35	29.9	5.5	42.3	2.5	51.86	3240	18.9	3000

## PERFORMANCE INDEX

Resistance		Capacitance	Charging Current	Short-Circuit Current		Flat			Trefoil		
DC @20°C	DC @90°C			Screen	Conductor	In Duct @20°C	In Air @30°C	In Earth @20°C	In Duct @20°C	In Air @30°C	In Earth @20°C
Ω/km	Ω/km	μF/km	mA/km	kA/1 sec	kA/1 sec	A	A	A	A	A	A
0.641	0.822	0.179	650	2.17	4.7	155	219	195	157	185	172
0.443	0.568	0.200	727	2.17	6.6	189	273	237	192	231	210
0.32	0.411	0.221	802	2.17	9.0	225	332	282	229	280	251
0.253	0.325	0.240	869	2.17	11.3	256	384	319	260	323	285
0.206	0.265	0.256	930	3.33	14.2	284	432	352	290	366	319
0.164	0.211	0.280	1014	3.33	17.5	321	494	396	328	420	361
0.125	0.161	0.312	1130	3.33	22.7	371	581	455	381	496	417
0.1	0.129	0.340	1233	3.33	28.4	418	663	510	430	569	471
0.0778	0.101	0.375	1358	4.64	37.8	470	753	564	490	660	535
0.0605	0.079	0.419	1520	4.64	47.2	532	866	634	560	766	609
0.0469	0.063	0.461	1672	4.64	59.5	599	941	697	637	949	744

// The values of capacity are based on the following conditions:

1. In Duct: Flat formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W. Trefoil formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W.
2. In Earth: Flat formation with a clearance of 0.07m distance, laying depth is 0.7m, soil thermal resistivity is 1.0 K.m/W. Trefoil formation touch each other, laying depth is 0.7m, soil thermal resistivity is 1.0K.m/W.
3. In Air: Flat formation with 1xD distance. Trefoil formation touch each other.

# // MV CABLE (CU)

N2XS(F)2Y 12/20kV

## STRUCTURE PARAMETERS

Size	Screen Area	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Cable Diameter	Total Cable Weight	Max. Pulling Tension	Max. Sidewall Pressure
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	mm	mm	kg/km	kN	N/m
50RM	16	8.2	5.5	20.4	2.5	29.40	1107	2.5	3000
70RM	16	9.8	5.5	22	2.5	31.00	1336	3.5	3000
95RM	16	11.4	5.5	23.6	2.5	32.60	1614	4.8	3000
120RM	16	12.8	5.5	25	2.5	34.00	1870	6.0	3000
150RM	25	14.1	5.5	26.3	2.5	35.30	2236	7.5	3000
185RM	25	15.9	5.5	28.1	2.5	37.10	2610	9.3	3000
240RM	25	18.4	5.5	30.6	2.5	39.60	3187	12.0	3000
300RM	25	20.4	5.5	32.8	2.5	41.80	3795	15.0	3000
400RM	35	23.1	5.5	35.5	2.5	45.06	4711	20.0	3000
500RM	35	26.6	5.5	39	2.5	48.56	5772	25.0	3000
630RM	35	29.9	5.5	42.3	2.5	51.86	7139	31.5	3000

## PERFORMANCE INDEX

Resistance		Capacitance	Charging Current	Short-Circuit Current		Flat			Trefoil		
DC @20°C	DC @90°C			Screen	Conductor	In Duct @20°C	In Air @30°C	In Earth @20°C	In Duct @20°C	In Air @30°C	In Earth @20°C
Ω/km	Ω/km	μF/km	mA/km	kA/1 sec	kA/1 sec	A	A	A	A	A	A
0.387	0.494	0.179	650	2.17	7.15	200	282	250	202	239	222
0.268	0.342	0.200	727	2.17	10.02	243	351	303	247	297	271
0.193	0.247	0.221	802	2.17	13.59	290	426	360	294	361	323
0.153	0.196	0.240	869	2.17	17.17	328	491	407	334	416	367
0.124	0.159	0.256	930	3.33	21.46	363	549	445	373	470	409
0.0991	0.128	0.280	1014	3.33	26.47	409	625	498	421	538	461
0.0754	0.098	0.312	1130	3.33	34.34	471	731	568	487	634	532
0.0601	0.079	0.340	1233	3.33	42.93	527	830	633	549	724	599
0.047	0.063	0.375	1358	4.64	57.23	582	923	685	618	829	671
0.0366	0.052	0.419	1520	4.64	71.54	652	1045	760	701	953	754
0.0283	0.043	0.461	1672	4.64	90.14	726	1147	845	791	1181	923

// **The values of capacity are based on the following conditions:**

1. In Duct: Flat formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W. Trefoil formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W.
2. In Earth: Flat formation with a clearance of 0.07m distance, laying depth is 0.7m, soil thermal resistivity is 1.0 K.m/W. Trefoil formation touch each other, laying depth is 0.7m, soil thermal resistivity is 1.0K.m/W.
3. In Air: Flat formation with 1xD distance. Trefoil formation touch each other.

