Powerchain Cable - 0.50mm² to 6mm² PVC



Description

Unscreened powerchain PVC cables are high-flexibility control cables engineered for continuous linear motion within cable drag chains and automated power track systems. Often designated as YY Powerchain or YY-Flex cables, this unscreened construction lacks the internal copper braid found in shielded variants, prioritizing a more compact outer diameter and a tighter minimum bending radius. The "Y" components signify the use of Polyvinyl Chloride (PVC) for both the core insulation and the outer sheath, providing a cost-effective and versatile solution for dry or damp indoor industrial environments.

Designed to endure the repetitive mechanical stresses of high-cycle automation, these cables utilise Class 6 extra-fine-wire copper conductors. This high-strand construction allows the cable to withstand millions of bending cycles—typically at a radius as low as 7.5 to 10 times the overall diameter—without the risk of conductor fatigue or internal friction. Rated for a standard operating voltage of 300/500V, they maintain operational reliability across a temperature range of -5°C to +70°C during flexing, making them suitable for standard climate-controlled production facilities.

In practice, unscreened PVC powerchain cables are the industry standard for power and control circuits in applications where electromagnetic interference (EMI) is not a critical concern. They are extensively used in conveyor systems, wood-processing machinery, and packaging equipment to connect sensors, limit switches, and small motors. Their primary function is to provide reliable, long-term power delivery to moving machine components where the added weight, cost, and stiffness of a metallic screen are unnecessary for the specific electrical environment.

Key Features

Core Colours

Green Yellow and Black numbered.

Standards

Construction

Training & Testing Lab

AN ISO/IEC 17025 ACCREDITED FACILITY

Cleveland Cable Test & Training Lab
Our state-of-the-art cable testing facility ensures that every cable meets the highest standards of quality and compliance through continuous, rigorous testing.

ISO/IEC 17025 Accredited Testing Laboratory
31196

CPR
Cleveland Cable Company is committed to compliance with the Construction Products Regulation (CPR). Where applicable, all cables manufactured after 1st July 2017 have been assessed in accordance with CPR requirements, with full supporting documentation available.

Our Sustainability Commitment

We are committed to the journey to Net Zero as a business partner, an employer and a community member.

By thinking and acting sustainably, we deliver excellent customer service while reducing carbon emissions in collaboration with our customers and suppliers.

CLEVELAND CABLE COMPANY

ecovadis
Cleveland Cable Company has been independently assessed by EcoVadis, a globally recognised provider of business sustainability ratings. Our score places us among the top 35% of companies evaluated worldwide, reflecting our strong commitment to environmental, social, and ethical performance

ecovadis

Powerchain Cable - 0.50mm² to 6mm² PVC - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Overall Diameter(mm)	Weight(Kg/Km)
POWERCHAIN2X/5	0.50	2	6.00	45
POWERCHAIN3X/5	0.50	3	6.20	50
POWERCHAIN4X/5	0.50	4	6.90	60
POWERCHAIN5X/5	0.50	5	7.50	70
POWERCHAIN7X/5	0.50	7	9.20	105
POWERCHAIN12X/5	0.50	12	10.90	145
POWERCHAIN18X/5	0.50	18	13.10	220
POWERCHAIN25X/5	0.50	25	15.80	315
POWERCHAIN2X/75	0.75	2	6.40	55
POWERCHAIN3X/75	0.75	3	6.80	60
POWERCHAIN4X/75	0.75	4	7.30	75
POWERCHAIN5X/75	0.75	5	8.30	95
POWERCHAIN7X/75	0.75	7	10.00	135
POWERCHAIN12X/75	0.75	12	12.00	190
POWERCHAIN18X/75	0.75	18	14.20	280
POWERCHAIN25X/75	0.75	25	17.30	410
POWERCHAIN2X1	1	2	6.70	60
POWERCHAIN3X1	1	3	7.10	70
POWERCHAIN4X1	1	4	7.80	90
POWERCHAIN5X1	1	5	8.70	105
POWERCHAIN7X1	1	7	10.50	155
POWERCHAIN12X1	1	12	12.80	240
POWERCHAIN18X1	1	18	15.00	335
POWERCHAIN25X1	1	25	18.10	490
POWERCHAIN2X1/5	1.5	2	7.70	85
POWERCHAIN3X1/5	1.5	3	8.10	95
POWERCHAIN4X1/5	1.5	4	9.00	115
POWERCHAIN5X1/5	1.5	5	10.00	145
POWERCHAIN7X1/5	1.5	7	12.00	210
POWERCHAIN12X1/5	1.5	12	14.50	315
POWERCHAIN18X1/5	1.5	18	17.30	470
POWERCHAIN25X1/5	1.5	25	21.00	665
POWERCHAIN2X2/5	2.5	2	9.00	120
POWERCHAIN3X2/5	2.5	3	9.60	155
POWERCHAIN4X2/5	2.5	4	10.50	175
POWERCHAIN5X2/5	2.5	5	11.90	215
POWERCHAIN7X2/5	2.5	7	14.50	315
POWERCHAIN12X2/5	2.5	12	17.40	475

Reference	Conductor Size (mm2)	No Of Cores	Overall Diameter(mm)	Weight(Kg/Km)
POWERCHAIN3X4	4	3	11.70	245
POWERCHAIN4X4	4	4	13.10	290
POWERCHAIN5X4	4	5	14.50	350
POWERCHAIN3X6	6	3	13.00	305
POWERCHAIN4X6	6	4	14.20	375
POWERCHAIN5X6	6	5	15.80	510

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