



The EMPIR initiative is co-funded by the European Union's Horizon 2020 research and innovation programme and the EMPIR Participating States

17RPT03 DIG-AC
A digital traceability chain for AC voltage and current

List of Deliverables

Partners

FER, CEM, CMI, GUM, INRIM, IPQ, JV, Metroser, NPL, PTB, TUBITAK, UMA

Delivered

May 2022

This project 17RPT03 DIG-AC has received funding from the EMPIR programme co-financed by the Participating States and from the European Union's Horizon 2020 research and innovation programme.

List of Deliverables

Deliverable number	Deliverable description	Deliverable type	Partners (Lead in bold)
D1	Report on the selection of three digitisers and their parameters that meet the necessary requirements for digital traceability chain. This will include the performance related to the requirements of using AC quantum voltage standards.	Report	TUBITAK , FER, CEM, CMI, GUM, Metrosert, PTB, INRIM, IPQ, JV, NPL, UMA
D2	Report on the best quantum-based system verification approach for testing digitisers to provide digital traceability chain for AC voltage and current	Report	TUBITAK , FER, CEM, CMI, GUM, Metrosert, PTB, INRIM, IPQ, JV, NPL, UMA
D3	Guidelines on the development of scaling systems employing digital techniques for use at NMIs and calibration laboratories for the practical realisation of step-up and step-down procedures and scaling of electrical current and voltage	Guidelines	INRIM , CEM, Metrosert, TUBITAK
D4	Report on the integrated software for data processing and uncertainty estimation of dynamic measurements, including related methods and algorithms	Report	CMI , IPQ, CEM, NPL
D5	Paper on the validation of the complete system, including passive coaxial current and voltage devices, algorithms, and software submitted to a peer-reviewed journal	Paper	NPL , CEM, CMI, FER, GUM, INRIM, IPQ, JV, Metrosert, PTB, TUBITAK, UMA
D6	Protocol for a future intercomparison of digital AC voltage and current standards between European NMIs	Documented protocol	NPL , FER, CEM, GUM, INRIM, JV, Metrosert, PTB, TUBITAK, UMA, CMI, IPQ
D7	Agreed individual strategies and coordinated strategic plan for the long-term development of FER, CEM, CMI, IPQ, JV, GUM, Metrosert, NPL, INRIM, PTB and TUBITAK research capability in digital traceability chain for AC voltage and current metrology	Report	PTB , FER, CEM, GUM, INRIM, IPQ, JV, Metrosert, NPL, TUBITAK, CMI, UMA
D8	Good Practice Guide on traceability of digital dynamic measurements of AC voltage and current.	Good Practice Guide	GUM , FER, CEM, CMI, INRIM, IPQ, JV, Metrosert, NPL, PTB, TUBITAK, UMA
D9	Evidence of contributions to or influence on new or improved international guides, recommendations and standards with a specific focus on the following guides and committees: EURAMET TC-EM, EURAMET TC-EM SC Low Frequency, EURAMET TC-EM SC Quantum Metrology, EURAMET TC-EM SC Power and Energy. Examples of early uptake of project outputs by end-users	Reporting documents	FER , all partners
D10	Delivery of all technical and financial reporting documents as required by EURAMET	Reporting documents	FER , all partners

Remark: With **green colour** are marked those deliverables which are openly available on this website.