RIPPLE CONTROL RECEIVER

(SA-B-20220526-001)

Definition

Ripple control receiver (RCR) is an interface between a PV system and power grid company that enables the grid operator to reduce the feed-in power if necessary. Generally, if the grid is overloaded, the utility company will specify whether the PV system should reduce their feed-in power to 0%, 30%, 60% of their rated power. If the grid is not overloaded, the PV system will be allowed to input 100% of the power. These control commands will be directly sent to the installer and then realized by the RCR.

In Germany and parts of Europe, power grid companies use ripple control receivers (RCR) to receive power grid scheduling signals and then convert for dry contact transmission, and power stations need to use dry contact communication method to receive the power grid scheduling signals.

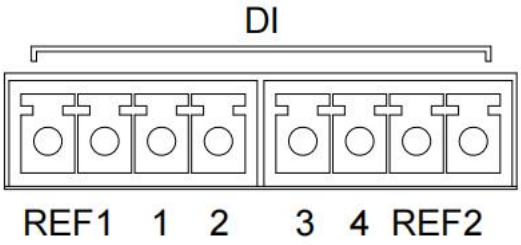
The RCR receives the signal and then transmits it to the inverter directly or via an interface, such as a data logger. Then the PV system will be limited in how much the power feeds into grids.

For 4 different values of the power 0%, 30%, 60% and 100%. 4 corresponding digital inputs are required on the inverter or external device like data logger.

GoodWe Solution

➢ Datalogger

GoodWe Ezlogger Pro acts as the intermediate interface to receive the signals from the RCR. And Ezlogger pro supports dry contact communication. DI terminal interface of Ezlogger Pro is as follows:



The port is defined as follows:

DI Port	Pin Description	Explanation
REF1	Active power derating	Voltage supply input
1	D_IN1	Digital input
2	D_IN2	Digital input
3	D_IN3	Digital input
4	D_IN4	Digital input
REF2	Reactive power compensation	

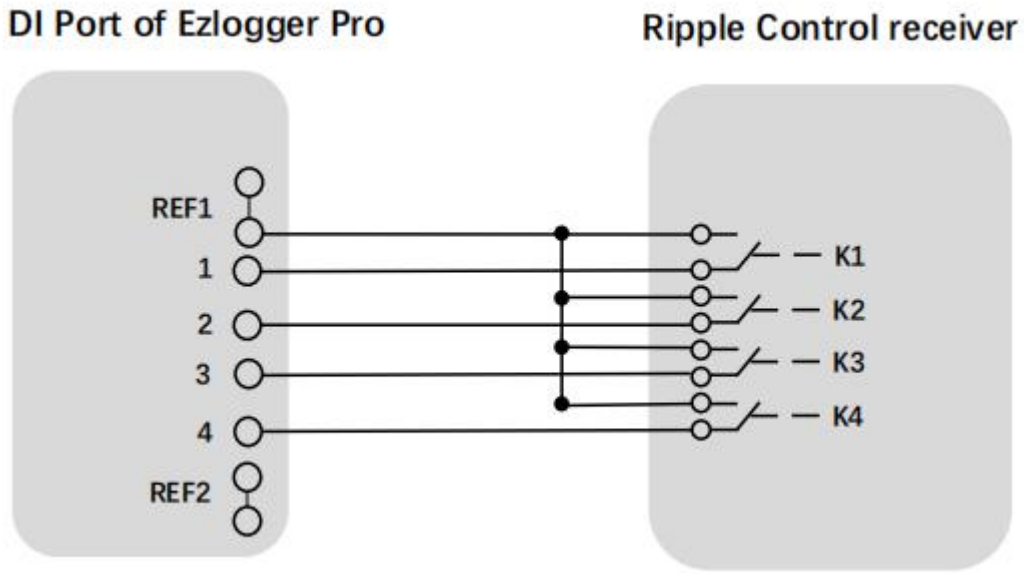
RIPPLE CONTROL RECEIVER

(SA-B-20220526-001)

The RCR used have four relays (K1-K4). The relays are potential-free make contacts. The relays are interlocked with each other. Furthermore, each of these relays represents one of the following control stages:

K1	K2	K3	K4	
1	0	0	0	100%
0	1	0	0	60%
0	0	1	0	30%
0	0	0	1	0%

EzLogger Pro is connected to the ripple control receiver as follows:



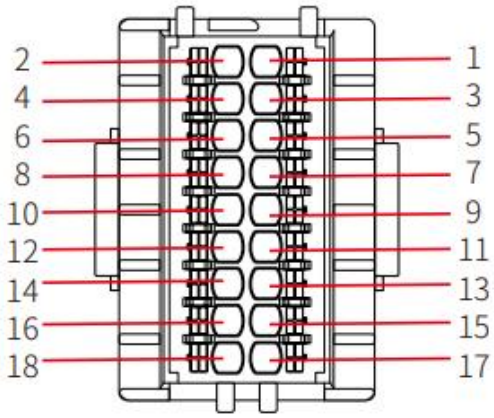
When you choose export limit function, then you cannot active RCR setting. That means, you can only active one function at the same time, export limit or RCR. So you should disable **Export Enab** and enable the **RCR Setting** in Promate to realize the power limit by RCR.

RIPPLE CONTROL RECEIVER

(SA-B-20220526-001)

➢ Inverter

The Inverter can also communicate directly with RCR. For example, ET series are equipped with DI terminal that is compatible with RCR. DI terminal interface of ET is as follows:



The port is defined as follows:

PIN	Definition	Function
3	DRM 1/5 or DI_1	DRED or RCR
4	DRM 2/6 or DI_2	
5	DRM 3/7 or DI_3	
6	DRM 4/8 or DI_4	

Welcome visiting **GoodWe Solar Community (community.goodwe.com)** to check all technical articles, guidance videos, webinars and activities released by GoodWe and GoodWe Solar Academy.