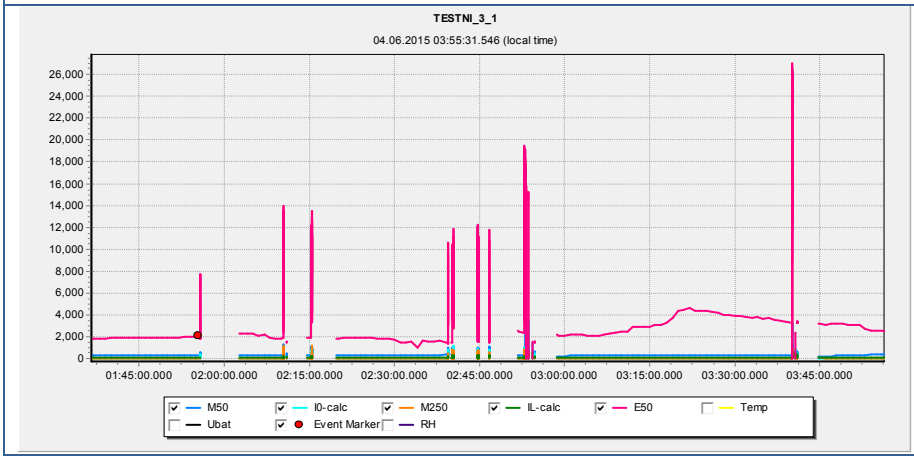
Disturbance diagrams captured by Sipronika LOK 200

Device: Sipronika LOK 200	**Location: RTP Domžale**	**Date: Jun 2015**

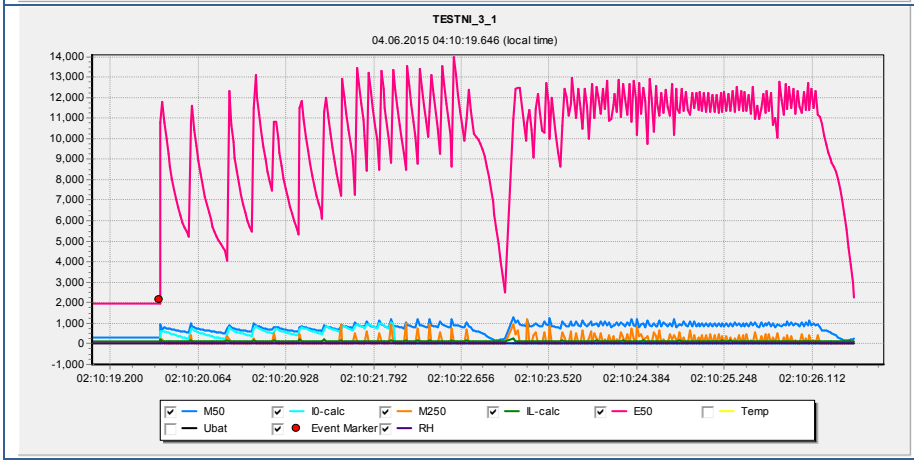
Legend of curves:

- E50 - Electric field: the resultant of MV line voltage, affected by geometrical line conductor's asymmetry and presence of U_0 , used as input data for Earth-fault detection algorithm;
- M50 - Magnetic field, base frequency 50 Hz: the resultant of MV line current, affected by geometrical line conductor's asymmetry and presence of I_0 , used as input data for earth-fault and short-circuit detection algorithm;
- I0-calc – Calculated/estimated residual current I_0 , used as input data for Earth-fault detection algorithm;
- M250 - Magnetic field, harmonic frequency 250 Hz: the resultant of MV line current (250 Hz), affected by geometrical line conductor's asymmetry and presence of I_0;
- IL-calc - Line current: calculated/estimated line current, used as input data for short-circuit detection algorithm;
- Ubat - Battery voltage;
- Temp - Device's temperature;

