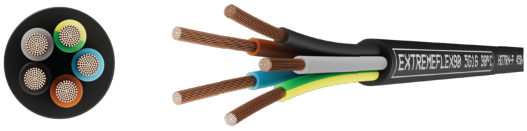
ExtremeFlex90 Flexible Mains & Control Cable - 1mm² to 630mm²



Description

Flexible 90°C EPR cable with high resistance to mechanical stress. Able to withstand water and weather. For use in fixed and temporary installation works on Work sites, mobile power supplies, ports and harbours, water treatment plants, sewage and drains, hot and cold areas and harsh industrial environments. UV Resistant Sheath. Extremeflex90 is suitable for burial in ducts.

For use in portable power supplies, site equipment, industrial machinery, and audio visual equipment. Can be cut to size for temporary power leads with a wide choice of terminals and connections.

Available sizes:
From 1mm² to 630mm², in various core configurations and lengths.
It can be cut to standard 5m, 10m, 15m, 25m patch leads or any bespoke length fitted with a wide range of terminals.

Key Features

Voltage Rating
Fixed: 0.6kV - 1kV
Flexing: 450/750 Volts

Minimum Bending Radius
(Less than 12mm²): 3 X Overall Diameter
(More than 12mm²): 4 X Overall Diameter

Flame Retardancy
BS EN 60332-1-2

Temperature Limits
Temperature Range: -40 to 90°C

Core Colours

Single Core: White bonded to Black sheath

2 Core: Brown Blue

3 Core: Brown Blue Green Yellow

4 Core: Brown Black Grey Green Yellow or

4 Core: Brown Black Grey Blue

5 Core: Brown Black Grey Blue Green Yellow

7+ Core: Black with White Numbers plus Green Yellow

Standards

- BS EN 60811-2-1
- BS EN 60228
- BS EN/IEC 60332-1-2
- UV Resistant Sheath
- BS EN 50363
- AD8 water resistance
- Conforms to H07RN-F

Construction

- **Conductor**: Class 5 flexible, stranded copper
- **Insulation**: Ethylene Propylene Rubber (EPR)
- **Outer Sheath**: UV Resistant Chlorinated Polyethylene (CPE)

QA Lab

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. Where applicable, cables are independently tested and certified by BASEC to ensure full compliance.

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

ExtremeFlex90 Flexible Mains & Control Cable - 1mm² to 630mm² - Dimensions

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(Lower)	Overall Diameter(Upper)	Weight(Kg/Km)
3182EF1	1	2	32/0.20	0.8	1.3	7.9	8.9	99
3183EF1	1	3	32/0.20	0.8	1.4	8.5	9.5	118
3184EF1	1	4	32/0.20	0.8	1.5	9.5	10.5	144
3181EF1/5	1.5	1	30/0.25	0.8	1.6	5.5	6.6	55
3182EF1/5	1.5	2	30/0.25	0.8	1.4	9.0	10.0	127
3183EF1/5	1.5	3	30/0.25	0.8	1.5	9.6	10.6	150
3184EF1/5	1.5	4	30/0.25	0.8	1.6	10.8	11.8	185
3185EF1/5	1.5	5	30/0.25	0.8	1.7	13.8	15.2	220
3187EF1/5	1.5	7	30/0.25	0.8	1.8	15	16.6	365
3180/12EF1/5	1.5	12	30/0.25	0.8	1.9	17.8	19.8	485
3180/19EF1/5	1.5	19	30/0.25	0.8	2.0	20.7	23.0	715
3180/27EF1/5	1.5	27	30/0.25	0.8	2.9	27.7	29.9	920
3180/37EF1/5	1.5	37	30/0.25	0.8	3.8	29.5	31.8	1260
3182EF2/5	2.5	2	50/0.25	0.9	1.4	10.8	11.8	193
3183EF2/5	2.5	3	50/0.25	0.9	1.7	11.4	12.6	235
3184EF2/5	2.5	4	50/0.25	0.9	1.8	12.4	13.9	290
3185EF2/5	2.5	5	50/0.25	0.9	1.9	13.3	14.5	345
3187EF2/5	2.5	7	50/0.25	0.9	2	20.6	22.0	695
3180/12EF2/5	2.5	12	49/0.24	0.9	2.2	25.5	24.0	695
3180/19EF2/5	2.5	19	49/0.24	0.9	2.88	23.9	25.4	1030
3181EF4	4	1	50/0.25	1	1.5	7.2	8.4	99
3182EF4	4	2	56/0.30	1	1.8	12.3	13.6	257
3183EF4	4	3	56/0.30	1	1.9	13.2	14.5	310
3184EF4	4	4	56/0.30	1	2	14.4	16.0	395
3185EF4	4	5	56/0.30	1	2.2	16.1	18.0	485
3187EF4	4	7	56/0.30	1	2.4	19.8	21.2	773
6381EF6	6	1	84/0.30	1	1.6	7.9	9.1	130
6382EF6	6	2	84/0.30	1	2	13.8	15.3	350
6383EF6	6	3	84/0.30	1	2.1	14.7	16.4	495
6384EF6	6	4	84/0.30	1	2.3	16.4	18.3	610
6385EF6	6	5	84/0.30	1	2.5	17.5	20.2	760
6387EF6	6	7	84/0.30	1	2.8	21.6	23.9	904
6381EF10	10	1	80/0.40	1.2	1.8	9.5	10.9	230
6382EF10	10	2	80/0.40	1.2	3.1	19.1	21.1	598
6383EF10	10	3	80/0.40	1.2	3.3	20.6	21.6	880
6384EF10	10	4	80/0.40	1.2	3.4	22.8	24.8	1060
6385EF10	10	5	80/0.40	1.2	3.6	24.5	26.4	1300

