

DCBS

DC-HR12390W

Valve-regulated lead-acid battery



HIGH RATE SERIES

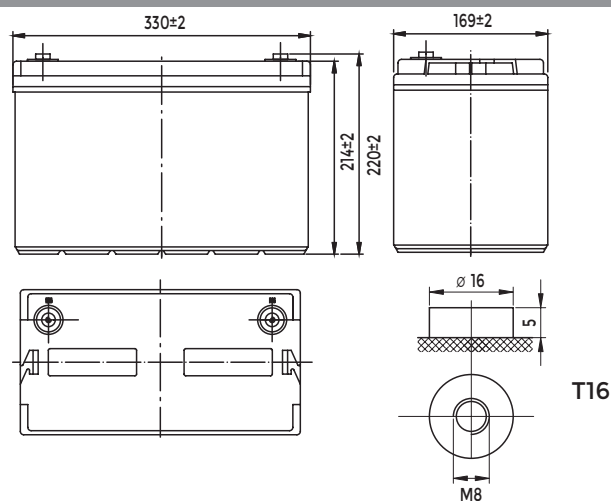
Characteristics

Nominal voltage		12V (6 cell per unit)
Nominal power at 15 min. rate 1.67V/cell (25°C)		390W
Capacity (25°C)	10 Hours rate/10.8V	100Ah
	5 Hours rate/10.8V	91.5Ah
Terminal type		T16
Torque		12.3±2.5N.m
Approx. internal resistance (25°C)		4.0 mΩ
Dimensions	Length	330±2mm (12.99inch)
	Width	171±2mm (6.73inch)
	Height	214±2mm (8.43inch)
	Total height	220±2mm (8.66inch)
Design Life (stand-by)	JIS at 25°C	10 years
	Eurobat at 20°C	10-12 years
Weight		32.70kg (72.10lbs)±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		13.5V~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)		31.2A
Max. discharge current for 5 seconds		800A
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)



Construc tion

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

Constant cur rent discharge characteristics at 25°C

(Ampere/cell)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	302.94	216.38	180.63	132.48	95.18	71.80	38.40	27.50	22.20	19.30	16.50
1.67V/cell	288.68	210.14	173.06	127.99	92.15	70.00	38.00	27.30	22.00	19.10	16.30
1.70V/cell	281.56	203.90	169.81	125.74	90.42	68.90	37.80	27.20	21.90	19.00	16.30
1.75V/cell	269.68	196.62	163.32	123.50	88.26	67.60	37.20	27.00	21.70	18.90	16.20
1.80V/cell	254.23	186.21	154.67	117.88	85.01	65.50	36.30	26.20	21.10	18.30	15.70

Constant power discharge characteristics at 25°C

(Watts/cell)

F.V/Time	10min	15min	20min	30min	45min	60min	2h	3h	4h	5h	6h
1.60V/cell	527.91	410.04	341.61	251.28	183.86	139.00	74.80	54.20	43.70	38.20	32.70
1.67V/cell	503.66	390.00	327.82	243.56	177.37	135.00	74.20	53.70	43.30	37.80	32.40
1.70V/cell	490.43	385.56	321.45	239.16	174.12	133.00	73.70	53.50	43.10	37.70	32.20
1.75V/cell	469.49	372.30	309.78	232.54	169.80	130.00	72.60	53.20	42.80	37.40	32.00
1.80V/cell	443.04	352.92	293.87	224.83	164.39	126.00	70.80	51.60	41.50	36.30	31.10

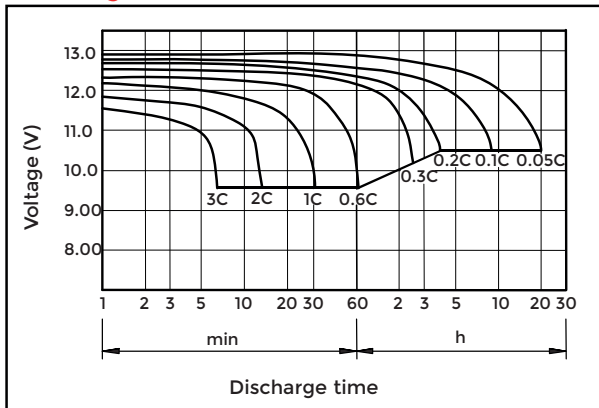
The above characteristics represent average values and can be obtained within three charge and discharge cycles. The batteries must be fully charged before testing. The data in this document is subject to change without notice and become contractual only after written confirmation. Please contact DCBS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

