

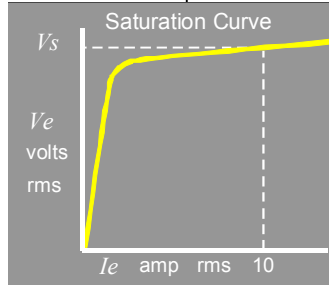
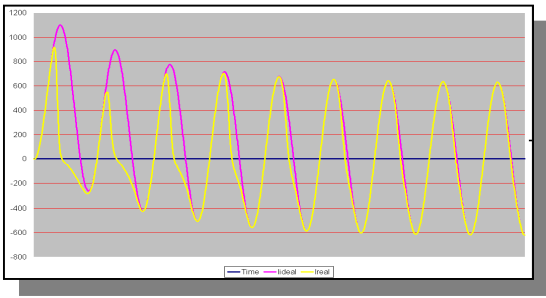
## Current Transformer Saturation

### Saturation check according to

- IEEE C37.110-1996
- IEC 60044-1 2003

### Results

- Individual check or all CTs together
- Check for 3-phase and 1-phase faults
- Saturation criteria's according to standard are listed in tables
- Plot of ideal and distorted secondary CT current

## Thermal Line Analysis

### Thermal short circuit capacity

- DIN VDE 100 Part 540, IEC 865-1:1993 or ANSI
- Cable or overhead lines
- Worst fault location for thermal cable stress determined
- Permissible thermal cable current according to standards and line input values determined
- Tripping time of protection devices considered
- Permissible fault clearing time calculated
- Radial and meshed networks

	Line	Worst Fault at Node	Permissible Thermal Cable Current	Ik2 Line Current	Thermal SC Current for Fault Clearing Time	Fault Clearing Time	Permissible Fault Clearing Time	Checked
			kA	kA	kA	s	s	
2	L57	A	9.510	24.073	25.030	0.100	0.148	☒
3	L62	B	9.510	13.931	14.203	0.100	0.463	☒
4	L72	M	6.023	9.144	9.283	0.100	0.431	☒
5	L77	P	6.023	8.380	8.503	0.100	0.514	☒
6	L67	C	6.023	11.755	11.962	0.100	0.253	☒
7	L87	O	9.510	10.502	10.676	0.100	0.817	☒
8	L92	T	9.510	8.899	9.038	0.100	1.139	☒
9	L82	C	9.510	11.755	11.962	0.100	0.651	☒
10	L102	X	6.023	6.314	6.403	0.100	0.908	☒
11	L107	Z	6.023	6.746	6.842	0.100	0.795	☒
12	L97	L	6.023	7.508	7.620	0.100	0.641	☒
13	L112	Y	6.023	7.236	7.342	0.100	0.690	☒
14	L117	L	6.023	7.508	7.620	0.100	0.641	☒