



GENERAL PRODUCT CATALOG

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ABOUT

ABOUT US

Products and Manufacturing

Armtek, owned by Armin Elektrik AŞ under the Kologlu Holding Group, commenced its manufacturing operations on 01.01.2018. The company aims to achieve high technology standards and sustainable growth.



Mission

To provide services through a corporate quality approach formed within the framework of modern technology utilization, expert human resources, and accumulated know-how, by implementing an investment policy shaped around the principles of being a pioneer and creating differentiation.

Acting on the principle that long-term profitability is achieved through quality, Armtek aims to create clear added value for Türkiye, its group companies, teammates, and stakeholders through the high-technology products it manufactures.

TRUS

Annual Production Capacity



10,000 units
Air Insulated Metal
Enclosed Modular
Switchgear



1,500 units
Metal Clad
Switchgear



2,400 units
Concrete Kiosks



1,000 units
Sheet Metal Kiosks

With an annual production capacity of 14.900 units, Armtek responds to sector demands in a fast and effective manner, steadily progressing by expanding its targets each year.

Vision

To continuously strengthen and sustain its position as a respected, reliable, and preferred brand by maintaining customer focus at the highest level and providing products and services in compliance with international quality standards within its field of operation.

To carry the achievements gained at the national level into the international arena and become one of the leading names in business areas with high growth potential.



Quality Policy

With the awareness that quality is an integrated whole, we guarantee unconditional customer satisfaction in every project we undertake, every decision we make, and every action we take. Accordingly, we observe high quality standards at every stage, from sales, marketing, and project design to planning and production, from research and development to procurement, and from financial management to human resources and information technologies.

At Armtek, quality is not merely inspected; it is planned, developed, and transformed into a living system. In this sense, quality is regarded as a continuous journey.

By adopting the zero-accident principle, including near-miss incidents, we commit to eliminating hazards in order to ensure that our employees maintain healthy lives, and to minimizing the risks posed by hazardous situations and unsafe behaviors to people and the environment through necessary preventive measures, continuous training, and proactive approaches.

By embracing the zero-accident principle, including near-miss incidents, we act with the objective of eliminating hazards to enable our employees to sustain healthy lives, and we commit to minimizing the risks of hazardous situations and behaviors affecting people and the environment through continuous training and preventive approaches by identifying them in advance.

By adopting the “zero waste” principle with our respect and commitment to the environment, we undertake to prevent pollution, to reduce it in cases where prevention is not possible, and to prioritize environmental protection under all circumstances. In this context, our approach to social responsibility is extremely natural and sincere.

In order to ensure the security of corporate information and information assets that constitute the information security management system, and to manage all risks related to business continuity and information assets, we aim to improve all our processes in line with the principles of confidentiality, integrity, and availability.

In all our business processes, we commit to fulfilling legal requirements and other applicable conditions, and to making the necessary arrangements to ensure that our stakeholders also act in compliance with these requirements. Thus, quality is not only reflected in our products, but also in our behaviors, communication, problem-solving techniques, outputs, and, most importantly, our stakeholders.

We believe that as long as we adopt and reflect the total quality approach in our operations, we will continue to improve ourselves, institutionalize our company, closely follow technological developments and integrate them into our R&D activities, and continuously enhance the trust and satisfaction of all our stakeholders. As a natural result of all these efforts, our philosophical approach constitutes the fundamental cornerstone of being a strong company in every field together with our employees and stakeholders.



A deep-rooted history of 40 years... Kolin Construction. With services provided across many different sectors and large-scale projects successfully completed, taking an active role in the development of our country... Each investment carried out with the awareness of representing Türkiye and the Turkish people, proudly signed... A global giant company that has made a name for itself through projects realized in different geographies of the world... Kolin Construction! As the "Flagship" of the Kolin Group of Companies, and the driving force behind the Group's growth to its present position, the foundations of Kolin Construction were laid in 1977 in Elazığ by the engineer members of the Koloğlu Family...



Armin Elektrik was established in 2000 with the purpose of implementing and supplying the electrical installations and equipment required for all types of construction and industrial facilities, both domestically and internationally, as well as undertaking the contracting works necessitated by these sectors. Since its establishment, the company has continuously sustained its development and growth by adhering to a working principle based on quality and trust, serving both individual and corporate clients. Through its investments in the fields of electromechanics, energy transmission and generation, highway lighting, energy distribution, and telecommunications, Armin Elektrik has successfully delivered numerous turnkey projects. Domestic Production, Global Power!

DOMESTIC PRODUCTION, GLOBAL POWER!



Temelli Factory



Temelli Factory

The Temelli Factory is established on a 23,500 m² indoor area. The facility houses the human resources, production planning, switchgear assembly, total quality, and quality control departments, as well as concrete kiosk production, the medium-voltage metal clad switchgear manufacturing line, painting shop, sheet metal shop, welding shop, and the procurement and accounting departments.





**PRODUCTION AT WORLD
STANDARDS!**

AIR INSULATED METAL ENCLOSED MODULAR SWITCHGEAR



ARME-AIS SERIES



AIR INSULATED METAL ENCLOSED MODULAR SWITCHGEAR COMPARTMENTS

A- Busbar Compartment

The Busbar Compartment contains electrolytic copper busbars selected in accordance with the rated current, as well as insulators and bushings. Access to this compartment requires special instructions and safety precautions.

B- Cable Connection Compartment

The Cable Connection Compartment varies depending on the product type. The following equipment can be used:

- SF6 Gas Insulated Circuit Breaker
- SF6 Gas Insulated Load Break Switch
- SF6 Gas Insulated Disconnecter
- Vacuum Type Circuit Breaker
- Voltage Transformer
- Current Transformer
- High Voltage Fuse
- Capacitive Voltage Divider
- Cable Connection System Equipment

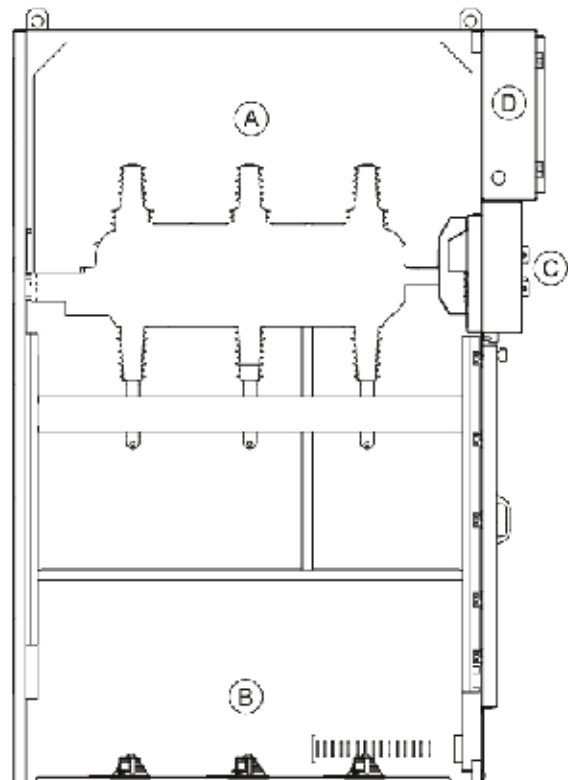
C- Switching (Operating Mechanism) Compartment

This compartment allows close-range operation for opening and closing through the switching equipment.

D- Low Voltage Compartment

This compartment contains all secondary circuits for control purposes (dimensions, protection, monitoring, communication, and other related systems).

Air Insulated Metal Enclosed Modular Switchgear consists of four main compartments. These compartments are secured by switching and mechanical interlocking systems and are isolated from other compartments through transitions designed to ensure operational continuity and safety.



General Features

The Armttek “ARME Series” offers enhanced safety and maximum ease of maintenance. The manufacturing facilities are ISO 9001 certified, and quality is assured through comprehensive design and production tests.

The low-voltage compartment provides sufficient space for easy testing and replacement of internal wiring. The independent busbar compartment is configured in such a way that any incident occurring in adjacent panels does not affect it. Therefore, it does not pose a risk during maintenance and inspection activities carried out in other compartments. As all equipment can be easily disassembled and reassembled, maintenance and inspection times are minimized.

Safety Considerations

Air Insulated Modular Switchgear is manufactured to prevent explosions or damage to surrounding equipment in the event of an internal arc fault. A high level of safety is ensured for both users and the environment in Air Insulated Modular Switchgear. Short-circuit, short-time current, and internal arc tests have been carried out in accredited laboratories in accordance with IEC 62271-200 standards. For protection against external environmental effects, the switchgear complies with IP3X protection class.

Thanks to mechanical interlocking systems and various protective measures, safety precautions are provided against incorrect use and improper operations. It is not possible to open the switchgear door unless the earthing switch is closed and the circuit breaker and disconnectors are set to the open position. When the switchgear door is open, all switching and operating functions are disabled.

