Quick guide OWTS

Connect System in accordance with Manual. Take special attention with the connection of the extension cable on the end-termination in order to avoid partial discharges.

1. Boot System and Notebook, do the remote connection
2. Enter the test object data.
3. Connect the calibrator as close as possible to the test object and twist the connection cables to reduce reflections.
4. Ensure connection is made to the cable shield directly, not to the ground bar!
5. Calibrate as follows:
   Normally it is sufficient to do one calibration procedure for all 3 Phases.
   For this, select “All” at the calibration screen.
   Only if there are differences between the phases to be expected, calibrate for each of the phases separately.
   Values for XLPE Cables (100, 500, 1000, 2000, 5000pC, 10000pC)
   Values for PILC Cables (500, 1000, 5000, 10000, 20000, 50000pC)
   There is no need to calibrate all values initially.

Note:
If the PD level is very high, there may be a clipping of the PD during the measurement. If this happens, stop the measurement and go to the calibration mode again. Calibrate with the next higher calibration value.

6. Disconnect the Calibrator
7. Run test with zero voltage to obtain information about background noise level and save it.
8. Start at 1Uo, and store two measurements disregarding, if PD is detected
9. Depending on the situation, follow the columns on the next page for your application!

Note!
Ensure that for all the measurements the same parameters are applied to provide comparable results.
This means measurements at 0,5; 0,7; 1 Uo, then 1,2; 1,4; 1,7 Uo plus PDIV and PDEV. Operating like this, ensures, that PD is recorded in comparable steps.
Take care that the number of the saved shots is more or less the same like stored on measurements before. The total number depends, if partial discharges appear or not. It makes no sense to save shots showing no PD. The only exception is the Uo, - saving a measurement at this particular voltage level is essential, in order to complete the tables in the report.

PD at 1Uo	No PD at 1Uo
This indicates that during normal operation discharges exists in the cable.	This indicates that no partial discharges exist during normal operation.
Find PDIV Normally go up from a certain start level to find PDIV. Go down in 0.1Uo steps to find the inception voltage, save the PDIV (using the PDIV save button).	Find PDIV Go up in 0.2Uo steps to the required value (typically 1.7Uo). Save only if pd pulses are observed in the Display! If PD incepts during those steps, save the PDIV at this particular voltage. Also save the measurements at the voltage levels above the PDIV but below the required voltage end value.
Starting at the PDIV increase the voltage in steps of 0.2Uo until the required value (typically 1.7Uo) and save for each voltage level.	Find PDEV PDEV is determined at a shot at 1.7Uo! Not at other voltage levels!
No need for PDEV	In General PD patterns show a clear decreasing tendency together with the decreasing voltage. Find the position where PD does not exist anymore, move the yellow line in the PD graph to this position and store this measurement as PDEV.
PDs are taking place at nominal voltage.	
For a complete test, the following details of the measurements should be stored: 0.0kV (Background noise level) PDIV 1Uo Appr. 5-10 measurements showing PD patterns at different voltage levels to do a proper and reliable analysis.	For a complete test, the following details of the measurements should be stored: 0.0kV (Background noise level) 1Uo 1.7Uo PDIV (if is existent) some measurements above PDIV (if it is existent) (different voltage levels up to required voltage value) PDEV