

Battery with high security



NIMH- Battery Pack with a protection electronics (PCM) Protects the battery against overcharge, deep discharge, short circuit and overheating **with redundant temperature protection.**

Applications:

- HEALTH & SAFETY
(Replacement battery for the Scott ProFlow)
- Industrial
- Medical
- and others

Pack Specifications

Nominal Voltage	9.6 V
Capacity (Nominal)	4000 mAh ±3%
Energy	38,4 Wh
Weight	456 grams ±3
Size (L x W x H) mm	142 x 50 x 34 ±0.5mm

Operating Specifications

Operating Voltage	11.20 V to 8.0 V
Charge:	
Standard (starting at 1.0V)	0.4A x 12hrs
Quick (@ -ΔV=5mV/Cell)	3A Max. ≤45°C
Discharge End Volt.	8.0V
Operating Temperature:	
Discharge	-10°C to 60°C
Charge	0°C to 45°C [50°C] ⁽¹⁾
Max Discharge Current	3 A (Continuous) 3.3 A (Peak)
Max Charge Current	3 A @ ≤45°C

Storage Specifications

Storage Temperature	1 year : -20~25°C(1*)
Rh: (0% ~ 75%)	3 months : -20~45°C(1*)
SoC: State-of-Charge ≥ 80%	1 month : -20~60°C(1*)

⁽¹⁾ with temperature compensated charge

Safety Circuits:

The Functions of the Safety Circuits (typical functions)

The protective electronics (PCM) Protects the battery against overcharge, deep discharge, short circuit and overheating (with redundant temperature protection).

The protective electronics consumed extremely low energy, which means that the battery can be stored for many months without any significant loss of energy and can always be ready to use.

1. The Overcharge Safety Function

The charge stops when the Battery voltage rises above 13V ± 0.05 V.
Over charge detection delay time 0.05S-1sec
The charge restarts when the Battery voltage falls below 12.0V ± 0.05 V.

2. The Overdischarge Safety Function

The discharge stops when the voltage per cell falls below 7.20V ± 0.1 V.
Over discharge detection delay time 10—200mS
The discharge restarts when the Battery voltage rises above 8.8V ± 0.2V.

3. The Overcurrent Safety Function

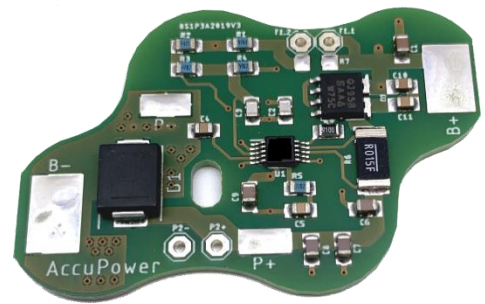
The charge or discharge stops when the current rises above 3.3A ± 0.05A.
Over current detection delay time 0.01S-0.02sec.

4. The short circuit Safety Function

The discharge is stopped when the output terminals are shorted. The discharge restarts when the short is removed.

5. Operating Temperature Range

-10 ~ +60°C



Transportation

Transport according to the current regulations: IMDG (ADR, RID, ADN & IATA-ICAO not applicable)

NiMH Battery / Class: 9 / UN-Number: UN3496

Shipping name: BATTERIES, NICKEL METAL HYDRIDE

Environmental hazards / Marine pollutant: Yes

During transport, do not subject the Batteries or the box(es) to violent shaking, bumps, rain and direct sunlight.

Care and safety recommendations:

Never open, short circuit or put in fire. Do not install backwards. Avoid short circuit with metal objects.

ATTENTION:

Please pay attention to following recommendations:

1. **Recharge batteries immediately after receipt!** the batteries Maybe delivered with low capacity (< 30%) according to Transport Regulations!
2. Charge the batteries to the recommended value before storing them for a long time: State Of Charge between 70% ~ 90% depending on the storage time, Store the battery in a dry place, Temperature (0° ~ +25°C), relative humidity should be less than 75% Rh.
3. Please fully charge the batteries before using! Use only the battery charger specified for this battery type.
4. Do not leave battery in charger over 24 hours.
5. Always avoid deep discharge of the battery.
6. Avoid exposure to high temperatures.
7. Do not disassemble or modify the battery, may cause the battery to generate heat, explode or ignite.
8. Dispose properly used batteries. Dispose it according to the applicable recycling regulations. Contact your city recycling coordinator. Thank you

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Replacement battery for the Scott ProFlow:

