

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-40-79/1960

E = single phase

S = self-cooling

O = oil insulated

40 = mains voltage (400 V AC)

79 = output alternating voltage (79 V AC_{eff})

1960 = output direct current (1960 mA DC_{eff})

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.

Rico-Werk
ELEKTROTECHNIK

Eiserlo & Emmrich GmbH
D - 47918 Tönisvorst
www.rico-werk.com



TYP
TYPE
TYPE

ESO 40-79/1960

HERSTELLER-Nr.
PRODUCT-No
PRODUIT N°

13448

BAUJAHR
BUILT IN
ANNE

2015

PRIM. SPANNUNG
PRIM. VOLTAGE
U PRIMAIRE

400 V

PRIM. STROM
PRIM. CURRENT
I PRIMAIRE

385 A

FREQUENZ
FREQUENCY
FREQUENCE

50 Hz
CPS

LEISTUNG
POWER INPUT
PUISSANCE

154 kVA

VERLUSTE
LOSSES
PERTES

6.6 kW

ÖL-GEWICHT
OIL-WEIGHT
POIDS HUILE

716 kg

GES.-GEWICHT
TOTAL-WEIGHT
POIDS TOTAL

2290 kg

HS-GLEICHRICHTER
HT-RECTIFIER
REDRESSEUR HT.

SILIZIUM
SILICIUM

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. (Irms)
I SEC. (EFF.)

1960 mA

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

1400 mA

KÜHLUNGSART
TYPE OF COOLING
REFROIDISSEMENT

OS / HUILE

ISOLIERMITTEL
INSULATING FLUID
TYPE DE'HUILE

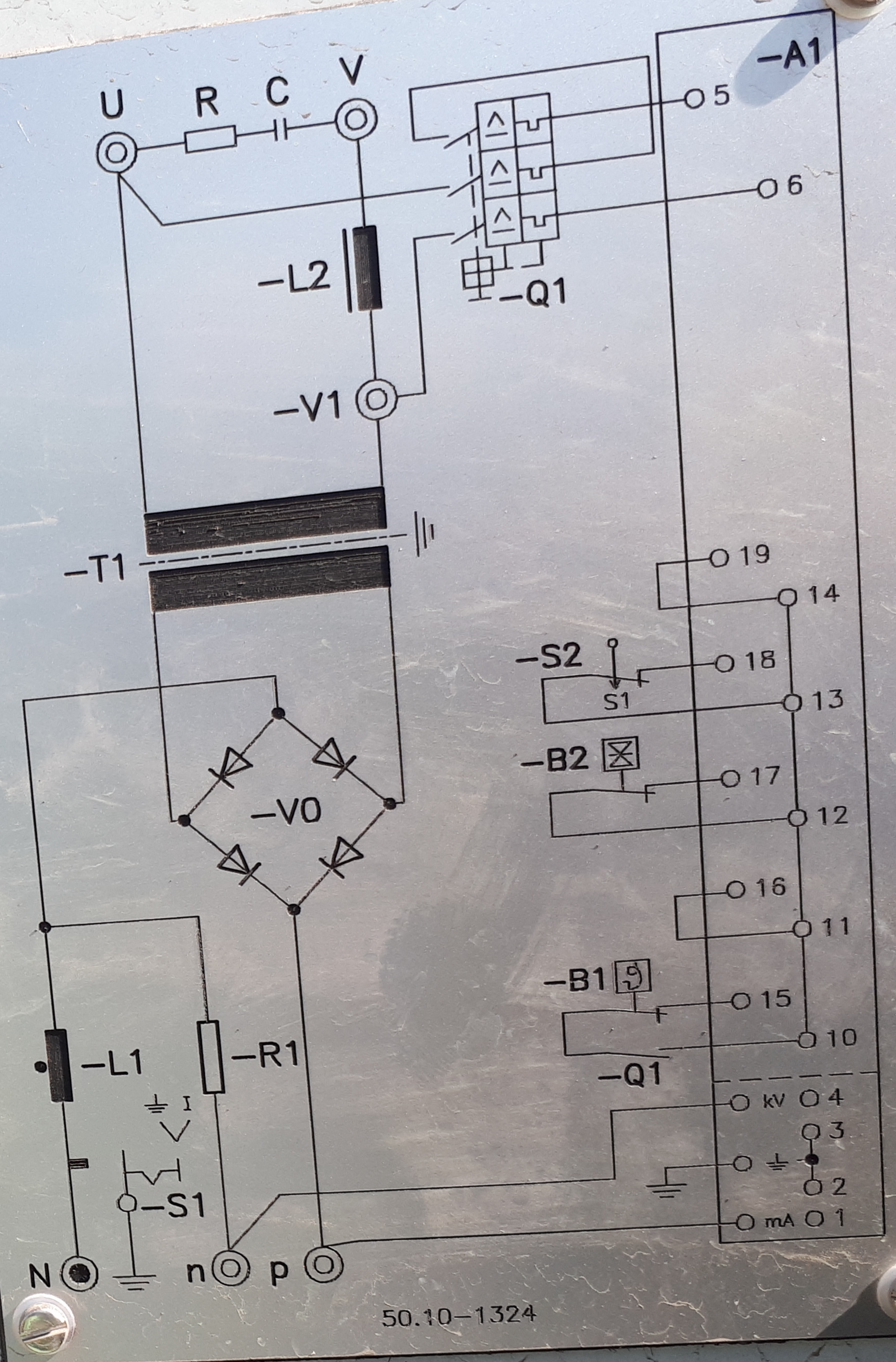
Diala S2 ZU-I dried

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