The compartments are interconnected with one another and with related switchgear through mechanical interlocking systems. The hinge and locking mechanisms have a robust structure and act as a safety barrier against incorrect operations. The IP-rated inspection window located on the circuit breaker door allows visual monitoring of the circuit breaker status. The earthing switch can be locked in accordance with insulation and line safety requirements. Communication and signaling systems ensure the overall safety of the line.



Armttek Elektrik is a Premier Plus partner of Schneider Electric.



Advantages

- LSC2A – Loss of Service Continuity classification
- Earthed metal partitions between compartments
- Maximum personnel safety with AFL internal arc test capability
- Safe operation against operational errors through electrical and mechanical interlocking systems
- Withdrawable type design
- Modular and compact design enabling continuous capacity expansion
- Long service life – 10,000 switching operations
- Designed to ensure easy and safe operation with all necessary safety measures in place
- After-sales service and spare parts availability
- Low maintenance costs
- Fast circuit interruption capability and easy maintenance with SF6 circuit breakers

APPLICABLE STANDARDS	
IEC 62271-1	High-voltage switchgear and controlgear – Common specifications
IEC 62271-200	High-voltage switchgear and controlgear (AC up to 52 kV)
IEC 62271-100	Alternating current circuit breakers
IEC 62271-102	Alternating current disconnectors and earthing switches
IEC 62271-105	Alternating current switch-fuse combinations
IEC 61869-2	Current transformers
IEC 61869-3	Voltage transformers
IEC 60273	Post insulators
IEC 60051	Electrical indicating instruments
IEC 60255	Measuring relays and protection equipment
IEC 61243-1	Voltage detecting systems

Technical Specifications

MODEL	ARME 12	ARME 24	ARME 36
Rated Voltage	12 kV	24 kV	36 kV
Rated Current	630-1250 A	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	50-60 Hz	50-60 Hz
Short-Time Rated Withstand Current (1 s)	16-21 kA	16-21 kA	16-21 kA
Power Frequency Withstand Test Voltage	28 kV	50 kV	70 kV
Lightning Impulse Withstand Test Voltage 1.2/50 μ s	75 kV	125 kV	170 kV
Internal Arc Classification	IAC-AFL	IAC-AFL	IAC-AFL
Degree of Protection	IP3X	IP3X	IP3X

Dimensions

SWITCHGEAR TYPE 12–24 kV	Height (mm)	Width (mm)	Depth (mm)
ARME-AIS – YGC – Load Break Switch Incoming / Outgoing Switchgear	1800-1900	375-500	1000-1200
ARME-AIS – KGC – Circuit Breaker Incoming / Outgoing Switchgear	1800-1900	750	1000-1200
ARME-AIS – YST – Load Break Switch + Fuse Combination Transformer Protection Switchgear	1800-1900	375-500	1000-1200
ARME-AIS – GGO – Voltage Transformer Switchgear	1800-1900	375-500	1000-1200
ARME-AIS – KGB – Cable Termination Switchgear	1800-1900	375-500	1000-1200
ARME-AIS – KBB – Circuit Breaker Busbar Coupling (Coupling) Switchgear	1800-1900	750-1000	1000-1200
ARME-AIS – YAG – Load Break Switch Current and Voltage Metering Switchgear	1800-1900	750	1000-1200
ARME-AIS – KOT – Circuit Breaker Autorecloser Switchgear	1800-1900	1000	1000-1200
ARME-AIS – GGC – Gas Insulated Incoming / Outgoing Switchgear	1800-1900	375-500	1000-1200
ARME-AIS – KTK – Circuit Breaker Transformer Protection Switchgear	1800-1900	750	1000-1200



AIR INSULATED METAL ENCLOSED MODULAR SWITCHGEAR

SWITCHGEAR TYPE 36 kV	Height (mm)	Width (mm)	Depth (mm)
ARME-AIS – YGC – Load Break Switch Incoming / Outgoing Switchgear	2250	750	1400
ARME-AIS – KGC – Circuit Breaker Incoming / Outgoing Switchgear	2250	1000	1400
ARME-AIS – YST – Load Break Switch + Fuse Combination Transformer Protection Switchgear	2250	750	1400
ARME-AIS – GGO – Voltage Transformer Switchgear	2250	750	1400
ARME-AIS – KGB – Cable Termination Switchgear	2250	750	1400
ARME-AIS – KBB – Circuit Breaker Busbar Coupling (Coupling) Switchgear	2250	1500	1400
ARME-AIS – YAG – Load Break Switch Current and Voltage Metering Switchgear	2250	1000	1400
ARME-AIS – KOT – Circuit Breaker Autorecloser Switchgear	2250	1500	1400
ARME-AIS – GGC – Gas Insulated Incoming / Outgoing Switchgear	2250	750	1400
ARME-AIS – KTK – Circuit Breaker Transformer Protection Switchgear	2250	1000	1400

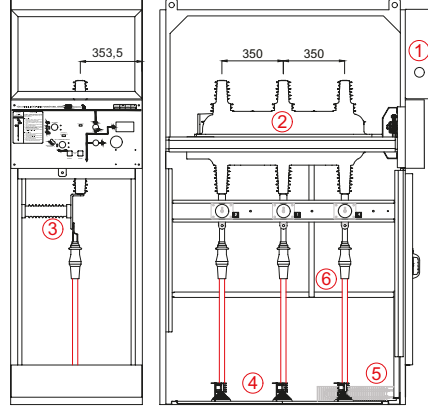


ARME-AIS Series Switchgear Types

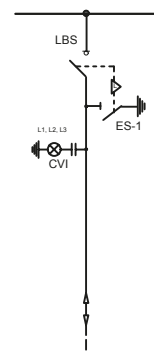
YGC

Load Break Switch Incoming- Outgoing Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Yük Ayırıcı
Load Break Switch
3. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
4. YG Kablo Bağlantı Düzeneği
*HV Cable Connection Mechanism
(Cable Entry Gland and Bracket)*
5. Isıtıcı
Heater
6. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



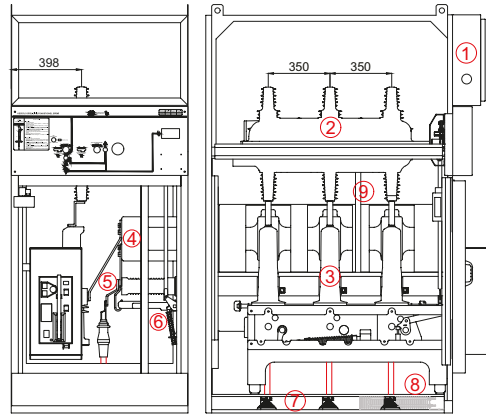
Tek Hat Şeması
Single Line Diagram



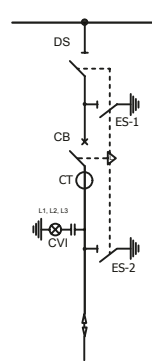
KGC

Circuit Breaker and Disconnecter Incoming-Outgoing Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnecter Switch
3. SF6 Gazlı Kesici
Circuit Breaker
4. Mesnet Tip Akım Transformatörü
Block Type Current Transformer
5. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
6. Topraklama Ayırıcısı
Earthing Switch
7. YG Kablo Bağlantı Düzeneği
*HV Cable Connection Mechanism
(Cable Entry Gland and Bracket)*
8. Isıtıcı
Heater
9. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



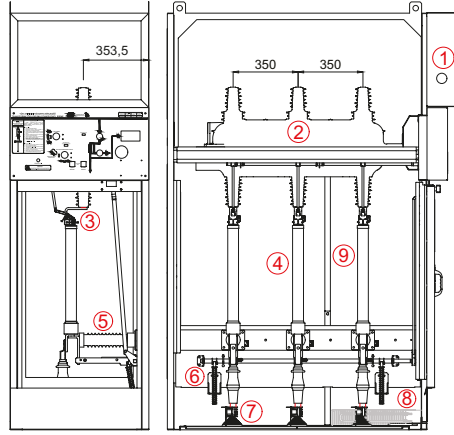
Tek Hat Şeması
Single Line Diagram



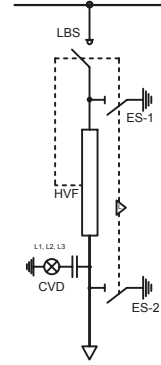
YST

Load Break Switch Fused Transformer Protection Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Yük Ayırıcı
Load Break Switch
3. Sigorta Tutucu
Fuse Holder
4. Sigorta
HV Fuse
5. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
6. Topraklama Ayırıcısı
Earthing Switch
7. YG Kablo Bağlantı Düzeneği
HV Cable Connection Mechanism (Cable Entry Gland and Bracket)
8. Isıtıcı
Heater
9. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



