Compact Substations
E-House

SCK Series

SCK-1 | SCK-2 | SCK-3

Switching Life to Infinity

aktif ELEKTROTEKNİK

Compact Substations E-House
SCK Series

SCK type are manufactured as Compact Substations for Power Distribution and as E-houses for Oil & Gas Applications in compliance with Zone2 Hazardous Area Classification, as according to IEC 62271-202 and equipped with special operating and safety systems. SCK series can be manufactured with three different materials depending on the application.

Material Data SCK-1 : Steel sheet
SCK-2 : Sandwich Panel
SCK-3 : Container

SCK series offer segregated design for MV Switchgear, LV Switchgear, Transformer, Emergency Supply and Batteries with dimensions and specifications as according to the necessity. SCK is equipped with HVAC system, Fire and Smoke detection system, Fire Extinguisher system, Communication system, Internal and External Lighting, Socket outlets, Earthing and Floor insulation.

SCK series compact substations can be design as skid type or mobile on semi-trailer up to IP54 Protection Class.

Application Areas

- Rolling plant
- Oil pipeline
- Industry
- Shipyards
- Emergency and backup power facilities
- Mining operations
- Transportation
- Infrastructure

Standarts

- IEC 62271-202
- IEC 62271-205
- IEC 62271-200
- IEC 62271-100
- IEC 62271-1
- IEC 60076-1
- IEC 61439-1

Color

- RAL 9003 for SCK-1 steel kiosk
- RAL 9002 for SCK-2 sandwich panel
- RAL 9003 for SCK-3 container

Compact Substation, E-House
Design And Structural Features

Design

Compact Substations can be designed in accordance with requirement of project. Equipment in Compact Substations can be provided as ex-proof.

Dimension

Dimensions of Compact Substation can be designed in accordance with requirement of project and are specified in view of the fact that rooms, dimensions of switching equipment, operating conditions and operating area

Base

Base are made of NPU or NPI shapes according to load on the floor and NPU and NPI shapes are covered hot dip galvanized.

Compact Substation Base

Frame

Frame of Compact Substation is made of 5 mm Sil St-37 and covered with hot dip galvanized for long term using.

Wall and Roof

Internal wall and ceiling lining is made of pre-painted corrugated steel sheet with provision for surface or flush mounted items like sockets, switches, fire detectors, lighting fixtures.

As a manufacturer standard total wall and roof thickness;

- for SCK - 1 is 43 mm
  Thickness of rock wool / fiber glass wool : 40 mm
  Thickness of exterier wall : 2 mm
  Thickness of interier wall : 1 mm
- for SCK - 2 is 40 mm
  Thickness of rock wool / fiber glass wool : 38.9 mm
  Thickness of exterier wall : 0.6 mm
  Thickness of interier wall : 0.5 mm
- for SCK - 3 is 52.4 mm
  Thickness of rock wool / fiber glass wool : 50 mm
  Thickness of exterier wall : 1.2 mm
  Thickness of interier wall : 1.2 mm

Compact Substation Roof

Doors

Doors can be opened to 120° outside and designed against to 20 J mechanical shock. Doors has rain channel against rain.

Compact Substation Door

Compact Substation, E-House
Technical Specifications

Interior Lighting, External Lighting

All rooms in Compact Substation are equipped Lighting System in compliance with standards. Internal and external lighting equipment and sockets can be selected in compliance with Atex certificated for Zone2 Hazardous Area.

Emergency Lighting

Emergency Exit Armatures are installed on the way of thedoors. Emergency Exit Armatures include emergency lighting unit.

Earthing

Electrical devices are connected to an isolated earthing busbar. Separate earthing system is used for doors, base, walls and roof to avoid electrical shock in case of touching.

Floor

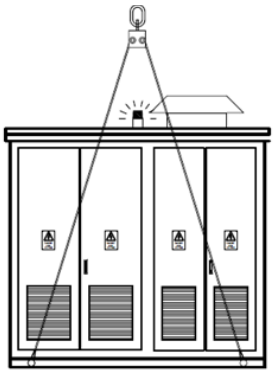
Floor covering is made of non-flammable rubber. It has A1 Classification and 50kV insulation level.,

Fire Detection and Fire Extinguisher System

All rooms are equipped with fire and smoke detectors. In case of emergency in dangerous situations HVAC system is disabled and warning lights and alarm become active.