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(Lower)	Overall Diameter(Upper)	Weight(Kg/Km)
6381EF16	16	1	126/0.40	1.2	1.9	10.8	12.2	320
6382EF16	16	2	126/0.40	1.2	3.3	21.3	23.8	850
6383EF16	16	3	126/0.40	1.2	3.5	22.8	25.3	1090
6384EF16	16	4	126/0.40	1.2	3.6	25.2	27.9	1345
6385EF16	16	5	126/0.40	1.2	3.9	27.7	30.6	1680
6381EF25	25	1	196/0.40	1.4	2	12.8	14.4	450
6382EF25	25	2	196/0.40	1.4	2.2	25.3	28.2	1147
6383EF25	25	3	196/0.40	1.4	3.8	27.3	30.2	1439
6384EF25	25	4	196/0.40	1.4	4.1	29.6	33.5	1773
6385EF25	25	5	196/0.40	1.4	4.5	33.4	37.0	2470
6381EF35	35	1	276/0.40	1.4	2.2	14.6	16.1	605
6382EF35	35	2	276/0.40	1.4	3.5	27.7	31.7	1550
6383EF35	35	3	276/0.40	1.4	3.8	29.3	33.5	1850
6384EF35	35	4	276/0.40	1.4	4.1	33.4	37.0	2645
6385EF35	35	5	276/0.40	1.4	4.6	36.9	40.7	2930
6381EF50	50	1	396/0.40	1.6	2.4	16.7	18.5	825
6382EF50	50	2	396/0.40	1.6	4.2	32.4	36.4	1999
6383EF50	50	3	396/0.40	1.6	4.5	35.0	38.7	2890
6384EF50	50	4	396/0.40	1.6	4.8	38.8	42.8	3635
6385EF50	50	5	396/0.40	1.6	5.2	43.3	47.2	3925
6381EF70	70	1	360/0.50	1.6	2.6	18.6	20.7	1090
6383EF70	70	3	360/0.50	1.6	4.8	39.4	43.9	3850
6384EF70	70	4	360/0.50	1.6	5.2	43.7	48.7	4830
6385EF70	70	5	360/0.50	1.6	5.7	48.5	54.0	5938
6381EF95	95	1	475/0.50	1.8	2.8	20.8	23.2	1405
6383EF95	95	3	475/0.50	1.8	5.3	44.7	48.8	4185
6384EF95	95	4	475/0.50	1.8	5.9	49.3	55.3	6320
6385EF95	95	5	475/0.50	1.8	6.3	54	61.5	6695
6381EF120	120	1	608/0.50	1.8	3	23.0	25.7	1745
6383EF120	120	3	608/0.50	1.8	5.6	48.7	54.7	5080
6384EF120	120	4	608/0.50	1.8	6	53	60.9	6500
6385EF120	120	5	608/0.50	1.8	6.5	58	66.0	7542
6381EF150	150	1	756/0.50	2	3.2	25.2	28.2	1824
6383EF150	150	3	756/0.50	2	6	51.7	59.6	6267
6384EF150	150	4	756/0.50	2	6.5	58	65.5	8031
6381EF185	185	1	925/0.50	2.2	3.4	27.6	30.6	2202
6383EF185	185	3	925/0.50	2.2	6.4	58.0	65.5	7661
6384EF185	185	4	925/0.50	2.2	7	64.3	71.4	9830
6381EF240	240	1	1221/0.50	2.4	3.5	30.6	33.8	2847

Reference	Conductor Size (mm2)	No Of Cores	Stranding(mm)	Insulation Thickness (mm)	Sheath Thickness (mm)	Overall Diameter(Lower)	Overall Diameter(Upper)	Weight(Kg/Km)
6383EF240	240	3	1221/0.50	2.4	7.1	65	73.8	9692
6384EF240	240	4	1221/0.50	2.4	7.7	72.8	82.5	12444
6381EF300	300	1	1525/0.50	2.6	3.6	33.7	37.3	3495
6381EF400	400	1	2257/0.50	2.6	3.9	37.4	42.4	4880
6381EF500	500	1	1769/0.60	2.8	4.2	41.3	46.5	5301
6381EF630	630	1	2257/0.60	2.8	4.5	47.5	52.5	7460

