Daktronics Vanguard® VS-5220 variable speed limit signs (VSLS) are designed to be an integrated, enforceable, and affordable part of a traffic management system. The signs provide high legibility 18-inch digits that are easily changed as traffic and weather conditions change.

The VS-5220 features an active LED speed limit pixel matrix and surrounding reflective 48-inch wide by 60-inch tall MUTCD-compliant static panel. The high-resolution LED pixel matrix allows clearly formed black digits on a white background that approximate the E-series fonts specified by the MUTCD. In freeway situations, the signs are nearly indistinguishable from static signs. All of this makes them more easily enforced than the amber VSLS seen in the market today.

The signs use a blend of long-life red, green, and blue LEDs to create the white light used for the speed limit background. An integrated light sensor automatically adjusts the LED intensity for all ambient lighting levels. Under full sunlight, the LEDs match the reflectivity of the surrounding speed limit panel. At night, the LEDs dim to a very legible level that will not blind drivers and is not washed out by headlights. Our long-life LED technology is designed for a 100,000 hour life and consumes less than 150 watts at full intensity.

The VS-5220 is designed for the roadside environment and features a number of features typically found only in high-end variable message signs (VMS). A forced-air ventilation system provides filtered air to keep the sign cool. Pixel diagnostics allow remote monitoring of the sign to ensure legibility, and the internal controller and mounting location for communication equipment eliminates the need for costly traffic cabinets.

The VS-5220 features a powerful NTCIP-compliant controller that integrates into nearly any traffic management system. The posted speed limit can be scheduled or controlled manually. The built-in logging function keeps track of all speed limit changes. Daktronics offers Vanguard software, which can control, configure, and monitor the VSLS, as well as any other NTCIP-compliant DMS.

The Vanguard VS-5220 VSLS are the best choice for a speed management solution. The signs offer the features needed, and allow integration into any NTCIP-compatible traffic management system.

### Key Features

#### Dynamic Sign Panel
- Programmable matrix capable of two 18-inch (473 mm) speed digits
- Black digits on white background
- Legible from greater than 1000 ft (305 m)
- High-intensity LED technology
- Wide 30-degree LED viewing angle
- Minimum brightness of 12,400 cd/m2
- Pixel self-diagnostics ensure legibility
- Contrast-enhancing louvers shield pixels from sunlight
- Built-in pixel diagnostics monitor LED operation
- Automatic brightness control using integrated light sensor

#### Static Sign Panel
- 48-inch by 60-inch aluminum panel
- MUTCD-compliant
- Reflective white 3M sheeting

#### Cabinet Style
- Lightweight all-aluminum cabinet construction
- Front service access cabinet for easy maintenance
- Forced-air, filtered ventilation system keeps sign cool
- Mounts to existing poles (hardware not included)

#### Control System & Diagnostics
- Internal NTCIP-compliant controller
- Automatic speed change logging
- Manual or scheduled speed control
- Available Vanguard control software
Specifications

Dynamic Sign Panel Specifications
- Pixel Matrix: 16 rows by 24 columns
- Pixel Pitch: 1.33 in (34 mm)
- Default Font Size: 14 rows by 10 columns
- Active Area: 1’9” H x 2’8” W (544 mm x 816 mm)

Static Sign Panel Specifications
- MUTCD-compliant speed limit panel
- 60” H x 48” W (1.52 m x 1.22 m) panel
- Reflective white 3M sheeting with black E-series lettering

Physical Specifications
- Speed Limit Panel Size: 60” H x 48” W (1.52 m x 1.22 m)
- Sign Cabinet Size: 27” H x 35” W x 6” D (686 mm x 889 mm x 152 mm)
- Sign Weight: 100 lbs (45.4 kg)
- Operating Temperature Range: -40º F to +140º F (-40º C to +60º C)
- Humidity Range: 0 to 99%, non-condensing
- 120 VAC single-phase power (2 wires plus ground)
- Max Power: 197 watts
- Typical Power: 145 watts

Controller Specifications
- NTCIP-compatible controller
- Compatible with dial-up, cellular, fiber, Ethernet, radio, RS-232, RS-422, and other communication devices
- Controller mounted within cabinet
- Internal mounting shelf for communication equipment

Design and Manufacturing Standards
- NTCIP-compliant control system
- Designed to AASHTO wind-load requirements
- Welders certified to AWS D1.2
- NEMA 3R cabinet rating

NTCIP Communication Standards
- NTCIP 1203 – DMS Objects
- NTCIP 1201 – Global Objects
- NTCIP 1101 – STMF
- NTCIP 2101 – PMPP/RS-232
- NTCIP 2103 – PPP/RS-232
- NTCIP 2104 – Ethernet
- NTCIP 2202 – TCP/IP
- NTCIP 2301 – STMF