



OBS12400HRF (12V 405W)

High Rate VRLA Battery

Osonix HRF Serie Front Terminal Pure Lead Acid Batteries are designed with advanced technology to optimize performance and improve energy density. Utilize a special fine-mesh grid technology and specially formulated paste plates, which enhance the adhesion of the active material.

Features

- Absorbent Glass Mat (AGM) technology, maintenance-free.
- Front terminals for easy installation, maintenance, and monitoring.
- Pure lead technology ensuring extended service life, 12+ years.
- Advanced welding technology ensures excellent high-current charge/discharge capacity.
- Oxygen recombination efficiency $\geq 98\%$.
- PbCaSn alloy grids - reduced gassing and lower self-discharge.
- Full compliance with IATA/ICAO regulations - A67 approved (unrestricted transport by rail, road, sea and air).

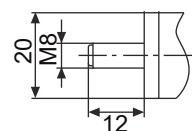
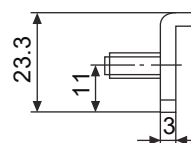
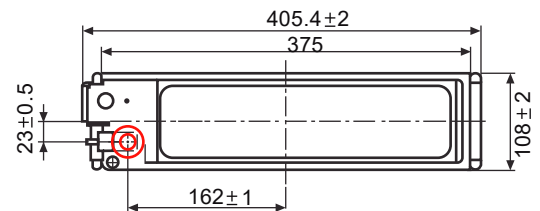
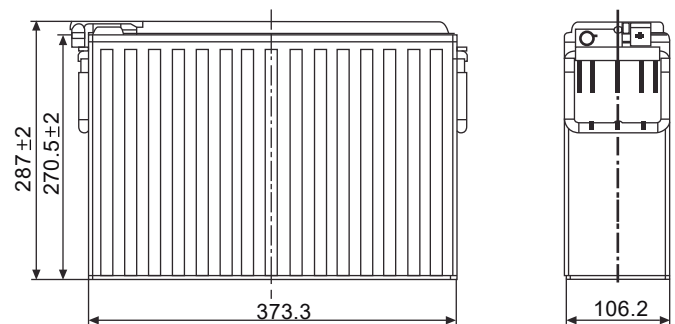
Applications

- Uninterruptible Power Supplies (UPS).
- Telecommunications Backup Power System.
- Emergency and Backup Power Sources.
- Power Plant Energy Storage Systems.
- Emergency Lighting.

PHYSICAL SPECIFICATION

Dimension	Length Width Height Total Height	405 ±2 mm (15.96 in) 108 ±2 mm (4.25 in) 287 ±2 mm (11.30 in) 287 ±2 mm (11.30 in)
Weight		31.5 Kg (69.4 lb)
Terminal		M8
Container Mat. (Flame retardant)		ABS UL94 HB o V0
Recommended Torque		(11 ~ 14.7) N·m (97.35 ~ 130.1) in·lbs

SPECIFICATIONS Standard @ 25°C (77°F)		
Rated Voltage	12 V	
Nominal Capacity (W) (15 min to 1.67 V/cell)	405W	
Nominal Capacity (Ah) (10 h to 1.80 V/cell)	100 Ah	
Rated Capacity	104.8 Ah 100.8 Ah 83.4 Ah 76.5 Ah	(20hrs, 5.24A, 1.80V/cell) (8hrs, 12.6A, 1.75V/cell) (3hrs, 27.8A, 1.75V/cell) (1hr, 76.5A, 1.60V/cell)
Max. Discharge Current	1200 A (5 s)	
Internal Resistance	4.4 mΩ	
Operating Temp. Range	Discharge Charge Storage	-40~65°C (-40~149°F) 0~40°C (32~104°F) -20~40°C (-4~104°F)
Max. charge Current	30 A	
Charge Voltage (25°C)	Float	13.62 V
	Temp. Coefficient	-3mV/cell/°C
	Equalization	14.1 ~ 14.4V
Design Life	≥15 years	



Unit: mm

Compliance:

IEC 60896

CE, UL 1989, UL94 HB o V-0

Certified production IATF16949, ISO 9001, ISO 14001



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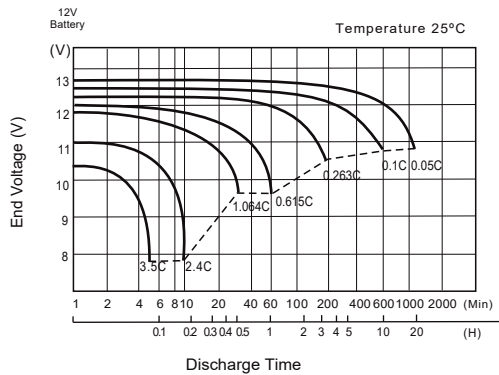
Constant Current Discharge (Amperes) at 25°C (77°F)

