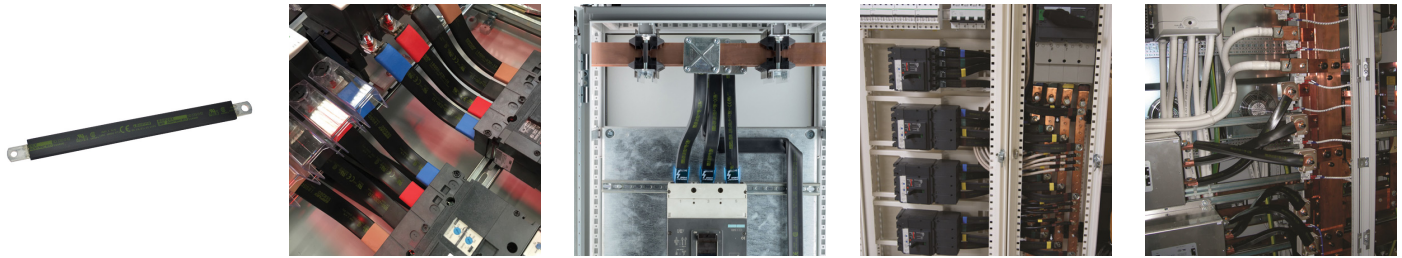


## IBS/IBSB Advanced Insulated Braided Conductor, Halogen Free – IBSBADV50-230 (534407)



IBS/IBSB Advanced Insulated Braided Conductor, Halogen Free is the ideal ready-to-install flexible wire replacement solution that is specifically designed for connections to all molded case circuit breakers, including the most compact breakers on the market. IBS/IBSB Advanced connects to the front access terminals of the breakers without any additional accessories, such as angular connectors, spreaders, ring terminal connectors or extenders. IBS/IBSB Advanced is available in cross sections of 25 to 240 mm<sup>2</sup> (49.34 to 273.65 kcmil), lengths from 230 to 1,030 mm (9.06" to 40.55"), and 80 to 700 A.

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

The unique manufacturing process of integral pre-punched palms make IBS/IBSB Advanced ready to connect out of the box. There are no lugs to purchase or install, making connections simpler and faster and eliminates faulty connections due to vibration or fatigue.

IBS/IBSB Advanced is compatible with all major brand molded case circuit breakers.

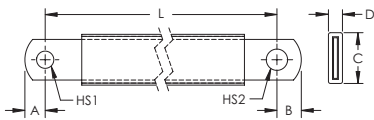
The advanced technology insulation is a high-resistance low smoke, halogen-free and flame retardant thermoplastic.

IBS/IBSB 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 visibility conditions for people to be able to easily locate the emergency exit and also allows rescue workers to better assess an emergency situation. IBS/IBSB 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. IBS/IBSB 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 IBS/IBSB Advanced in specific applications such as submarines, switchboards and other enclosed environments that require a low emissions solution.

In addition to the above features, IBS/IBSB Advanced is 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 IBS/IBSB Advanced is also shown by the Limiting Oxygen Index (LOI) at 30%. In case of fire, IBS/IBSB Advanced generates a limited quantity of smoke that is less damaging to your electrical equipment.

- Suitable for all main molded case circuit breakers
- 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
- Integral palm without lugs or terminals reduces material and assembly weight
- Conforms to NF EN 45545 obtaining an HL2 classification for chapters R22 and R23
- DNV GL® and Bureau Veritas certified for marine and offshore applications
- 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
- Tinned copper allows for copper or aluminum conductor connections
- On request, can be manufactured with other colors (typically with Orange sleeve for battery connection)



Part Number	IBSBADV50-230
Article Number	534407
Typical Application Current Rating	250 A
Peak Short Circuit Current (I <sub>pk</sub> )	30 kA
Finish	Tinned
Material	Copper Thermoplastic Elastomer
Dielectric Strength	20 kV/mm
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	1.8 mm
Max Working Voltage, IEC/UL 758	1,000 VAC 1,500 VDC
Max Working Voltage, UL 67	600 VAC/DC
Working Temperature	-50 to 115 °C
Wire Diameter	0.15 mm
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	50 mm <sup>2</sup>

Part Number	IBSBADV50-230
Conductor Width	20 mm
Conductor Thickness	2.8 mm
Length [L]	230 mm
A	9 mm
B	11 mm
C	27 mm
D	8 mm
Hole Size 1 (HS1)	8.5 mm
Hole Size 2 (HS2)	10.5 mm
Certifications	ABS INSULATED BRAIDS Bureau Veritas 41939 BV CE CSA 70173298 CSA 90005 cURus DNV GL IBS/IBSB Advanced, TAE00003B8 EAC 0254922 (Russian Federation) EN 45545-2 IBS/IBSB Advanced IEC 60695-2-12 CC11418_FADV IEC 61439-1 Class II IBSB_ADV IEC 61439-1 IBSB_ADV ISO 5659-2 CC11518_FADV RoHS UL UL (IEC) AVL2.E316390
Standard Packaging Quantity	10 pc
UPC	78285696085
EAN-13	0782856960850