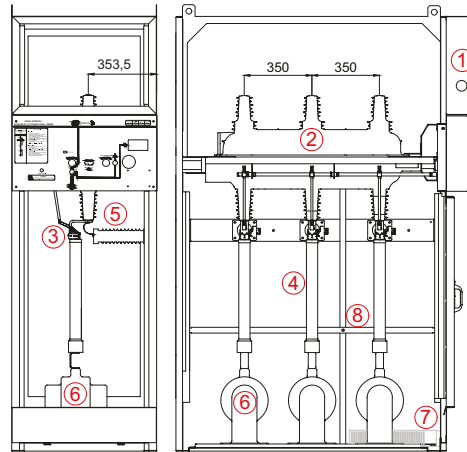
Tek Hat Şeması
Single Line Diagram



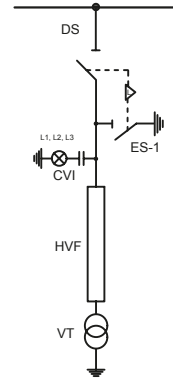
GGO

Voltage Transformer Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnect Switch
3. Sigorta Tutucu
Fuse Holder
4. Sigorta
HV Fuse
5. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
6. Gerilim Transformatörü
Voltage Transformer
7. Isıtıcı
Heater
8. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



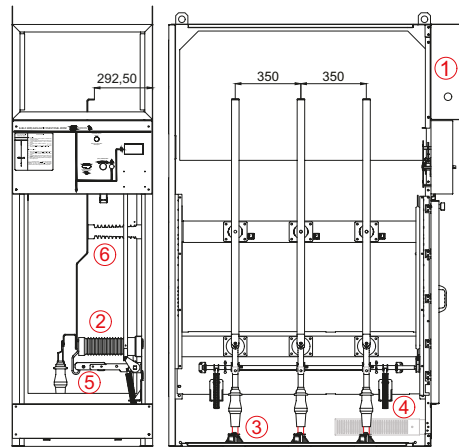
Tek Hat Şeması
Single Line Diagram



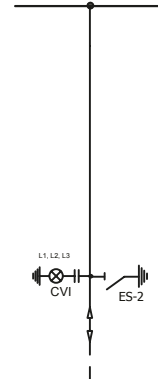
KGB

Cable Termination Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
3. YG Kablo Bağlantı Düzeneği
HV Cable Connection Mechanism (Cable Entry Gland and Bracket)
4. Isıtıcı
Heater
5. Topraklama Ayırıcısı
Earthing Switch
6. Mesnet İzolatörü
Post Insulator



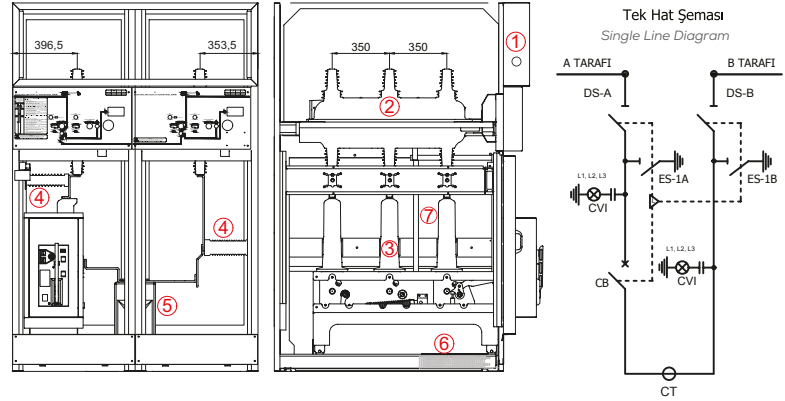
Tek Hat Şeması
Single Line Diagram



KBB

Voltage Transformer Switchgear

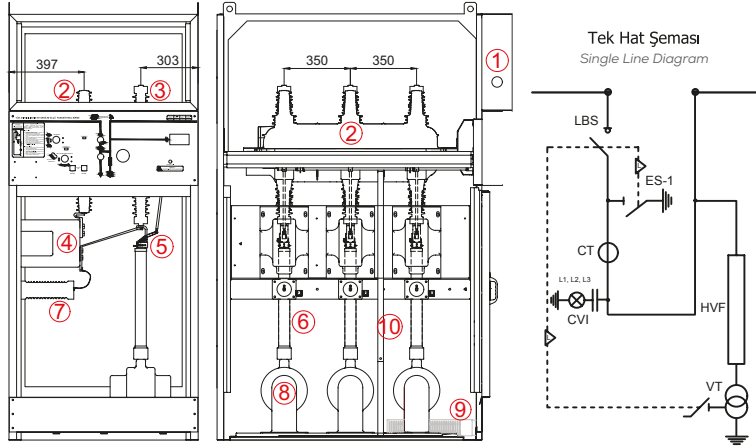
1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnecter Switch
3. SF6 Gazlı Kesici
Circuit Breaker
4. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
5. Akım Transformatörü
Current Transformer
6. Isıtıcı
Heater
7. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



YAG

Load Break Switch Fused Transformer Protection Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Yük Ayırıcı
Load Break Switch
3. Mesnet İzolatörü
Block Type Insulator
4. Akım Transformatörü
Current Transformer
5. Sigorta Tutucu
Fuse Holder
6. YG Sigorta
HV Fuse
7. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
8. Gerilim Transformatörü
Voltage Transformer



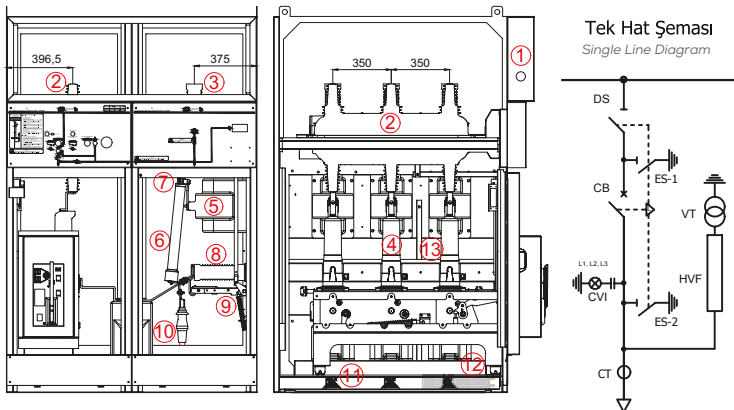
9. Isıtıcı
Heater

10. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear

KOT

Circuit Breaker Autorecloser Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnecter Switch
3. Mesnet İzolatör
Block Type Insulator
4. SF6 Gazlı Kesici
Circuit Breaker
5. Akım Transformatörü
Current Transformer
6. Sigorta
HV Fuse
7. Sigorta Tutucu
Fuse Holder
8. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider



9. Topraklama Ayırıcısı
Earthing Switch

12. Isıtıcı
Heater

10. Gerilim Transformatörü
Voltage Transformer

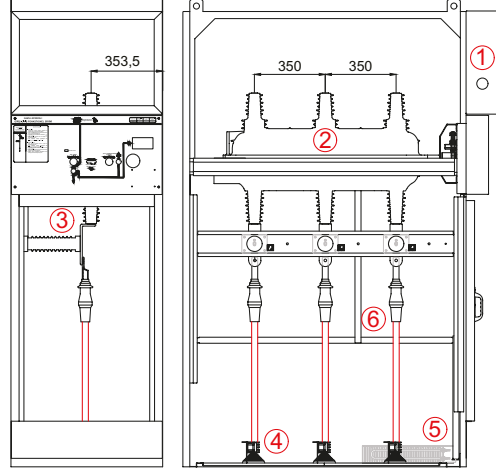
11. YG Kablo Bağlantı Düzeneği
*HV Cable Connection Mechanism
(Cable Entry Gland and Bracket)*

13. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear

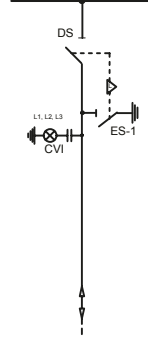
GGC

Gas Insulated Incoming- Outgoing Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnect Switch
3. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
4. YG Kablo Bağlantı Düzeneği
*HV Cable Connection Mechanism
(Cable Entry Gland and Bracket)*
5. Isıtıcı
Heater
6. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