EXTREMEFLEX90 FLEXIBLE CABLE - CURRENT CARRYING CAPACITY (AMPS)

CONDUCTOR CROSS SECTIONAL AREA	SINGLE CORE CABLES	2 CORE CABLE WITH OR WITHOUT PROTECTIVE CONDUCTOR	3 CORE CABLE	4 OR 5 CORE CABLE
(MM^2)	(AMPS)	(AMPS)	(AMPS)	(AMPS)
1*	16	16	21	17
1.5*	27	23	26	23
2.5*	35	30	36	32
4	49	39	49	42
6	60	51	63	54
10	83	70	86	75
16	111	95	115	100
25	147	125	149	127
35	181	154	185	158
50	226	193	225	192
70	279	238	289	246
95	338	288	352	298
120	391	-	410	346
150	449	-	473	399
185	513	-	421	456
240	603	-	542	538
300	694	-	641	-
400	825	-	-	-
500	946	-	-	-
630	1044	-	-	-

EXTREMEFLEX90 FLEXIBLE CABLE - VOLTAGE DROP

NOMINAL CROSS SECTIONAL AREA MM²	2 CORE CABLE DC mV/A/m	TWO CORE CABLE SINGLE-PHASE AC mV/A/m			1 X THREE CORE, FOUR CORE OR FIVE CORE CABLE, THREE PHASE AC			2 X SINGLE CORE CABLES TOUCHING			
								DC mV/A/m	SINGLE PHASE AC * mV/A/m		
1	46	46			34,0			-	27,0		
1,5	32	32			23,3			-	23,3		
2,5	19	19			14			-	14		
4	12	12			8,7			-	8,7		
6	7,8	7,8			5,8			-	5,90		
10	4,6	4,6			3,4			-	3,40		
16	2,9	2,9			2,2			-	2,20		
		R	X	Z	R	X	Z		R	X	Z
25	1,8	1,8	0,175	1,85	1,44	0,15	1,44	-	1,40	0,25	1,40
35	-	-	-	-	1,05	0,15	1,04	1,31	1,31	0,21	1,32
50	-	-	-	-	0,78	0,145	0,75	0,91	0,91	0,21	0,93
70	-	-	-	-	0,57	0,14	0,56	0,64	0,64	0,2	0,67
95	-	-	-	-	0,42	0,135	0,44	0,49	0,49	0,195	0,53
120	-	-	-	-	0,33	0,135	0,36	0,38	0,38	0,19	0,43
150	-	-	-	-	0,27	0,13	0,3	0,31	0,31	0,19	0,36
185	-	-	-	-	0,22	0,13	0,26	0,25	0,25	0,19	0,32
240	-	-	-	-	0,17	0,13	0,21	0,19	0,195	0,185	0,27
300	-	-	-	-	0,135	0,125	0,185	0,15	0,155	0,18	0,24
400	-	-	-	-	-	-	-	0,115	0,12	0,175	0,21
500	-	-	-	-	-	-	-	0,09	0,099	0,17	0,20
630	-	-	-	-	-	-	-	0,068	0,079	0,17	0,185

R = RESISTIVE COMPONENT X = REACTIVE COMPONENT Z = IMPEDANCE VALUE

* A LARGER VOLTAGE DROP WILL RESULT IF THE CABLES ARE SPACED APART

AMBIENT TEMPERATURE:	30 °C
CONDUCTOR OPERATING TEMPERATURE:	90°C
GROUND TEMPERATURE:	20°C
BURIAL DEPTH:	0.8M
THERMAL RESISTIVITY:	1.5KMV

FOR OTHER VARIABLES - REFER TO TABLES BELOW

FOR AMBIENT GROUND TEMPERATURES OTHER THAN 20°C

AMBIENT TEMPERATURE (°C)	10	15	25	30
DERATING FACTOR	1,07	1,04	0,96	0,89

FOR SOIL THERMAL RESISTIVITY OTHER THAN 1.5 Km/W

THERMAL RESISTIVITY (Km/W)	1	1,2	2,0	2,5
DERATING FACTOR	1,06	1,04	0,98	0,8

FOR DEPTHS OTHER THAN 0.8M

DEPTH (METRES)	0,5	0,8	1,00	1,2
DERATING FACTOR	1,02	1,00	0,98	0,8

ALL ELECTRICAL CALCULATIONS REGARDING THE ABOVE DERATING VARIABLES MUST BE CARRIED OUT BY A CERTIFIED ELECTRICAL ENGINEER IN CONJUNCTION WITH THE CORRECT APPENDICES WITHIN THE 18TH EDITION WIRING REGULATIONS, OFFICIALLY KNOWN AS BS 7671:2018