

Variable Frequency Drive Cables



**Symmetrical 3 + 3 XLPE Insulated,
Foil + Braid Screened, PVC
Sheathed Flexible VFD Cable
[BPYJVPR]**

Standards: IEC 60502-1 (cable construction & test), IEC 60228 (conductor), IEC 60332-1-2 (flame retardance); ref. JB/T 10491, GB/T 12706.1, EN 50525-2-31

Technical Data

Rated voltage (U0/U): 0.6 / 1 kV
Max. conductor temperature: 90 °C continuous (XLPE)
Max. short-circuit temperature: 250 °C (max. 5 s)
Min. installation temperature: ≥ 0 °C (preheat below)
Operating ambient: -40 °C to +90 °C
Min. bending radius: ≥ 7.5 × OD fixed; ≥ 12 × OD flexing
Operating frequency range: 0 Hz to 5 kHz (VFD PWM carrier-frequency tolerant)
Symmetry: 3 phase + 3 ground conductors arranged at 60° symmetry
Inner screen: aluminium-polyester (Al-PET) tape, helical overlap ≥ 25%
Outer screen: tinned copper wire braid, coverage ≥ 85%
Capacitance (phase to phase): typical ≤ 150 pF/m

Application

BPYJVPR is designed for the power supply between Variable Frequency Drives (VFDs, also known as Adjustable-Speed Drives or Inverters) and AC motors at rated voltage 0.6 / 1 kV. Typical applications include pump and fan drives, conveyor and crane systems, paper mills, cement plants, steel mills, mining controls, HVAC, water treatment, and automation lines in plants and factories. Suitable for fixed and flexible (non-continuous-flexing) installations indoors, in cable trays, conduit, trunking, and ducts.

Construction

① Conductor — flexible stranded annealed bare copper, Class 5 per IEC 60228 ② Insulation — cross-linked polyethylene (XLPE), low-capacitance grade ③ Cabling — 3 phase cores and 3 symmetrically-placed ground cores laid up together at 60° symmetry, with filler ④ Inner screen — aluminium-polyester (Al-PET) laminated tape, helically applied with overlap ⑤ Outer screen — tinned copper wire braid, coverage ≥ 85% ⑥ Outer sheath — polyvinyl chloride (PVC), oil and abrasion resistant (LSZH variant available on request)

DIMENSION AND WEIGHTS				ELECTRICAL PROPERTIES			
Specification (3 × Phase + 3 × Ground)	Insulation Thickness (nom)	Overall Diameter (approx)	Net Weight (approx)	Delivery Length	Phase Cond. R 20°C Max	Ground Cond. R 20°C Max	Phase Current Capacity (in air, 30 °C)
mm ²	mm	mm	kg/km	m	Ω/km	Ω/km	A
3 × 4 + 3 × 0.75	0.7	15.0	272	500	4.95	26.00	42
3 × 6 + 3 × 1	0.7	16.5	355	500	3.30	19.50	54
3 × 10 + 3 × 1.5	0.7	18.9	518	300	1.910	13.30	75
3 × 16 + 3 × 2.5	0.7	21.9	767	300	1.210	7.98	100
3 × 25 + 3 × 4	0.9	26.5	1159	300	0.7800	4.95	133
3 × 35 + 3 × 6	0.9	30.5	1593	200	0.5540	3.30	164
3 × 50 + 3 × 10	1.0	33.9	2212	200	0.3860	1.910	198
3 × 70 + 3 × 10	1.1	38.9	2934	200	0.2720	1.910	253
3 × 95 + 3 × 16	1.1	44.3	3991	100	0.2060	1.210	306
3 × 120 + 3 × 16	1.2	48.7	4866	100	0.1610	1.210	353
3 × 150 + 3 × 25	1.4	53.8	6172	50	0.1290	0.780	406
3 × 185 + 3 × 25	1.6	59.1	7413	50	0.1060	0.780	463
3 × 240 + 3 × 35	1.7	65.9	9584	50	0.0801	0.554	546

Note: "3 × Phase + 3 × Ground" — three power conductors plus three symmetrical ground conductors. Conductors are flexible stranded copper (Class 5 per IEC 60228); DC conductor resistance is the maximum at 20 °C. Phase current capacity is indicative for the three power cores in free air at 30 °C ambient with XLPE 90 °C conductor — apply derating per installation method, grouping, and ambient temperature. Dimensions and weights are approximate and for reference only. The Al-PET tape + tinned copper braid double screen has typical screen DC resistance ≤ 12 Ω/km. The cable is suitable for VFD output side; for input side or DC bus, consult engineering. Delivery length follows realistic packaging by weight; other lengths and the LSZH (low-smoke halogen-free) jacket variant available on request.