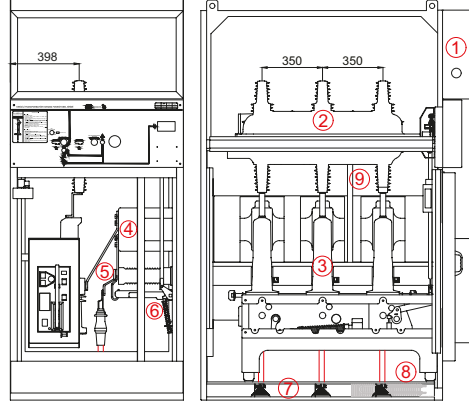
Tek Hat Şeması
Single Line Diagram



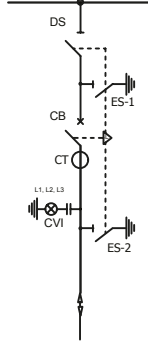
KTK

Circuit Breaker Transformer Protection Switchgear

1. AG Kumanda Panosu
LV Control Panel
2. SF6 Gazlı Ayırıcı
Disconnect Switch
3. SF6 Gazlı Kesici
Circuit Breaker
4. Mesnet Tip Akım Transformatorü
Block Type Current Transformer
5. Kapasitif Gerilim Bölücü
Capacitive Voltage Divider
6. Topraklama Ayırıcısı
Earthing Switch
7. YG Kablo Bağlantı Düzeneği
*HV Cable Connection Mechanism
(Cable Entry Gland and Bracket)*
8. Isıtıcı
Heater
9. Fonksiyonel Birim Topraklama Barası
External Earthing Busbar of Switchgear



Tek Hat Şeması
Single Line Diagram







armtek
ELEKTRIK

METAL CLAD SWITCHGEAR COMPARTMENTS



ARMC SERIES



METAL CLAD SWITCHGEAR COMPARTMENTS

Metal clad switchgear consists of five main compartments. These compartments are separated by metal partitions, and movable shutters and insulated transition equipment are used at interfaces to ensure operational continuity.

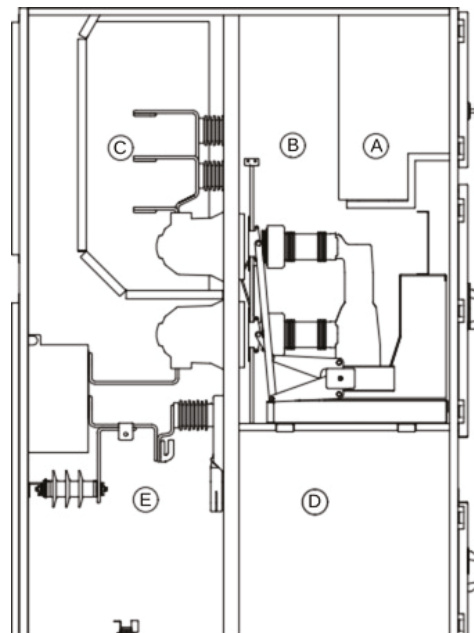
A – Low Voltage Compartment

This compartment contains all secondary circuits required for control purposes (measurement, protection, monitoring, communication, and other related systems).

B – Circuit Breaker Compartment

The following equipment is used in the circuit breaker compartment:

- Vacuum Circuit Breaker
- Fused Voltage Transformer
- Disconnecter



C – Busbar Compartment

The busbar compartment contains electrolytic copper busbars selected in accordance with the rated current, as well as insulators and bushings. Access to this compartment requires special instructions and safety precautions.

D – Voltage Transformer Compartment

This compartment contains a withdrawable fuse + voltage transformer combination. Safety is ensured by mechanical interlocks and shutter mechanisms.

E – Cable Compartment

The following equipment is used in this compartment:

- Current Transformer
- Voltage Transformer
- Surge Arrester
- Earthing Switch
- Capacitive Voltage Divider
- Cable Gland and Connection Accessories

*Access to this compartment requires special instructions and safety precautions.



APPLICABLE STANDARDS

IEC 62271-1	High-Voltage Switchgear And Controlgear – Common Specifications
IEC 62271-200	High-Voltage Switchgear And Controlgear (Ac Up To 52 Kv)
IEC 62271-100	Alternating Current Circuit Breakers
IEC 62271-102	Alternating Current Disconnectors And Earthing Switches
IEC 62271-105	Alternating Current Switch-Fuse Combinations
IEC 61869-2	Current Transformers
IEC 61869-3	Voltage Transformers
IEC 60273	Post Insulators
IEC 60051	Electrical Indicating Instruments
IEC 60255	Measuring Relays And Protection Equipment
IEC 61243-1	Voltage Detecting Systems

Technical Specifications

MODEL	MC12A	MC24A	MC36A	MC40A
Rated Voltage	12 kV	24 kV	36 kV	36 kV
Power Frequency Withstand Voltage	28 kV	50 kV	70 kV	80 kV
Lightning Impulse Rated Withstand Voltage (kV, 1.2/50 μ s)	75 kV	125 kV	170 kV	200 kV
Short-Time Rated Current Withstand (kA / s)	31,5 kA/1-3 s.	31,5 kA/1-3 s	31,5 kA/1-3 s	25 kA/1 s
Degree of Protection	IP4X	IP4X	IP4X	IP4X
Internal Arc Withstand Current	31,5 kA/1 s	31,5 kA/1 s	31,5 kA/1 s	25 kA/1 s
Internal Arc Classification	AFLR	AFLR	AFLR	AFLR
Standard	IEC 62271-200, TS EN 62271-200			
Component Options	Schneider, ABB, Siemens, Armtek			

Dimensions

SWITCHGEAR TYPE 12 kV	Height (mm)	Width (mm)	Depth (mm)
ARMC Series – Busbar Coupling Switchgears	2300	1550	1000
ARMC Series – Busbar Riser Switchgears	2300	1550	1000
ARMC Series – Incoming Switchgears	2300	1550	1000
ARMC Series – Metering Switchgears	2300	1550	800
ARMC Series – Outgoing Switchgears	2300	1550	800

SWITCHGEAR TYPE 24 kV	Height (mm)	Width (mm)	Depth (mm)
ARMC Series – Busbar Coupling Switchgears	2400	1700	1000
ARMC Series – Busbar Riser Switchgears	2300	1550	1000
ARMC Series – Incoming Switchgears	2400	1700	1000
ARMC Series – Outgoing Switchgears	2400	1700	800
ARMC Series – Voltage Metering Switchgears	2400	1700	800

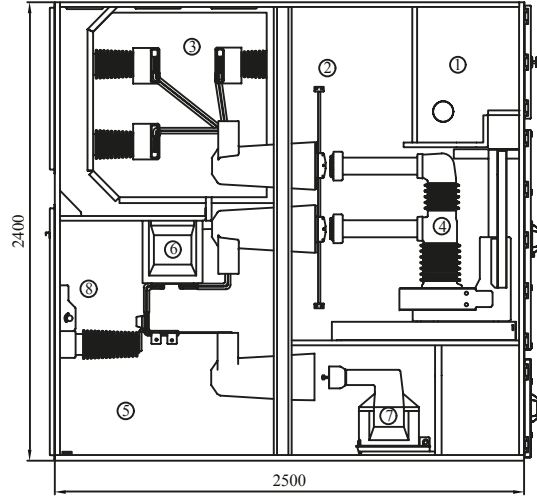
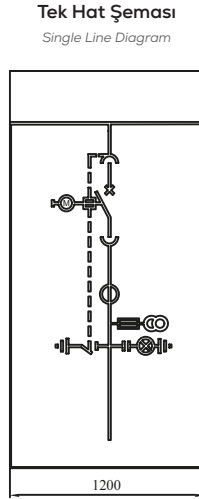
SWITCHGEAR TYPE 36 – 40.5 kV	Height (mm)	Width (mm)	Depth (mm)
ARMC Series – Busbar Coupling Switchgears	2400	2500	1200
ARMC Series – Busbar Riser Switchgears	2400	2500	1200
ARMC Series – Incoming Switchgears	2400	2500	1200
ARMC Series – Outgoing Switchgears	2400	2500	1200
ARMC Series – Voltage Metering Switchgears	2400	2500	1200



ARMC Series Switchgear Types

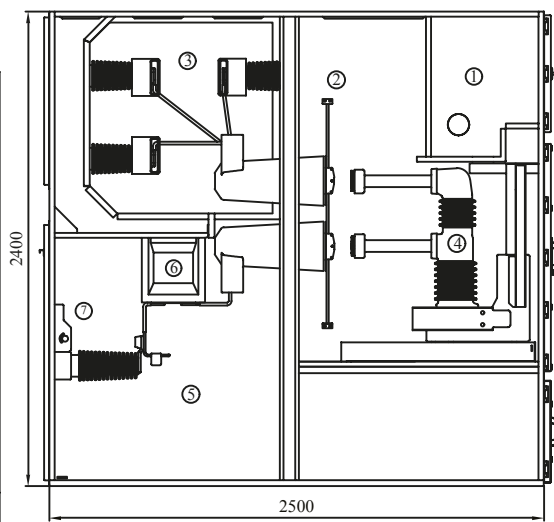
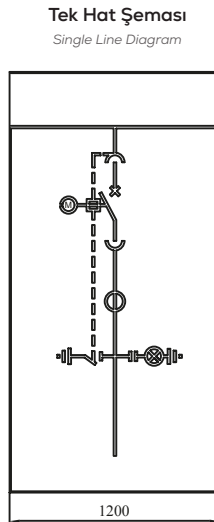
Incoming Switchgear

