ENVIROLEX® Flexible Single Core - 110°C

CU ENVIRO RHE-1-FLEX 50 BK 110

Contact
Sales and Customer Solutions
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Nexans Ref.: BZHX05AA001CXNA
Country Ref.: 2647

Plain Annealed Copper conductor (Flexible), X-HF-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
Sheath colour	Black
Outer sheath	HFS-110-TP
Conductor flexibility	Class 5
Conductor shape	Circular
With Green/Yellow core	No
With smaller neutral conductor	No
Dimensional characteristics	
Conductor cross-section	50 mm²
Maximum diameter of wires	0.31 mm
Nominal overall diameter	14.2 mm

Conductor flexibility
Class 5

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

Cable flexibility
Flexible

Mechanical resistance to impacts
Very good

Flame retardant
Yes

Max.conductor temp.in service
110 °C

Smoke density
Low

U.V resistance
Yes

All drawings, designs, specifications, plans and particulars of weights, size and dimensions contained in the technical or commercial documentation of Nexans is indicative only and shall not be binding on Nexans or be treated as constituting a representation on the part of Nexans.

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Dimensional characteristics	
Approximate weight	0.54 kg/m
Neutral conductor section (when smaller)	- mm²
Number of cores	1
Electrical characteristics	
Conductor AC resistance at 50 Hz	0.523 Ohm/km
Inductive reactance at 50Hz - flat touching	0.105 Ohm/km
Inductive reactance at 50Hz - trefoil	0.0901 Ohm/km
Insulation resistance at 20°C	250 MOhm.km
Max. DC resistance of the conductor at 20°C	0.386 Ohm/km
Rated Voltage Uo/U (Um)	0.6/ 1 (1.2) kV
Mechanical characteristics	
Cable flexibility	Flexible
Maximum Pulling Tension	3.5 kN
Mechanical resistance to impacts	Very good
Usage characteristics	
Flame retardant	Yes
Max. conductor temperature in service	110 °C
Smoke density	Low
U.V resistance	Yes
Minimum Bending Radius during installation	9 (xD)
Bending factor when installed	D>25mm: 6 (xD); D<25mm: 4 (xD)
Maximum operating temperature	110 °C
Minimum operating temperature	-25 °C

Conductor flexibility
Class 5

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

Cable flexibility
Flexible

Mechanical resistance to impacts
Very good

Flame retardant
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Max.conductor temp.in service
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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 [mm²]	Cu	Cu	Cu	Cu	Cu	Cu	Cu
50	281	233	221	299	228	228	-

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

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 [mm²]	Cu	Cu	Cu	Cu	Cu	Cu	Cu
50	249	232	203	251	199	199	-

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

Conductor flexibility
Class 5

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

Cable flexibility
Flexible

Mechanical resistance to impacts
Very good

Flame retardant
Yes

Max.conductor temp.in service
110 °C

Smoke density
Low

U.V resistance
Yes

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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

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