Powerchain PUR Cable - 0.50mm² to 6mm²



Description

Powerchain PUR cables are high-performance power and control cables specifically engineered for the most demanding dynamic applications within cable drag chains and robotic systems. The "PUR" designation refers to the cable's Polyurethane outer sheath, a premium material selected for its superior mechanical properties compared to standard PVC. This halogen-free jacket offers exceptional resistance to abrasion, tearing, and notch propagation, while also providing high immunity to mineral oils, coolants, and microbes commonly found in heavy industrial environments.

Designed for extreme service life, these cables utilise Class 6 extra-fine-wire copper conductors, enabling them to withstand millions of continuous bending cycles at high speeds and accelerations. They typically maintain a tight bending radius—often as low as 7.5 times the overall diameter—and remain highly flexible in low-temperature environments down to -40°C. Because Polyurethane is more resilient than PVC, these cables are the preferred choice for outdoor use, wash-down areas, or high-cycle production lines where downtime due to cable fatigue must be minimised.

In practice, Powerchain PUR cables are the industry standard for heavy-duty machine tools, automotive assembly lines, and high-speed material handling systems. While they are available in both shielded (screened) and unshielded versions, their primary function is to provide reliable power and signal transmission in environments where cables are subjected to constant friction and aggressive chemical exposure. Their robust construction ensures long-term operational integrity in applications where standard control cables would prematurely degrade or fail mechanically.

Key Features

Voltage Rating
300/500 Volts

Minimum Bending Radius
Fixed: 4 x overall diameter
Flexing: 8 x overall diameter

Flame Retardancy
BS EN/IEC 60332-1

Temperature Limits
Fixed: -50°C to +80°C
Flexing: -35°C to +80°C

Standards

- BS EN/IEC 60811-404
- BS EN/IEC 60332-1
- BS EN/IEC 60228
- VDE 0482-332-1-2

Construction

- **Conductor**: Class 6 extra flexible copper
- **Insulation**: Thermoplastic Elastomer/Polypropylene (TPE/PP)
- **Outer Sheath**: Polyurethane (PUR)

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

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.

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

Powerchain PUR Cable - 0.50mm² to 6mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Overall Diameter(mm)	Weight(Kg/Km)
PCHAINPUR2X/5	0.5	2	5.0	35
PCHAINPUR3X/5	0.5	3	5.4	55
PCHAINPUR4X/5	0.5	4	5.9	60
PCHAINPUR5X/5	0.5	5	6.4	77
PCHAINPUR7X/5	0.5	7	7.5	82
PCHAINPUR12X/5	0.5	12	9.0	180
PCHAINPUR18X/5	0.5	18	11.0	195
PCHAINPUR25X0.5	0.5	25	13.0	200
PCHAINPUR2X/75	0.75	2	5.5	60
PCHAINPUR3X/75	0.75	3	6.0	77
PCHAINPUR4X/75	0.75	4	6.5	99
PCHAINPUR5X/75	0.75	5	7.1	119
PCHAINPUR7X/75	0.75	7	8.5	110
PCHAINPUR12X7/5	0.75	12	10.0	250
PCHAINPUR18X/75	0.75	18	12.0	260
PCHAINPUR25X0.75	0.75	25	14..5	360
PCHAINPUR2X1	1	2	6.0	67
PCHAINPUR3X1	1	3	6.3	89
PCHAINPUR4X1	1	4	6.9	115
PCHAINPUR5X1	1	5	7.5	140
PCHAINPUR7X1	1	7	9.1	185
PCHAINPUR12X1	1	12	11.0	265
PCHAINPUR18X1	1	18	13.0	400
PCHAINPUR25X1	1	25	16.0	450
PCHAINPUR2X1/5	1.5	2	6.9	82
PCHAINPUR3X1/5	1.5	3	7.4	115
PCHAINPUR4X1/5	1.5	4	8.2	135
PCHAINPUR5X1/5	1.5	5	9.0	170
PCHAINPUR7X1/5	1.5	7	10.5	235
PCHAINPUR12X1/5	1.5	12	13.0	310
PCHAINPUR18X1/5	1.5	18	15.5	515
PCHAINPUR25X1.5	1.5	25	18.5	655
PCHAINPUR2X2.5	2.5	2	7.9	118
PCHAINPUR3X2/5	2.5	3	8.5	150
PCHAINPUR4X2/5	2.5	4	9.1	175
PCHAINPUR5X2/5	2.5	5	10	199
PCHAINPUR7X2/5	2.5	7	14.0	270
PCHAINPUR12X2/5	2.5	12	15.0	425

Reference	Conductor Size (mm2)	No Of Cores	Overall Diameter(mm)	Weight(Kg/Km)
PCHAINPUR4X4	4	4	11.5	260
PCHAINPUR5X4	4	5	13.0	345
PCHAINPUR7X4	4	7	16.0	485
PCHAINPUR4X6	6	4	13.5	325
PCHAINPUR5X6	6	5	15.5	525
PCHAINPUR7X6	6	7	18..5	699
PCHAINPUR4X10	10	4	18.0	600
PCHAINPUR5X10	10	5	19.9	820
PCHAINPUR7X10	10	7	24.0	1060
PCHAINPUR4X16	16	4	21.5	1010
PCHAINPUR5X16	16	5	24.0	1180
PCHAINPUR7X16	16	7	30.0	1715

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