

Application

NYCWY is a PVC-insulated power cable for a rated voltage of 0.6/1 kV to DIN VDE 0276-603 (HD 603 S1) with a concentric copper conductor. The plain copper phase conductors (solid class 1 / stranded class 2) have PVC core insulation; over the laid-up cores a concentric conductor of helically applied copper wires in a wave form (the 'W') with a copper counter-helix serves as the combined PEN conductor, and a black PVC outer sheath completes the cable. It is used for fixed power distribution and mains supply in TN-C systems where the concentric conductor acts as the protective-and-neutral (PEN) conductor and as an electrical screen, including direct burial in the ground. It is available as 2- to 4-core cables from 10 to 240 mm² (phase).



CONSTRUCTION

Conductor	Plain (bare) copper phase conductor, solid class 1 or stranded class 2 acc. to IEC 60228 / DIN VDE 0295.
Insulation	Polyvinyl chloride (PVC), compound type DIV4 acc. to HD 603 S1.
Concentric conductor	Concentric copper conductor of helically applied bare copper wires in a wave form ('W') with an open copper counter-helix tape, over a bedding on the laid-up cores; serves as the PEN conductor (TN-C). Concentric size per phase size: see the table note.
Sheath	Polyvinyl chloride (PVC), compound type DMV5 acc. to HD 603 S1; black.
Core identification	Acc. to HD 308 S2 / VDE 0293-308; concentric conductor = PEN.

ELECTRICAL & THERMAL PROPERTIES

Rated voltage U₀/U	0.6/1 kV (600/1000 V).
Test voltage	4 kV AC.
Standard	DIN VDE 0276-603 (HD 603 S1); IEC 60502-1; conductors acc. to IEC 60228.
Flame-retardant	Acc. to IEC 60332-1-2 / DIN EN 60332-1-2.
Max. conductor temperature	+70 °C in normal operation.
Max. short-circuit temperature	+160 °C ($\leq 300 \text{ mm}^2$), up to 5 s.
Min. bending radius, fixed	12 × overall diameter.
Reaction to fire (CPR)	Eca (EN 50575).

DIMENSIONS & TECHNICAL DATA

Cores × mm ²	Cond. R @20°C (Ω/km)	Nominal O.D. (mm)	Weight (kg/km)
2 × 10	1.83	19	650
3 × 10	1.83	19.5	730
4 × 10	1.83	20.5	890
2 × 16	1.15	21	850
3 × 16	1.15	22	1000
4 × 16	1.15	23.5	1250
2 × 25	0.727	24	1210
3 × 25	0.727	26	1550
4 × 25	0.727	28	1800
3 × 35	0.524	27	1750
4 × 35	0.524	29	2050
3 × 50	0.387	29.5	2250
4 × 50	0.387	33	2700
3 × 70	0.268	33	2950
4 × 70	0.268	37	3750
3 × 95	0.193	38	4100
4 × 95	0.193	43	5000
3 × 120	0.153	41	5050
4 × 120	0.153	47	6350
3 × 150	0.124	45	6000
4 × 150	0.124	51	7650
3 × 185	0.0991	50	7550
4 × 185	0.0991	56	9350
3 × 240	0.0754	57	9950
4 × 240	0.0754	62.5	11600

The Cores × mm² column gives the PHASE conductor size; each row also carries a concentric (PEN) copper conductor of the standard reduced size (10→10, 16→16, 25/35→16, 50→25, 70→35, 95→50, 120/150→70, 185→95, 240→120 mm²). Outer diameters and weights are the nominal manufacturer values of the leading reference source; conductor resistance is the phase IEC 60228 class 1/2 maximum. All values are indicative and non-binding.