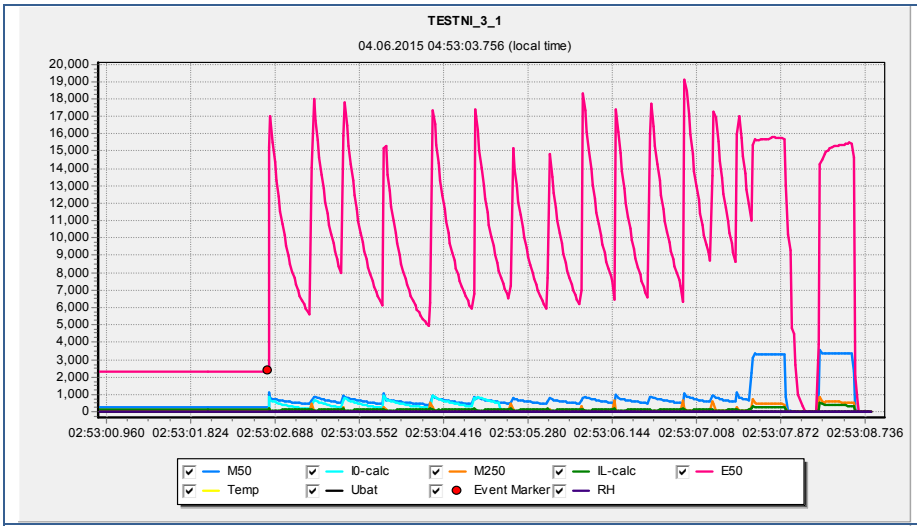
Indicator: Testni_3_1
Location: DV Tuhinj behind the branch Dob žaga
Located in front of the fault site



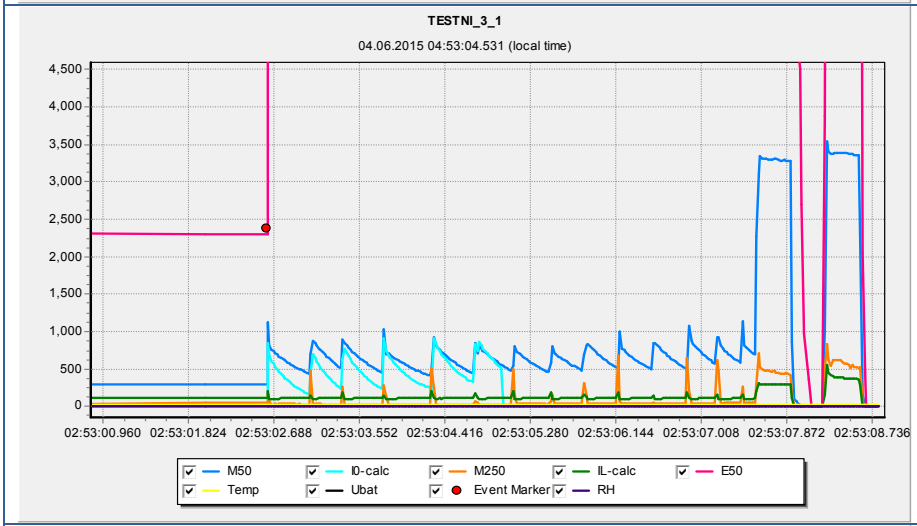
1. Multiple Earth-faults in resonant grounded network



