CYME
Power Engineering Software and Solutions

CYME INTERNATIONAL T&D

Protective Device Analysis

Verify and enhance your power system's protection with CYME's Protective Device Analysis.

The Protective Device Analysis module is an indispensable tool to help power engineers effectively address protection issues by analyzing time-current curves.

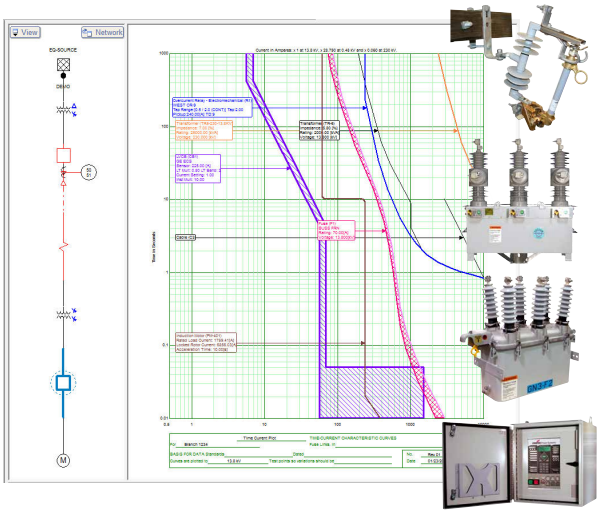
With an extensive library of over 15000 protective devices, an intuitive graphical plot and a broad range of tools and analyses, planning and validating protection schemes has never been easier with the CYME Power System Analysis Software.

The right selection of protective devices and their proper sizing are important issues for engineers desiring to reduce the impact caused by any short-circuit on the network and to minimize equipment failures. CYME's Protective Device Analysis module provides engineers with a wide range of tools to efficiently and accurately design and validate the coordination scheme of their power system.

Time over current plots are generated within the user-friendly interface of CYME, which offers:

- Log-log plot to display time-current curves of protective devices such as fuses, relays, circuit breakers and reclosers
- Library containing more than 100 000 curves from North American, European and Asian manufacturers
- Online update of the library of curves
- Inspection of the proper coordination for motor starting, transformer inrush and cable damage
- Tools to calculate precisely the time and current margins between curves
- Modification of any setting to visualize the change interactively on-screen
- Customizable display options for curve colors, tags and other grid options
- Export function to easily include time-current plots in reports

Not only does CYME provide the useful tools listed above to make any study simple, it also offers advanced analyses to assist engineers in examining the coordination and protection range of the devices on the network more closely.



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Network Protection Analysis

The Network Protection analysis can be used to verify the coordination, the protective reach and the loading of all protective devices in a network.

Main capabilities include:

- Verify the coordination between successive pairs of devices according to user-defined criteria
- Examine whether a device operates for all faults in its protection zone within a user-defined maximum permitted operating time
- Compare the current through each device to a user-defined maximum permitted continuous load current
- Verify if cables are protected by a device on all its length
- Fuse clearing or fuse saving option
- Study both primary and secondary protective devices
- Specialized report and indication on one-line diagram to highlight curve intersections, reach and loading problems

Minimum Fault Analysis

The Minimum Fault analysis is offered to assist engineers in the verification of whether the protective devices can adequately detect and clear the minimum faults seen in their respective protection zone.

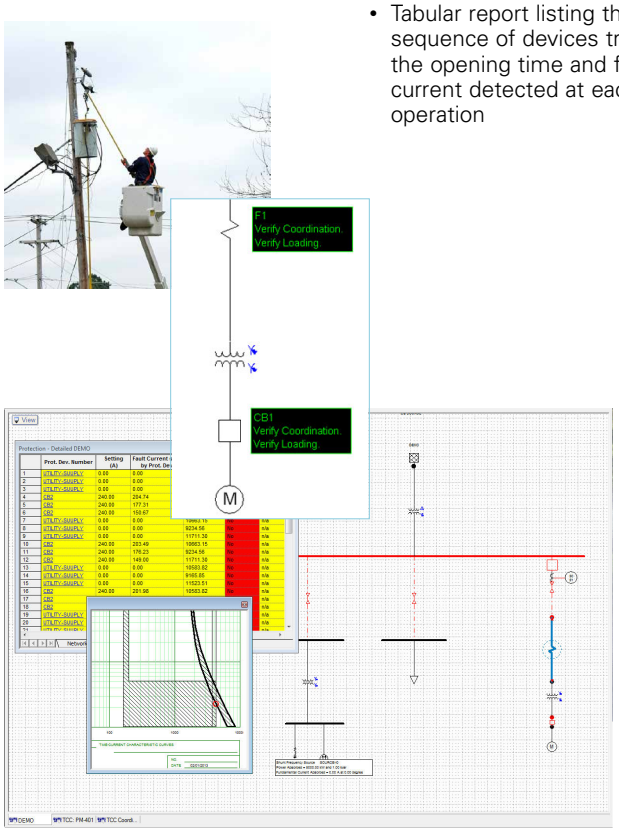
A detailed report is provided to list all areas that are inadequately protected. Those areas are also color-coded on the one-line diagram for easier visualization.

Sequence of Operation

The Sequence of Operation analysis evaluates the impact of a fault on the network to provide the sequence of protective device operations triggered.

Main capabilities include:

- User-defined fault location
- Simulation of any fault type
- Calculation of the fault current and opening time of each protective device while taking into account the state of the network at each operation
- Take into account device settings, including delays and reset times
- Tracing of the protective devices triggered in the one-line diagram
- Tabular report listing the sequence of devices triggered, the opening time and fault current detected at each operation



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