

CABLE DATA for NAY2Y

General Information



Cable standard(s)

- HD 603 S1

Construction Product Regulation (CPR) Classification

- Regulation: Compliant with the EU Regulation (EU) No. 305/2011 on construction products.
- Intended Use: Suitable for general applications in construction works with fire safety requirements.
- Harmonized Standard: EN 50575:2014.
- Reaction to Fire Classification: Fca (according to EN 13501-6).
- Release of Dangerous Substances: N.P.D. (No Performance Determined).

Flame Retardant Properties

- The cable complies with the self-extinguishing requirements specified in EN 60332-1-2 (single vertical wire flame test).

Temperature Ratings

- Minimum installation and handling temperature: -5°C
- Maximum continuous conductor operating temperature: +70°C
- Maximum conductor temperature during short-circuit (≤ 5 seconds): +160°C
- Permissible ambient temperature range during operation: -30°C to +50°C

Minimum Bending Radius (D = external diameter of the cable)

- 15×D for single core cable.
- 12×D for multi-core cable

Application of the cable:

- The **NAY2Y** is a cost-efficient yet highly durable power distribution cable, featuring **aluminum conductors**, **PVC insulation**, and a toughened **Polyethylene (PE) outer sheath**. This construction is specifically engineered to withstand demanding environmental conditions while maintaining economic viability for long-distance networks.
- **Enhanced Mechanical Protection:** The high-density Polyethylene (PE) jacket provides superior resistance to abrasion, lateral pressure, and mechanical stress compared to standard PVC-sheathed cables during installation and operation.
- **Water and Chemical Resistance:** The non-hygroscopic nature of the PE sheath ensures excellent performance in damp ground conditions, making the cable ideal for **direct underground burial** and permanent installation in **water**.
- **Outdoor Durability:** Designed for outdoor versatility, the sheath offers high resistance to UV radiation and weathering, allowing for uncovered installation in cable trays or open air.
- **Primary Sectors:** Widely used by utility companies for **low-voltage urban distribution grids**, secondary distribution networks, and industrial power supply lines where mechanical robustness and weight reduction (due to aluminum) are prioritized.

Cable Construction and Electrical Properties

Conductor(s)

- Stranded Al conductor, Class 2, round (RM) or sector-shaped (SM), complying with IEC 60228.

Insulation:

- PVC insulation compound DIV4, according to HD 603 S1.
- Wire cores concentrically stranded, with or without a yellow-green protective conductor.
- Insulation color coding according to HD 308 S2.

Filler:

- EPDM extruded elastomer or plastomer compound, or wrapped thermoplastic tape.

Sheath:

- HDPE outer sheath, compound type DMP2, according to HD 603 S1.
- Sheath color: Black.

Rated Voltage

- $U_0/U = 0,6/1$ kV

Test Voltage

- 4 kV AC

Ampacity chart

Cross section [mm ²]	Ampacity in air at 30 C in [A]			Ampacity in ground at 20 C in [A]		
						
16	68	58	52	73	65	60
25	110	87	82	160	106	102
35	135	107	100	193	127	123
50	166	131	119	230	151	144
70	210	166	152	283	185	179
95	259	205	186	340	222	215
120	302	239	216	389	253	245
150	345	273	246	436	284	275
185	401	317	285	496	322	313
240	479	378	338	578	375	364
300	555	437	400	656	425	419

- For higher ambient temperatures, apply derating factors.

Dimensional Specifications

Nº	Construction [n×mm²]	Metal index [kg/km]	Weight (approx.) [kg/km]	Diameter (approx.) [mm]	Resistance at 20°C [Ω/km]
1	1×16 RM	46	117	10	1,910
2	1×25 RM	74	165	12	1,200
3	1×35 RM	103	202	13	0,868
4	1×50 RM	147	274	15	0,611
5	1×70 RM	206	352	17	0,443
6	1×95 RM	279	457	19	0,320
7	1×120 RM	353	543	20	0,253
8	1×150 RM	441	650	22	0,206
9	1×185 RM	544	800	25	0,164
10	1×240 RM	606	1009	27	0,125
11	1×300 RM	882	1246	30	0,100
12	3×16 RM	140	496	20	1,910
13	3×25 RM	218	711	23	1,200
14	3×35 SM	305	877	25	0,868
15	3×50 SM	435	924	26	0,611
16	3×70 SM	618	1224	30	0,443
17	3×95 SM	827	1583	34	0,320
18	3×120 SM	1044	1863	36	0,253
19	3×150 SM	1305	2276	40	0,206
20	3×185 SM	1610	2762	44	0,164
21	3×240 SM	2088	3506	49	0,125
22	3×25+16 RM/RM	264	507	26	1,20/1,90
23	3×35+16 SM/RM	351	954	29	0,868/1,90
24	3×50+25 SM/RM	509	1174	34	0,611/1,20
25	3×70+35 SM/RM	721	1542	38	0,443/0,868
26	3×95+50 SM/RM	974	1955	41	0,320/0,611
27	3×120+70 SM/RM	1250	2375	46	0,253/0,443
28	3×150+70 SM/RM	1511	2793	51	0,206/0,443
29	3×185+95 SM/RM	1889	3423	57	0,164/0,320
30	3×240 +120 SM/RM	2441	4360	21	0,125/0,253
31	4×16 RM	186	581	25	1,91
32	4×25 RM	290	845	26	1,20
33	4×35 SM	406	979	30	0,868
34	4×50 SM	580	1275	34	0,611
35	4×70 SM	812	1642	39	0,443
36	4×95 SM	1102	2124	42	0,320
37	4×120 SM	1392	2573	47	0,253
38	4×150 SM	1740	3112	52	0,206
39	4×185 SM	2146	3856	59	0,164
40	4×240 SM	2784	4846	23	0,125
41	5×16 RM	245	711	28	1,91
42	5×25 RM	383	1068	31	1,20
43	5×35 RM	536	1336	34	0,868