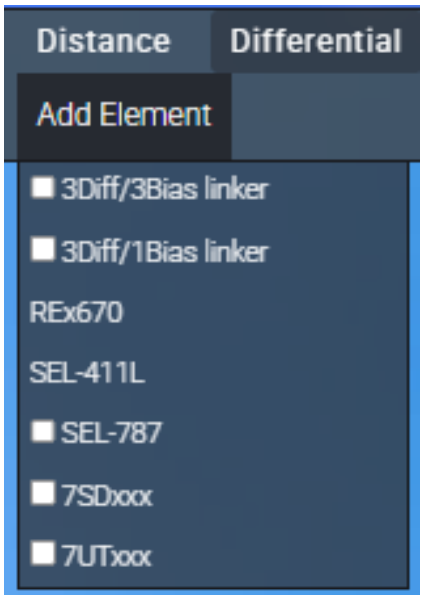
DIFFERENTIAL PROTECTION.

Protection → **Differential**



Differential protection has only one menu.

On the top we have two elements called **linkers. Linkers** are used to visualize differential and restrain currents from the event file in the protection window.

3Diff/3Bias linker is used in case when each phase in differential protection algorithm has its own differential and restrain currents (e.g. line differential).

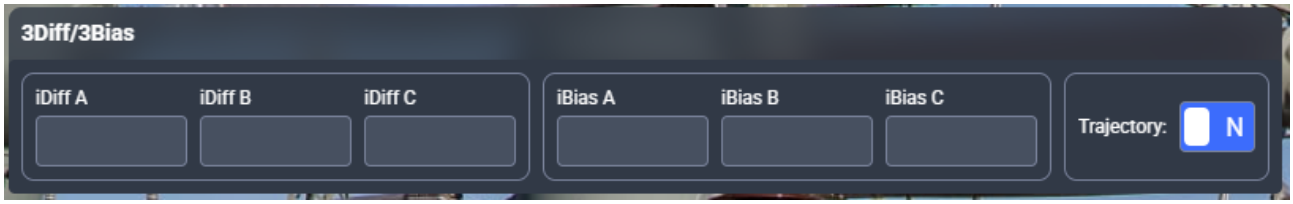
3Diff/1Bias linker is used in case when all three phases in differential protection algorithm have only one restrain current (e.g. transformer differential).

REx670 sub menu has three options used with ABB relays.

- **PDIF** can be used to enter and visualize settings from line, transformer, generator or motor differential protections.
- **BPDIF** is used with busbar differential protection.
- With **RET670 calculator** you can emulate the RET670 differential algorithm for three windings transformer (you can also use it with two windings transformer, just don't link channels to Winding 2 or 3). **SEL-411L** and **SEL-787** – modules for famous American manufacturer devices.

7SDxxx and **7UTxxx** elements used with corresponding famous German relays.

To link analog channels that contain differential and restrain currents you need to select linker or calculator to link with. Differential and restrain currents may be direct or alternate. In the case of a direct current, the algorithm takes the instantaneous value, in the case of an alternate, it takes RMS.



RelayHelper
You can just see

Linking differential and restrain currents using **Link Tool** from **Toolbar is shown at example below.**

Example with phase **B** to ground short circuit on 330 kV line protected by 7SD522 relay visualized with **3Diff/3Bias linker** and **7SDxxx** element