

# IBSB Advanced Insulated Braided Conductor, 250 A, 50 mm<sup>2</sup>, 430 mm

## Data Solutions

### NUMER KATALOGOWY

### IBSBADV50-430

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 2015 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.

## CERTYFIKATY



## FUNKCJE

Łatwy i prosty montaż

Zgodność z normą RoHS

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

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 HL3 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

Tinned copper allows for copper or aluminum conductor connections

On request, can be manufactured with other colors (typically with Orange sleeve for battery connection)

## ATRYBUTY PRODUKTU

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Numer artykułu: 534409

Prąd znamionowy typowego zastosowania: 250A

Szczytowy prąd zwarcia (I<sub>pk</sub>): 30kA

Wykończenie: Cynowany

Materiał: Miedź; Elastomer termoplastyczny

Wytrzymałość dielektryczna: 20

Klasyfikacja palności: UL® 94V-0

Bez zawartości halogenów: UL® 2885; IEC® 60754-1; IEC® 62821-1

Niska wartość emisji dymu: IEC® 61034-2; ISO 5659-2; UL® 2885

Odporność na promieniowanie UV: UL® 2556; UL® 854

Wydłużenie izolacji: 500%

Grubość izolacji: 1.8mm

Maks. napięcie robocze, UL 67: 600

Temperatura robocza: -50 to 115°C

Maks. napięcie robocze, IEC/UL 758: 1000; 1500

Maks. napięcie robocze, EN 50264-3-1: 6000V

Średnica drutu: 0.15mm

Szczegóły dotyczące certyfikacji: UL® 67; UL® 758

Zgodność z: IEC® 60439.1; IEC® 60695-2-11 (próba rozżarzonego drutu 960°C); IEC® 61439.1; IEC® 61439.1 klasa II

Przekrój: 50mm<sup>2</sup>

Szerokość przewodu: 20mm

Grubość przewodu: 2.8mm

Długość (L): 430mm

A.: 9mm

B.: 11mm

C.: 27mm

D.: 8mm

Rozmiar otworu 1 (HS1): 8.5mm

Rozmiar otworu 2 (HS2): 10.5mm

Masa urządzenia: 0.27kg

## DODATKOWE INFORMACJE O PRODUKCIE

$\Delta T$  = 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.

| 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 | 3 Bar Current Coefficient |
| 25/49.34                               | 116                  | 134                  | 142                  | 150                  | 157                  | 164                  | 177                  | 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                         |

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|--|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|----------------------|---------------------------|---------------------------|
| 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 | 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                         |
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| 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<br>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<br>XT2             | -                                  | T3 XT3 XT4          | T3 XT3 XT4          | T4                  | T4               | T5               | T5               | T5               |
| ABB® Tmax® (UL)                    | T1 T2 XT1<br>XT2             | T3                                 | T4 XT3 XT4          | T4                  | T5                  | T5               | T5               | -                | -                |
| 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<br>3VL1 VL160<br>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<br>DPX3 160          | -                                  | DPX 250<br>DPX3 250 | DPX 250<br>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-<br>Frame          | -                                  | I-Frame J-<br>Frame | I-Frame J-<br>Frame | I-Frame J-<br>Frame | -                | K-Frame          | K-Frame          | -                |
| Mitsubishi Electric (IEC)          | -                            | NF125<br>NF160<br>DSN125<br>DSN160 | NF250<br>DSN250     | NF250<br>DSN250     | -                   | NF400<br>DSN400  | -                | -                | -                |
| OEZ (IEC)                          | BC160N                       | -                                  | BD250N<br>BD250S    | -                   | BH630B<br>BH630S    | BH630B<br>BH630S | BH630B<br>BH630S | BH630B<br>BH630S | BH630B<br>BH630S |

## SCHEMATY



## OSTRZEŻENIE

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Produkty nVent powinny być instalowane i używane wyłącznie zgodnie z instrukcjami i materiałami szkoleniowymi nVent. Instrukcje są dostępne na stronie [www.nvent.com](http://www.nvent.com) oraz u przedstawiciela działu obsługi klienta firmy nVent. Nieprawidłowa instalacja, niewłaściwe użycie, niewłaściwe zastosowanie lub inne nieprzestrzeganie instrukcji i ostrzeżeń nVent może spowodować nieprawidłowe działanie produktu, uszkodzenie mienia, poważne obrażenia ciała i śmierć i/lub utratę gwarancji.



Marki w naszej ofercie:

**CADDY ERICO HOFFMAN ILSCO SCHROFF TRACHTE**

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