Farnell COMPONENTS

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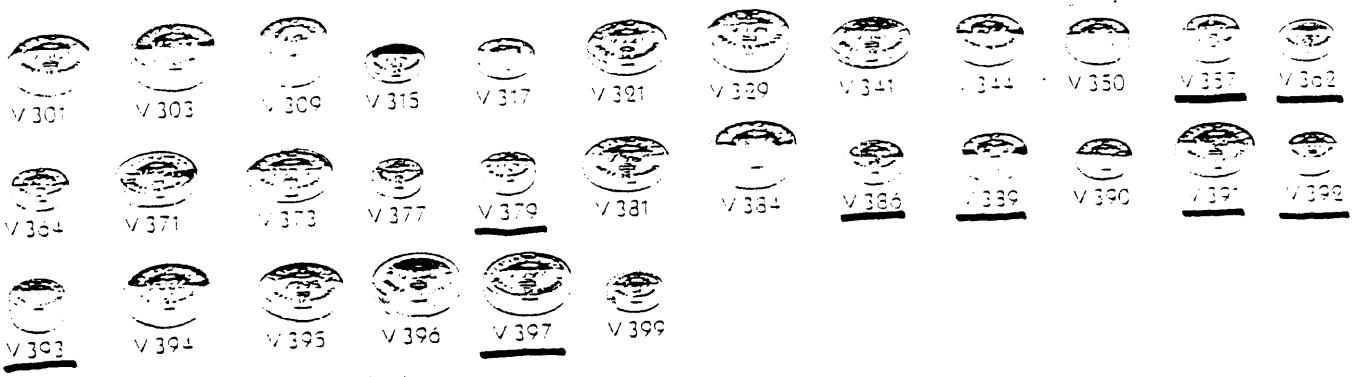
860



Type Range Silver Oxide Cells for Watches

VARTA-Cell Type	Order No.	Nominal Voltage V	Capacity* mAh	Internal Resistance Ω	Dimensions Ø mm	Dimensions Height mm	Weight g	IEC Coding	Preferred Application
V 301	301	1.5	115	20	11.6	4.2	1.78	SR 43	watches
V 303	303	1.5	170	20	11.6	5.4	2.33	SR 44	watches
V 309	309	1.5	70	30	7.9	5.4	1.08	SR 48	watches
V 315	315	1.5	19	40	7.9	1.6	0.4	–	watches
V 317	317	1.5	8	100	5.8	1.6	0.18	–	watches
V 321	321	1.5	13	60	6.8	1.6	0.25	–	watches
V 329	329	1.5	30	60	7.9	3.1	0.6	–	watches
V 341	341	1.5	11	100	7.9	1.4	0.27	–	watches
V 344	344	1.5	100	30	11.6	3.6	1.49	SR 42	watches
V 350	350	1.5	100	10	11.6	3.6	1.49	SR 42	watches
V 357	357	1.5	155	10	11.6	5.4	2.33	SR 44	watches
V 362	362	1.5	22	50	7.9	2.1	0.4	SR 58	watches
V 364	364	1.5	20	60	6.8	2.15	0.33	SR 60	watches
V 371	371	1.5	34	40	9.5	2.1	0.61	–	watches
V 373	373	1.5	24	40	9.5	1.6	0.5	–	watches
V 377	377	1.5	24	70	6.8	2.6	0.39	–	watches
V 379	379	1.5	12	70	5.8	2.1	0.23	–	watches
V 381	381	1.5	45	30	11.6	2.1	0.9	SR 55	watches
V 384	384	1.5	45	60	7.9	3.6	0.69	SR 41	watches
V 386	386	1.5	105	10	11.6	4.2	1.78	SR 43	watches
V 389	389	1.5	85	10	11.6	3.1	1.32	SR 54	watches
V 390	390	1.5	85	30	11.6	3.1	1.32	SR 54	watches
V 391	391	1.5	43	10	11.6	2.1	0.9	SR 55	watches
V 392	392	1.5	38	10	7.9	3.6	0.69	SR 41	watches
V 393	393	1.5	70	15	7.9	5.4	1.08	SR 48	watches
V 394	394	1.5	67	30	9.5	3.6	1.04	SR 45	watches
V 395	395	1.5	46	30	9.5	2.6	0.73	SR 57	watches
V 396	396	1.5	25	15	7.9	2.6	0.55	SR 59	watches
V 397	397	1.5	30	50	7.9	2.6	0.50	SR 59	watches
V 399	399	1.5	42	10	9.5	2.6	0.76	SR 57	watches

* average values at end-of-discharge voltage of 0.9 V/cell

1.7 Silver Oxide Button Cells

Construction: According to sectional view 1.

