



Power and Control Cables

www.caledonian-cables.co.uk

P1 or P1/P8 RFOU/TFOU 0.6/1KV

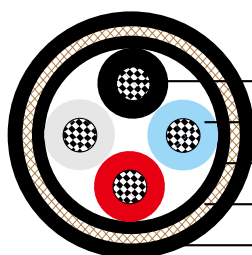
Applications

These cables are flame retardant, low smoke, halogen free and mud resistant, used for control, power and lighting systems.



Standards

- IEC 60092-353
- IEC 60092-351
- IEC 60092-359
- IEC 60332-1
- IEC 60332-3-22
- IEC 60754-1,2
- IEC 61034-1,2
- NEK 606:2004



- ▶ Stranded Copper Conductor
- ▶ Halogen Free EPR/XLPE Insulation
- ▶ Halogen-free Bedding
- ▶ Copper Wire Braid
- ▶ SHF2/SHF MUD Sheath

Construction

- **Conductors:** Tinned annealed stranded copper to IEC 60228 class 2.
- **Insulation:** Halogen-free EPR. XLPE can be offered as an option (for TFOU cable)
- **Bedding:** Halogen free compound.
- **Armour:** Tinned copper wire braid.
- **Outer Sheath:** Halogen free thermosetting compound, SHF2 (for TYPE P1). Halogen free, mud resistant thermosetting compound, SHF MUD (for TYPE P1/P8), coloured black.

Electrical Characteristics

Nominal Cross Section Area	mm ²	1.5	2.5	4	6	10	16	25	35	50	70
Nominal Conductor Diameter	mm	1.6	2.1	2.6	3.2	4.0	5.1	6.5	7.4	8.7	10.3
Maximum DC Resistant@20°C	Ω/km	12.2	7.56	4.7	3.11	1.84	1.16	0.734	0.529	0.391	0.27
Continuous Current Rating@45°C 1 Core	A	23	30	40	52	72	96	127	157	196	242



Continuous Current Rating@45°C 2 Core	A	20	26	34	44	61	82	108	133	167	206
Continuous Current Rating@45°C 3&4 Core	A	16	21	28	36	50	67	89	110	137	169
Short Circuit Current 1s	A	210	360	570	860	1430	2290	3580	5010	7150	10020
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Nominal Cross Section Area	mm ²	95	120	150	185	240	300	400	500	630
Nominal Conductor Diameter	mm	12.2	13.8	15.1	17.0	19.6	21.9	24.6	27.6	32.5
Maximum DC Resistant@20°C	Ω/km	0.195	0.154	0.126	0.1	0.0762	0.0607	0.0475	0.0369	0.0286
Continuous Current Rating@45°C 1 Core	A	293	339	389	444	522	601	690	780	890
Continuous Current Rating@45°C 2 Core	A	249	288	331	444	444	511	587	663	757
Continuous Current Rating@45°C 3&4 Core	A	205	237	272	311	365	421	483	546	623
Short Circuit Current 1s	A	13590	17170	21460	26470	34340	42930	57230	71540	90140
Operating Voltage	KV	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1	0.6/1

Note: For more than 4-cores, the current ratings may be calculated from the following formula ($I_N = I_1 / \sqrt[3]{N}$), I_1 = Current rating for 1-core, N = Number of cores.

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: 8×OD (during installation); 6×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		
1×1.5	1.0	1.1	1.1	8.9	135
1×2.5	1.0	1.1	1.1	9.3	150
1×4	1.0	1.1	1.1	9.9	180
1×6	1.0	1.1	1.1	10.4	205
1×10	1.0	1.1	1.2	12.2	295
1×16	1.0	1.1	1.2	13.5	385



