

Vertiv U12V425P/B

Valve-regulated lead-acid battery | P Series high-rate discharge

Electrical and mechanical specifications

Parameter	Specification
Nominal voltage	12 V
Capacity at 10-hour rate	100 Ah at 1.80 V/cell, 25°C
15-minute constant-power rating	425 W/cell at 1.67 V/cell, 25°C
Approximate weight	30.8 kg
Terminal / tightening torque	M8 / 12-16 N·m
Dimensions: L / W / case H / total H (mm)	330 ±2 / 173 ±1 / 213 ±2 / 216 ±2
Case material	ABS
Design float life at 25°C	10-12 years
Cycle life	>60 cycles; 15-minute constant-power discharge, 100% depth of discharge
Short-circuit current	2900 A
Maximum discharge current	1000 A for 5 seconds
Approximate internal resistance, fully charged	3.5 mΩ

Charging, environment and applications

Operating parameters

Parameter	Specification
Operating temperature	-15 to 50°C
Recommended operating temperature	25 ±3°C
Float voltage	13.38-13.8 V at 25°C; recommended 13.62 V
Equalization voltage	14.1-14.4 V at 25°C; recommended 14.1 V
Maximum charging current	25 A
Temperature compensation	-3 mV/cell/°C
10-hour capacity at 40 / 25 / 0°C	106 / 100 / 86 %
Storage / refresh interval	6 months at 25°C
Self-discharge	<2% per month
Refresh charging	2.35 V/cell, current limit 0.1C, 16 hours

Applications and source-listed standards

High-power UPS, emergency power systems, banking and commercial systems, medical equipment, automation control systems and data centers.

Standards listed in the supplied datasheet: IEC 61056-1; BS 6290 Part 4.

Discharge performance at 25°C

Constant-power discharge (W/cell)

End V/cell	5m	10m	15m	20m	30m	45m	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85	436.6	385.3	341.7	290	209.9	148.3	115.6	82.1	65.3	48.3	39.8	34.1	24.1	20.1
1.80	492.9	423.2	372.5	315.2	225.1	157	122.3	86.2	68.1	50.1	41	35.1	24.5	20.5
1.75	551.9	461	401.8	336.3	236.7	164.9	128	90.2	71.3	51.9	42.2	36	24.9	20.6
1.70	601.6	492.2	423.6	350.8	245.6	171.1	132.3	93	73.2	53.4	43.3	36.7	25.2	20.8
1.67	644.6	513.1	425	358.7	251.9	175.6	135.5	95	74.7	54.5	44.1	37.1	25.6	21
1.60	687.1	534.7	430	362.6	255.2	178.1	137.7	96.7	76	55.1	44.6	37.6	25.9	21.2

Constant-current discharge (A)

End V/cell	5m	10m	15m	20m	30m	45m	1h	1.5h	2h	3h	4h	5h	8h	10h
1.85	214.1	186.9	153.5	127.5	102	73.1	57.3	40.9	32.6	24	19.6	16.7	11.9	9.7
1.80	240.8	198	169.3	146	108.3	77.6	60.9	43.2	34.3	25.1	20.4	17.3	12.2	10
1.75	274.7	231.2	186.6	157.3	113.8	80.9	63.5	44.8	35.6	26.1	21	17.8	12.3	10.1
1.70	308.5	246.5	207.2	168.5	118.9	83.5	65.3	46.3	36.7	26.7	21.5	18.2	12.5	10.2
1.67	322	256.9	219.6	175.4	122.9	85.6	67	47.3	37.5	27.2	21.8	18.4	12.6	10.3
1.60	355	274.5	227.9	180.9	126.3	87.4	68.4	48.2	38.2	27.9	22.3	18.8	12.7	10.4

Values are reproduced from the model-specific supplied datasheet. End voltage is per cell. C denotes nominal capacity in Ah; charge current expressed as C is in amperes. Design life is not a service-life guarantee.

Source and edition notes

Independently prepared English technical edition by IWELL, 22 October 2026. This is not an official Vertiv English publication. Specifications refer to the cited source revision; confirm the exact model and supplied configuration before selection.

Source: U12V425P-B-Supplied-Datasheet-ZH.pdf

Model-specific sheet, pages 1-2; the English edition includes all tabulated parameters and discharge data. Original dimensional drawings and characteristic curves remain available in the unchanged source PDF.