

ELSEWEDY
ELECTRIC

BUSWAY

BUSWAY
BROCHURE





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ELSEWEDY ELECTRIC

Integrated Energy Solutions

Group strategy and market opportunities

Elsowedy Electric 80 years ago, we started with a clear vision to position Elsowedy Electric for successful growth, inspired by innovation, determination and spirit of hardworking staff, empowered and liberated by a strong enterprise system. Since our start, we made the decision of never sacrificing integrity for growth & this same motto did not change till today.

Behind our success is professional dedicated team and the latest technologies which deliver comprehensive product portfolio and unmatched services. Elsowedy Electric always delivers top-rated products & services that customers need with the highest quality.

Elsowedy Electric is a conglomerate that specializes in Infrastructure, products and solutions. We are segmented to 5 divisions: Wire & Cable, Electrical Products, Engineering & Contracting, Smart Infrastructure and Infrastructure Investments. Our founding fathers started the journey back in 1938 and we have been growing ever since to be what we are now, the biggest infrastructure solutions provider in the Middle East and Africa.

Behind our success is 15,000 professionals located in 45 countries using the latest technologies to design and engineer a vast product portfolio and unmatched services. We strive to deliver top-quality products & services that meet our customers' expectations while adding value to the communities we serve.

FINANCIAL STRENGTH | PRODUCT DIVERSITY | SECTOR EXPERTISE | GEOGRAPHICAL REACH

23
Giga Watts
Total number
of delivered
power

4K+
KiloMeters
Overhead
Transmission
Lines

23K+
KiloMeters
Distribution
Networks

2.9^{USD}
billion
Revenue

95+
Substations
Indoor & Outdoor
Substations

25M
Square Meters
Sustainable
Industrial
Communities

Factory Brief

Elsewedy Busway

Our factory is located in the 10th of Ramadan city- Egypt, built on 36,271 meter square with 50% covered area; projected to be one of the largest factories in MEA region with a production capacity of sandwiched non-ventilated busway from 630 A to 6300A copper conductor and 630 A to 5000 A Aluminum (bimetal) conductor.

36,271 m²
Factory Total area

Quality System & Environmental Management



9001:2015



14001:2015



31000
Risk-Management



Services



Pre-sales Customer Services

Site take off, technical review, design check & customer data analysis to build a BOM



Full Design Package

(Busway software)



Emergency Production Teams



Fast Response & Delivery Time



24/7 After Sales Hotline (Services van)



After sales Customer Services

Site supervision, installation, testing & commissioning

R&D and Test Lab

- In house R&D team

- Elsewedy Certified Laboratory Capable of:

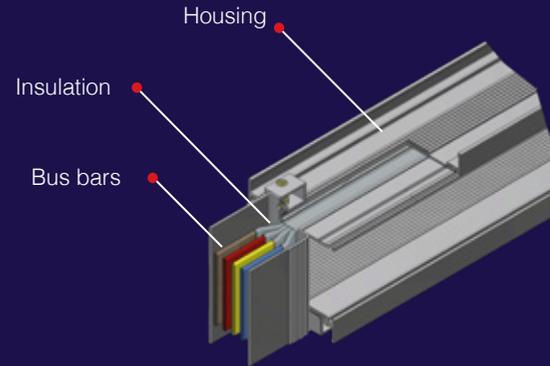
- 1- Temperature Rise Test
- 2- Impulse Test
- 3- Epoxy Insulation Test

- High Precision Electrical Measurements



Product Overview

The busway is a prefabricated electrical distribution system consisting of dielectric insulated bus bars in a protective enclosure / housing, including straight lengths, fittings, devices, and accessories.



Why Busway?

- Easy Installation
- Compact Design
- Distribution of loads
- Reduced Dimensions
- Long Life
- Flexibility
- Excellent short Circuit
- Economical and cost saving

Product Competitive Edges

- Elsewedy busway produces both insulation Epoxy or PET class B/F class.
- Powder coated extruded aluminum housing best performance.
- IP 54 and IP-65 are available.
- One bolt joint design easy in installation.
- Smart Busway with temprature monitoring (Optional Solution).
- In-house installation team.
- In-house test lab accredited by ASTA.

Busway System Application



High rise buildings



Airports and high security installation



Data centers



Oil & Gas



Hospitals

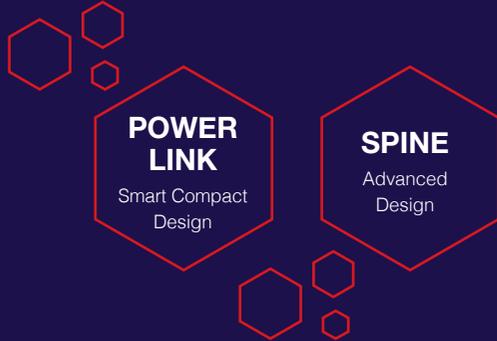


Commercial and residential structure



Plants / Factories

Product Range



- Our Busway complies to IEC 61439-1&6 and is certified by ASTA.
- Available with TPN as standard configuration and TPNE with 50% upon request.