1. Alçak Gerilim Bölmesi
Low Voltage Compartment
2. Kesici Bölmesi
Circuit Breaker Compartment
3. Bara Bölmesi
Busbar Compartment
4. Vakumlu Kesici
Vacuum Circuit Breaker
5. Kablo Bölmesi
Cable Compartment
6. Akım Trafosu
Current Transformer
7. Gerilim Trafosu
Voltage Transformer
8. Topraklama Anahtarı
Earthing Switch



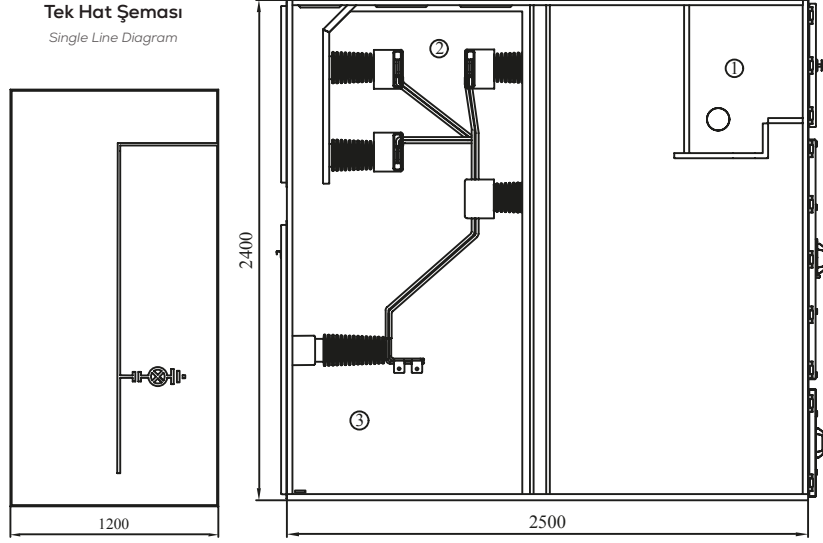
Outgoing Switchgear

1. Alçak Gerilim Bölmesi
Low Voltage Compartment
2. Kesici Bölmesi
Circuit Breaker Compartment
3. Bara Bölmesi
Busbar Compartment
4. Vakumlu Kesici
Vacuum Circuit Breaker
5. Kablo Bölmesi
Cable Compartment
6. Akım Trafosu
Current Transformer
7. Topraklama Anahtarı
Earthing Switch



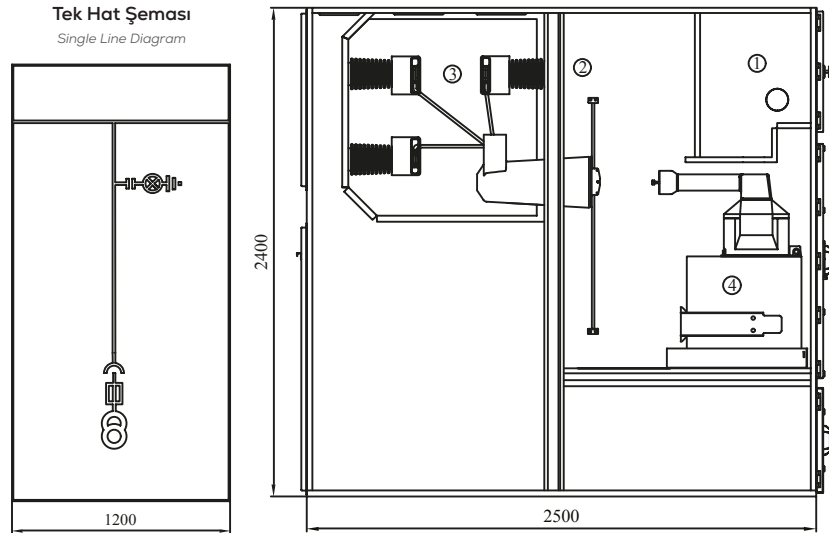
Busbar Riser Switchgear

1. Alçak Gerilim Bölmesi
Low Voltage Compartment
2. Bara Bölmesi
Busbar Compartment
3. Kablo Bölmesi
Cable Compartment



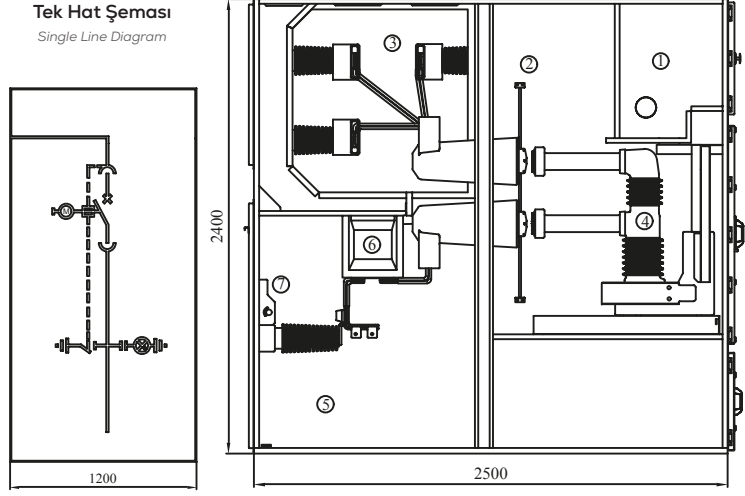
Voltage Metering Switchgear

1. Alçak Gerilim Bölmesi
Low Voltage Compartment
2. Gerilim Trafosu
Voltage Transformer
3. Bara Bölmesi
Busbar Compartment
4. Gerilim Trafosu Arabası
Voltage Transformer Truck



Busbar Coupling Switchgear

- 1. Alçak Gerilim Bölmesi**
Low Voltage Compartment
- 2. Kesici Bölmesi**
Circuit Breaker Compartment
- 3. Bara Bölmesi**
Busbar Compartment
- 4. Vakumlu Kesici**
Vacuum Circuit Breaker
- 5. Kablo Bölmesi**
Cable Compartment
- 6. Akım Trafosu**
Current Transformer
- 7. Topraklama Anahtarı**
Earthing Switch





COMPACT SUBSTATIONS



MONOBLOCK CONCRETE KIOSKS

ARCK SERIES



ARCK Series

ARCK Series Monoblock Concrete Kiosks are MV–LV prefabricated monoblock concrete transformer and distribution substations designed for medium- and low-voltage electrical installations, manufactured in accordance with relevant international standards and specifications.

Fields of Application

Used in power generation (WPP/HPP), transmission and distribution facilities, as well as in industrial and commercial installations, as:

- MV/LV Transformer Substation
- MV Distribution Substation
- LV Switchboard Enclosure
- Generator Enclosure

Advantages

- Personnel safety ensured by internal arc resistance and degree of protection proven by type tests
- Equipment and internal earthing system assembled and tested in factory conditions
- High-quality electrical equipment compliant with applicable standards
- Electrical components of superior quality
- Resistant to harsh environmental conditions
- Minimum installation space and labor requirements
- Easy installation and commissioning
- Customizable aesthetic structure and surface coating with unlimited color options



Operation

Concrete kiosks, featuring a long service life and an enclosure resistant to environmental conditions, require minimal installation area and offer fast installation, portability, and rapid commissioning. With various color options, they provide an aesthetic design harmonized with the surrounding environment.



Internal Earthing and Lighting System

The steel reinforcement of the concrete enclosure, the earthing terminals of doors and electrical equipment, and all other metal parts requiring earthing are connected to the equipotential bonding bar using conductors specified in applicable standards and specifications.