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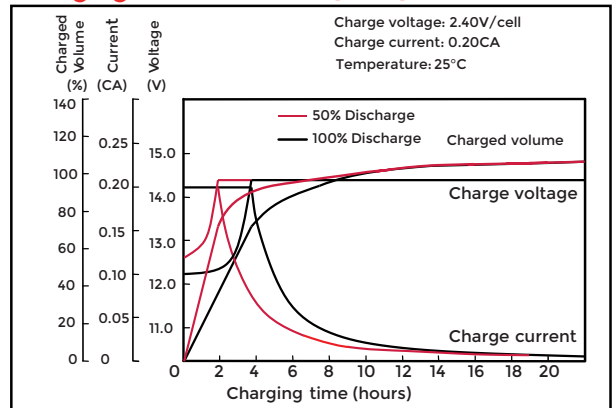
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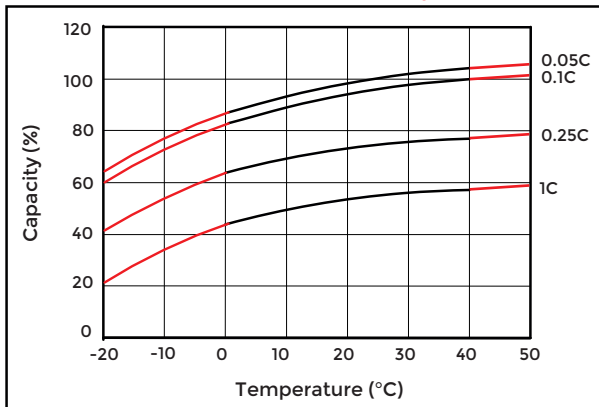
Discharge characteristics (25°C)



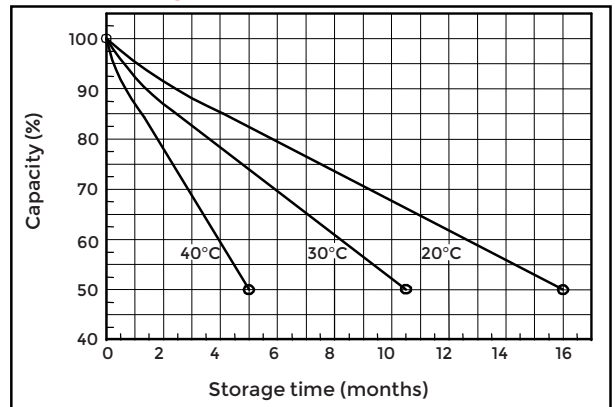
Charging characteristics (25°C)



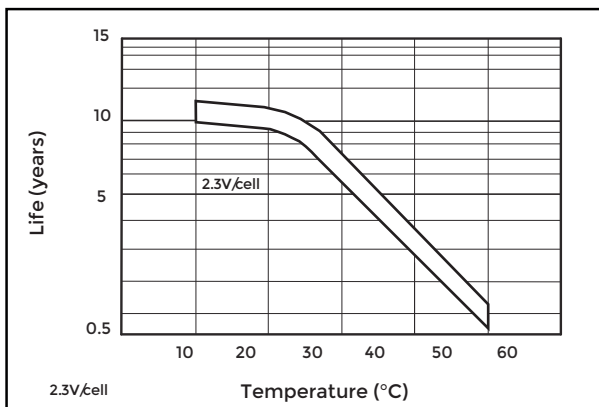
Temperature effects on capacity



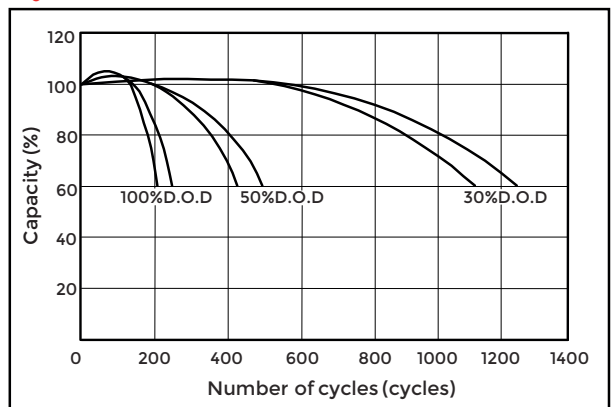
Self-discharge characteristics



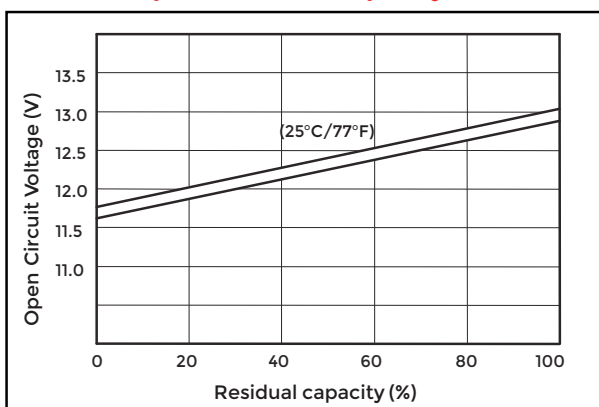
Floating life on temperature



Cycle life on D.O.D (25°C)



Relationship for OCV and capacity (25°C)



Charging voltage VS temperature