Power and Control Cables

www.caledonian-cables.co.uk

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		
1×25	1.2	1.1	1.2	15.4	525
1×35	1.2	1.1	1.3	16.9	685
1×50	1.4	1.1	1.4	18.7	870
1×70	1.4	1.1	1.4	20.4	1105
1×95	1.6	1.1	1.5	22.8	1435
1×120	1.6	1.2	1.6	24.9	1745
1×150	1.8	1.2	1.6	26.8	2055
1×185	2.0	1.2	1.7	29.3	2560
1×240	2.2	1.2	1.8	32.5	3190
1×300	2.4	1.2	1.9	35.2	3935
1×400	2.4	1.4	2.1	40.5	5060
1×500	2.4	1.4	2.2	44.0	6180
1×630	2.4	1.4	2.3	48.0	7620
2×1.5	1.0	1.1	1.2	13.6	295
2×2.5	1.0	1.1	1.2	14.4	335
2×4	1.0	1.1	1.3	16.1	445
2×6	1.0	1.1	1.3	17.1	520
2×10	1.0	1.1	1.4	19.3	680
2×16	1.0	1.1	1.5	21.7	955
2×25	1.2	1.2	1.6	25.9	1335
2×35	1.2	1.2	1.7	27.9	1595
2×50	1.4	1.2	1.9	31.9	2250
2×70	1.4	1.2	2.1	35.8	2795
2×95	1.6	1.2	2.3	41.2	3780
2×120	1.6	1.4	2.4	44.8	4560
2×150	1.8	1.4	2.6	49.2	5500
2×185	2.0	1.4	2.7	53.8	6675
2×240	2.2	1.6	3.0	61.0	8605
2×300	2.4	1.6	3.2	67.0	10510
3×1.5	1.0	1.1	1.2	14.2	320
3×2.5	1.0	1.1	1.3	15.6	415
3×4	1.0	1.1	1.3	16.8	500
3×6	1.0	1.1	1.4	18.1	605
3×10	1.0	1.1	1.4	20.3	795
3×16	1.0	1.1	1.5	22.8	1125
3×25	1.2	1.2	1.6	27.5	1620
3×35	1.2	1.2	1.7	29.6	1955
3×50	1.4	1.2	1.9	33.9	2730
3×70	1.4	1.4	2.0	38.4	3655
3×95	1.6	1.4	2.2	43.8	4885



Power and Control Cables

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		
3×120	1.6	1.4	2.3	47.6	6000
3×150	1.8	1.6	2.5	52.4	7300
3×185	2.0	1.6	2.7	58.6	8960
3×240	2.2	1.8	2.9	66.1	11610
3×300	2.2	1.8	3.4	71.9	13490
4×1.5	1.0	1.1	1.3	15.7	350
4×2.5	1.0	1.1	1.3	16.6	425
4×4	1.0	1.1	1.4	18.1	590
4×6	1.0	1.1	1.4	19.5	725
4×10	1.0	1.1	1.5	22.1	955
4×16	1.0	1.2	1.6	25.2	1375
4×25	1.2	1.2	1.7	30.0	1965
4×35	1.2	1.2	1.8	32.4	2410
4×50	1.4	1.4	2.0	37.3	3365
4×70	1.4	1.4	2.2	42.1	4580
4×95	1.6	1.4	2.4	48.2	6020
4×120	1.6	1.6	2.5	52.7	7440
4×150	1.8	1.6	2.9	58.3	8800
4×185	2.0	1.6	3.1	64.0	10760
4×240	2.2	1.8	3.4	72.4	13890
4×300	2.4	1.8	3.7	79.8	17405
5×1.5	1.0	1.1	1.3	16.7	420
6×1.5	1.0	1.1	1.3	17.8	495
7×1.5	1.0	1.1	1.3	17.8	540
8×1.5	1.0	1.1	1.5	20.3	645
9×1.5	1.0	1.1	1.5	21.5	675
10×1.5	1.0	1.1	1.5	21.8	705
12×1.5	1.0	1.1	1.5	22.5	805
14×1.5	1.0	1.1	1.6	23.6	860
16×1.5	1.0	1.1	1.7	24.9	940
19×1.5	1.0	1.1	1.7	26.0	1100
20×1.5	1.0	1.1	1.7	27.2	1130
23×1.5	1.0	1.1	1.8	29.3	1285
24×1.5	1.0	1.1	1.8	30.0	1305
27×1.5	1.0	1.1	1.9	30.8	1460
30×1.5	1.0	1.1	1.9	31.8	1520
33×1.5	1.0	1.2	2.0	33.5	1670
37×1.5	1.0	1.2	2.0	34.6	1840
44×1.5	1.0	1.2	2.2	39.2	2210
5×2.5	1.0	1.1	1.4	18.0	555



Power and Control Cables

www.caledonian-cables.co.uk

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		
6×2.5	1.0	1.1	1.4	19.2	590
7×2.5	1.0	1.1	1.4	19.2	655
8×2.5	1.0	1.1	1.5	21.8	775
9×2.5	1.0	1.1	1.6	23.3	785
10×2.5	1.0	1.1	1.6	23.6	865
12×2.5	1.0	1.1	1.6	24.5	955
14×2.5	1.0	1.1	1.7	25.5	1070
16×2.5	1.0	1.1	1.7	26.7	1155
19×2.5	1.0	1.1	1.8	28.2	1360
20×2.5	1.0	1.1	1.8	29.5	1410
23×2.5	1.0	1.1	1.9	31.8	1610
24×2.5	1.0	1.2	2.0	33.2	1690
27×2.5	1.0	1.2	2.0	33.9	1815
30×2.5	1.0	1.2	2.0	34.9	1960
33×2.5	1.0	1.2	2.1	36.7	2190
37×2.5	1.0	1.2	2.1	38.0	2370
44×2.5	1.0	1.2	2.3	42.6	2795

Note: For XLPE insulated cable, a thinner insulation thickness is applied.