		Busway Range												
Housing Material	Conductor	Current Rating (A)												
Al		630	800	1000	1250	1350	1600	2000	2250	2500	3200	4000	5000	6300
●	Cu	[Red bar representing current ratings 630-6300A]												
●	Al Bi-metal	[Red bar representing current ratings 630-5000A]												
Insulation Type	Insulation Class	IP	Frequency	Voltage										
Epoxy	B/F	54 & 65	50/ 60	Up to 1000 V										
PET	B/F	54 & 65	50/ 60	Up to 1000 V										

- Copper Conductor with end Tin/Silver Plating
- Aluminum Bi-metal Conductor with end Silver Plating

Product Features

1- Housing:

- Powder coated extruded aluminum housing.
- Lightweight aluminum is easier to handle and install which in return saves more labor cost, installation time and serves best heat dissipation over surface.
- High efficiency compact (sandwiched) design, totally enclosed & no ventilated.
- Internal ground bar 50% available for both aluminum and copper bars busway.

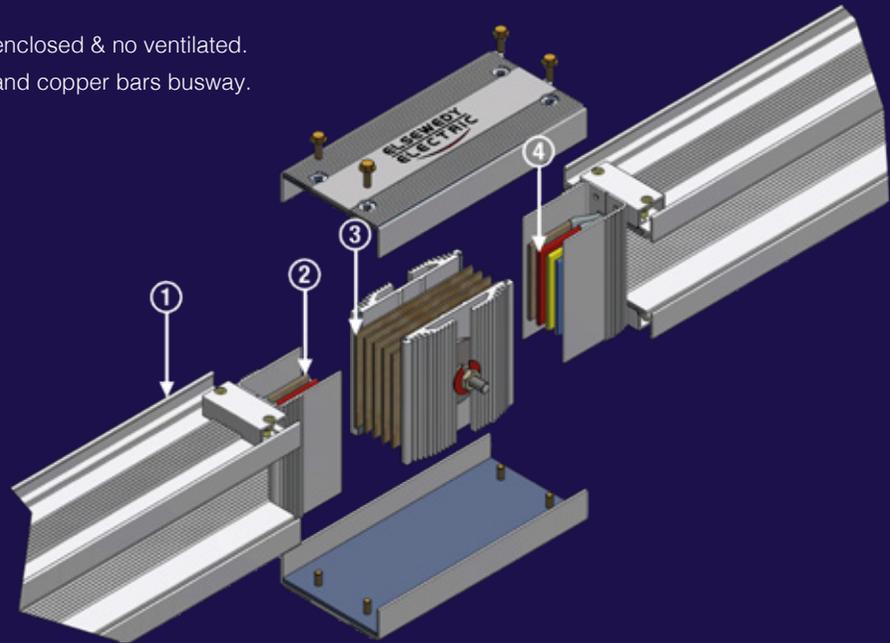
2- Conductors:

Copper:

- Highly Conductive, electrical Grade Copper.
- 99,999 % oxygen free purity
- Mill Certificate for each batch upon request.
- Tin / Silver Plating.

Aluminum bi-metal:

- Highly Conductive, electrical Grade Aluminum.
- Silver Plating.





3- Insulation:

Epoxy

- Elsewedy busway plant is the first and the largest factory in Africa that provide Epoxy insulation.
- Available in both classes: B/F.
- Most sophisticated automatic electrostatic epoxy coating plant in house ensures homogenous and reliable insulation.
- Halogen & toxic free.
- V0 flammability class.

PET Film

- Available in both classes: B/F.
- Automatic modern PET cutting and pocketing machine in house ensures homogenous and reliable insulation.

4- Tin/ Silver Plating:

- Tin plating is standard on all busway copper conductors at all contact points, and silver plating is available upon request.
- Silver plating system is standard on all busway aluminum (Bimetal) conductors at all contact points.
- The plating process takes place in house in our factory.

Busway Main Components

Straight Length (400 - 4000 mm):

- **Feeder**

No opening.

- **Plug in**

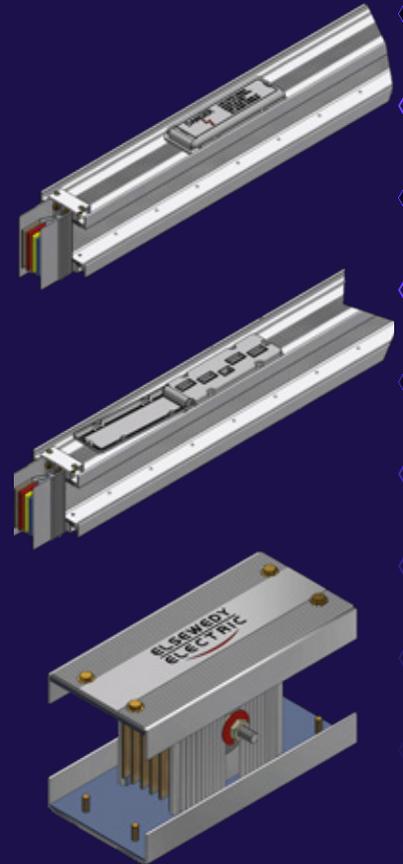
Openings on both sides, openings located on both sides for optimum utilization.

