

# IBS Advanced Round Insulated Braided Conductor, Halogen Free

## Data Solutions

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 mm<sup>2</sup> (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

SPECIFICATIONS

Wire Diameter:	0.01in
Insulation Thickness:	0.07in
Dielectric Strength:	20
Insulation Elongation:	500%

<b>Max Working Voltage, UL 67:</b>	600
<b>Max Working Voltage, IEC/UL 758:</b>	1000; 1500
<b>Max Working Voltage, EN 50264-3-1:</b>	6000V
<b>Material:</b>	Copper; Thermoplastic Elastomer
<b>Complies With:</b>	IEC® 60439.1; IEC® 60695-2-11 (Glow Wire Test 960 °C); IEC® 61439.1; IEC® 61439.1 Class II
<b>Halogen Free Rating:</b>	UL® 2885; IEC® 60754-1; IEC® 62821-1
<b>Low Smoke Rating:</b>	IEC® 61034-2; ISO 5659-2; UL® 2885
<b>Finish:</b>	Tinned
<b>UV Resistance Rating:</b>	UL® 854; UL® 2556
<b>Certification Details:</b>	UL® 67; UL® 758
<b>Flammability Rating:</b>	UL® 94V-0
<b>Working Temperature:</b>	-58 to 239°F

Table 1/2

Catalog Number	Article Number	Typical Application Current Rating	Cross Section	Conductor Width	Conductor Thickness	Length (L)
IBSADV120-1030	534519	400A	236.82kcmil	0.94in	0.39in	40.55in
IBSADV120-330	534514	400A	236.82kcmil	0.94in	0.39in	12.99in
IBSADV120-430	534515	400A	236.82kcmil	0.94in	0.39in	16.93in
IBSADV120-530	534516	400A	236.82kcmil	0.94in	0.39in	20.87in
IBSADV120-630	534517	400A	236.82kcmil	0.94in	0.39in	24.8in
IBSADV120-830	534518	400A	236.82kcmil	0.94in	0.39in	32.68in
IBSADV185-1030	534525	500A	365.1kcmil	0.94in	0.59in	40.55in
IBSADV185-330	534520	500A	365.1kcmil	0.94in	0.59in	12.99in
IBSADV185-430	534521	500A	365.1kcmil	0.94in	0.59in	16.93in
IBSADV185-530	534522	500A	365.1kcmil	0.94in	0.59in	20.87in

CatalogNumber	Article Number	Typical Application Current Rating	Cross Section	Conductor Width	Conductor Thickness	Length (L)
IBSADV185-630	534523	500A	365.1kcmil	0.94in	0.59in	24.8in
IBSADV185-830	534524	500A	365.1kcmil	0.94in	0.59in	32.68in
IBSADV240-1030	534531	630A	473.65kcmil	1.26in	0.59in	40.55in
IBSADV240-330	534526	630A	473.65kcmil	1.26in	0.59in	12.99in
IBSADV240-430	534527	630A	473.65kcmil	1.26in	0.59in	16.93in
IBSADV240-530	534528	630A	473.65kcmil	1.26in	0.59in	20.87in
IBSADV240-630	534529	630A	473.65kcmil	1.26in	0.59in	24.8in
IBSADV240-830	534530	630A	473.65kcmil	1.26in	0.59in	32.68in

Table 2/2

Catalog Number	Article Number	A	Diameter (Ø)	Hole Size (HS)	Unit Weight
IBSADV120-1030	534519	0.47in	1.06in	0.41in	3.53lb
IBSADV120-330	534514	0.47in	1.06in	0.41in	1.15lb
IBSADV120-430	534515	0.47in	1.06in	0.41in	1.46lb
IBSADV120-530	534516	0.47in	1.06in	0.41in	1.76lb
IBSADV120-630	534517	0.47in	1.06in	0.41in	2.07lb
IBSADV120-830	534518	0.47in	1.06in	0.41in	2.69lb
IBSADV185-1030	534525	0.47in	1.22in	0.41in	5.07lb
IBSADV185-330	534520	0.47in	1.22in	0.41in	1.81lb

Catalog Number	Article Number	A	Diameter (Ø)	Hole Size (HS)	Unit Weight
IBSADV185-430	534521	0.47in	1.22in	0.41in	2.36lb
IBSADV185-530	534522	0.47in	1.22in	0.41in	2.78lb
IBSADV185-630	534523	0.47in	1.22in	0.41in	3.26lb
IBSADV185-830	534524	0.47in	1.22in	0.41in	4.19lb
IBSADV240-1030	534531	0.51in	1.42in	0.49in	7.05lb
IBSADV240-330	534526	0.51in	1.42in	0.49in	2.36lb
IBSADV240-430	534527	0.51in	1.42in	0.49in	3.06lb
IBSADV240-530	534528	0.51in	1.42in	0.49in	3.62lb
IBSADV240-630	534529	0.51in	1.42in	0.49in	4.25lb
IBSADV240-830	534530	0.51in	1.42in	0.49in	5.42lb

## ADDITIONAL PRODUCT DETAILS

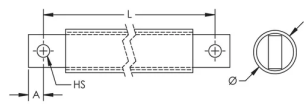
$\Delta T$  = Temperature of conductors – Internal temperature of panel.

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 (mm <sup>2</sup> /kcmil)	$\Delta T$ 30° C (A)	$\Delta T$ 40° C (A)	$\Delta T$ 45° C (A)	$\Delta T$ 50° C (A)	$\Delta T$ 55° C (A)	$\Delta T$ 60° C (A)	$\Delta T$ 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](http://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.



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