

TALES FROM THE CODE

IN A WORLD WIRED FOR POWER, THE NATIONAL ELECTRICAL CODE (NEC) STANDS BETWEEN SAFETY AND CHAOS, AND IS REVIEWED AND REFINED EVERY THREE YEARS BY THE NATIONAL FIRE PROTECTION ASSOCIATION (NFPA). THOSE WHO FAIL TO ADHERE TO THESE LONG-ESTABLISHED BEST PRACTICES FOR SAFETY COULD BE HELD NEGLIGENT...OR WORSE.

DEFENDER AGAINST TRANSIENT SURGES

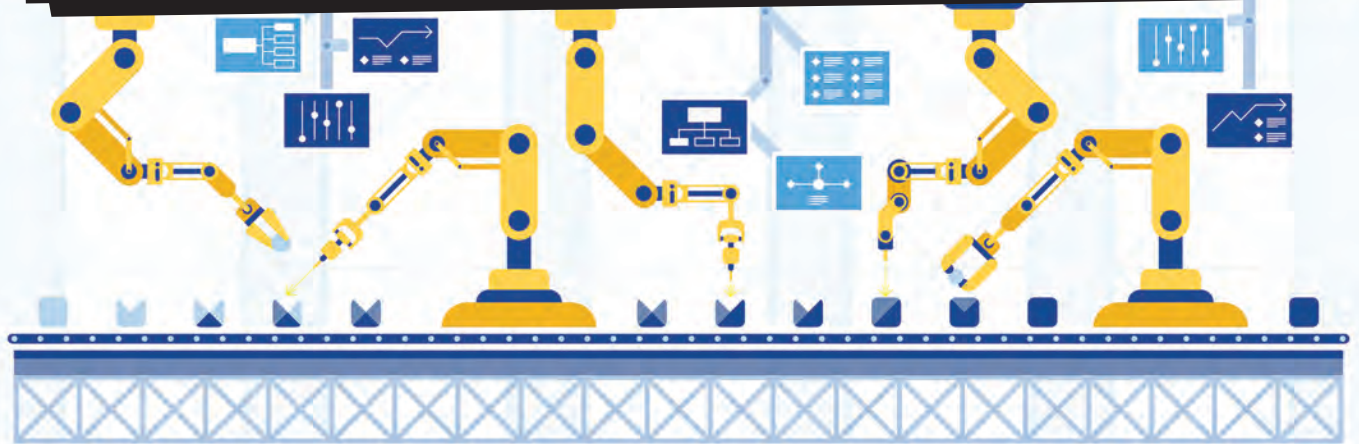


MEET SURGIO, EATON'S SURGE PROTECTION DEVICE (SPD). SPDs ARE BEHIND-THE-SCENES SUPERHEROES IN FACILITIES WITH INDUSTRIAL CONTROL PANELS, MACHINERY AND EVEN DATA CENTERS.

I WILL PURGE
THE SURGE!

Next, learn how SPDs bring calm to chaos...

THE SCENE: A BUSY MANUFACTURING FACILITY. ROBOTIC EQUIPMENT TWISTS AND WHIRLS IN AUTOMATED PROCESSES.



BEHIND EVERY ROBOTICS STATION IS THE TRUE BRAINS OF THE OPERATION: THE INDUSTRIAL CONTROL PANEL.

Industrial Control Panels are defined in Article 100 Industrial Control Panels as:

- 1) Power circuit components only, such as motor controllers, overload relays, fused disconnect switches and circuit breakers*
- 2) Control circuit components only, such as push buttons, pilot lights, selector switches, timers, switches and control relays*
- 3) A combination of power and control circuit components*

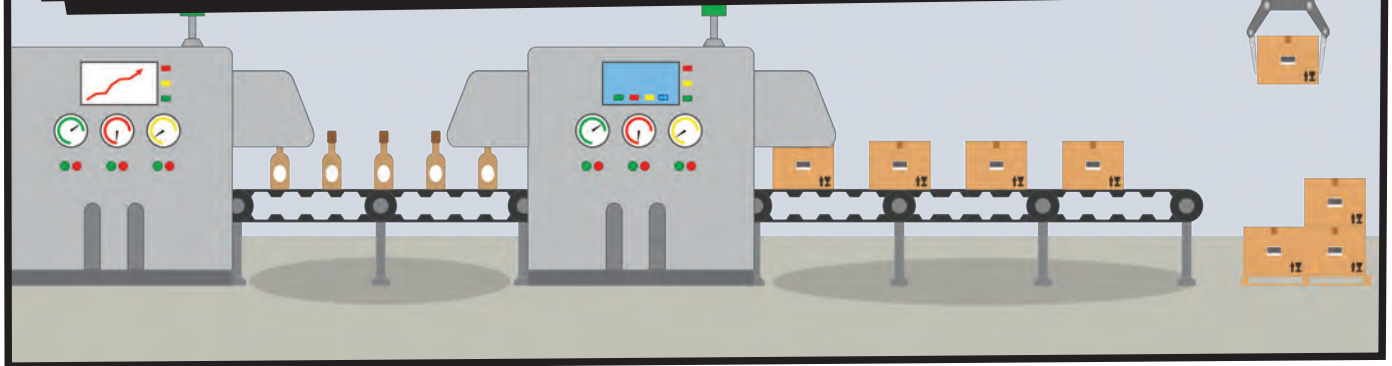


*NEC 2023
ARTICLE 409.70 SAYS:*

"Safety circuits for personnel protection that are subject to damage from surge events shall have surge protection installed within or immediately adjacent to the control panel."

