

## EXTREMEFLEX90 FLEXIBLE MAINS AND CONTROL CABLE



### APPLICATION

Flexible 90°C EPR cable with high resistance to mechanical stress. Able to withstand water and weather. For use on Work sites, mobile power supplies, ports and harbors, water treatment plants, sewage and drains, hot and cold areas and harsh industrial environments. 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.

### CONSTRUCTION

#### Conductor:

Class 5 flexible stranded copper conductor to BS EN 60228

#### Insulation:

EPR (Ethylene Propylene Rubber) to BS 50363

#### Sheath:

CPE Rubber Compound To BS EN 50363

### CABLE STANDARDS

BS EN 50525-2-21

BS EN 60811-2-1

BS EN/IEC 60332-1-2

BS 50363

Water Resistant to AD8

Wiring Regulations reference: IPX8

Conforms to H07RN-F

### CHARACTERISTICS

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

**Temperature Limits:** Fixed: -40°C to +90°C,

**Minimum Bending Radius:** Less than 12mm<sup>2</sup> 3 X OD

**Minimum Bending Radius:** More than 12mm<sup>2</sup> 4 X OD

### CORE IDENTIFICATION

Single Core: **White** bonded to **Black** sheath

2 Core: **Brown Blue**

3 Core: **Brown Blue Green/Yellow**

4 Core: **Brown Black Blue Green/Yellow**

5 Core: **Brown Black Grey Blue Green/Yellow**

Cable with 6 core and above

**Black** with **White** Numbers plus **Green/Yellow**

Should not be installed below 0°C

## EXTREMEFLEX90 FLEXIBLE MAINS AND CONTROL CABLE - DIMENSIONS

CCC CODE	CONDUCTOR SIZE (MM <sup>2</sup> )	STRANDING (MM)	NO OF CORES	INSULATION THICKNESS (MM)	SHEATH THICKNESS (MM)	OVERALL MEAN DIAMETER (MM)		WEIGHT (KG/KM)	BENDING RADIUS(MM)	
						LOWER LIMIT	UPPER LIMIT		LOWER LIMIT	UPPER LIMIT
3182EF1	1	32/0.20	2	0.8	1.3	7.7	8.8	99	23.1	26.4
3183EF1	1	32/0.20	3	0.8	1.4	8.3	9.3	118	19.5	25.5
3184EF1	1	32/0.20	4	0.8	1.5	9.2	10.4	144	27.6	31.2
3181EF1/5	1.5	30/0.25	1	0.8	1.6	5.7	6.7	55	17.1	20.1
3182EF1/5	1.5	30/0.25	2	0.8	1.4	8.5	9.8	127	25.5	29.4
3183EF1/5	1.5	30/0.25	3	0.8	1.5	9.2	10.4	150	27.6	31.2
3184EF1/5	1.5	30/0.25	4	0.8	1.6	10.2	11.7	185	30.6	35.1
3185EF1/5	1.5	30/0.25	5	0.8	1.7	11.2	12.7	220	33.6	38.1
3187EF1/5	1.5	30/0.25	7	0.8	1.8	14.7	16.2	365	44.1	48.6
3182EF2/5	2.5	50/0.25	2	0.9	1.4	10.2	11.7	193	30.6	35.1
3183EF2/5	2.5	50/0.25	3	0.9	1.7	10.9	12.4	235	32.7	37.2
3184EF2/5	2.5	50/0.25	4	0.9	1.8	12.1	13.6	290	36.3	40.8
3185EF2/5	2.5	50/0.25	5	0.9	1.9	13.3	14.8	345	39.9	44.4
3180/19EF2/5	2.5	49/0.24	19	0.9	2.88	23.9	26.9	1030	71.7	80.07
3181EF4	4	50/0.25	1	1	1.5	7.2	8.4	99	21.6	25.2
3182EF4	4	56/0.30	2	1	1.8	11.8	13.3	257	35.4	39.9
3183EF4	4	56/0.30	3	1	1.9	12.7	14.2	310	38.1	42.6
3184EF4	4	56/0.30	4	1	2	14	15.5	395	42	46.5
3185EF4	4	56/0.30	5	1	2.2	15.6	17.1	485	46.8	51.3
3187EF4	4	56/0.30	7	1	2.4	19.8	24.4	773	59.4	73.2
6381EF6	6	84/0.30	1	1	1.6	7.9	9.1	130	23.7	27.3
6382EF6	6	84/0.30	2	1	2	13.1	14.8	350	39.3	44.4
6383EF6	6	84/0.30	3	1	2.1	14.1	16.1	495	42.3	48.3
6384EF6	6	84/0.30	4	1	2.3	15.7	17.4	610	47.1	52.2
6385EF6	6	84/0.30	5	1	2.5	17.5	19.2	760	52.5	57.6
6387EF6	6	84/0.30	7	1	2.8	21.6	26.9	904	64.8	80.7
6381EF10	10	80/0.40	1	1.2	1.8	9.5	10.7	230	28.5	32.1
6383EF10	10	80/0.40	3	1.2	3.3	19.1	21.1	880	57.3	63.3
6384EF10	10	80/0.40	4	1.2	3.4	20.9	23.4	1060	62.7	70.2
6385EF10	10	80/0.40	5	1.2	3.6	22.9	25.9	1300	68.7	77.7
6381EF16	16	126/0.40	1	1.2	1.9	10.8	12.3	320	43.2	49.2
6382EF16	16	126/0.40	2	1.2	3.3	20.2	22.7	850	80.8	90.8
6383EF16	16	126/0.40	3	1.2	3.5	21.8	24.3	1090	87.2	97.2
6384EF16	16	126/0.40	4	1.2	3.6	23.8	26.3	1345	95.2	105.2
6385EF16	16	126/0.40	5	1.2	3.9	26.4	29.4	1680	105.6	117.6

