

VARIABLE SPEED LIMIT SIGNS (VSLS)



- CABINETS
- CONTROLLERS
- DETECTION
- PARKING
- SIGNALS
- SIGNS**
- SOFTWARE
- SPECIALTY

Overview

McCain's Variable Speed Limit Sign (VSLS), featuring SWARCO's patented lens technology, allows agencies to adjust the speed limit in response to current road and traffic conditions, such as heavy traffic or adverse weather. Decreasing the risk associated with driving at speeds higher than appropriate in these types of conditions can improve traffic flow and safety.

This highly energy efficient sign provides brilliant legibility and a superior luminance ratio resulting in outstanding reliability, quality and usability.

Benefits

- Improve safety and traffic flow by adjusting speed limits in less than ideal conditions
- Clear visibility and color uniformity from any angle with unrivaled contrast ratios
- Meets or exceeds NTCIP and NEMA TS 4 standards
- Fully programmable
- All control equipment is internally housed
- Ultra-bright, full-color LEDs
- Schedule for Day of Week, Month of Year, or any specific date(s)

Product Description

McCain Variable Speed Limit Signs features SWARCO's patented lens technology enabling the fitting of the optical lens directly in the matrix plate. Our unique optical design avoids the problems associated with reflections. Even at a low sun position, the luminance ratio meets the highest requirements and guarantees superior visibility.

The energy efficient VSLS displays two-digit speed limits using 18" or 22" tall numerals. Built to McCain's high-quality standards, these signs are ideal for permanent or temporary installation, as they will withstand wide temperature and humidity ranges as well as winds and other harsh weather conditions.

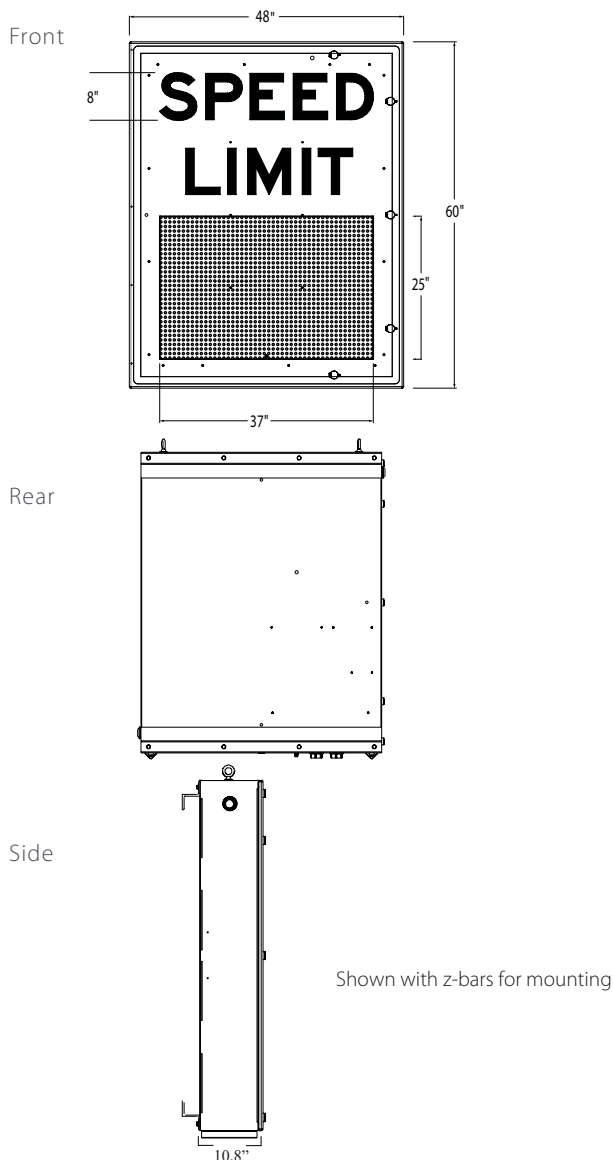
The signs are fully NTCIP-compliant. Up to 14 schedules can be accommodated with up to 16 events per schedule and 32 customizable events.

McCain's VSLS sign is the perfect addition to your overall intelligent transportation management system and can improve traffic flow and safety in your jurisdiction.

