

Cyrix-i 12/24V 120A and 225A

Intelligent battery combiner

www.victronenergy.com



Cyrix-i 12/24-120

Intelligent battery monitoring to prevent unwanted switching

Some battery combiners (also called voltage controlled relay, or split charge relay) will disconnect a battery in case of a short but high amperage load. A battery combiner also may fail to connect a large but discharged battery bank because the DC voltage immediately drops below the disengage value once the batteries are connected.

The software of the Cyrix-i 12/24 does more than simply connect and disconnect based on battery voltage and with a fixed time delay. The Cyrix-i 12/24 looks at the general trend (voltage increasing or decreasing) and reverses a previous action only if the trend has reversed during a certain period of time. The time delay depends on the voltage deviation from the trend.

(for Battery Combiners with multiple engage/disengage profiles, please see the Cyrix-i 200A-400A)

12/24V auto ranging

The Cyrix-i 12/24 automatically detects system voltage.

No voltage loss

Cyrix battery combiners are an excellent replacement for diode isolators. The main feature is that there is virtually no voltage loss so that the output voltage of alternators or battery chargers does not need to be increased.

Prioritising the starter battery

In a typical setup the alternator is directly connected to the starter battery. The accessory battery, and possibly also a bow thruster and other batteries are each connected to the starter battery with Cyrix battery combiners. When a Cyrix senses that the starter battery has reached the connect voltage it will engage, to allow for parallel charging of the other batteries.

Bidirectional voltage sensing and power supply from both batteries

The Cyrix senses the voltage of both connected batteries. It will therefore also engage if for example the accessory battery is being charged by a battery charger.

The Cyrix-i 12/24 has a dual power supply. It will therefore also close if the voltage on one battery is too low to operate the Cyrix.

In order to prevent unexpected operation during installation or when one battery has been disconnected, the Cyrix-i 12/24 will not close if the voltage on one of the two battery connections is lower than 2V (12V battery) or 4V (24V battery).

Parallel connection in case of emergency (Start Assist)

The Cyrix can also be engaged with a push button (Cyrix remains engaged during 30 seconds) or a switch to connect batteries in parallel manually.

This is especially useful in case of emergency when the starter battery is discharged or damaged.



Cyrix-i 12/24-225

Cyrix battery combiner	Cyrix-i 12/24-120	Cyrix-i 12/24-225
Continuous current	120 A	225 A
Cranking rating (5 seconds)	180 A	500 A
Connect voltage	From 13V to 13,8V and 26 to 27,6V with intelligent trend detection	
Disconnect voltage	From 11V to 12,8V and 22 to 25,7V with intelligent trend detection	
Current consumption when open	<4 mA	
Start Assist	Yes (Cyrix remains engaged during 30 seconds)	
Protection category	IP54	
Weight kg (lbs)	0,11 (0.24)	0,66 (1.45)
Dimensions h x w x d in mm (h x w x d in inches)	46 x 46 x 80 (1.8 x 1.8 x 3.2)	100x90x100 (4.0x3.5x4.0)

