

**Rico-Werk**  
ELEKTROTECHNIK

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TYP  
TYPE

**ESO 40-79/2520**

HS-GLEICHRICHTER  
HT-RECTIFIER  
REDRESSEUR HT.

SILIZIUM  
SILICIUM

HERSTELLER-Nr.  
PRODUCT-NO  
PRODUIT N°

**13446**

BAUJAHR  
BUILT IN  
ANNE

**2015**

PRIM. SPANNUNG  
PRIM. VOLTAGE  
U PRIMAIRE

**400** V

PRIM. STROM  
PRIM. CURRENT  
I PRIMAIRE

**495** A

FREQUENZ  
FREQUENCY  
FREQUENCE

**50** Hz  
CPS

LEISTUNG  
POWER INPUT  
PUISSANCE

**198** kVA

VERLUSTE  
LOSSES  
PERTES

**8** kW

ÖL-GEWICHT  
OIL-WEIGHT  
POIDS HUILE

**877** kg

GES.-GEWICHT  
TOTAL-WEIGHT  
POIDS TOTAL

**2615** kg

SEK. SPG. (Ueff)  
SEC. VOLT. (Urms)  
U SEC. (EFF.)

**79** kV

SEK. SPG. (Us)  
SEC. VOLT. (Upeak)  
U SEC. (CRETE)

**111** kV

SEK. STROM. (Ieff)  
SEC. CURR. (I rms)  
I SEC. (EFF.)

**2520** mA

SEK. STROM. (Iar)  
SEC. CURR. (I mean)  
I SEC. (MOY.)

**1800** mA

KÜHLUNGSART  
TYPE OF COOLING  
REFROIDISSEMENT

**OS / HUILE**

ISOLIERMITTEL  
INSULATING FLUID  
TYPE DE HUILE

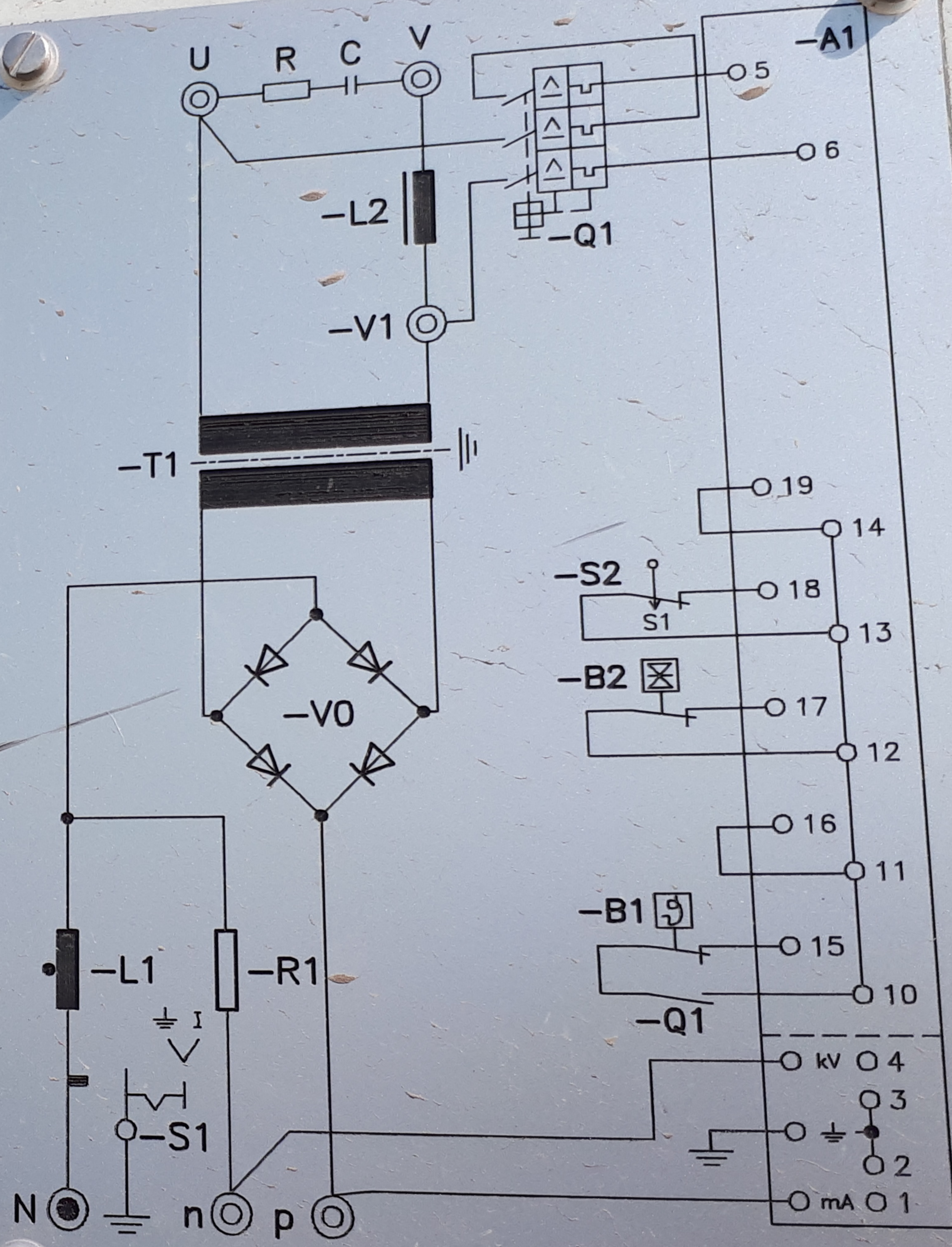
**Diala S2 ZU-I dried**

ÖL TEMP. MAX.  
OIL TEMP. MAX.  
TEMP. MAX. HUILE

**85** °C

UMGEB. TEMP. MAX.  
AMBIENT TEMP. MAX.  
TEMP. AMB. MAX.

**50** °C



50.10-1324

## 1. Description

### 1.1 Use

The high-voltage transformer/rectifier unit is used in connection with a control cubicle to supply electrostatic precipitators with variable directed high-voltage.

### 1.2 Type code (Example)

ESO-40-35-140

E = single phase

S = self-cooling

O = oil insulated

40 = mains voltage (400 V AC)

79 = output alternating voltage ( 79K V AC<sub>eff</sub> )

2520 = output direct current 2520mA DC<sub>eff</sub> )

Further technical dates see rating plate

### 1.3 High-voltage unit

Containing:

- a single-phase high-voltage (HV) transformer, whose high-voltage winding is manufactured using Aluminiumfoil-winding-system.
- a current limiting reactor, referring to size of the installed unit in control cubicle, in series with the primary winding of the high-voltage transformer. It limits the short circuit current which results after spark overs inside the precipitator and improves the form factor of the unit and is designed that the short circuit current is limited on the 2.5-times rated current.
- a high-voltage (HV) rectifier in single-phase bridge connection on silicon technique.
- a high-voltage (HV) dividing resistor.
- a HF Choke between HV-rectifier and HV-bushing
- an oil tank in which the above mentioned components are arranged

In a terminal box on the tank top the following components are arranged :

- a. Shunt for measuring of secondary current (mA)
- b. Resistor for measuring of secondary voltage (kV)
- c. Overvoltage arrester for above mentioned measuring circuits
- d. Low voltage bushings for :
  - supply U+V control voltage V1
  - Measuring output for sec. current (mA)
  - Measuring output for sec. voltage (kV)
- e. Monitoring devices for the protection of the HV-aggregate.