Variable Speed Limit Signs

Standard Features

- NTCIP and NEMA TS 4 standards compliant
- 100 sign brightness levels under software or photocell control
- Message is clearly visible when on and concealed when off
- Internally-housed controller
- All electronic assemblies are conformal coated for operation in harsh environmental conditions
- Compatible with flashing beacon systems
- Front and rear photocells
- Door contact switch
- 2 x 120 VAC utility outlets inside sign housing
- Optional RGB graphics support



Software Features

- Fully customizable
- Runs up to 14 schedules
- Schedules for Day of Week, Month of Year, or specific dates
- Day plan with up to 16 events per schedule
- Select from 32 customizable day plans
- Control the minute and hour of every event
- Sign schedule control via override, local, or central control
- Ethernet and RS232 serial communication

General Specifications

| | |
|------------------------------------|--|
| Dimensions: | 60" H x 48" W x 10" D |
| Display Dimensions: | 32 pixels high X 48 pixels wide |
| Enclosure: | Material: 5052-H32 aluminum Finish: Display face is black, rest of face is retroreflective material |
| Access: | Front |
| Display Technology: | RGB LED with SWARCO 3G6 or 3G7 lens |
| Pixel Size & Spacing: | 20 mm |
| Pixel Inclination (half angle): | 3G6 optics: $\pm 15.5^\circ$ 3G7 optics: $\pm 31^\circ$ |
| "SPEED LIMIT": | FHWA Series E, 8" UC |
| Display Font: | McCain MUTCD Series "E" |
| Character Height: | 18" or 22" |
| Power: | 120 VAC supply |
| Typical Power: | 17W |
| Max Power: | 54W |
| Environment: | Operating Temperature: -37°C to $+74^\circ\text{C}$ Humidity: 0 to 95% (non-condensing) |
| Weight: | 91 kg / 199 lbs |

Options

- V12440 31° Viewing angle
- V12440-3G7 62° Viewing angle

Variable Speed Limit Signs

Additional Features

| | | |
|--------------------------------|--|---|
| General | Model Series | FMS9000 |
| | Matrix Type | Full Matrix |
| | Number of Lines & Chars/symbols | 1 Lines x 2 Chars @ 18" Char Height Series E20000 MUTCD/NEMA TS4 |
| Optical | Display Color | Full Color |
| | Display Area | 960 x 640 mm |
| | Pixel Type | Nichica (3 in 1 RGB SMD) |
| | Luminance [cd/m2] | L3* (16,758 white) / (9,321 yellow) |
| | Viewing Angle | B6 30° (± 15° H) (0-10° V) |
| | Chromaticity | C2 |
| | Contrast Ratio | R3 (24:1) |
| | Optical Classification | EN 12966 - 1:2005 + A1:2009 |
| | Color Depth | Color depth 24 bits (2 ²⁴) (RGB) |
| | Max. Operating Current per pixel | 6.21mA (White RGB) / 3.94mA (Yellow) |
| Mechanics | Sign Placement Proposal | Outdoor |
| | Matrix Material | >0.118" THK Anodized Aluminum and painted |
| | Casing Material | Skin 1/8 THK 5052-H32 Aluminum |
| | External Fixation | Zee Extrusion Mounting Bracket |
| | Water/Dust Ingress Rating | NEMA 3R |
| | Wind Load Rating | WL9 |
| | Bending Rating | TDB2 |
| | Dynamic Snow Load Rating | DSL0 |
| Others | Stainless Steel locks and hinges / Aluminum conduit inlets | |
| Electrics | Display Consump. [W] (Typ. (Avg. 24h) / Standby)**/** | 17 / 13.9 |
| | I _{max} [A] (Display I _{max} + Outlets + GFCIs) | 6.1 / 1.1 +5 + 0 |
| | Energy Consumption in 1 year [KWh] | 150 |
| | Operating cost 1 / 10 year/s @ \$0.12 KW/h | \$18 / \$180 |
| | Others | Other controls: Illuminance by Integrated sensors, door contact switches |
| Controls & Software | Protocol of Communications | NTCIP 1203 v03 Rainbow controller |
| | Physical Layer | Ethernet, RS485, Contacts (Digital I/Os) |

** GFCIs not included in the Watts consumption calculation

*** Average consumption within the 24h of the day (LEDs typically active when using average message: 15%) (These figures don't include GFCI branches consumption)

Additional Models

| | | |
|---|-----------------------|---|
| Serial Number: 9100-ACODFF-10048032F20 | Casing Color Finished | Mill Finish |
| | Operating Temp | T2 (-25° C up to + 55° C) |
| | Supply Type | 12890VAC, 60Hz 1Ph |
| | Control | Software: Basic Diagnostics/Maintenance software included |
| Serial Number: 9100-DCODFF - 10048032F20 | Casing Color Finished | Any RAL |
| | Operating Temp | T1 (-15° C up to +60° C) |
| | Supply Type | 24 VDC |