Structural Features

ARCK Series Prefabricated Monoblock Concrete Transformer and Distribution Substations consist of the following main components:

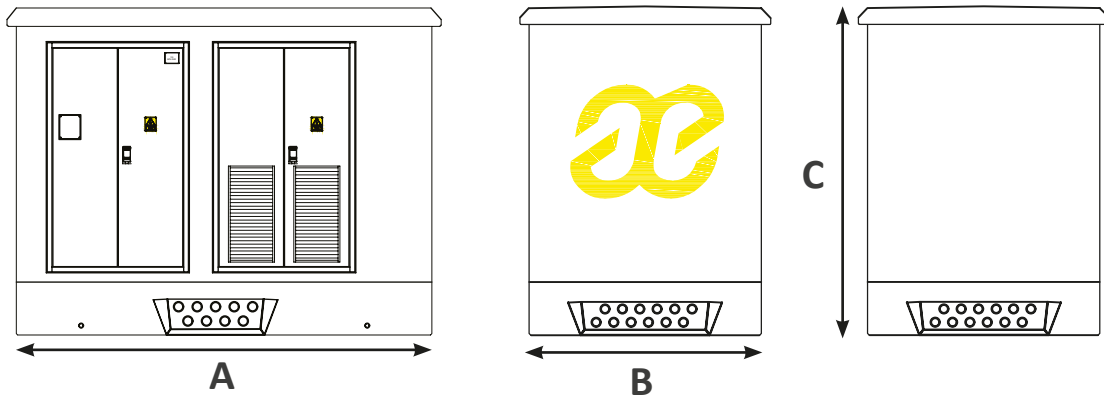
- MV/LV Switching Equipment and Transformer
- AC/DC Auxiliary Power Supply
- MV/LV Internal Connection Components
- Operational Safety Equipment

APPLICABLE STANDARDS	
IEC 62271-202 - TS EN 62271-202	MV/LV prefabricated transformer substations
IEC 62271-200 - TS EN 62271-200	MV switchgear and controlgear
IEC 60529 - TS EN 3033 EN 60529	Classification of degrees of protection provided by
IEC 60787 - TS IEC 60787	Application guide for switching devices used in MV transformer circuit protection
TS 822	Flat and corrugated galvanized steel sheets
EN ISO 1461-EQV - TS EN ISO 1461	Hot-dip galvanized coatings on fabricated iron and steel articles
EN ISO 1460 - TS EN ISO 1460	Metallic coatings – Hot-dip galvanized coatings on ferrous materials
EN ISO 2409 - TS EN ISO 2409	Paints and varnishes – Cross-cut test
EN ISO 4628-3 - TS EN ISO 4628-3	Paints and varnishes – Evaluation of degradation of coatings – Assessment of degree of rusting
IIEC 60439-1 - TS 708	Concrete reinforcing steel bars
IEC 60068-2-11 -TS 2093 EN 60068-2-11	Salt mist test
IEC 60076-1 - TS 267 EN 60076-1	Power transformers
IEC 61442TS - EN 61442	Test methods for accessories for power cables with rated voltages from 6 kV up to 36 kV
EN 62271-1 - EN 62271-1	High-voltage switchgear and controlgear – Common specifications for AC switchgear and controlgear

ENVIRONMENTAL CONDITIONS

Altitude	2000 m
Ambient Temperature	-25...+50 °C
Ambient Pollution Level	Level 3
Maximum Solar Radiation	1000 W/m ²
Relative Humidity (Max. %)	95
Seismic Acceleration (H/V)	0.5 g/0.4 g
System Earthing	Resistance-earthed or solidly earthed

ARCK Series Kiosk Types



Product Type	Length (mm)	Width (mm)	Height (mm)	Weight (Ton)
	A	B	C	
ARCK 2550	2750	2500	3540	15,2
ARCK 3200	3400	2500	3540	18,4
ARCK 4500	4700	2500	3540	18,25
ARCK 5500	5700	2500	3540	21,4
ARCK 6500	6700	2500	3540	25
ARCK 7500	7700	2500	3540	29

SHEET METAL KIOSKS

ARSK SERIES

ARSK Series Sheet Metal Kiosks are transformer and distribution substations manufactured from galvanized and electrostatic powder-coated sheet metal, produced in customized dimensions to meet the requirements of all application areas. Sheet metal kiosks (substations), suitable for use under all climatic conditions, meet the medium-voltage / low-voltage (MV/LV) distribution substation needs of electricity distribution companies as well as private projects.

Technical Specifications

Rated Voltage	12–36 kV
Maximum Declared Power (kVA)	2500 kVA
Dimensions (meters)	2–40 meters
Degree of Protection	IP65
Coating	Electrostatic



The bases are designed as NPU or NPI profiles depending on the load applied to the ground. Both NPU and NPI profiles are coated with hot-dip galvanization.

Frame

Unless otherwise specified by the customer, the frame of the sheet metal kiosk is manufactured from 2 mm thick galvanized sheet metal.

Doors

The doors can be opened outwards up to 120° and have an impact protection rating of IK20.

Fields of Application

- Iron casting workshops
- Oil pipelines
- Industrial facilities
- Shipyards
- Emergency and backup power facilities
- Mining operations

Compartments

MV Compartment

Metal Enclosed Modular Switchgear, Metal Clad switchgear, and RMU-type units can be used in the MV compartment. The dimensions of the MV compartment are determined according to the size of the equipment installed inside.

Transformer Compartment

Both dry-type transformers and oil-immersed transformers can be used in the transformer compartment. The dimensions of the transformer compartment are determined according to the transformer rating.

LV Panel Compartment

In the Low Voltage (LV) room, installation of MCC Distribution Panels, AC Distribution Panels, DC Distribution Panels, HVAC Panels, Fire Control Panels, UPS units, SCADA–RTU Panels, and other LV panels can be carried out.

Battery–Rectifier Room

The battery room contains Ni-Cd batteries and DC circuit breakers. If required, the battery room can be designed in accordance with Zone 2 Hazardous Area Classification (this feature is optional).

Internal Lighting and External Lighting

All rooms in the Compact Substation are equipped with lighting systems compliant with applicable standards. Upon request, ATEX-certified indoor and outdoor lighting equipment and sockets suitable for Zone 2 Hazardous Area Classification can be selected. Emergency exit luminaires can be installed above door openings. These luminaires are equipped with an emergency lighting unit.

Earthing

Electrical equipment is connected to an isolated earthing bar. In order to prevent electric shock in case of contact, separate earthing systems are applied to doors, floors, walls, and the roof.

Flooring

The floor covering is made of non-flammable rubber material. It complies with A1 fire classification and has a 50 kV insulation level (this feature is optional).

Fire Detection and Fire Suppression

All rooms can be equipped with fire and smoke detectors. In hazardous situations, the HVAC system is deactivated, and warning lights and alarms are activated (this feature is optional).

Air Conditioning System

In the Compact Substation, HVAC systems can be used to maintain stable internal temperature and humidity. Stabilization is provided in all rooms through air duct systems (this feature is optional).

System Advantages

Compared to concrete kiosks, the system is lighter, providing ease of transportation and installation. Since it is designed in accordance with the equipment to be installed inside, it can be manufactured in a wide range of dimensions. It is particularly preferred in RMU-equipped substations, as it offers significant advantages in terms of size and weight. Thanks to its modular structure and prefabricated features, large-scale substations can be established. It provides significant logistics savings for overseas shipments when delivered in dismantled form and offers high operational safety. In addition, it stands out with its customizable manufacturing solutions for special projects, as well as ease of transportation and operation.



PREFABRICATED CONCRETE DISTRIBUTION AND TRANSFORMER SUBSTATIONS

ARPK SERIES

ARPK Series

ARPK Series MV/LV Prefabricated Monoblock Concrete Transformer and Distribution Substations are products designed for medium- and low-voltage electrical installations and manufactured in accordance with relevant international standards and specifications.

Annex – 1

Width (mm)	Depth (mm)	Height (mm)
6600	3800	3800
8600	3800	3800
10600	3800	3800
12600	3800	3800
14600	3800	3800
16600	3800	3800
18600	3800	3800
20600	3800	3800
22600	3800	3800
24600	3800	3800
26600	3800	3800



Annex – 2

Width (mm)	Depth (mm)	Height (mm)
9200	3800	3800
11200	3800	3800
13200	3800	3800
15200	3800	3800
17200	3800	3800
19200	3800	3800
21200	3800	3800
23200	3800	3800
25200	3800	3800
27200	3800	3800
29200	3800	3800

Annex – 3

Width (mm)	Depth (mm)	Height (mm)
6600	5000	3800
8600	5000	3800
10600	5000	3800
12600	5000	3800
14600	5000	3800
16600	5000	3800
18600	5000	3800
20600	5000	3800
22600	5000	3800
24600	5000	3800

MOBILE DISTRIBUTION AND TRANSFORMER SUBSTATIONS

Mobile Transformer Substations, which can be commissioned in a much shorter time compared to fixed substations and enable fast and flexible transmission of electrical energy, offer ideal solutions for emergency situations, temporary requirements, and electricity distribution in remote or hard-to-access locations.

