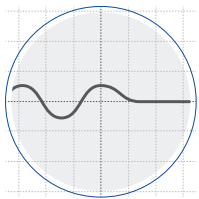


# 10 COMMON POWER PROBLEMS

that can harm your critical electronics and applications

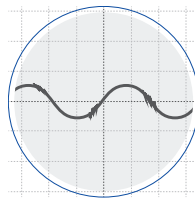


Which power problems are affecting your systems?



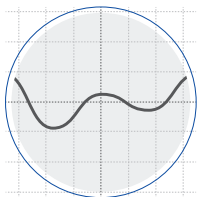
## AC BLACKOUT

A total loss of utility power occurring for more than 2 cycles.



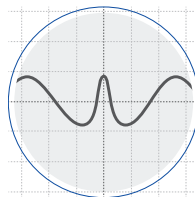
## NORMAL MODE NOISE

High frequency electrical waveform between line (L) and neutral (N) caused by RFI or EMI interference.



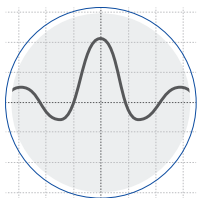
## POWER SAG

Short-term low voltage caused by starting inrush current of large equipment, utility switching, or a temporary overload.



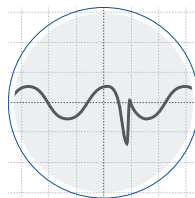
## FREQUENCY VARIATION

Frequency change from nominal 60Hz or 50Hz. Operation from engine generators can produce frequency variations.



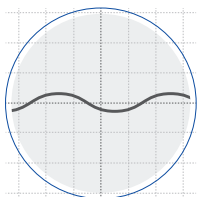
## VOLTAGE SURGE

Short-term high voltage above 110% of nominal for several cycles.



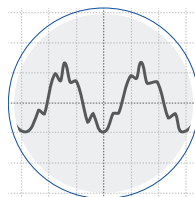
## SWITCHING TRANSIENT

Fast high voltage spike with very short duration time.



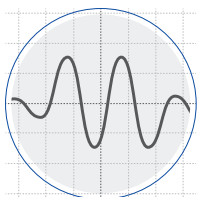
## BROWNOUT

Long-term reduced line voltage for an extended period of a few minutes to a few days.



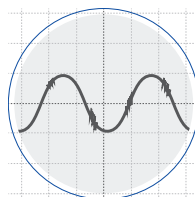
## HARMONIC DISTORTION

Distortion of the normal waveform generally caused by nonlinear loads such as rectifiers, switch mode power supplies, and variable frequency drives.



## OVERVOLTAGE

Extended periods of increased line voltage ranging from a few minutes to a few days.



## COMMON MODE NOISE

Electrical Interference that is measured between ground and either neutral (N) or line (L) of a typical AC power line.

# Find the right UPS to protect your critical electronics

## STANDBY UPS

Standby UPS protect against 3 of the 10 most common power problems. This low cost UPS provides basic protection and will reduce equipment downtime. Standby UPS are most commonly used to protect single workstations, ATM/Kiosk, IP telephony, and POS terminals.

UPS Standby models: **J60, XST**



## LINE INTERACTIVE UPS

Line Interactive UPS protect against 5 of the 10 most common power problems. This midrange protection adds Automatic Voltage Regulation (AVR) feature to the Standby UPS topology. Line Interactive UPS are most commonly used to protect servers, small network systems, IP telephony, POS terminals, and POE equipment.

UPS Line Interactive models: **S70, V80, P80**



## ONLINE UPS

Online UPS, also known as double conversion technology, protect against 9 of the 10 most common power problems. This topology first converts AC utility power into DC power, then converts back into AC power. Online UPS are most commonly used to protect mission critical applications including critical servers, phone systems, medical devices, and equipment requiring long battery runtimes.

UPS models: **E90, M90, M90S, P90, P90G, P90L, R91, T90, T91, XPRT**



## ISOLATED ONLINE UPS

Isolated Online UPS, also known as Power Conditioned Online UPS or Laboratory Grade UPS, protect against all 10 of the common power problems. This premium technology adds galvanic isolation transformer to the online UPS topology providing protection from common mode noise. Isolated Online UPS are used to provide the cleanest power in difficult applications such as industrial environments, laboratories, retail, and any installation with grounding or noise issues.

UPS Isolated Online models: **TX90**



|   | AC Blackout | Power Sag | Voltage Surge | Brownout | Overvoltage | Normal Mode Noise | Frequency Variation | Switching Transient | Harmonic Distortion | Common Mode Noise |
|---|-------------|-----------|---------------|----------|-------------|-------------------|---------------------|---------------------|---------------------|-------------------|
| <b>Standby UPS</b><br>J60, XST  |             |           |               |          |             |                   |                     |                     |                     |                   |
| <b>Line Interactive UPS</b><br>S70, V80, P80                              |             |           |               |          |             |                   |                     |                     |                     |                   |
| <b>Online UPS</b><br>E90, M90, M90S, P90, P90G, P90L, R91, T90, T91, XPRT |             |           |               |          |             |                   |                     |                     |                     |                   |
| <b>Isolated Online UPS</b><br>TX90  |             |           |               |          |             |                   |                     |                     |                     |                   |

**XTREME**  
Power Conversion®

Protect your business.

XPC USA / Denver, CO / sales@xpcc.com

XPC EMEA / Rotterdam, NL / emea@xpcc.com

www.xpcc.com

©2017 Xtreme Power Conversion Corporation. All Rights Reserved.



601 Quail Valley Drive  
Georgetown, TX 78626  
(512) 686-1876 Office  
sales@republicpowersystems.com  
www.republicpowersystems.com