



TCA-D/E

**Distribution
Automation RTU
with embedded FPI**



2 enclosures: 1/2rack, 1/3 rack, 6 U high

General characteristics

- ✓ Powerful programmable logic engine
- ✓ Up to 5 FPI functions per IED
- ✓ Up to 64 digital inputs
- ✓ 16 configurable digital outputs for alarm signalling or LBS control commands
- ✓ 24 analogue channels
- ✓ Voltage measurement supported: directly in busbar or installed in feeder bushings.
- ✓ 4000 event logger and oscillography recorder function (sample rate 4800 Hz).
- ✓ Diagnosis and Maintenance WebUI
- ✓ Fault Isolation Automatism (FIA)
- ✓ Cybersecurity: Authentication and encryption

**RTU with built-in directional
Fault Passage Indicator
(up to 5 FPI) for Overhead
Load Break Switch and
extensible switchgears**

Distribution Monitoring and Automation solution for **extensible Switchgear** in **underground Distribution networks** or pole-mounted **Load Break Switches (LBS)** in **Overhead lines**.

8-feeder Switchgear Automation solution covered with only one **Master** and one **Slave IEDs** interconnected via IEC61850 protocol.

Suitable for single busbar as well as multiple busbar substations.



Key Features

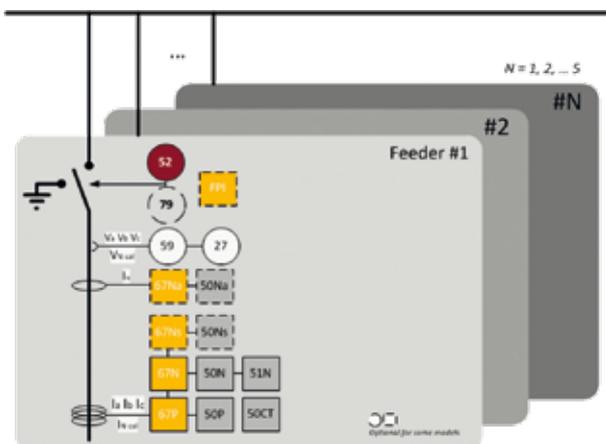
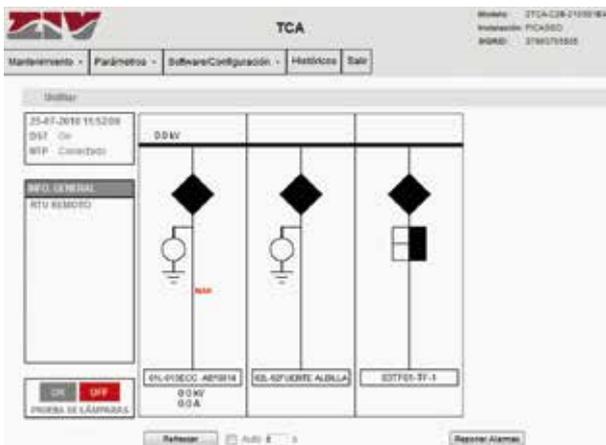
Expansions supported with Master-Slave role devices

In case of large installations not covered with a stand-alone device, it is possible to create a daisy-chain of several devices: one device acts as master including the RTU function and the rest of devices behave as slaves, interchanging data relative to the feeders controlled by each one.

Diagnosis & Maintenance via WebUI

Single line diagram and the status of the different elements of installation can be monitored for diagnosis and maintenance tasks.

No proprietary software tools are required.



Extended Switchgear Controller application

Communication Protocols & Cybersecurity

RTU function embedded in TCA D/E communicates with control centers or SCADA systems using the IEC 60870-5-104 communications protocol.

Remote firmware update, device configuration, remote commands execution and many other operations can be performed through WebUI or web services on the device.

All remote commands are transmitted over secure transport protocols like HTTPS or SSH.

Role-based access control is managed via authentication using LDAP and TACACS+ protocols.

Automatic service restoration (FIA)

The TCA devices have been designed to operate as part of an automatic service restoration system.

Settings and configurations can be adaptatively modified for optimal network operation.

