DCBS

DC-HR12110W

Valve-regulated lead-acid battery

High Rate | AGM | UPS | Data Center | Telecom

HIGH RATE SERIES

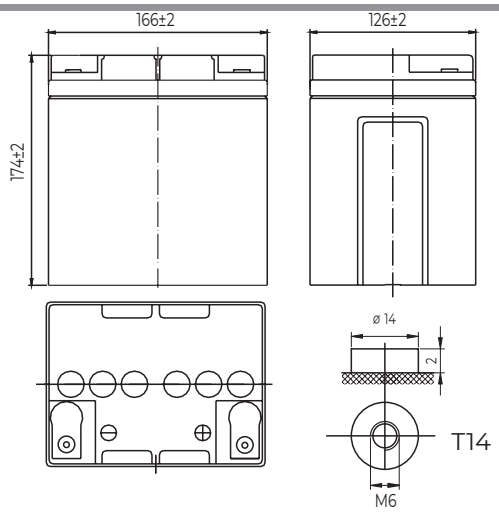
Characteristics

Nominal voltage		12V (6 cell per unit)
Nominal power at 15 min. rate 1.67V/cell (25°C)		110W
Capacity (25°C)	20 Hours rate/10.5V	28Ah
	5 Hours rate/10.5V	24.8Ah
Terminal type		T14
Torque		5.1±0.6N.m
Approx. internal resistance (25°C)		9.0 mΩ
Dimensions	Length	166±2mm (6.54inch)
	Width	126±2mm (4.96inch)
	Height	174±2mm (6.85inch)
	Total height	174±2mm (6.85inch)
Design Life (stand-by)	JIS at 25°C	10 years
	Eurobat at 20°C	10-12 years
Weight		8.80kg (19.40lbs)±3%
Nominal operating temperature		25±3°C (77°F±5)
Operating temperature range	Discharge	-15°C~50°C (5°F~122°F)
	Charge	-10°C~50°C (14°F~122°F)
	Storage	-20°C~50°C (-4°F~122°F)
Float charging voltage at 25°C		13.6V~13.8V
Cyclic charging voltage at 25°C		14.5V~15.0V
Temperature compensation	Float charge	-18 (mV/°C/Block)
	Cycle charge	-30 (mV/°C/Block)
Max. charging current (A)		8.80A
Max. discharge current for 5 seconds		300A
Self discharge rate (25°C)		≤3%/month
Battery container ABS UL94-HB		V-0 optional

Overview

High Rate series batteries are specially de-signed for applications that require high power output. With their high-power density and low internal resistance, the HR series are the right choice for your most demanding applications.

Dimensions & Terminal Type (mm)



Construction

Component	Positive Plate	Negative plate	Container	Separator	Electrolyte	Sefety valve	Terminal
Raw material	Lead dioxide	Lead	ABS (V-0 opt.)	AGM	Sulfuric Acid	Rubber	Copper

Constant current discharge characteristics at 25°C

(Ampere/cell)

F.V/Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V/cell	128.70	80.04	59.33	47.42	32.45	22.90	18.70	10.30	7.31	5.88	5.06
1.67V/cell	123.29	76.44	57.27	45.45	31.40	22.10	18.20	10.20	7.25	5.83	5.01
1.70V/cell	120.05	74.47	55.72	44.51	30.77	21.70	18.00	10.10	7.22	5.81	4.99
1.75V/cell	114.64	71.20	53.87	43.06	30.03	21.20	17.60	9.98	7.17	5.77	4.96
1.80V/cell	108.15	67.27	50.99	40.77	28.98	20.40	17.10	9.73	6.95	5.59	4.81

Constant power discharge characteristics at 25°C

(Watts/cell)

F.V/Time	5min	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h
1.60V/cell	229.00	146.26	114.00	90.20	61.10	45.30	37.00	20.50	14.70	11.80	10.20
1.67V/cell	218.00	140.08	110.00	86.60	59.20	43.80	36.10	20.30	14.60	11.70	10.10
1.70V/cell	213.00	135.96	107.00	84.80	58.10	43.00	35.50	20.20	14.50	11.70	10.00
1.75V/cell	203.00	130.81	104.00	81.90	56.70	41.90	34.80	19.90	14.40	11.60	9.96
1.80V/cell	192.00	122.57	98.00	77.60	54.60	40.40	33.80	19.40	14.00	11.20	9.66

The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact **DCBS** for the latest available version.