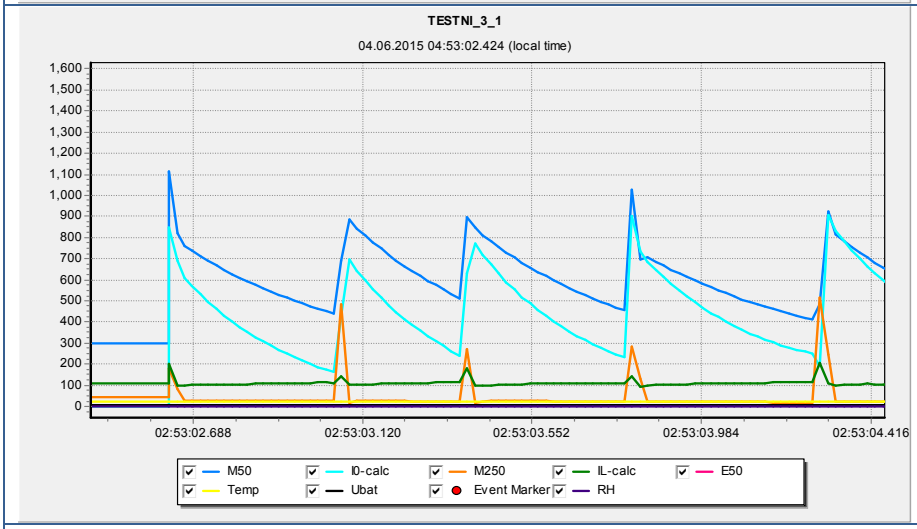
1. Magnified view of event



1. The earthing resistor was switched on at the end of the event.

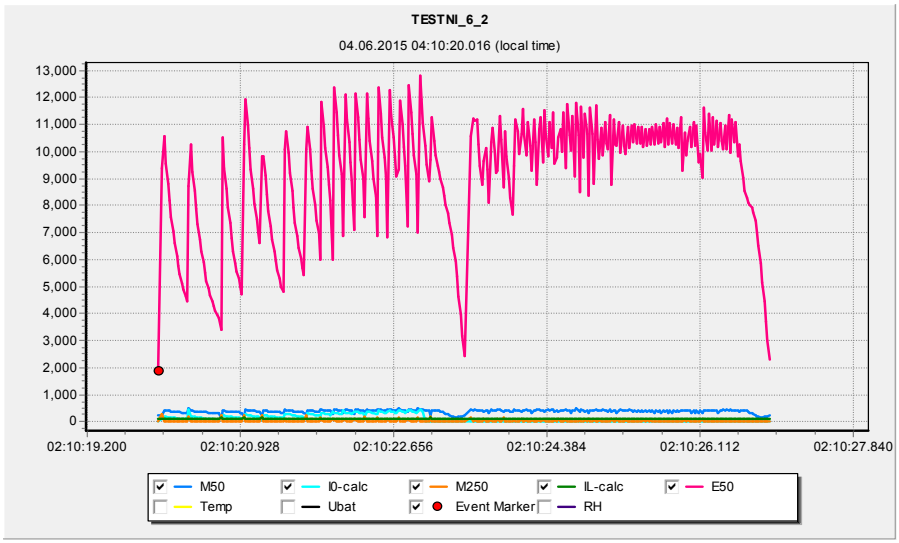


1. Detail of earth-fault current – magnetic field

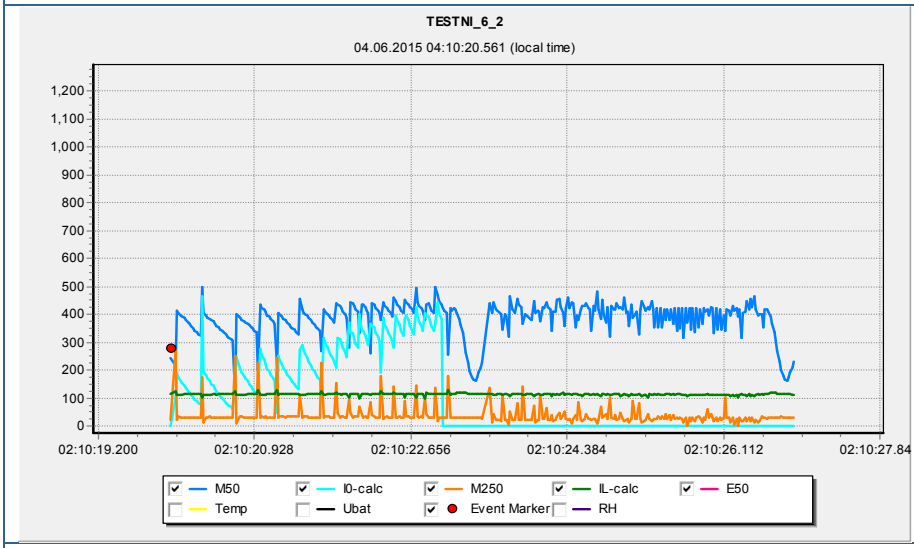


1. Detail of earth-fault current – magnetic field
2. I0 amplitude is between 9 A and 40 A

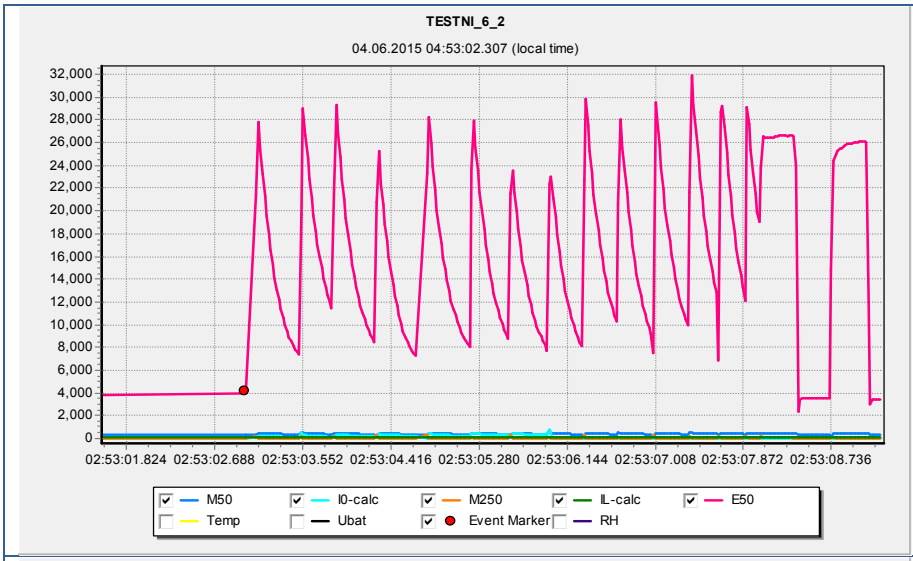
