



-Technical Specifications Temperature Chambers BiA MTH 4.46-

Summary



Twelve identical temperature chambers integrated into three cabinets, one shown on the left - BiA MTH 4.46 - for testing batteries were purchased in 2013 and 2016 (C112219). The system is equipped for providing controlled temperature independently inside each chamber.

Each test volume features a door with window, internal lighting and a display showing temperature inside the chamber, duration of the test, preceding and following steps of the program.

Test volume

The dimensions of each test space are 400 mm (width) x 225 mm (depth) x 510 mm (height) which corresponds to ca. 46 l. Two entry ports with a diameter of 50 mm are available for each temperature controlled volume.

Temperature range

The temperature range is -40°C to 85°C . The temperature deviation in the centre of working space is ± 0.5 K, the temperature homogeneity in space relative to the set value is ± 1.5 K.

The temperature rate according to IEC 60068-3-5 is 2.0 K/min for both heating and cooling.

Temperature is measured using a high quality Pt 100 Ω /0 $^{\circ}\text{C}$ CLASS 1/3 DIN precision sensor following IEC751.

Heat compensation of 100 W is provided in the whole operational temperature range for each test volume.

Input/output

The equipment features 4 digital outputs and 4 digital inputs, serial port and Ethernet connection.

Safety features

Each chamber is equipped with optic and acoustic alarm and a CO sensor. The alarm features a digital output to facility safety control. Furthermore, a pressure release flap with a diameter of 50 mm for each temperature-controlled volume is connected to the air exhaust system. A safe temperature limiter (STB) protects each chamber against overheating.

Required services

The equipment has a standard power supply at 400V, 50Hz with a maximum nominal electrical power consumption of ca. 17 kW. The equipment is air-cooled with a maximum heat dissipation into the installation space of 12 kW.