

TRANSFORMER RECTIFIERS Compensating current limitation unit

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Sheet: 1 of 1

German Cathodic Protection



Type: CCLU-01

On long-distance routes, several pipelines often run parallel in a corridor, and they are often protected by a common CP unit with individual cathode cable connections for each pipeline.

Depending on the age and quality of their pipeline coatings, the current demand for each pipeline may vary considerably, thus causing extremely high potential differences at the drain point.

This can result not just in the insufficient protection of poorly coated pipelines or an excess protection for well coated pipelines, worse still it can result in the circulation of uncontrolled currents between the pipelines which can cause corrosion or decrease the effectiveness of the CP system.

The CCLU enables the individual adjustment of current for each pipeline circuit and prevents the circulation of uncontrolled current between the pipelines, thus guaranteeing uniform potential levels. The CCLU can be installed in the transformer rectifier or separately according to customer specifications.

Description

The unit mainly consists of several current paths depending on the number of pipelines to be connected.

Each current path consists of :

- BLOCKING DIODE to prevent the flow of current between pipelines
- VARIABLE RESISTOR to adjust the magnitude of current for each pipeline
- SURGE PROTECTION CASCADE to protect the components against overvoltage
- SHUNTS AND METERS for total and individual current measurements
- TERMINALS for cable connections

The type of components (diodes, variable resistors, surge protection cascades, meters, shunts, etc.) depends on the total output current of the CP unit and the single current of each individual pipeline.

The enclosure for the unit can be made of sheet steel, stainless steel, aluminium or non-metallic material such as glass-fibre reinforced polyester with weatherproof protection up to IP 65, and suitable for pole, wall or plinth mounting.