## // MV CABLE (AL)

NA2XS(F)2Y 18/30kV



## // MV CABLE (CU)

N2XS(F)2Y 18/30kV



### SAMPLE PRINT

VOLTAGE TM XX NA2XS(F)2Y 18/30kV  
1x120RM16 20240603 \*\*\*m

### SAMPLE PRINT

VOLTAGE TM XX N2XS(F)2Y 18/30kV  
1x120RM16 20240603 \*\*\*m

### CONSTRUCTION

- Conductor: 50 mm<sup>2</sup> through 630 mm<sup>2</sup> Class 2 compacted **aluminum** stranded wire
- Conductor Shield: Extruded cross-linked semi-conducting compound
- Insulation: Extruded XLPE compound
- Insulation Shield: Extruded cross-linked semi-conducting compound
- Metal Screen: Single copper wire stranded with counter helix copper tape and longitudinal water blocking
- Outer Sheath: Extruded polyethylene compound

### CONSTRUCTION

- Conductor: 50 mm<sup>2</sup> through 630 mm<sup>2</sup> Class 2 compacted **copper** stranded wire
- Conductor Shield: Extruded cross-linked semi-conducting compound
- Insulation: Extruded XLPE compound
- Insulation Shield: Extruded cross-linked semi-conducting compound
- Metal Screen: Single copper wire stranded with counter helix copper tape and longitudinal water blocking
- Outer Sheath: Extruded polyethylene compound

## APPLICATIONS

- Medium voltage power cables with additional water blocking properties for distribution networks and generation units
- Used for direct burial, underground duct, in air (indoors or outdoors)
- Used at 18/30kV or less (Um=36kV)
- Used at conductor temperatures not to exceed 90°C
- Max. short-circuit temperature 250°C for 5s
- Min. installation temperature: -20°C
- Min. bending radius during installation: 15D (D=diameter of cable)

## OPTIONS

- EPR or HERP insulation
- PVC or PO sheath
- Copper tape shielded screen
- Different screen area and short-circuit current requirement
- Other voltages and sizes
- Conductor longitudinal water blocking
- Longitudinal and transversal water tightness
- Armored with wires or tapes
- Flame retardant and low smoke halogen free

## STANDARDS

- HD620 Distribution cables with extruded insulation for rated voltages from 3.6/6(7.2)kV up to and including 20.8/36(42)kV
- IEC 60502 Power cable with extruded insulation and their accessories for rated voltage 1kV up to 30kV
- IEC 60228 Conductors of insulation cables
- IEC 60949 Calculation of thermally permissible short-circuit currents

# // MV CABLE (AL)

NA2XS(F)2Y 18/30kV

## STRUCTURE PARAMETERS

Size	Screen Area	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Cable Diameter	Total Cable Weight	Max. Pulling Tension	Max. Sidewall Pressure
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	mm	mm	kg/km	kN	N/m
50RM	16	8.2	8.0	25.4	2.5	34.4	1050	1.5	3000
70RM	16	9.8	8.0	27.0	2.5	36.0	1165	2.1	3000
95RM	16	11.4	8.0	28.6	2.5	37.6	1294	2.9	3000
120RM	16	12.8	8.0	30.0	2.5	39.0	1412	3.6	3000
150RM	25	14.1	8.0	31.3	2.5	40.3	1618	4.5	3000
185RM	25	15.9	8.0	33.1	2.5	42.1	1784	5.6	3000
240RM	25	18.4	8.0	35.6	2.5	44.6	2028	7.2	3000
300RM	25	20.4	8.0	37.8	2.5	46.8	2277	9.0	3000
400RM	35	23.1	8.0	40.5	2.5	50.06	2706	12.0	3000
500RM	35	26.6	8.0	44.0	2.5	53.56	3129	15.0	3000
630RM	35	29.9	8.0	47.3	2.5	56.86	3633	18.9	3000

## PERFORMANCE INDEX

Resistance		Capacitance	Charging Current	Short-Circuit Current		Flat			Trefoil		
DC @20°C	DC @90°C			Screen	Conductor	In Duct @20°C	In Air @30°C	In Earth @20°C	In Duct @20°C	In Air @30°C	In Earth @20°C
Ω/km	Ω/km	μF/km	mA/km	kA/1 sec	kA/1 sec	A	A	A	A	A	A
0.641	0.822	0.142	760	2.17	4.7	156	219	195	158	187	174
0.443	0.568	0.157	841	2.17	6.6	190	273	238	193	232	213
0.32	0.411	0.171	922	2.17	9.0	227	331	283	230	282	254
0.253	0.325	0.184	991	2.17	11.3	257	382	321	261	325	289
0.206	0.265	0.196	1055	3.33	14.2	286	429	354	291	367	322
0.164	0.211	0.212	1144	3.33	17.5	323	492	399	330	421	364
0.125	0.161	0.235	1266	3.33	22.7	374	578	458	383	496	422
0.1	0.129	0.252	1372	3.33	28.4	420	659	514	432	568	476
0.0778	0.101	0.276	1503	4.64	37.8	473	750	570	493	659	541
0.0605	0.079	0.307	1671	4.64	47.2	536	861	642	564	764	616
0.0469	0.063	0.336	1829	4.64	59.5	604	941	697	642	948	743