F.V / Time	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.85V/cell	303.6	228.6	184.3	153.9	113.6	80.3	66.4	38	26.2	22.3	18.3	12	9.81	5.12
1.80V/cell	329.6	242.8	193.4	159.9	118.4	83.9	69.7	39.7	27.4	23.2	18.9	12.3	10	5.24
1.75V/cell	350.9	255.6	200.4	166.2	122.4	86	71.4	40.9	27.8	23.6	19.2	12.6	10.2	5.3
1.70V/cell	373.3	263.7	207.5	171.6	126.6	88.2	72.9	41.6	28	24	19.4	12.6	10.3	5.38
1.67V/cell	390	274.8	213	177.3	132	91	75.1	42.6	29.3	24.3	19.6	12.7	10.3	5.42
1.60V/cell	410	279.4	225	185.1	135	93.9	76.5	44	29.9	24.5	19.8	12.7	10.4	5.51

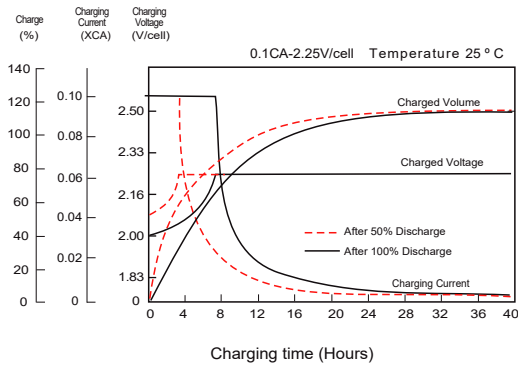
Constant Power Discharge (Watts/cell) at 25°C (77°F)

F.V / Time	5 min	10 min	15 min	20 min	30 min	45 min	1 h	2 h	3 h	4 h	5 h	8 h	10 h	20 h
1.85V/cell	569	438.9	357.7	299.5	222.7	158.6	131.7	75.8	52.8	45.4	37.3	24.3	20.1	10.5
1.80V/cell	611	461.2	372.9	309.2	230.6	164.9	137.4	78.9	55.3	47	38.4	24.6	20.3	10.7
1.75V/cell	642.4	480.1	382.6	318.4	236.4	167.7	140	80.8	56	47.9	38.8	24.9	20.4	10.7
1.70V/cell	667.2	491.6	392.2	325.7	242.5	170.9	142.1	81.9	57.6	48.4	39.3	25.4	20.4	10.9
1.67V/cell	670	501.2	405	333	245	176.8	145.8	83.7	58.8	49.3	39.8	25.5	20.5	11
1.60V/cell	710	506.1	410	343.9	250	179.3	147.2	85.4	59.6	50	40.3	25.5	20.5	11.2

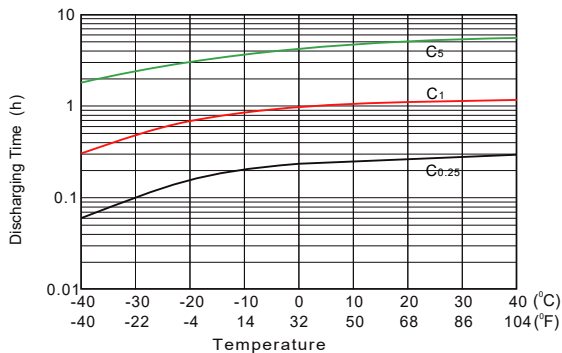
Discharge Characteristics



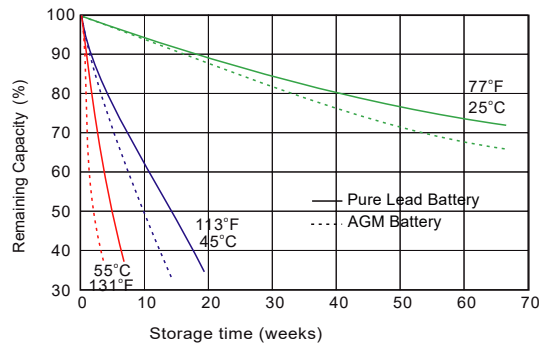
Float Charging Characteristics



Effects of Temperature on Discharging Time



Self-discharge Characteristics



* The OBS12400HRF can be stored for up to 24 months at 25°C (77°F). For higher temperatures, the storage time will be shorter.
 **Charging should be done when the OCV (Open Circuit Voltage) approaches 2.10 V/cell or when the maximum storage time is reached, whichever comes first.

* Product specifications are subject to change without notice.
 * US-V2605-REV1.03
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