



```
def _amps_given_terminal_volts(terminal_volts):  
    voc = self.fn_soc_to_ocv(self.soc_per)  
    v_r_volts = terminal_volts - voc  
    amps = v_r_volts / self.batter_r_ohms  
    return amps  
  
def _amp_hours_given_amps(amps, time):  
    delta_t_sec = \  
        (time - self.last_sample_time).total_seconds()  
    amp_hours = amps * delta_t_sec / 3600.0  
    return amp_hours
```

