



```

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
  
```