// The values of capacity are based on the following conditions:

1. In Duct: Flat formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W. Trefoil formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W.
2. In Earth: Flat formation with a clearance of 0.07m distance, laying depth is 0.7m, soil thermal resistivity is 1.0 K.m/W. Trefoil formation touch each other, laying depth is 0.7m, soil thermal resistivity is 1.0K.m/W.
3. In Air: Flat formation with 1xD distance. Trefoil formation touch each other.

# // MV CABLE (CU)

N2XS(F)2Y 18/30kV

## STRUCTURE PARAMETERS

Size	Screen Area	Conductor Diameter	Insulation Thickness	Insulation Diameter	Jacket Thickness	Cable Diameter	Total Cable Weight	Max. Pulling Tension	Max. Sidewall Pressure
mm <sup>2</sup>	mm <sup>2</sup>	mm	mm	mm	mm	mm	kg/km	kN	N/m
50RM	16	8.2	8.0	25.4	2.5	34.4	1335	2.5	3000
70RM	16	9.8	8.0	27	2.5	36	1576	3.5	3000
95RM	16	11.4	8.0	28.6	2.5	37.6	1866	4.8	3000
120RM	16	12.8	8.0	30	2.5	39	2132	6.0	3000
150RM	25	14.1	8.0	31.3	2.5	40.3	2508	7.5	3000
185RM	25	15.9	8.0	33.1	2.5	42.1	2896	9.3	3000
240RM	25	18.4	8.0	35.6	2.5	44.6	3491	12.0	3000
300RM	25	20.4	8.0	37.8	2.5	46.8	4116	15.0	3000
400RM	35	23.1	8.0	40.5	2.5	50.06	5052	20.0	3000
500RM	35	26.6	8.0	44	2.5	53.56	6140	25.0	3000
630RM	35	29.9	8.0	47.3	2.5	56.86	7531	31.5	3000

## PERFORMANCE INDEX

Resistance		Capacitance	Charging Current	Short-Circuit Current		Flat			Trefoil		
DC @20°C	DC @90°C			Screen	Conductor	In Duct @20°C	In Air @30°C	In Earth @20°C	In Duct @20°C	In Air @30°C	In Earth @20°C
Ω/km	Ω/km	μF/km	mA/km	kA/1 sec	kA/1 sec	A	A	A	A	A	A
0.387	0.494	0.142	760	2.17	7.15	201	282	251	203	241	225
0.268	0.342	0.157	841	2.17	10.02	244	350	304	248	299	274
0.193	0.247	0.171	922	2.17	13.59	291	425	362	296	363	327
0.153	0.196	0.184	991	2.17	17.17	330	488	409	336	418	371
0.124	0.159	0.196	1055	3.33	21.46	366	548	449	375	472	414
0.0991	0.128	0.212	1144	3.33	26.47	411	624	502	423	539	466
0.0754	0.098	0.235	1266	3.33	34.34	474	728	574	490	635	539
0.0601	0.079	0.252	1372	3.33	42.93	531	828	640	552	725	606
0.047	0.063	0.276	1503	4.64	57.23	587	922	695	623	831	680
0.0366	0.052	0.307	1671	4.64	71.54	658	1045	773	706	953	765
0.0283	0.043	0.336	1829	4.64	90.14	734	1153	848	799	1183	925

// The values of capacity are based on the following conditions:

1. In Duct: Flat formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W. Trefoil formation, the inner diameter of the pipeline is 1.5D, soil thermal resistivity is 1.0 K.m/W.
2. In Earth: Flat formation with a clearance of 0.07m distance, laying depth is 0.7m, soil thermal resistivity is 1.0 K.m/W. Trefoil formation touch each other, laying depth is 0.7m, soil thermal resistivity is 1.0K.m/W.
3. In Air: Flat formation with 1xD distance. Trefoil formation touch each other.



VOLTAGE CLEAN ENERGY GMBH

Hamburger Allee 2-4  
60486 Frankfurt am Main, Germany

+49 69 - 956 389 83

[sales.europe@voltageenergy.com](mailto:sales.europe@voltageenergy.com)



**VOLTAGEENERGY.COM**

The Voltage name and associated logos, in addition to other trademarks used herein, are owned exclusively by Voltage Group. All rights reserved.

V2.3 - 06/2026