

ARF-100 logger continuous usage time

1. ADL-200 current consumption

(The ARF-100 has relatively low current consumption, but assuming same consumption as ARF-100.)

- 1) RS-485 communication : 100mA / Hr
- 2) Zigbee communication : 250mA / Hr

2. 12V 60A usage period of industrial (automobile) battery

- 1) RS-485 communication : 60000mA / 100mA / 24Hr = 25 Days
- 2) Zigbee communication : 60000mA / 250mA / 24Hr = 10 Days

3. 200W usage period of using solar system and 12V 60A rechargeable battery

The condition is that the charging rate of a 200W solar photovoltaic system is more than 16%.

- 1) Solar system 200W
: 12V x 16.6A and the average charge rate is 16%, the chargeable is 12V 2.65A.
- 2) Daily current consumption while Zigbee communication with ADL-200
: Since $0.25A \times 24Hr = 6A$, it is possible to use it fully with the charge amount calculated in case of 1).

Considering the rainy and snow seasons, using a 16 ~ 20% charge efficiency for 200W, even if operated by Zigbee communication, can be used continuously for more than 5 days while nonchargeable environment.

Since the charge rate and the quantity of equipment are different according to the construction site, it is necessary to adjust the power of the photovoltaic system and the specification of the rechargeable battery according to the situation.