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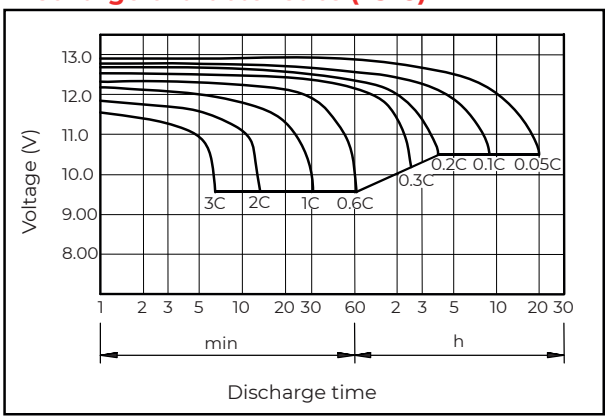
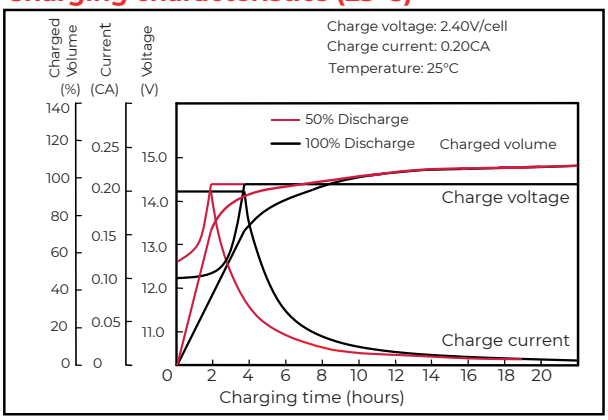
HIGH RATE
SERIES

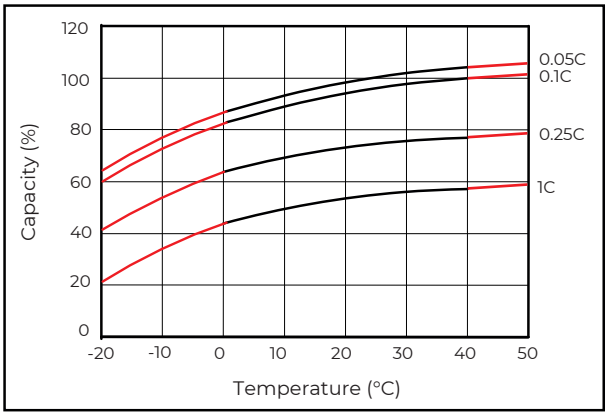
Discharge characteristics (25°C)



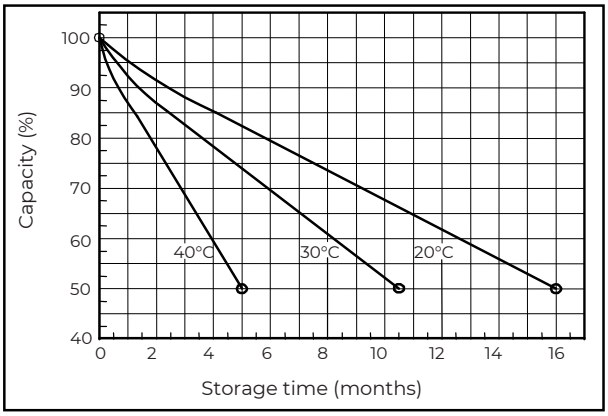
Charging characteristics (25°C)



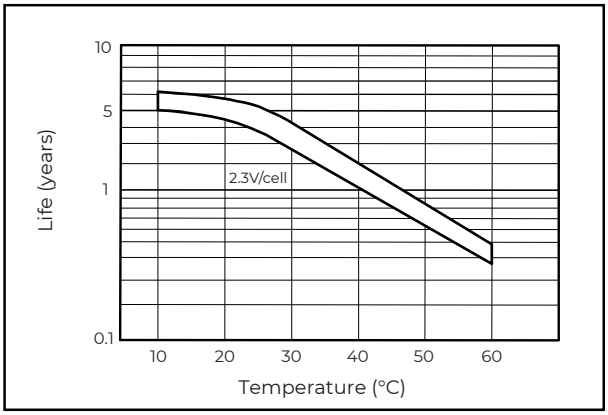
Temperature effects on capacity



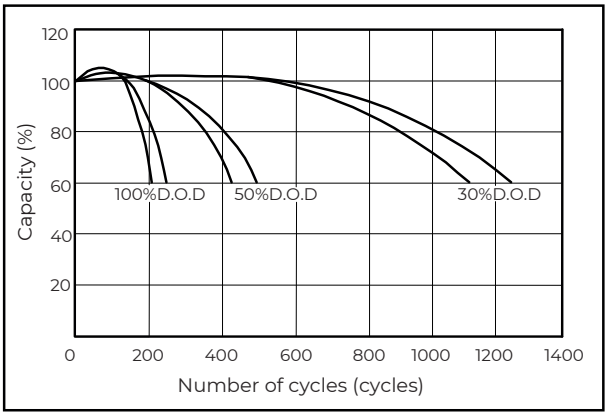
Self-discharge characteristics



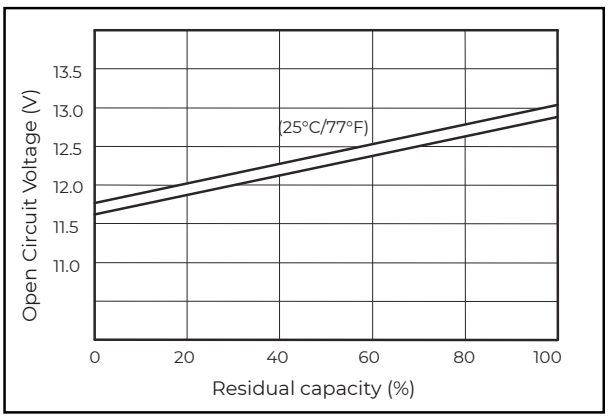
Floating life on temperature



Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Charging voltage VS temperature