

# ENVIROLEX® Flexible Single Core - 110°C

**Contact**  
 General Sales inquiries  
 Phone: 0508 NEXANS  
 sales.nz@nexans.com

Plain Annealed Copper conductor (Flexible), X-110 (XLPE) insulation, Halogen Free Flame Retardant HFS-110-TP sheath. 0.6/1 kV. Made to AS/NZS 5000.1

## DESCRIPTION

### Applications

Envirolex Single Core cable has multiple applications including switchboard wiring, pumps, power supplies, transformer LV switches, battery connections.

### Benefits

- Flame Retardant, Non Hazardous, No Heavy Metals, No Corrosive Emissions
- Low Smoke, Low Calorific Value
- Halogen free, PVC Best Practice (As per Green Building Council requirements)
- Easy to handle and install; No Mica Tape
- 110°C continuous operating temperature.
- Flexible Conductor (to be used in fixed application).
- Submersible to 500m



## STANDARDS

**National AS/NZS 5000.1**

## CHARACTERISTICS

### Construction characteristics

Conductor material	Copper
Type of conductor	Stranded flexible
Insulation	X-HF-110
Outer sheath	HFS-110-TP

### Electrical characteristics

Rated Voltage U <sub>o</sub> /U (Um)	0.6/ 1 (1.2) kV
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### Mechanical characteristics

Mechanical resistance to impacts	Very good
Cable flexibility	Flexible

### Usage characteristics

Flame retardant	Yes
U.V resistance	Yes
Smoke density	Low
Maximum operating temperature	110 °C
Minimum operating temperature	-25 °C



Rated Voltage U<sub>o</sub>/U (Um)  
 0.6/ 1 (1.2) kV



Mechanical resistance to impacts  
 Very good



Cable flexibility  
**Flexible**



Flame retardant  
**Yes**



U.V resistance  
**Yes**



Smoke density  
**Low**



Maximum operating temperature  
 110 °C



Minimum operating temperature  
 -25 °C

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## PRODUCT LIST

Nexans ref.	Cross section [mm²]	Max. DC Resist. Cond. 20°C [Ohm/km]	Max. diam. of wires [mm]	Nom. overall diam. [mm]	Sheath colour	Approx. weight [kg/m]
BZHX01AA001CXNA	10	1.91	0.21	8.5	Black	0.14
BZHX02AA001CXNA	16	1.21	0.21	9.8	Black	0.2
BZHX02AA001HTNA	16	1.21	0.21	9.8	Green / Yellow	0.2
BZHX03AA001CXNA	25	0.78	0.21	11.3	Black	0.3
BZHX03AA001HTNA	25	0.78	0.21	11.3	Green / Yellow	0.3
BZHX04AA001CXNA	35	0.554	0.21	12.6	Black	0.4
BZHX04AA001HTNA	35	0.554	0.21	12.6	Green / Yellow	0.4
BZHX05AA001CXNA	50	0.386	0.31	14.2	Black	0.54
BZHX05AA001HTNA	50	0.386	0.31	14.2	Green / Yellow	0.54
BZHX06AA001CXNA	70	0.272	0.31	16.2	Black	0.74
BZHX06AA001HTNA	70	0.272	0.31	16.2	Green / Yellow	0.74
BZHX07AA001CXNA	95	0.206	0.31	18.3	Black	0.99
BZHX07AA001HTNA	95	0.206	0.31	18.3	Green / Yellow	0.99
BZHE87AA001CXNA	120	0.161	0.51	20.7	Black	1.25
BZHE87AA001HTNA	120	0.161	0.51	20.7	Green / Yellow	1.25
BZHE88AA001CXNA	150	0.129	0.51	22.6	Black	1.5
BZHE89AA001CXNA	185	0.106	0.51	24.6	Black	1.79
BZHE90AA001CXNA	240	0.0801	0.51	27.7	Black	2.4
BZHE91AA001CXNA	300	0.0641	0.51	31.0	Black	2.9
BZHE92AA001CXNA	400	0.0486	0.51	35.4	Black	3.89
BZHE93AA001CXNA	500	0.0384	0.51	40.0	Black	4.98
BZHE94AA001CXNA	630	0.0287	0.51	44.0	Black	6.29



Rated Voltage Uo/U (Um)  
0.6/ 1 (1.2) kV



Mechanical resistance to impacts  
Very good



Cable flexibility  
Flexible



Flame retardant  
Yes



U.V resistance  
Yes



Smoke density  
Low



Maximum operating temperature  
110 °C



Minimum operating temperature  
-25 °C

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






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## CURRENT CARRYING CAPACITIES SINGLE PHASE (IN AMPS) - SINGLE CORE CU ENVIROLEX 110°C

Copper conductor - Circular Flexible stranded conductor Insulation X-HF-110 - Max. Conductor Temperature 110C


Conductor cross-section [mm <sup>2</sup> ]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
10	105	86	82	93	91	91	43
16	138	112	109	163	119	119	57
25	182	149	142	210	152	152	77
35	225	184	179	252	187	187	94
50	281	233	221	299	228	228	-
70	352	292	281	367	282	282	-
95	423	352	334	441	331	331	-
120	499	417	389	501	381	381	-
150	574	482	456	563	439	439	-
185	654	552	515	637	492	492	-
240	783	664	624	740	581	581	-
300	900	766	-	836	669	669	-
400	1076	920	-	952	778	778	-
500	1245	1069	-	1079	906	906	-
630	1454	1250	-	1217	1036	1036	-


 Unenclosed spaced from surface


 Unenclosed touching

 Enclosed conduit in air

 Buried direct

 Buried in multi-way duct

 Buried in single-way duct

 Cable surrounded by thermal insulation, unenclosed



Rated Voltage U<sub>o</sub>/U  
(Um)  
0.6/ 1 (1.2) kV



Mechanical resistance to impacts  
**Very good**



Cable flexibility  
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



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## CURRENT CARRYING CAPACITIES THREE PHASE (IN AMPS) - SINGLE CORE CU ENVIROLEX 110°C

Copper conductor - Circular Flexible stranded conductor Insulation X-HF-110 Max. Conductor Temperature 110C


Conductor cross-section [mm <sup>2</sup> ]							
	Cu	Cu	Cu	Cu	Cu	Cu	Cu
10	91	86	75	82	81	81	43
16	120	112	97	138	103	103	57
25	159	149	129	178	133	133	77
35	197	184	158	213	160	160	94
50	249	232	203	251	199	199	-
70	312	292	250	308	243	243	-
95	378	352	296	369	284	284	-
120	447	417	354	420	335	335	-
150	516	482	404	472	378	378	-
185	592	552	469	533	428	428	-
240	712	663	576	618	510	510	-
300	820	764	655	696	575	575	-
400	982	915	810	791	687	687	-
500	1138	1059	924	894	773	773	-
630	1327	1235	1063	1004	878	878	-


 Unenclosed spaced from surface


 Unenclosed touching

 Enclosed conduit in air

 Buried direct

 Buried in multi-way duct

 Buried in single-way duct

 Cable surrounded by thermal insulation, unenclosed



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(Um)  
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## NOTE

1. Content from AS/NZS 3008.1.2:2010 has been reproduced with the permission from Standards New Zealand under Copyright Licence 00926. Please see the standard for full details.
2. The current ratings in the above tables are only for flexible cables installed in a fixed installation
3. The values in the above table are based on typical New Zealand conditions of:-  
Ambient Air Temperature 30°C  
Soil Temperature 15°C  
Soil Thermal resistivity 1.2 K.m/W  
Depth of Burial 0.5 m