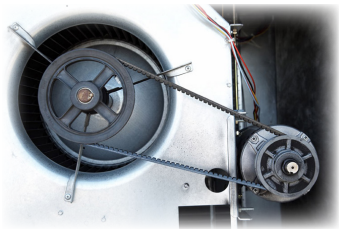
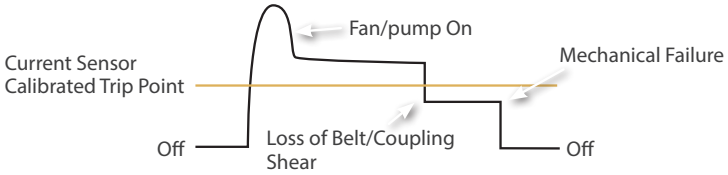
How to detect proof of flow with current sensors



On constant volume fans and pumps, a typical HVAC motor that loses its load has a reduction of current draw of up to 60%. To detect when drive belt slips, breaks, or a pump coupling shears, a current sensor with an adjustable amperage trip point can be utilized to monitor when the motor goes from a normal operating state to a state of mechanical failure.

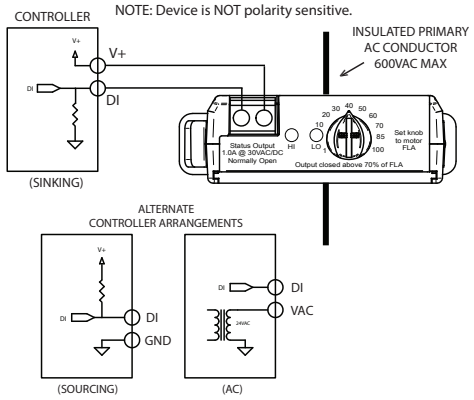


Detects Belt Loss/Coupling Shear!

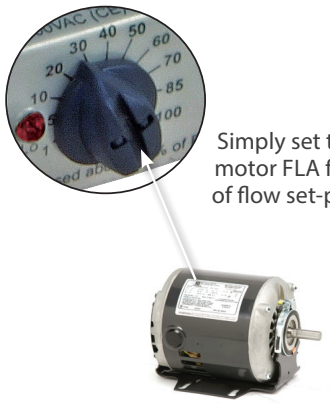
How is the current sensor trip point calibrated?

In order to detect belt loss/coupling shear, the current sensor trip point would ideally be set slightly below the motor's full load amperage. The current sensor then alarms the controller with a change in state when amperage falls below the trip point. So, how does a technician calibrate a current sensor to monitor mechanical failure? The first option for the majority of adjustable current sensors on the market is live calibration in an energized enclosure. Live calibration is time consuming and dangerous because of the potential for arc flash hazards. The alternative to using an adjustable current sensor that requires live calibration is using a Preset™ current sensor, which allows the technician to set a dial to the desired full load amperage as it is listed on the motor nameplate without working in an energized enclosure - saving time on install and creating a safer work environment.

Installing and calibrating a Preset™ current sensor:



Preset™ Wiring Example



Simply set to motor FLA for proof of flow set-point

PreSet® 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	NEW LOWER TURN-ON!	0.50A	100A	1.0A@30VAC/DC	•	•
C-2320-H		0.50A	150A	1.0A@30VAC/DC	•	•
SPLIT CORE - MINI						
C-2220		1.00A	50 A	1.0A@30VAC/DC	•	
SOLID CORE						
C-1320		0.75A	50 A	1.0A@30VAC/DC	•	
SOLID CORE - MINI						
C-1220-L		0.75A	5 A	1.0A@30VAC/DC	•	
C-1220		0.75A	50 A	1.0A@30VAC/DC	•	

C-2220

C-1220

C-2320

C-1320

Proudly Made in the U.S.A.