"Safety circuits for personnel protection" is an extremely vast interpretation. An industrial panel with indicating lights is considered a safety circuit for the safe operation of the equipment. Therefore, Eaton's interpretation is that ALL industrial panels need protection.

*SURGE EVENTS CAN WREAK SERIOUS HAVOC ON UNPROTECTED MACHINERY:
DISRUPTION! DAMAGE! DESTROYED EQUIPMENT - AND IT'S LIGHTS OUT!*



*CURSES! MY
ARCUS INTERRUPTUS
SPELL IS NOT
WORKING.*



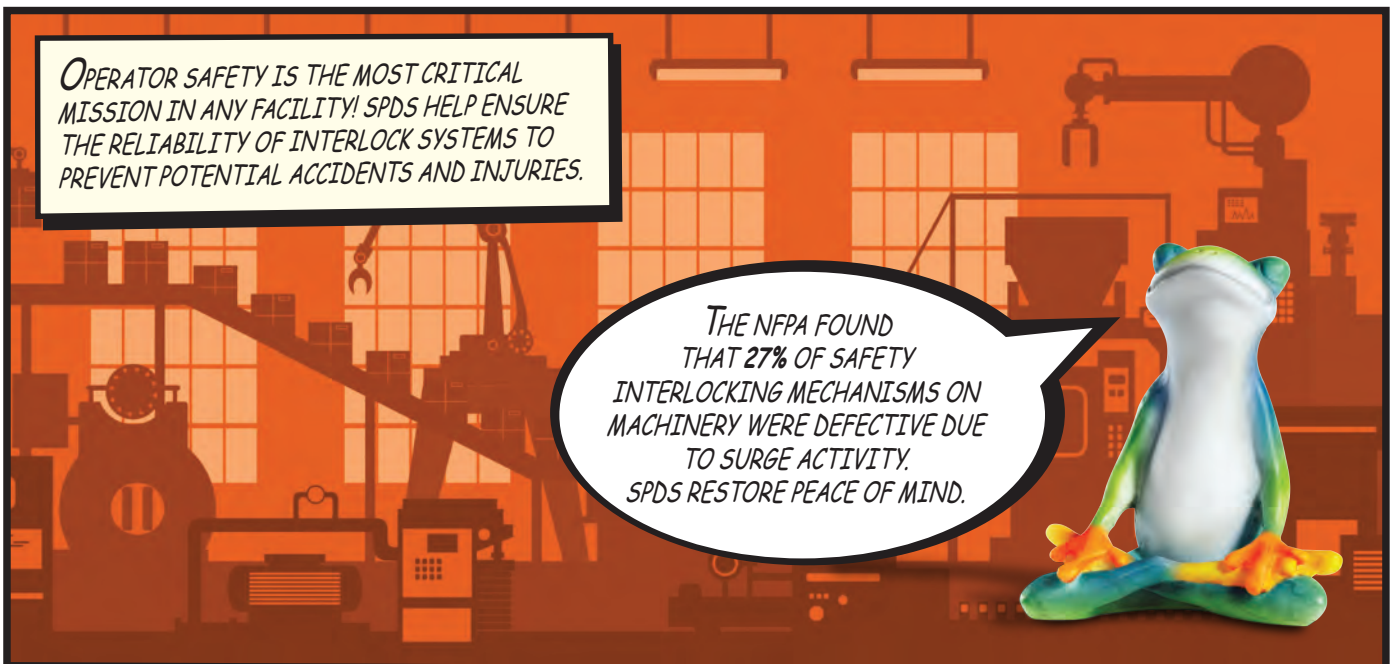
SENTINEL OF SAFETY

*IT'S A SIMPLE
SOLUTION! NEC 2017
ARTICLE 670.6 ADDRESSES
EQUIPMENT WITH SAFETY
INTERLOCK CIRCUITS:
"Industrial machinery with
safety interlock circuits shall
have surge protection
installed."*



*OPERATOR SAFETY IS THE MOST CRITICAL
MISSION IN ANY FACILITY! SPDS HELP ENSURE
THE RELIABILITY OF INTERLOCK SYSTEMS TO
PREVENT POTENTIAL ACCIDENTS AND INJURIES.*

*THE NFPA FOUND
THAT 27% OF SAFETY
INTERLOCKING MECHANISMS ON
MACHINERY WERE DEFECTIVE DUE
TO SURGE ACTIVITY.
SPDS RESTORE PEACE OF MIND.*



WELCOME TO THE WORLD OF DATA CENTERS, WHERE EVERY BYTE COUNTS AND UPTIME IS KING! POWER SURGES LURK IN THE SHADOWS, READY TO STRIKE YOUR PRECIOUS EQUIPMENT AND WIPE OUT YOUR DATA.

NEC ARTICLE

645.18 HAS IT IN FOR MY EVIL PLANS:

Surge protection is required for critical-operations data systems, defined as "information technology equipment systems that require continuous operation for reasons of public safety, emergency management, national security or business continuity."



DEFENDER OF DATA

- AN NFPA SURVEY FOUND NEARLY HALF - 48% - OF RESPONDENTS NOTED THEIR FACILITY HAD EXPERIENCED UNEXPLAINED PROCESS INTERRUPTIONS.
- MORE THAN A THIRD OF RESPONDENTS (38%) NOTED THE OCCURRENCE OF LOCKUPS OF COMPUTER OR INDUSTRIAL PROCESS SYSTEMS.



VOLTAGE SPIKE
NEUTRALIZED!

DEPLOYING SPDs IN YOUR FACTORY, WAREHOUSE OR DATA CENTER IS A NO-BRAINER, SO GEAR UP AND LET THEM SAVE THE DAY!



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