

Relay for OLTC Control & Transformer Monitoring

Model REG-DA

- ▶ Wall mounting housing
- ▶ Panel mounting housing
- ▶ Din-rail mounting



1. Application

The REG-DA relay for OLTC control & Transformer Monitoring is used to perform both complex and simple measurement, control and regulation tasks on tap-changing transformers. To achieve these tasks, the REG-DA voltage regulator can be used with an array of add-on components, such as the BIN-D and ANA-D remote I/O modules, and an assortment of communication cards.

Each REG-DA has transducer and statistical modes, as well as optional multi-channel recorder, transformer monitoring module (TMM) and ParaGramer.

Transducer Mode displays all of the relevant measured variables of the voltage network, while Statistical Mode provides a clear overview of the various switching operations of the tap changer.

Voltage regulators operating in parallel are connected via a fibre optic or copper ELAN bus, which enables the automatic sharing of relevant data. ParaGramer then detects which transformers have been switched into a parallel control scheme and displays this information via a single-line diagram.

The powerful TMM functions enable the continuous monitoring of various conditions within the transformer and tap changer. Information such as hot-spot temperature (IEC 60354 or IEC 60076) and transformer loss-of-life are calculated, and if necessary up to six cooling levels can be activated.

As an alternative to direct measurement, the U, I, tap position and $\cos(\varphi)$ value can also be transmitted to the REG-DA via either IEC 61850 or by mA inputs, thereby eliminating the need for CT and VT cabling to the regulator.

The REG-DA regulator can communicate with a SCADA system (see list of characteristics) through all of the common protocols.

Freely programmable inputs and outputs enable the implementation of application specific tasks.

A number of different communication cards are available for the REG-DA, with connections that range from copper RS232 to fibre optic Ethernet.

A variety of protocols are available to communicate with a SCADA system or RTU:

- IEC 61850
- IEC 60870 - 5 - 101 / 103 / 104
- DNP 3.0 via Ethernet
- DNP 3.0
- MODBUS TCP
- MODBUS RTU
- Profibus DP
- SPABUS
- LON (on request)

The REG-PED is capable of most of these protocols and may be switched between them and configured using the free WinConfig software. WinConfig is specifically designed to provide a similar configuration interface for all of the protocols, thereby reducing engineering time.