

Forex 1225 PD tester Tips:

1. What parameters should i use, to test the battery.

The tester is very flexible, you can set the cut off voltage and discharge current in a wide range, but when you have the results the evaluation is sometimes not easy.

Let us recommend two ways of using the tester.

1.

1C Test

If the battery capacity is less then 25Ah , re recommend to use **1C test**. It means, that you use the same discharge current as the battery capacity. So if is it 15Ah battery, use 15A discharge current.

If the battery is 100% , then this test will last about 30 minutes. (depending on the battery Peukert value) .

1C minutes	percent	1C minutes	percent	1C minutes	percent	1C minutes	percent
30	100%	21	70%	12	40%	3	10%
29	97%	20	67%	11	37%	2	7%
28	93%	19	63%	10	33%	1	3%
27	90%	18	60%	9	30%	0	0%
26	87%	17	57%	8	27%		
25	83%	16	53%	7	23%		
24	80%	15	50%	6	20%		
23	77%	14	47%	5	17%		
22	73%	13	43%	4	13%		

So if the test lasted 25 minutes , then it means 83% ($25/30=0,83$). And the capacity is $0,83 * \text{Original capacity}$.

So if your battery is 15Ah , you set the current to 15A , if the test last for 25 min , then the capacity is $0,83*15= 12.45 \text{ Ah}$

(This 30 minute is a general value. To make this way of testing more accurate, we recommend to check brand new battery of the same type to see what minute value comes with the 100% battery. So you need to make the discharge test with 1C . The result may be a bit different from 30 minutes .. (bit it will be somewhere 25-35 min) . For example if this value is 35 min , then you use this 35 min value when testing this type of battery.

So after this , when you test same type of battery , and the test lasts for 25min, you calculate like this.. $25/35=71\%$

2. Reserve capacity test (RC)

The concept of this testing method, is to discharge all batteries with the same current, (cut off voltage 10,5V) So you should discharge the battery with 25A . The result will be in minutes.

Using the below table, you can convert this result to Ah.

Rc (25A , 10,5V) minutes to Ah Conversion

25A		25A		25A		25A		25A		25A	
minutes	Ah	minutes	Ah	minutes	Ah	minutes	Ah	minutes	Ah	minutes	Ah
36	26	103	65	185	104	281	143	392	182	517	221
38	27	105	66	187	105	284	144	395	183	521	222
40	28	107	67	190	106	286	145	398	184	524	223
41	29	109	68	192	107	289	146	401	185	528	224
43	30	111	69	194	108	292	147	404	186	531	225
44	31	113	70	197	109	295	148	407	187	534	226
46	32	115	71	199	110	297	149	410	188	538	227
47	33	117	72	201	111	300	150	413	189	541	228
49	34	119	73	204	112	303	151	416	190	545	229
51	35	121	74	206	113	305	152	420	191	548	230
52	36	123	75	208	114	308	153	423	192	552	231
54	37	125	76	211	115	311	154	426	193	555	232
56	38	127	77	213	116	314	155	429	194	559	233
57	39	129	78	215	117	316	156	432	195	562	234
59	40	131	79	218	118	319	157	435	196	566	235
61	41	133	80	220	119	322	158	438	197	569	236
62	42	135	81	223	120	325	159	442	198	573	237
64	43	137	82	225	121	328	160	445	199	577	238
66	44	139	83	228	122	330	161	448	200	580	239
67	45	141	84	230	123	333	162	451	201	584	240
69	46	143	85	232	124	336	163	454	202	587	241
71	47	146	86	235	125	339	164	458	203	591	242
72	48	148	87	237	126	342	165	461	204	594	243
74	49	150	88	240	127	345	166	464	205	598	244
76	50	152	89	242	128	348	167	467	206	602	245
78	51	154	90	245	129	350	168	471	207	605	246
79	52	156	91	247	130	353	169	474	208	609	247
81	53	158	92	250	131	356	170	477	209	613	248
83	54	161	93	253	132	359	171	480	210	616	249
85	55	163	94	255	133	362	172	484	211	620	250
87	56	165	95	258	134	365	173	487	212		
89	57	167	96	260	135	368	174	490	213		
90	58	169	97	263	136	371	175	494	214		
92	59	171	98	265	137	374	176	497	215		
94	60	174	99	268	138	377	177	500	216		
96	61	176	100	271	139	380	178	504	217		
98	62	178	101	273	140	383	179	507	218		
100	63	180	102	276	141	386	180	511	219		
102	64	183	103	279	142	389	181	514	220		

The advantage of using Reserve Capacity (25A) test is that you discharge all batteries with the same current, so there is no need to change the test parameters before each testing.