Indicator: Testni_6_2
Location: DV Moravče, calculated Ic ~ 28A
Located behind the fault site



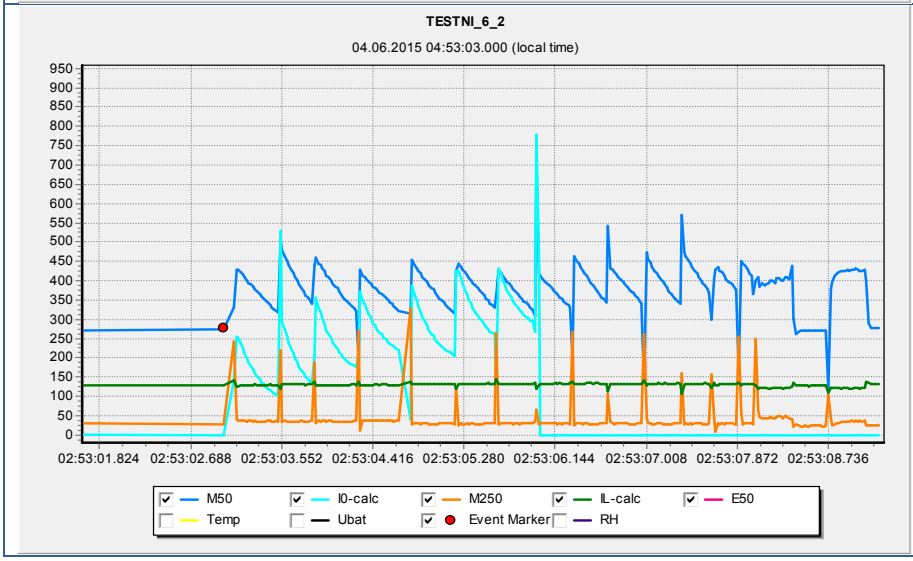
1. Earth-fault in resonant grounded network behind the fault site.



1. Detail of fault-current



1. Earth-fault in resonant grounded network behind the fault site.
2. The earthing resistor was switched on at the end of the event.



Detail of fault-current