⊕ pos. electrode (silver oxide)

Electrolyte: Potassium or sodium hydroxide

Nom. Voltage: 1.55 V

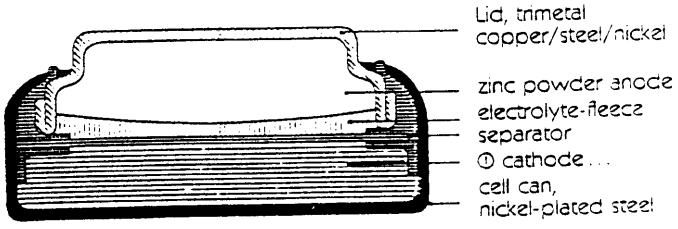
Average operating voltage: 1.4–1.5 V

Specific energy density: 350–430 mWh/cm³

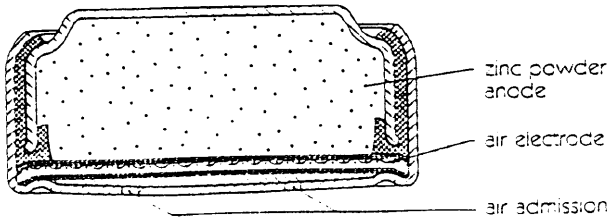
Characteristic curve: horizontal

Operating temperature: –10 °C to +60 °C

Silver Oxide Button Cells have excellent voltage characteristics, offering a highly constant voltage supply in many applications. Voltage for this system is some



Sectional view 1



Sectional view 2

Farnell Order Code 249907, 300779, 300780, 249919, 300792, 300809

300810, 300822, 300834, 300858, 300860

Data Sheet No CSH00166

COSHH REGULATIONS 1988

Varta design and manufacture batteries, so far as is reasonably practicable, to be safe and without risk to health when properly used.

Supplied as sealed units they represent no chemical hazard in the sense of the Control of Substances to Health COSHH Regulations.

Chemical hazard can however arise if batteries are misused or abused when leakage or, in extreme cases, fire or explosion may occur.

In order to avoid potential problems the Battery Safety Guidelines copy attached should be observed on storage, use and disposal.

1. ZINC CARBON BATTERIES

The main chemical hazard arises if the battery leaks or vents. The electrolyte is a concentrated solution of zinc chloride and ammonium chloride in water. The material is acidic, corrosive and will cause burns to skin. The electrolyte is also harmful if it enters the eyes. If the user comes into contact with the electrolyte then the part affected should be washed immediately with water. If the material enters the eye medical attention should be sought without delay.

The cathode mix is corrosive and contains manganese dioxide which is toxic if ingested. Medical attention should be sought if ingestion is thought to have arisen.

2. ZINC CHLORIDE BATTERIES

The main chemical hazard arises if the battery leaks or vents. The electrolyte is a concentrated solution of zinc chloride in water. This material is acidic, corrosive and will cause burns to skin. The electrolyte is also harmful if it enters the eyes. If the user comes into contact with zinc chloride then the part affected should be washed immediately with water. If the material enters the eye medical attention should be sought without delay.

The cathode mix is corrosive and contains manganese dioxide which is toxic if ingested. Medical attention should be sought if ingestion is thought to have arisen

3. ALKALINE MANGANESE BATTERIES

The main hazard arises if the battery leaks or vents. The electrolyte is strongly alkaline 34-38% w/w potassium hydroxide which is highly corrosive. It will cause burns to skin externally or internally). Potassium hydroxide is exceedingly harmful if allowed to enter the eyes. Anyone coming into contact with potassium hydroxide should wash with copious amounts of water. Tissue damage is not usually

apparent until several hours after exposure. If the material enters the eyes emergency hospital treatment should be sought without delay.

Alkaline manganese cells contain zinc powder and manganese dioxide. Both these substances are toxic by ingestion.

4. BUTTON CELLS

Any type of button cell is hazardous if swallowed. If this arises immediate medical attention should be sought. Surgical removal of the battery may be necessary.

The chemical hazard depends on the system type. If button cells are ingested even the nickel plated case material will dissolve in the stomach acid giving rise to toxic nickel salts. Most button cells contain 34-40% potassium hydroxide solution which is highy corrosive but present in small volume.

Mercuride oxide-zinc button cells are the most hazardous if ingested because they contain approximately 30% by cell weight of highly toxic mecuric oxide powder in the cathode. Other button cells also contain amalgamated zinc powder which may be harmful if ingested.

5. NICKEL-CADMIUM BATTERIES

These batteries contain 30% potassium hydroxide solution which is highly corrosive. Normally this material would only be expelled under conditions of abuse. These batteries also contain cadmium, cadmium hydroxide and nickel hydroxide all of which are toxic. If the user comes into contact with potassium hydroxide then the effected area should be washed with a copious supply of water. Potassium hydroxide is harmful if it enters the eyes.