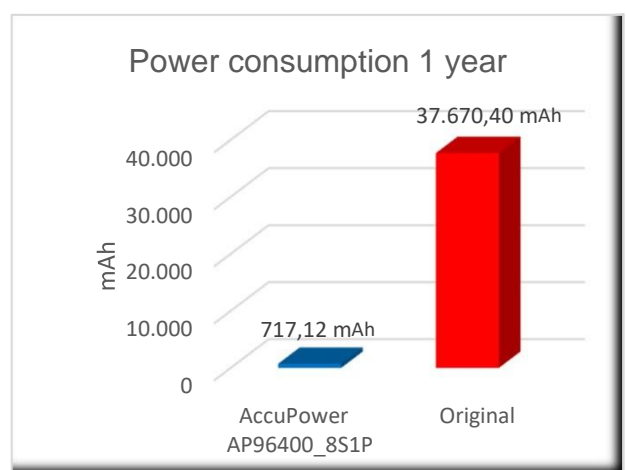
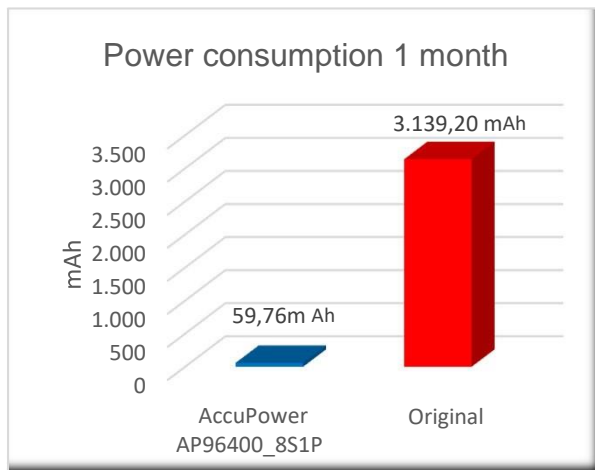
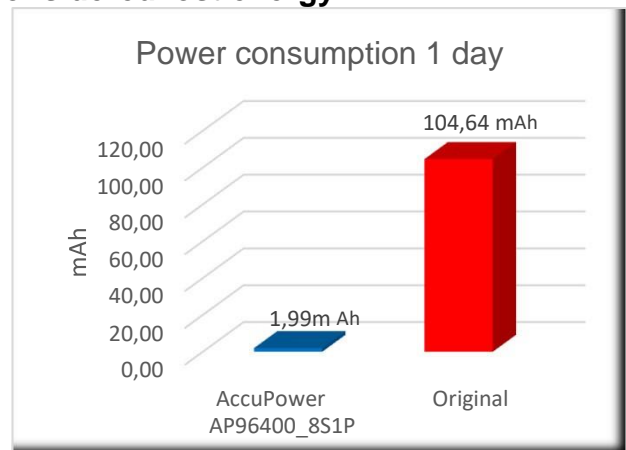
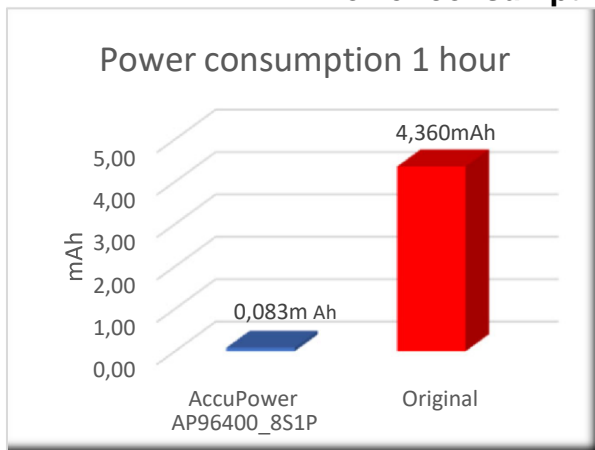
This battery pack can be used as an ideal replacement battery for the Scott ProFlow. Comparison between AccuPower Battery AP96400 and the Original Scott Proflow EX NiMh 9.6V battery packs.

Comparison table between the protective electronics of the two products:

Type	AccuPower AP8S1P Battery		Original Proflow EX Battery	
Standby current consumption	↑✓	0,004mA	↓✓	4,36mA
Working current consumption	↑✓	0,083mA	↓✓	4,36mA
Over voltage protection	↑✓	13V	↓✗	-
Under voltage protection	↑✓	7,2V	→✓	5,9V
Current consumption after under voltage	↑✓	0,004mA	↓✓	4,36mA (no protection)
Over charge current protection	↑✓	3,294A	↓✗	-
Over discharge current protection	↑✓	3,334A	↑✓	2,6A-3,1A
Short circuit protection	↑✓	yes	↑✓	yes
Temperature safety switch	↑✓	65°C	↑✓	65°C
Second temperature circuit breaker	↑✓	65°C	↓✗	-
Temperature sensor ext.	↑✓	PTC	↑✓	PTC

↑ good → acceptable ↓ bad ✓ existing ✗ not existing

Power consumption: is considered lost energy



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