We connect and protect

IBS Advanced Round Insulated Braided Conductor, 400 A, 120 mm², 830 mm

Data Solutions

CATALOG NUMBER

IBSADV120-830

IBS Advanced Round Insulated Braided Conductor, Halogen Free are the ideal ready-to-install flexible wire replacement solution. Round IBS Advanced connect to the terminals of an electrical device without the need for additional accessories, such as angular connectors, spreaders, ring terminal connectors or extenders. Round IBS Advanced are available in cross sections of 120, 185 and 240 mm² (236.82, 365.10, and 473.65 kcmil), lengths from 330 to 1,030 mm (9.06" to 40.55"), and amperages ranging from 420 to 630 A.

Manufactured in an ISO 9001 2015 certified automated facility, round IBS Advanced is formed by weaving high-quality electrolytic copper wire to form a durable low voltage connector with maximum flexibility that allows for more compact power connections to electrical devices. The round IBS Advanced allows users to reduce the total size and weight of the installation, improving both design flexibility and assembly aesthetics.

The round IBS Advanced features pre-punched palms that are ready to connect out of the box. There are no lugs to purchase or install, making connections simpler and faster and eliminating faulty connections due to vibration or fatigue.

The advanced technology insulation is a high-resistance low smoke, halogen-free and flame retardant thermoplastic.

Round IBS Advanced does not generate corrosive gases and produces a relatively low smoke opacity in accordance with IEC 61034-2 and UL 2885. The low smoke characteristic improves the visibility conditions for people to be able to easily locate the emergency exit and also allows rescue workers to better assess an emergency situation. Round IBS Advanced means greater safety for individuals, less damage for your electrical equipment and less environmental impact.

The halogen–free feature enables a reduction in the quantity of toxic smoke. Round IBS Advanced does not contain any halogens, according to IEC 60754-1 and UL 2885, minimizing toxicity and making it the ideal product for use in enclosed spaces such as data centers, rail, and public facilities such as hospitals and schools. This also facilitates the use of round IBS Advanced in specific applications such as submarines, switchboards and other enclosed environments that require a low emissions solution.

In addition to the above features, round IBS Advanced is also compliant with the UL 94-V0 testing standard and Glow wire test 960 °C. The flame retardant portion of the test illustrates the self-extinguish feature. This superior feature of round IBS Advanced is also shown by the Limiting Oxygen Index (LOI) at 30%. In case of fire, round IBS Advanced generates a limited quantity of smoke that is less damaging to your electrical equipment.

CERTIFICATIONS

FEATURES

- Resistant to vibration, improving reliability and performance
- Insulated by high-resistance, halogen free, flame retardant and low smoke material
- Tinned copper provides superior corrosion resistance
- Improves assembly flexibility and aesthetics
- Quick and easy installation
- No additional cutting, stripping, crimping and punching needed
- Conforms to NF EN 45545 obtaining an HL3 classification for chapters R22 and R23
- Small wire diameter provides maximum flexibility
- Dramatically smaller and more flexible than comparable cable based on ampacity
- Better power density than cable with lower skin effect ratio
- Reduces total installation cost
- RoHS compliant

PRODUCT ATTRIBUTES

Article Number: 534518

Typical Application Current Rating: 400A

Material: Copper; Thermoplastic Elastomer

Finish: Tinned

Dielectric Strength: 20

Flammability Rating: UL® 94V-0

Halogen Free Rating: UL® 2885; IEC® 60754-1; IEC® 62821-1

Low Smoke Rating: IEC® 61034-2; ISO 5659-2; UL® 2885

UV Resistance Rating: UL® 854; UL® 2556

Insulation Elongation: 500%

Insulation Thickness: 1.8mm

Working Temperature: −50 to 115°C

Max Working Voltage, UL 67: 600

Max Working Voltage, IEC/UL 758: 1000; 1500

Max Working Voltage, EN 50264-3-1: 6000V

Wire Diameter: 0.15mm

Certification Details: UL® 67; UL® 758

Complies With: IEC® 60439.1; IEC® 60695-2-11 (Glow Wire Test 960 °C); IEC® 61439.1; IEC® 61439.1 Class II

Cross Section: 120mm²

Conductor Width: 24mm

Conductor Thickness: 10mm

Length (L): 830mm

A: 12mm

Diameter (Ø): 27mm

Hole Size (HS): 10.5mm

Unit Weight: 1.22kg

ADDITIONAL PRODUCT DETAILS

ΔT = Temperature of conductors – Internal temperature of panel.

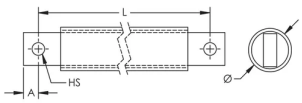
This table indicates the temperature rise produced by chosen current in the given section. This calculation does not take into account the heat dissipation from the switch gear.

Distance between supports must not exceed 630 mm (17.8") according to IEC 61439-1.

Maximum Ampacity Ratings

Cross Section (mm²/kcmil)	ΔT 30° C (A)	ΔT 40° C (A)	ΔT 45° C (A)	ΔT 50° C (A)	ΔT 55° C (A)	ΔT 60° C (A)	ΔT 70° C (A)	2 Bar Current Coefficient
120/236.82	325	376	398	420	441	460	497	1.6
185/365.10	407	470	499	526	552	576	622	1.6
240/473.65	488	563	598	630	661	690	745	1.6

DIAGRAMS



WARNING

nVent products shall be installed and used only as indicated in nVent's product instruction sheets and training materials. Instruction sheets are available at www.nvent.com and from your nVent customer service representative. Improper installation, misuse, misapplication or other failure to completely follow nVent's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death and/or void your warranty.

Our powerful portfolio of brands:

CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE

©2026 nVent. All nVent marks and logos are owned or licensed by nVent Services GmbH or its affiliates. All other trademarks are the property of their respective owners. nVent reserves the right to change specifications without notice.

This document is system-generated.