Advantages

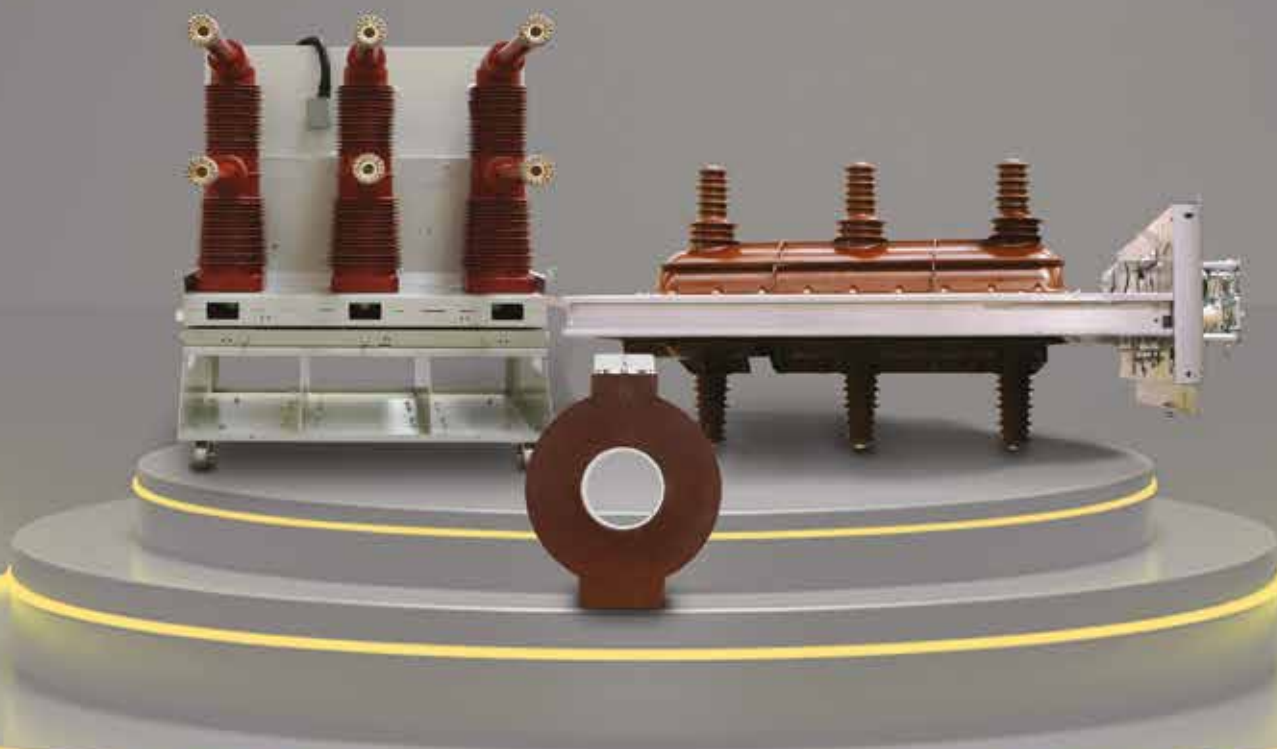
- **Fast Installation and Commissioning:** Since they can be installed much more quickly than fixed substations, they provide a significant advantage in cases of urgent power demand.
- **Flexibility:** Mobile transformer substations can be used in locations with constantly changing energy requirements or for temporary projects (such as construction sites, festivals, and mining areas). They also offer temporary solutions when fixed substations are taken out of service during maintenance or upgrade works.
- **Custom-made production capability**
- **Easy Transportation:** As they can be easily mounted on a trailer, they can be deployed wherever required to meet energy demands.







MEDIUM VOLTAGE COMPONENTS



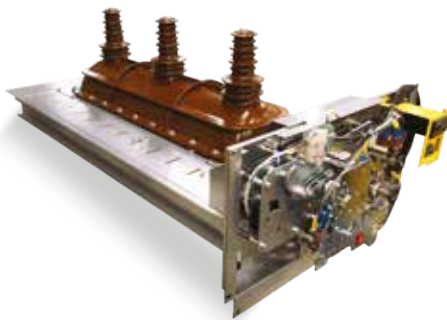
MEDIUM VOLTAGE COMPONENTS

KEMA Labs

CESI

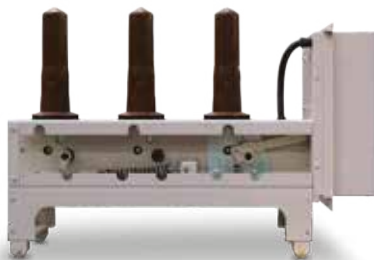


SF6 Gas Insulated Disconnecter



MODEL	SF6 GAS INSULATED DISCONNECTOR	
		12-24 kV
Rated Voltage	12/24 kV	36 kV
Lightning Impulse Withstand Test Voltage	125 kV	170 kV
Withstand Voltage at Isolating Distance	145 kV	195 kV
Power Frequency Withstand Test Voltage	50 kV	70 kV
Rated Current	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	50-60 Hz
Short-Circuit Withstand Current (1 s)	16-21 kA	16-21 kA

SF6 Gas Insulated Circuit Breaker



MODEL	SF6 GAS INSULATED CIRCUIT BREAKER	
		12-24 kV
Rated Voltage	12/24 kV	36 kV
Lightning Impulse Withstand Test Voltage	125 kV	170 kV
Power Frequency Withstand Test Voltage	50 kV	70 kV
Rated Current	630-1250 A	630-1250 A
Rated Frequency	50-60 Hz	50-60 Hz
Rated Short-Circuit Withstand Current (3 s)	16-20 kA	16-20 kA
Interrupting Medium	SF6	SF6
Rated Peak Short-Circuit Withstand	40-50 kA	40-50 kA
Mechanical Endurance Class	M1	M1
Electrical Endurance Class	E2	E2



Front-Operated
Vacuum Circuit Breaker



MODEL	12 kV	24 kV	36 kV
Rated Voltage	12 kV	24 kV	36 kV
Lightning Impulse Withstand Test Voltage	28 kV	50 kV	70 kV
Power Frequency Withstand Test Voltage	75 kV	125 kV	170 kV
Rated Current	630-4000 A	630-4000 A	630-4000 A
Rated Frequency	50 Hz	50 Hz	50 Hz
Rated Short-Circuit Withstand Current (3 s)	31,5 kA	31,5 kA	25 kA
Interrupting Medium	Vacuum	Vacuum	Vacuum
Rated Peak Short-Circuit Withstand	78,8 kA	78,8 kA	62,5 kA
Mechanical Endurance Class	M2	M2	M2
Electrical Endurance Class	E2	E2	E2
Capacitive Class	C2	C2	C2

Side-Operated
Vacuum Circuit Breaker



MODEL	12 kV	24 kV	36 kV
Rated Voltage	12 kV	24 kV	36 kV
Lightning Impulse Withstand Test Voltage	28 kV	50 kV	70 kV
Power Frequency Withstand Test Voltage	75 kV	125 kV	170 kV
Rated Current	630-4000 A	630-4000 A	630-4000 A
Rated Frequency	50 Hz	50 Hz	50 Hz
Rated Short-Circuit Withstand Current (3 s)	31,5 kA	31,5 kA	25 kA
Interrupting Medium	Vacuum	Vacuum	Vacuum
Rated Peak Short-Circuit Withstand	78,8 kA	78,8 kA	62,5 kA
Mechanical Endurance Class	M2	M2	M2
Electrical Endurance Class	E2	E2	E2
Capacitive Class	C2	C2	C2

Transformers

Cable Type (Toroidal) Current Transformers

ARCT - KA07



MODEL	ARCT-KA07 80*195*xxx	ARCT-KA07 130*195*xxx
Rated Data		
Maximum Operating Voltage (Um)	kV	0,72/3/ -
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Current	A	40...3000
Rated Secondary Current	A	1 or 5
Accuracy Class		As Per Customer Request
Rated Burden (Accuracy Class)	VA	As Per Customer Request
Rated Short-Time Thermal Current	kA	Min. 100 × Ipr
Rated Dynamic Current	kA	2.5 × Ith

ARCT - KA07



MODEL	ARCT-KA07 180*250*120	
Rated Data		
Maximum Operating Voltage (Um)	kV	0.72 / 3 / -
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Current	A	200...4000
Rated Secondary Current	A	1 or 5
Accuracy Class		As Per Customer Request
Rated Burden (Accuracy Class)	VA	As Per Customer Request
Rated Short-Time Thermal Current	kA	Min. 100 × Ipr
Rated Dynamic Current	kA	2.5 × Ith

Block Type (Support Type) Current Transformers

ARCT-B12



MODEL		ARCT-B12-1	ARCT-B12-2	ARCT-B12-3
Rated Data				
Maximum Operating Voltage (Um)	kV	12		
Test Voltages	kV	12/28		
Rated Frequency	Hz	50 or 60		
Maximum Rated Primary Current	A	2500		
Rated Secondary Current	A	1 or 5		
Rated Short-Time Thermal Current	kA	Maximum 60 kA (1000 × In)		
Rated Dynamic Current	kA	Maximum 120 kA (2.5 × Ith)		
Weight	kg	20-22	25-28	30-35

ARCT-B24



MODEL		ARCT-B24-1	ARCT-B24-2	ARCT-B24-3
Rated Data				
Maximum Operating Voltage (Um)	kV	24		
Test Voltages	kV	50/125		
Rated Frequency	Hz	50 or 60		
Maximum Rated Primary Current	A	3000		
Rated Secondary Current	A	1 or 5		
Rated Short-Time Thermal Current	kA	Maximum 60 kA (1000 × In)		
Rated Dynamic Current	kA	Maximum 120 kA (2.5 × Ith)		
Weight	kg	33-35	37-40	45-50