Air Conditioning System

In Compact Substation, HVAC is used to keep stable internal temperature and humidity. Stabilization in all rooms is provided by air ducts.



Lifting

When carrying the SCK, the ropes should fastened to the eyebolts carefully.

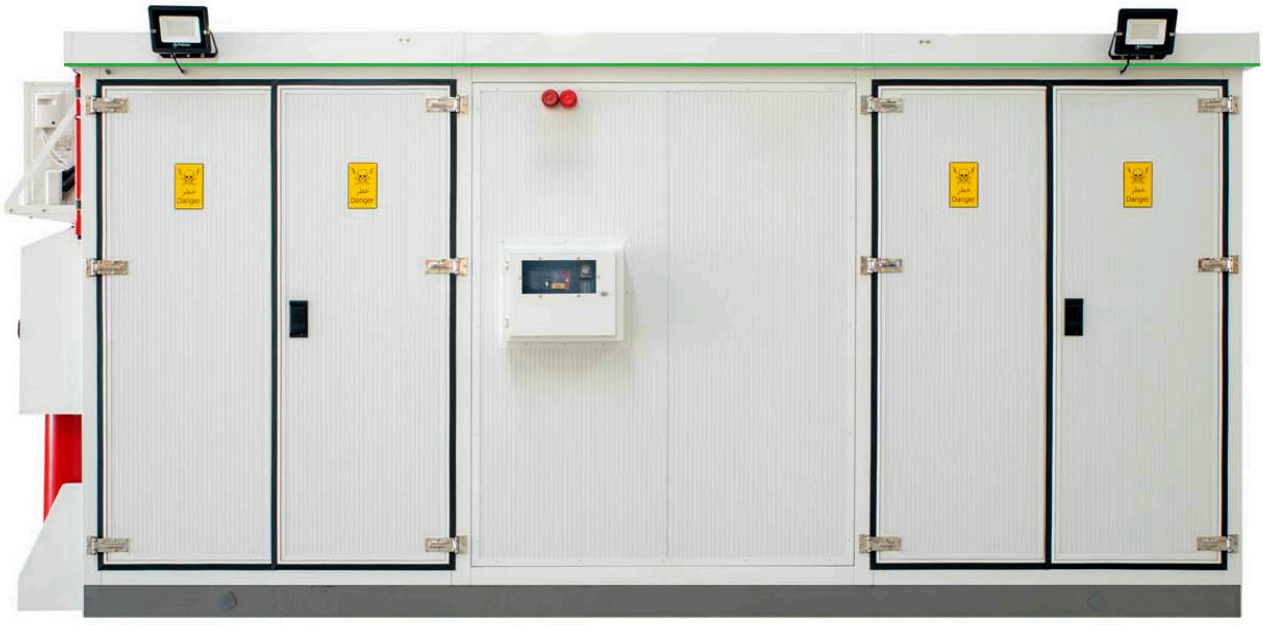
Compact Substation, E-House
Electrical Features And Rooms

MV Switchgear Room

In Medium Voltage (MV) Switchgear room, Metal Enclosed, Metal Clad, primary and secondary gas insulated switchgear (GIS and RMU) can be used. MV room dimensions are specified in according with equipment dimensions of the room.

Transformer Room

In Transformer room, dry type transformer and oil type transformer can be used. Dimensions of transformer room are specified in according with power of transformer.



LV Switchgear Room

In Low Voltage (LV) room, MCC distribution panel, AC distribution panel, DC distribution panel, metering panel, compensation panel, HVAC panel, fire control panel, UPS, Scada - RTU panel and other requested LV panel can be installed.

Battery Room

There are Ni-Cd batteries and DC breakers in battery room. If it is required, Zone2 Hazardous Area Classification can be provided in battery room.

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