- **Riser**

Openings on one side. Unusable plug-in outlets in vertical position are eliminated.

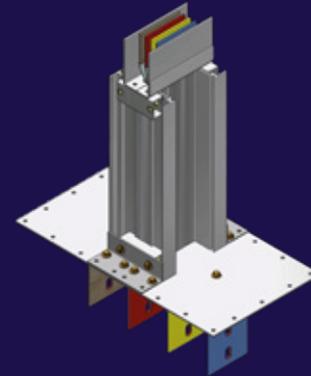
Joint Pack:

- Joint-Pak is standard on Elsewedy Busway system.
- Single bolt connection makes installation faster.
- Belleville washer provides equal pressure across the complete joint contact area to assure proper electrical contact.
- Double surface contact guarantees good current continuity.
- Joint temperature monitoring (optional solution).



Flanged End:

- Flanged-end unit allows the busway to be connected to a switchboard's bus-bar or to the terminals of an transformer, generator set, etc.



Tap Off Boxes:

- Easy and reliable installation.
- Eliminates forces against plugs during installation.
- Absolute safety solution.
- smart design to accept many type/ model/ brand of standard breakers.
- Equipped with mechanical interlock mechanism; cannot be removed from the busway when the box is at 'on' position.
- IP54 protection.
- Plugin Contacts silver plated.



Hangers (Trapeze Hanger & Spring):

There are two types of support for installing the Busway:

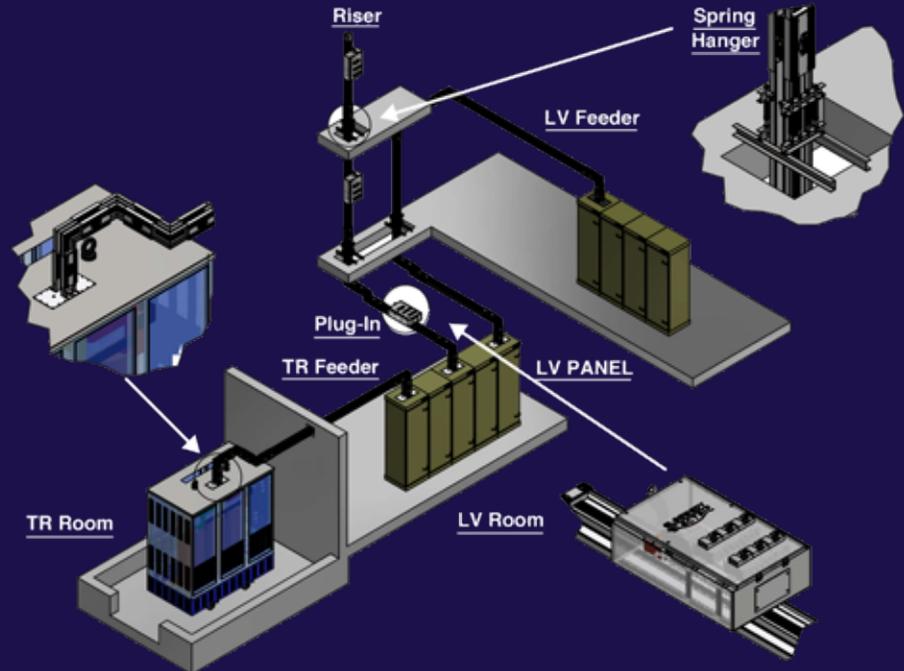
- Trapeze hanger for horizontal installation.
- Spring hanger for vertical installation.

For installing the busway vertically, they ensure:

- Height and depth adjustment.
- Load sharing.
- Absorption of expansions, vibrations, etc.

Accessories (Compact sizes):

- Elbow
- Tee
- End Flange
- Combination
- Reducer
- Offset
- Expansion
- End cap



Certificates

IEC Full Type Tested and Certified for each and every Rating from ASTA:



Verification of Strength of materials and parts according to Cl. no: 10.2

- Resistance to corrosion- Severity test A (Clause 10.2.2)
- Properties of insulating materials (Clause 10.2.3).
- Verification of resistance of insulating materials to abnormal heat and fire due to internal electric effects (Clause 10.2.3.2).
- Lifting (Clause 10.2.5) for the highest rating in Single stack, double stack & triple stack
- Mechanical Impact (Clause 10.2.6)
- Marking (Clause 10.2.7)
- Ability to withstand mechanical loads (clause 10.2.101)

Verification of degree of protection (IP65) according to Cl. no: 10.3

Verification of clearances and creepage distances according to Cl. No: 10.4

Verification of the effectiveness of the protective circuit according to Cl. no: 10.5

Verification of dielectric properties according to Cl. no:10.9

Verification of temperature rise (Horizontal orientation) according to Cl.no: 10.10

Verification of short circuit withstand strength according to Cl.no:10.11

Resistance to flame-propagation Cl. no: 10.101

Fire resistance in building penetrations Cl. no 10.102

Verification of phase conductor characteristics according to Annexure BB, CC & DD





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