ARCT-B36



MODEL	ARCT-B36-1	ARCT-B36-2	ARCT-B36-3	ARCT-B36-4
Rated Data				
Maximum Operating Voltage (Um)	kV	36		
Test Voltages	kV	70 / 170		
Rated Frequency	Hz	50 or 60		
Maximum Rated Primary Current	A	3000		
Rated Secondary Current	A	1 or 5		
Rated Short-Time Thermal Current	kA	Maximum 60 (1000 × In)		
Rated Dynamic Current	kA	Maximum 120 (2.5 × Ith)		
Weight	kg	28–36		

ARCT-B36-T1



MODEL	ARCT-B36-T	ARCT-B36-T1	
Rated Data			
Maximum Operating Voltage (Um)	kV	36	
Test Voltages	kV	70 / 170	
Rated Frequency	Hz	50 or 60	
Maximum Rated Primary Current	A	3000	
Rated Secondary Current	A	1 or 5	
Rated Short-Time Thermal Current	kA	Maximum 60 (1000 × In)	
Rated Dynamic Current	kA	Maximum 120 (2.5 × Ith)	
Weight	kg	40-55	45-60

ARCT-M36



MODEL		ARCT-M36-1	ARCT-M36-2	ARCT-M36-3	ARCT-M36-4
Rated Data					
Maximum Operating Voltage (Um)	kV	36			
Test Voltages	kV	70 / 170			
Rated Frequency	Hz	50 or 60			
Maximum Rated Primary Current	A	1500			
Rated Secondary Current	A	1 or 5			
Rated Short-Time Thermal Current	kA	Maximum 60 (1000 × I _n)			
Rated Dynamic Current	kA	Maximum 120 (2.5 × I _{th})			
Weight	kg	28-36			



Block Type Voltage Transformers

■ ARVT-M12



MODEL		ARVT-M12
Rated Data		
Maximum Operating Voltage (Um)	kV	12
Test Voltages	kV	28 / 75
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12 / $\sqrt{3}$
Rated Secondary Voltage	V	100 / $\sqrt{3}$ – 110 / $\sqrt{3}$ – 120 / $\sqrt{3}$
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1.9 Un
Weight	kg	25

■ ARVT-M12-WF



MODEL		ARVT-M12-WF
Rated Data		
Maximum Operating Voltage (Um)	kV	24
Test Voltages	kV	28/75
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/ $\sqrt{3}$
Rated Secondary Voltage	V	100/ $\sqrt{3}$ –110/ $\sqrt{3}$ –120/ $\sqrt{3}$
Rated Burden for Measuring Winding	VA	Maksimum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	25

■ ARVT-M24



MODEL		ARVT-M24
Rated Data		
Maximum Operating Voltage (Um)	kV	24
Test Voltages	kV	50/125
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/√3
Rated Secondary Voltage	V	100/√3–110/√3–120/√3
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	35

■ ARVT-M24-WF



MODEL		ARVT-M24-WF
Rated Data		
Maximum Operating Voltage (Um)	kV	24
Test Voltages	kV	50/125
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/√3
Rated Secondary Voltage	V	100/√3–110/√3–120/√3
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	35

■ ARVT-M36-1



MODEL		ARVT-M36-1
Rated Data		
Maximum Operating Voltage (Um)	kV	36
Test Voltages	kV	70/170
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/√3
Rated Secondary Voltage	V	100/√3–110/√3–120/√3
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	45

■ ARVT-M36-1WF



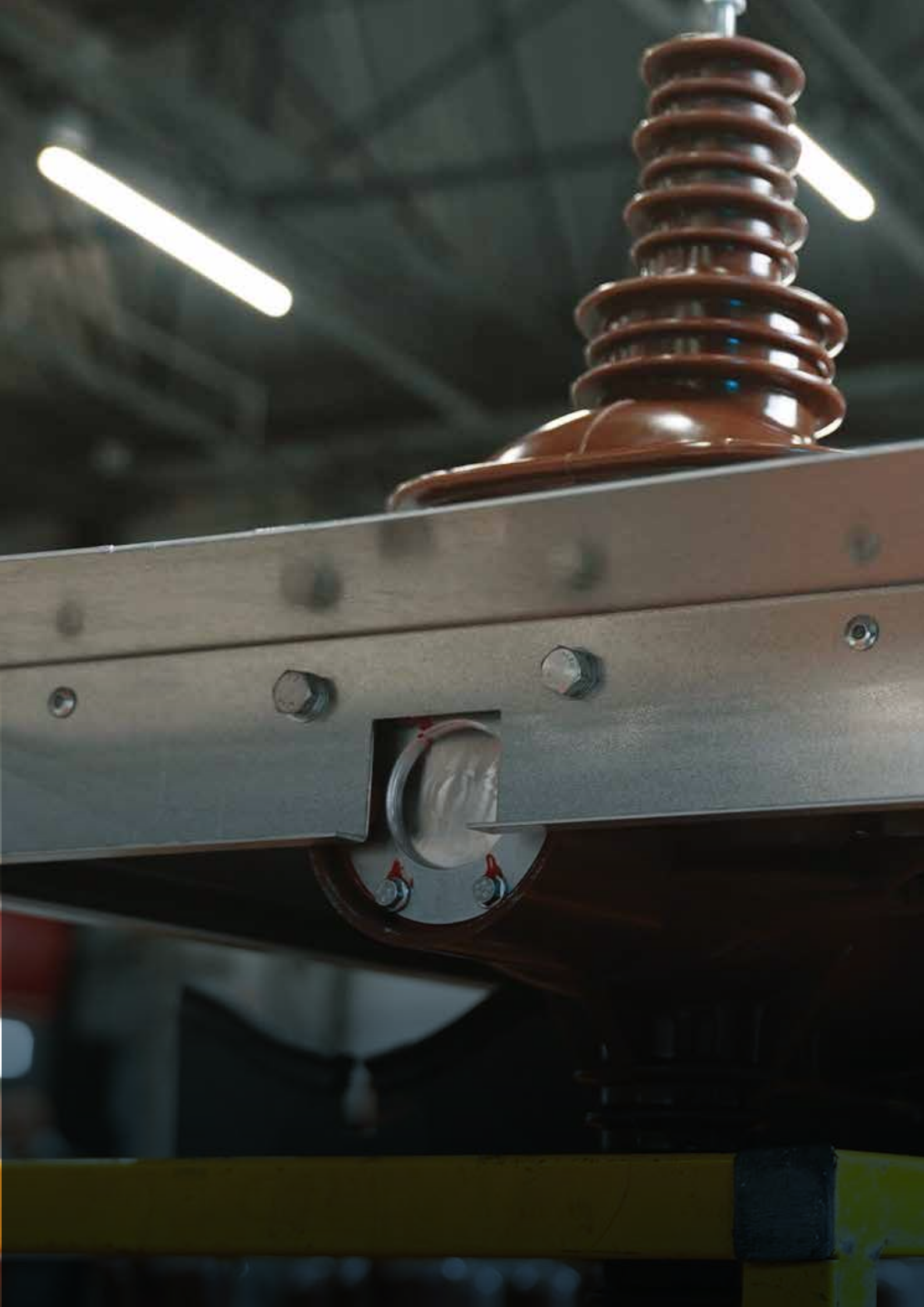
MODEL		ARVT-M36-1WF
Rated Data		
Maximum Operating Voltage (Um)	kV	36
Test Voltages	kV	70/170
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/√3
Rated Secondary Voltage	V	100/√3–110/√3–120/√3
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	45

ARVT-M36-2



MODEL		ARVT-M36-2
Rated Data		
Maximum Operating Voltage (Um)	kV	36
Test Voltages	kV	70/170
Rated Frequency	Hz	50 or 60
Maximum Rated Primary Voltage	kV	12/√3
Rated Secondary Voltage	V	100/√3–110/√3–120/√3
Rated Burden for Measuring Winding	VA	Maximum 100
Rated Burden for Protection Winding	VA	Maximum 100
Open Delta Winding Thermal Withstand Current	A	Maximum 6A
Rated Voltage Factor (8 h)		1,9 Un
Weight	kg	50





REFERE

REFERENCES

AKDENİZ
ELEKTRİK
DAĞITIM

BOĞAZIÇI
ELEKTRİK
DAĞITIM

ÇAMLIBEL
ELEKTRİK
DAĞITIM



REFERENCES



**ARMTEK POWER
DOMINATES
IN MORE THAN 38 COUNTRIES
ACROSS 5 CONTINENTS.**



CONTACT



Temelli Factory
ASO 2-3 OSB, 2013rd Street
No: 16, Sincan / ANKARA / TÜRKİYE
+90 312 802 04 45



armtek.com.tr



armtek@armtek.com.tr
sales@armtek.com.tr
satis@armtek.com.tr





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