Maximum Ampacity Ratings									
Cross Section (mm <sup>2</sup> /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	3 Bar Current Coefficient
25/49.34 (IBSB)	116	134	142	150	157	164	177	1.6	2
25/49.34 (IBS)	137	158	167	177	185	193	209	1.6	2
50/98.68	213	246	260	274	288	301	325	1.6	2
70/138.15	226	261	277	291	306	319	345	1.6	2
100/197.35	298	344	365	385	404	422	456	1.6	2
120/236.82	363	419	444	468	491	513	554	1.6	2
185/365.1	416	480	509	537	563	588	635	1.6	2
240/473.65	556	642	681	718	753	786	849	1.6	2

Circuit Breaker Compatibility									
Circuit Breaker Current Rating	125/160 A		250 A		300 A	350 A	400 A	500 A	630 A
Part Number	IBSBADV25x	IBSADV25x	IBSBADV50x	IBSADV50x	IBSBADV70x	IBSBADV100x	IBSBADV120x	IBSBADV185x	IBSBADV240x
Schneider Electric® Compact® (IEC)	NSA NG 125	NSX 100 NSX 160	NSX 250	NSX 250	NSX 400	NSX 400	NSX 400	NSX 630	NSX 630
Square D® PowerPact® (UL)	H-Frame	J-Frame	J-Frame	J-Frame	L-Frame	L-Frame	L-Frame	-	-
ABB® Tmax® (IEC)	T1 T2 XT1 XT2	-	T3 XT3 XT4	T3 XT3 XT4	T4	T4	T5	T5	T5
ABB® Tmax® (UL)	T1 T2	T3	T4 XT3	T4	T5	T5	T5	-	-

Circuit Breaker Compatibility									
Circuit Breaker Current Rating	125/160 A		250 A		300 A	350 A	400 A	500 A	630 A
Part Number	IBSBADV25x	IBSADV25x	IBSBADV50x	IBSADV50x	IBSBADV70x	IBSBADV100x	IBSBADV120x	IBSBADV185x	IBSBADV240x
	XT1 XT2		XT4						
GE® Record Plus® (IEC/UL)	FD 160	FD 160	FE 250	FE 250	FG 400	FG 400	FG 400	FG 630	FG 630
Siemens® Sentron® (IEC/UL)	VL160X 3VL1 VL160 3VL2	-	VL250 3VL3	VL250 3VL3	VL400 3VL4	VL400 3VL4	VL400 3VL4	-	-
Moeller® xEnergy® (IEC)	NZM1	-	NZM2	NZM2	NZM3	NZM3	NZM3	NZM3	NZM3
Cutler Hammer® Series G (UL)	EG Frame	JG Frame	JG Frame	JG Frame	LG Frame	LG Frame	LG Frame	LG Frame	LG Frame
Legrand® (IEC)	DPX 160 DPX3 160	-	DPX 250 DPX3 250	DPX 250 DPX3 250	DPX 630	DPX 630	DPX 630	DPX 630	DPX 630
Hager® (IEC)	h3 160	-	h3 250	h3 250	h3 630	h3 630	-	-	-
Rockwell/Allen Bradley (UL)	G-Frame H-Frame	-	I-Frame J-Frame	I-Frame J-Frame	I-Frame J-Frame	-	K-Frame	K-Frame	-
Mitsubishi Electric (IEC)	-	NF125 NF160 DSN125 DSN160	NF250 DSN250	NF250 DSN250	-	NF400 DSN400	-	-	-
OEZ (IEC)	BC160N	-	BD250N BD250S	-	BH630B BH630S	BH630B BH630S	BH630B BH630S	BH630B BH630S	BH630B BH630S

$\Delta T$  = 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.

IBSB Advanced Insulated Braided Conductor with a cross section of 240 mm<sup>2</sup> (473.65 kcmil) is constructed of red copper strands with tinned palms.

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

ABB is a registered trademark of ABB Asea Brown Boveri Ltd. ABS is a registered certification mark of American Bureau of Shipping. CSA, CSA-US and C-CSA-US are registered trademarks of Canadian Standards Association. DNV GL and the Horizon Graphic are trademarks of DNV GL AS. GE and Record Plus are registered trademarks of General Electric Company. Hager is a registered trademark of the Hager Group. IEC is a registered trademark of the International Electrotechnical Commission. Legrand is a registered trademark of Legrand North America, Inc. Moeller, xEnergy, and Cutler Hammer are registered trademarks of Eaton Corporation. Schneider Electric and Compact are registered trademarks of Schneider Electric SA. Siemens and Sentron are registered trademarks of Siemens Aktiengesellschaft. Square D and PowerPact are registered trademarks of SNA Holdings Inc. Tmax is a registered trademark of ABB SACE Spa. UL, UR, cUL, cUR, cULus and cURus are registered certification marks of UL LLC.

#### 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.erico.com](http://www.erico.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.

© 2021 nVent All rights reserved

nVent, nVent CADDY, nVent ERICO, nVent ERIFLEX and nVent LENTON are owned by nVent or its global affiliates.

All other trademarks are the property of their respective owners. nVent reserves the right to change specifications without prior notice.