

## Monitoring for status versus proof of flow on VFDs

There are two methods to monitoring a variable frequency drive with current sensors: monitoring for status and monitoring for proof of flow. When monitoring for status, you are simply looking for confirmation that the VFD is on or off. Other applications require additional monitoring of the VFD to verify proof of flow to ensure no mechanical failure has occurred (belt loss/coupling shear). This whitepaper will focus on monitoring for status. If your application calls for proof of flow monitoring, please [click here](#).



### How to monitor for status on a VFD?

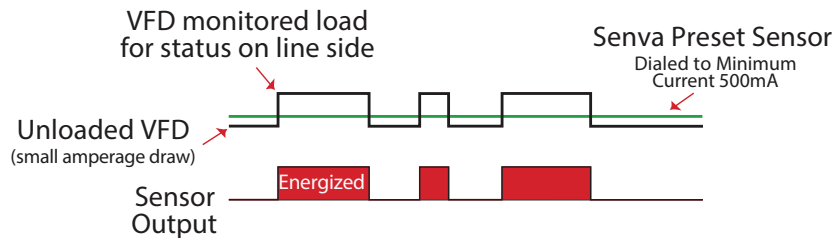
Senva recommends using an adjustable current sensor, such as the Senva Preset™ Series, installed on the line side of the variable frequency drive and turned down to the lowest trip point. The most common Preset™ utilized is our C-2320-L as it is a split-core model with an amperage range of 0.5-50A.

### Line side versus load side

Fixed and adjustable current sensors are designed to operated within specifications of 50-60Hz. If fixed and adjustable current sensors are installed on the load side of a VFD, their performance will deteriorate at frequencies of 30Hz and below. Our customers have noted that their VFDs will commonly operate below the 30Hz threshold, and therefore a fixed or adjustable current sensor is not advisable to install on the load side where frequencies will vary. On the line side, the constant frequency allows the sensor to operate within specification and provide accurate monitoring for status.

### Why use Preset™ and not just a fixed current sensor?

VFDs can draw current even when they are off, which can lead to false 'on' status readings if the minimum trip level of the current sensor is surpassed. To avoid the potential of a VFD falsely tripping a fixed current sensor, utilizing a Preset™ C-2320-L turned to the lowest dial setting will provide a trip point of 0.5A. In the case that is still too low, the technician can simply adjust the current sensor's dial so that current sensor can distinguish when the VFD is truly on or off for proper monitoring of status.



The Senva Preset™ series output changes state whenever current above the turn-on is present. This provides "go/no" status on VFDs without false trips due to the small amperage draw even when the motor is off by monitoring the line side.

PreSe™ ORDERING INFORMATION					
SPLIT CORE	Min (on)	Max A	N.O. Output*	Trip LED	Power LED
C-2320-L	0.45A	50A	1.0A@30VAC/DC	•	•
C-2320	0.50A	100A	1.0A@30VAC/DC	•	•
C-2320-H	0.50A	150A	1.0A@30VAC/DC	•	•



Simply set the dial to your desired amperage trip point!

