



## AVERAGE TRIPPING TIME-CURRENT CHARACTERISTIC CURVES

### VISTA® OVERCURRENT CONTROL — U.S. SHORT-TIME INVERSE (U5)

**BASIS**—The average tripping time-current characteristic curves shown above are applicable to both 50-Hz and 60-Hz systems. In addition, these curves are applicable over the entire S&C Vista Underground Distribution Switchgear operating temperature range of -40°C to +40°C. No adjustments need to be made to these curves for ambient temperatures within this temperature range.

**TOLERANCES**—Curves are plotted to average test points. Time-over-current tolerance, expressed in terms of current, is  $\pm 5$  amperes plus  $\pm 5\%$  of the selected pickup setting. Tolerance, expressed in terms of time, is  $\pm 1.5$  cycles plus  $\pm 10\%$  of the time indicated on the selected curve at a specified value of current between 2 and 30 multiples of the pickup setting.

Instantaneous pickup current tolerance is -0% to +10% of the selected instantaneous pickup current level.

Definite-time response tolerance is -0 to 8 milliseconds.

**I<sup>2</sup>t SECURITY CHARACTERISTIC**—To protect the relay from exceeding its thermal limits, for faults above 14.5 kA up to the maximum sensing current of 25 kA, the I<sup>2</sup>t security characteristic may implement a definite-time tripping characteristic of 0.25 second for any current magnitude above 14.5 kA, depending on the time-dial setting and the minimum-pickup current selected. Refer to Instruction Sheet 681-515, Appendix D, "Coordination".

**APPLICATION**—The maximum continuous current-carrying capability of S&C Vista Underground Distribution Switchgear is 1200 amperes. The overcurrent control is capable of sensing currents in the range of 50 to 25,000 amperes RMS.

Since the tripping time-current characteristics are electronically derived, they are not subject to change due to aging, transient over-currents, or fault currents. It is, therefore, only necessary to reset the fault interrupters following a fault-clearing operation.

**CONTROL SETTINGS**—Curves are set using a laptop computer.

