

ASPEN OneLiner and Power Flow

Version 12.6 Update

Please find enclosed the installation CD for *ASPEN OneLiner*™ version 12.6. This maintenance release contains fixes for all known bugs to date. This update also updates the *ASPEN Power Flow*™ logic if you are running *OneLiner* and *Power Flow* from a single executable.

You can run the setup.exe on this CD to create a new installation or to update an existing *OneLiner/Power Flow* installation.

Please write to support@aspeninc.com in English (suporte@aspeninc.com in Spanish and Portuguese) or call us (650-347-3997) if you have questions.

New Features and Improvements

- **New distance relay types REL512P__ and REL512G__ for ABB REL 512 relay**
- **Added support for SEL 421 relay phase element quad characteristic in SEL 421P__ distance relay type.**
- **Improved “Show Relay Operation for All Faults” display in the Distance-Relay Window:** For supported relay types, the command now displays apparent-impedance symbols on the RX diagram in colors to indicate which zone operated in the faults.
- **Improved relay operating time on the 1-line diagram:** The relay trip time is now displayed with 3 decimal digits instead of 2.
- **PowerScript™ engine write access for additional data fields:** Transformer: name, MVA, BaseMVA, and winding configuration; Phase shifter: Name; Series capacitor/reactor: Bypassed and in-service flags; Mutual pair: line orientation flag.
- **New branch-outage simulation option in PowerScript DoFault() function:** The new outage option in DoFault() allow you to simulate failure of breaker open at a bus, in which two lines that share the common breaker are separated from the bus, but remain connected to each other.
- **Improved logic to recover from program inactivity timed out event:** Instead of forcing a program close, attempts is made to re-login to the network key to check out the available seat. When re-login is successful, the user can continue running program simulations without interruption.

Newly added relay curves

- **ABB.RLY:**
 - New curve: ABB PCD Recloser curve A(101)
 - New curve: CSP-xxx Protective Link for CSP Transformer
- **Basler.rly**
 - Fixed error in point values for all time dials in curve BE1-51A_W7
 - New curve Basler BE1-51: Timing Type E6: BS 142 Very Inverse
- **Cooper.RLY:**
 - New revision of BAY-353Cxxxx curve (TCC R240-91-50 06/15/2011)
 - Bay-O-Net dual sensing 358C fuse link
- **Edison.rly**
 - Edison High Voltage Din Distribution Fuse: 7.2, 17.5 and 24-27.6kV

- **GE.rly**
 - GE EntelliGuard TU Trip Unit
- **Kearney.rly**
 - New curves KERNY-K001
- **Siba.rly**
 - New curves: Siba HHD-B High Voltage Current-Limiting fuse German DIN standard

New sample script programs (included in the \Script subdirectory in the program folder)

- **BkrFailure.bas:** Run DoFault() with breaker failure simulation option
- **changebkrdata.bas, changemudata.bas:** Modify network data using change file
- **datawks.bas:** Import network data from Excel spreadsheet
- **orphanbus.bas:** Print list of buses that are islanded (i.e., have no connection to any other buses)
- **LineFault.bas:** Run intermediate fault simulation with on all transmission lines
- **remotelineflt.bas:** Simulate fault on remote line(s)
- **setfuse.bas:** Demo set fuse parameters
- **fltexpEx.bas:** Exports fault simulation results to disk files
- **fltparam.bas:** Demo GetData() function

Bug Fixes

- The Bus Selector wizard in the Bus Fault Summary and Line End/Out Summary commands did not exclude tap buses in the selection list when the user marked the Ignore Tap Bus check box.
- The Phasor Probe incorrectly showed nonzero shunt current when the Fault | Option “Ignore shunt with + seq value” is in effect.
- Fixed bug in Stepped Event Simulation command logic that caused error in simulation of reclosing operation in some cases.
- The program did not display transformer damage curve correctly when the damage curve is linked to a relay that is not located on a transformer branch.
- Fixed a bug that caused the Show Phasor command to display solution for transformer terminal other than the one the user had right-clicked on in some cases.
- Fixed a bug that caused the Show Phasor command to fail when a relay group on switch is selected.
- Fixed a bug in Merge file command that caused unnecessary changes to branch circuit ID and generator unit ID in networks being merged.
- Fixed bug in the Paste Network Equipment from Clipboard and Merge File commands that caused damage to logic scheme elements data.
- Fixed a bug in logic for displaying the progress bar in the Check Relay Loadability command.
- Fixed several issues in Relay Loadability Report: report in TXT and CSV files formats contained formatting error. The loadability check did not take into account OC phase relay voltage restrained/controlled flag.

- Fixed bug in logic for displaying relay operating time on the one-line diagram that sometime caused random data to be displayed for relay groups where no device has tripped.
- Fixed bug that caused incorrect results in simulation of phase-open fault in some networks.
- Fixed bug that caused problem in copying and pasting a relay group with no relays or logic schemes.
- Fixed bug in the PowerScript DoSteppedEvent() function. The script logic did not process line percent parameter for intermediate fault in the same way as the Stepped Event Analysis menu command when the are tap bus(es) on the line.
- Fixed issue in Stepped Event Analysis command to correctly display protection tripped state on transformers and phase shifters.
- Fixed bug in PowerScript data access logic for code: PS_dMWmin, PS_dMWmax, XR_dG2.
- Fixed bug in Data browser display for transformer neutral impedance values ZG2 and ZGN
- Fix buffer-size limitation in copy to clipboard and relay import commands that caused error when processing data for D60 distance relay models.
- Fixed bug in PowerScript PostGenParam() function logic for validating fILimit values.
- Fixed bugs in logic for evaluating logic scheme operating time in fault.
- Updated setting ranges for REL670 per manual V1.2
- Fixed bugs and improved simulation logic of distance relay type 7SA522__
- Added simulation of fault detector by current magnitude to P441__ distance relay type. Also fixed a few typos in loop-checking logic.
- Fixed bug in SEL321P__, SEL311P__ and SEL421P__ distance relay types load encroachment logic simulation.
- Case comparison program: kV range input field did not allow floating point numbers.
- Case comparison program: Help command did not open correct help file topic.
- Case comparison program: Fixed an error in change file coordinating pair data section. This error did not seem to cause OneLiner Read change file command to fail.
- Fixed bug in arc flash hazard calculator command. In some cases, bus fault fault current calculation was not accurate when multiple buses are included in the calculation.
- Fixed potential memory error in fault simulation logic.
- Fixed error that caused the check Primary/Backup coordination command to neglect primary distance relay operation in intermediate faults on the line where the relay is located.
- Fixed issue in saving relay test config file (TFC). PT and CT ratio data were saved in file incorrectly.
- Fixed error in computing apparent impedance in phasor diagram when voltage or current are shown in p.u.