The Atom Switch™ solid state circuit breaker has many software enabled features within that allow for it to act as a motor controller. These features include:

- Remote Control and ON/OFF scheduling
- ANSI relay protections
- Motor soft-starting
- Metering
- Dynamic time-current curve adjustment

Please reference the AS3P100 data sheet for representative features of the 100-amp 3-phase Atom Switch and Atom OS™ software. For the purposes of this application note, we will be referencing the AS3P100 Atom Switch integrated into the 225-amp Atom Panel, which, together mimic the functions of a motor control center (MCC) at ~¼ the size, less cost, and all while significantly reducing arc flash and destructive short circuit hazards.

Atom Switches - the Atom Panel can fit up to fourteen (14) Atom Switches. Each Atom Switch is programmable from 15-100A with adjustable LT, ST, and instantaneous trip settings

Power Bus

Comm Bus - this aggregates all Atom Switches together via CAN bus to the Atom Gateway

External Input - customer can bring external relay wiring here for initiating pre-programmed control of Atom Switches upon relay or communication. Ten (10) contact points available

Atom Gateway

Ethernet out - there’s one (1) IP address for the entire Atom Panel

The Atom Panel and internal Atom Switches can be easily configured within the free web-app based (use on any device) Atom OS software. A typical setup scenario within the Atom OS would be as follows:

1. Setup Atom Switch amp ratings
2. Select ANSI relay features required for the Atom Switches (over/under voltage, under/over frequency, phase imbalance, etc)
3. Select motor soft-starting requirements for each Atom Switch (ramp-up time, ramp-down, kick start, etc)
4. Setup ON/OFF scheduling, if required
5. Connect external signaling (open/close contacts, 4-20mA loop, etc) to Atom Gateway, if required. Setup Atom Switches to turn ON/OFF Start/Stop upon external input signal(s)