

## Data Sheet

# Kirk-Polarization Cell

The Kirk cell is an electrochemical device which basically resembles an electrochemical safety switch. Its function is to shunt hazardous voltages to ground in installations which, for reasons of corrosion protection, may not be grounded via metal conductors. The cell has a low resistance to the passage of AC current while blocking DC current.



The Kirk cell consists of multiple pairs of stainless steel plates which are immersed in a 30% potassium hydroxide electrolyte solution. An oil seal floating on the electrolyte prevents evaporation, absorption of atmospheric gases and excessive foaming under high current flow. The cell blocks direct current up to a direct voltage of 1.2 V. When the direct voltage on the plates becomes higher than this, electrolysis begins, causing film of oxygen gas to form on the positive plates hydrogen gas on the negative plates. The internal resistance of the Kirk cell is thereby reduced and the direct current flows through the cell. AC current is conducted by the low resistance plate condenser effect of the cell.

The cell has to be installed in well ventilated locations, protected from sunlight and rain.

Provided the liquid level is maintained within the marked lines, the cell can be unproblematically used in ambient temperatures between -40°C and +60°C. The top up interval varies according to the installation conditions (approx. 1 year).

Types and sizes		
K5A	Kirk Cell K 5A	pc
K 25	Kirk Cell K 25	pc
K 50	Kirk Cell K 50	pc
K5A/EH 2	2xK5A in cabinet, alternative A	Set
K5A/WS	2xK5A in cabinet, alternative B	Set
L-EH2	AC drain in cabinet, alternative A	Set
L-KS4	AC drain in cabinet, alternative B	Set

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