# H. Aron direct current power meter

AUTHOR

TIME AND PLACE OF CREATION

Time:
1905

TECHNICAL DATA

Dimensions:
height: 400 mm, width: 235 mm, length: 205 mm

OTHER

MIM 1703/IV/76

KEYWORDS

urządzenia pomiarowe, licznik, energetyka, elektrotechnika

DESCRIPTION

This meter is a device used for measuring electrical load (ampere hours) and electrical energy (watt hours) of the direct current received from the network by a consumer. At it most simple, the operation of the meter is based on the movement of pendulums connected to the grid voltage. The pendulums move at a given speed in the electric field created by coils connected to the power network. The characteristic movement of the pendulums is then transferred to a mechanism that allows the value of the load and energy received to be read. This type of meter was widely used until early 20th century, alongside designs using an electrical motor or electrochemical phenomena (hydrogen and mercury meters). The pendulum meter presented here was produced by the German company H. Aron, Elektrizitätszähler Fabrik GmbH, which was established in 1885 by Hermann Aron who worked in physics and electrical engineering. The company's founder was also one of the authors of the concept of the pendulum meter and the owner of a patent for this device, and the company itself became a global leader in the production of energy meters. In 1897, a Viennese branch of the company was opened and the model seen here was manufactured there. Interesting fact: Pendulum meters went out of use partly because they were

expensive and complicated, but mainly because of the increased popularity of alternating current, the consumption of which could be measured using different devices. References: Aron Herman, a biographic entry published in the „Polin. Wirtualny Sztetl" database, https://sztetl.org.pl/pl/biogramy/4841-aron-hermann (Accessed: 9.05.2021). P. Olszowiec, Pomiary energii elektrycznej liczą już 140 lat. Najpierw ważono miedź..., „Energia Gigawat" 2010, nr 1, https://rynek-energii-elektrycznej.cire.pl/pliki/2/pom-energ-el-licza-140-lat.pdf (Accessed: 9.05.2021).