



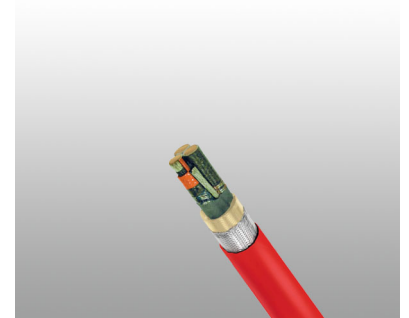
Medium Voltage Power Cables

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P103 (Formerly P3 or P3/P10) RFOU/TFOU 6/10KV

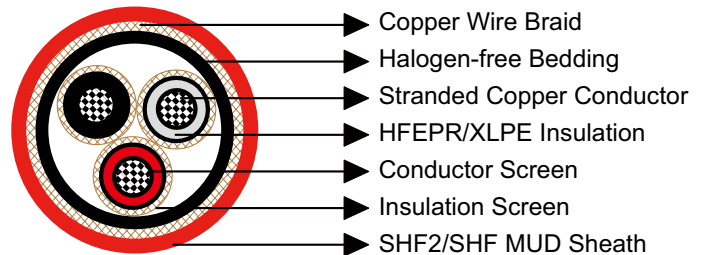
Applications

These cables are flame retardant, low smoke, halogen free and mud resistant, used for fixed installation for medium voltage power.



Standards

- IEC 60092-354
- IEC 60092-351
- IEC 60092-359
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004



Construction

- **Conductors:** Circular tinned annealed stranded copper to IEC 60228 class 2 or class 5.
- **Conductor Screen:** Semi conducting material.
- **Insulation:** Halogen-free EPR or XLPE.
- **Insulation Screen:** Semi conducting material and tinned copper wire braid.
- **Bedding:** Halogen free compound.
- **Armour:** Tinned copper wire braid in accordance with IEC 60092-350.
- **Outer Sheath:** Halogen free thermosetting compound, SHF2 (formerly TYPE P3), or halogen free mud resistant thermosetting compound, SHF MUD (for formerly TYPE P3/P10), coloured red.

Electrical Characteristics

Nominal Cross Section Area	mm ²	16	25	35	50	70	95	120
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Nominal Conductor Diameter	mm	5.2	6.5	7.4	8.7	10.3	12.2	13.8
Maximum DC Resistant@20°C	Ω/km	1.16	0.734	0.529	0.391	0.27	0.195	0.154
Continuous Current Rating@45°C 1 Core	A	96	127	157	196	242	293	339
Continuous Current Rating@45°C 3 Core	A	67	89	110	137	169	205	237
Short Circuit Current 1s	A	2290	3580	5010	7150	10020	13590	17170
Operating Voltage	KV	6/10	6/10	6/10	6/10	6/10	6/10	6/10

Nominal Cross Section Area	mm ²	150	185	240	300	400	500	630
Nominal Conductor Diameter	mm	15.1	17.0	19.6	21.9	24.5	27.5	32.3
Maximum DC Resistant@20°C	Ω/km	0.126	0.1	0.0762	0.0607	0.0475	0.0369	0.0286
Continuous Current Rating@45°C 1 Core	A	389	444	522	601	690	780	890
Continuous Current Rating@45°C 3 Core	A	272	311	365	421	483	546	623
Short Circuit Current 1s	A	21460	26470	34340	42930	57230	71540	90140
Operating Voltage	KV	6/10	6/10	6/10	6/10	6/10	6/10	6/10

Ambient Temperature Correction Factors

Ambient Temperature Correction Factors	35	40	45	50	55	60	65	70	75	80
Rating Factor	1.1	1.05	1.0	0.94	0.88	0.82	0.74	0.67	0.58	0.47

Mechanical and Thermal Properties

- Bending Radius: 15×OD (during installation); 9×OD (fixed installed)
- Temperature Range: -20°C ~ +90°C

Dimensions and Weight

Construction No. of cores×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
1×16	3.4	1.5	1.1	24.0	900
1×25	3.4	1.5	1.2	26.0	1140
1×35	3.4	1.6	1.2	26.9	1265
1×50	3.4	1.6	1.2	28.3	1460
1×70	3.4	1.7	1.3	30.0	1710
1×95	3.4	1.8	1.3	32.0	2060
1×120	3.4	1.8	1.4	33.8	2380



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Construction No. of cores×Cross section(mm ²)	Nominal Insulation Thickness mm	Nominal Sheath Thickness mm		Nominal Overall Diameter mm	Nominal Weight kg/km
		Inner	Outer		
1×150	3.4	1.9	1.4	35.3	2700
1×185	3.4	2.0	1.5	37.8	3225
1×240	3.4	2.1	1.6	41.0	3990
1×300	3.4	2.2	1.6	43.7	4760
1×400	3.4	2.3	1.7	45.5	5900
1×500	3.4	2.4	1.8	49.5	7350
1×630	3.4	2.6	1.9	54.5	8750
3×16	3.4	2.3	1.7	46.0	3300
3×25	3.4	2.4	1.8	50.1	3905
3×35	3.4	2.5	1.8	52.2	4360
3×50	3.4	2.6	1.9	55.1	5185
3×70	3.4	2.7	2.0	58.9	6125
3×95	3.4	2.9	2.1	63.5	7500
3×120	3.4	3.0	2.2	67.6	8775
3×150	3.4	3.2	2.3	71.7	10235
3×185	3.4	3.4	2.4	74.0	11300
3×240	3.4	3.6	2.6	79.5	13300
3×300	3.4	3.8	2.7	85.0	16300

