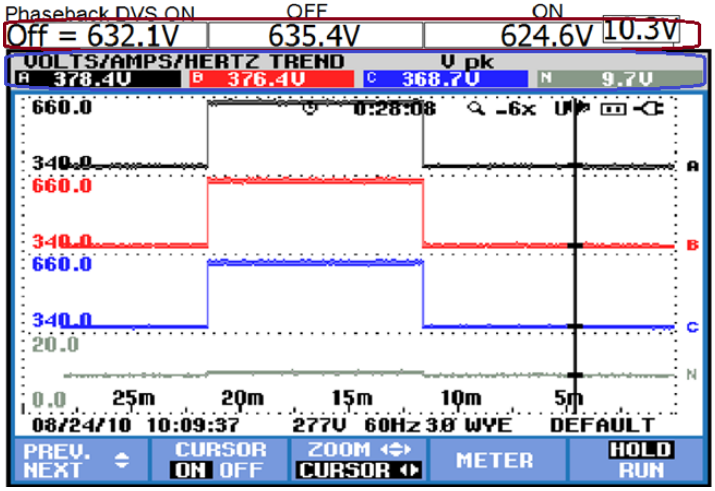
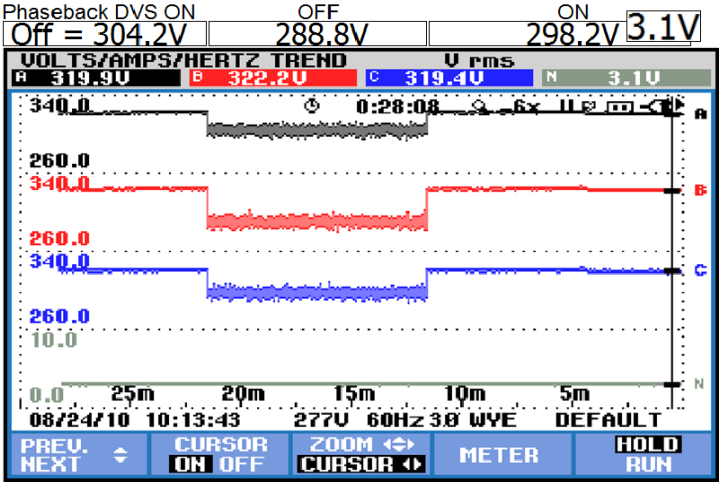
PHASEBACK DVS BENEFITS: *TESTED TO 1000FT FROM DRIVE TO MOTOR AND MORE!*





PEAK VOLTAGE CHART SHOWS PEAK 635 TO 376V

RMS CHART SHOWS 288 TO 322V INCREASE

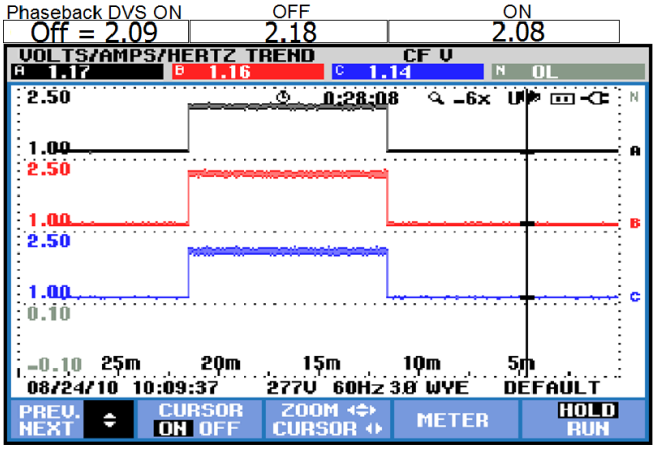
PHASEBACK DVS (DRIVE VOLTAGE STABILIZER) CLEANS UP THE VOLTAGE ISSUES THAT DAMAGE AND REDUCE THE LIFE OF THE MOTOR.

THE CASE STUDY FOLLOWS:

200 HP 480 VOLT 3-PHASE MOTOR CONNECTED TO THE SECONDARY OF AN 18-PULSE SIEMENS ROBICON AC VFD WITH A PHASEBACK DRIVE VOLTAGE STABILIZER CONNECTED TO THE MOTOR POWER CABLE TERMINALS.

TEST BASIS:

67% REFERENCE SPEED, 40.2 HERTZ,
184 AMPS ON THE OUTPUT OF THE DRIVE



CREST FACTOR CHART SHOWS 2.18 TO 1.16

RESULTS FROM THE TEST: THE ***PHASEBACK DVS***

- EFFICIENTLY REDUCED THE PEAK AC VOLTAGE FROM 630 VOLTS TO ONLY 372 VOLTS. *NO OTHER DEVICES WERE NEEDED, SUCH AS REACTORS, FILTERS, ACTIVE FRONT END, TVSS, ISOLATION TRANSFORMERS, ETC.*

  ⇒ **REDUCED BY THE TRANSIENT VOLTAGE PREVENTION PROPERTIES OF *PHASEBACK DVS***
- REDUCED THE VOLTAGE CREST FACTOR BY 45%. FROM 2.12 TO 1.16. *WITHOUT OTHER DEVICES.*

  ⇒ **REDUCED BY THE HARMONIC REDUCTION PROPERTIES OF *PHASEBACK DVS***
- IMPROVED THE RMS VOLTAGE BY 8%. *WITHOUT OTHER DEVICES.* **FROM 297.07V TO 320.5V** AVERAGE

SUMMARY:

WITH LOWER PEAK VOLTAGE AND REDUCED HARMONICS, THE MOTOR RUNS COOLER AND DOES NOT HAVE TO WORK AS HARD. THIS CAUSES LESS WASTED POWER AND LESS VOLTAGE DROP, ALLOWING AN IMPROVEMENT IN RMS (EFFECTIVE VOLTAGE), POWER FACTOR, KVAR AND KVA.

1. ELECTRIC MOTORS RUNNING COOLER WITH A 7.5°C REDUCTION IN HEAT = MOTOR LIFE IS DOUBLED.
2. PHASEBACK DVS REMOVES THE TRANSIENTS, IGBT DRIVES TYPICALLY HAVE 36000 TRANSIENTS PER SECOND.
3. THIS WILL TYPICALLY EQUATE TO A 1 TO 2 YEAR PAYBACK.

WE OFFER AN EXCEL SPREADSHEET FOR CALCULATING ACTUAL PAYBACK BASED ON YOUR HORSEPOWER, ANNUAL RUN TIME HOURS, ENERGY COST AND OTHER FACTORS. DOWNLOAD XL FILE

REFERENCE: JON BICKEL, SQUARE D / SCHNEIDER ELECTRIC—PLANT ENGINEERING 6/1/2006 DOWNLOAD

FOR A QUOTE ON PHASEBACK DVS, PHASEBACK VSGR, OR PHASEBACK HARMONIC SILENCER

CY CATES CYCATES@CYCATES.COM HTTP://WWW.CYCATES.COM **832 647 4606 CELL** WWW.PHASEBACK.COM