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						LOWER LIMIT	UPPER LIMIT		LOWER LIMIT	UPPER LIMIT
6381EF25	25	196/0.40	1	1.4	2	12.7	14.2	450	50.8	56.8
6382EF25	25	196/0.40	2	1.4	3.6	24.3	26.8	1210	97.2	107.2
6383EF25	25	196/0.40	3	1.4	3.8	26.1	28.6	1394	104.4	114.4
6384EF25	25	196/0.40	4	1.4	4.1	28.9	31.4	1995	115.6	125.6
6385EF25	25	196/0.40	5	1.4	4.5	32	35	2470	128	140
6381EF35	35	276/0.4	1	1.4	2.2	14.3	15.8	605	57.2	63.2
6383EF35	35	276/0.40	3	1.4	3.8	29.3	31.8	1850	117.2	127.2
6384EF35	35	276/0.40	4	1.4	4.1	32.5	35.5	2645	130	142
6385EF35	35	276/0.40	5	1.4	4.4	35.7	38.7	2930	142.8	154.8
6381EF50	50	396/0.40	1	1.6	2.4	16.5	18.1	825	66	72.4
6383EF50	50	396/0.40	3	1.6	4.5	34.1	37.1	2890	136.4	148.4
6384EF50	50	396/0.40	4	1.6	4.8	37.7	40.7	3635	150.8	162.8
6385EF50	50	396/0.40	5	1.6	5.2	41.8	45.8	4450	167.2	183.2
6381EF70	70	360/0.50	1	1.6	2.6	18.6	20.1	1090	74.4	80.4
6383EF70	70	360/0.50	3	1.6	4.8	38.4	37.1	3850	153.6	148.4
6384EF70	70	360/0.50	4	1.6	5.2	42.7	46.7	4830	170.8	186.8
6385EF70	70	360/0.50	5	1.6	5.7	48.5	55	5938	194	220
6381EF95	95	475/0.50	1	1.8	2.8	20.8	23.3	1405	83.2	93.2
6383EF95	95	475/0.50	3	1.8	5.3	43.3	47.3	4185	173.2	189.2
6384EF95	95	475/0.50	4	1.8	5.9	48.4	52.4	6320	194	209.6
6385EF95	95	475/0.50	5	1.8	6.3	54	58	6695	216	232
6381EF120	120	608/0.50	1	1.8	3	22.8	25.3	1745	91.2	101.2
6383EF120	120	608/0.50	3	1.8	5.6	47.4	51.4	5080	189.6	205.6
6384EF120	120	608/0.50	4	1.8	6	53	57	6500	212	228
6385EF120	120	608/0.50	5	1.8	6.5	58	62	7542	232	248
6381EF150	150	756/0.50	1	2	3.2	25.2	28	1824	100.8	112
6383EF150	150	756/0.50	3	2	6	52	56.5	6267	208	226
6384EF150	150	756/0.50	4	2	6.5	58	63.3	8031	232	253.2
6381EF185	185	925/0.50	1	2.2	3.4	27.6	30.1	2202	110.4	120.4
6383EF185	185	925/0.50	3	2.2	6.4	57	61	7661	228	244
6384EF185	185	925/0.50	4	2.2	7	64	68	9830	256	272
6381EF240	240	1221/0.50	1	2.4	3.5	30.6	33.6	2847	122.4	134.4
6383EF240	240	1221/0.50	3	2.4	7.1	65	69	9692	260	276
6384EF240	240	1221/0.50	4	2.4	7.7	72	76	12444	288	304
6381EF300	300	1525/0.50	1	2.6	3.6	33.5	36.5	3495	134	167.6
6381EF400	400	2257/0.50	1	2.6	3.9	37.4	40.4	4880	149.6	161.6
6381EF500	500	1769/0.60	1	2.8	4.2	41.3	45.3	5301	165.2	181.2
6381EF630	630	2257/0.60	1	2.8	4.5	47.5	51.5	7460	190	206

## EXTREMEFLEX90 FLEXIBLE CABLE - CURRENT CARRYING CAPACITY (AMPS)

CONDUCTOR CROSS SECTIONAL AREA MM <sup>2</sup>	SINGLE CORE CABLES	2 CORE CABLE WITH OR WITHOUT PROTECTIVE CONDUCTOR	3 CORE CABLE	4 OR 5 CORE CABLE
(MM <sup>2</sup> )	(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 MM <sup>2</sup>	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

CONDUCTOR OPERATING TEMPERATURE: 90°C

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

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

THE INFORMATION CONTAINED WITHIN THIS DATASHEET IS FOR GUIDANCE ONLY AND IS SUBJECT TO CHANGE WITHOUT NOTICE OR LIABILITY. WE BELIEVE THE INFORMATION IS CORRECT AT THE TIME OF PUBLICATION. PLEASE NOTE WHEN SELECTING CABLE ACCESSORIES THAT ACTUAL CABLE DIMENSIONS MAY VARY DUE TO MANUFACTURING TOLERANCES.