

# EN12966 L Series VMS



## Application

The variable message sign is a useful medium to alert motorway users when there are abrupt changes in traffic patterns, road conditions, emergencies, or special events. The application of VMS on road can improve traffic flow while ensuring the safety of drivers and passengers. Variable message signs are ultra-bright and highly legible, with a variety of functions for many applications: lane closure, highway construction, work zone, parking lot guidance, etc. A combination of different colors and sizes makes these signs extremely efficient in conveying safety messages to road users.

## Feature

- The embedded system can perform constant diagnosis and report any abnormal status to the central system
- The VMS can be monitored by our proprietary central management system
- **ChainSpot®** which is developed independently by Chainzone's R&D team
- The excellent LED optical system meets EN12966 standards and provides the highest optical performance
- The LED beam can be precisely projected to the road surface
- A wide range of pixel pitch options from 12mm to 31.25mm, adaptable to any application
- SMD LED technology, better color mixture and uniformity
- Modular design for easy maintenance
- Integrated light sensor for automatic control
- The integrated sensor can monitor cabinet temperature
- Easily programmed and more advanced functions for users' options



Teamwork



Report



Convenient Maintenance



Temperature Detection

## Specification

| VMS L-Series               |  |            |               |
|----------------------------|--|------------|---------------|
| Model                      | VMS20L-RGB   | VMS25L-RGB | VMS31.25L-RGB |
| Pixel Pitch (mm)           | 20   | 25         | 31.25         |
| Module Resolution (pixels) | 8×16   | 8×16       | 8×8           |
| Size of Module (mm) (H×W)  | 160×320  | 200×400    | 250×250       |
| Optical Characteristics    |  |            |               |
| Conformity                 | EN12966 Standards & NEMA TS4   |            |               |
| Luminance                  | L3/L3(*) (Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)                              |            |               |
| Luminance Ratio            | R3   |            |               |
| Color                      | C2   |            |               |
| Beam Width                 | B1, B2, B3, B4, B5, <b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down) |            |               |
| Brightness Control         | 100 Levels   |            |               |
| Physical Characteristics   |  |            |               |
| Enclosure Material         | Aluminum   |            |               |
| Enclosure Surface          | Powder Coated, Matte Black (Other Colors Available)  |            |               |
| Working Temperature        | <b>T1</b> (-15°C ~ +60°C ), <b>T2</b> (-25°C ~ +55°C ), <b>T3</b> (-40°C ~ +40°C )                                     |            |               |
| Humidity Range             | RH<95%   |            |               |
| Resistance to Pollution    | D3   |            |               |
| Ingress Protection Class   | IP54, IP56, IP65, IP66   |            |               |
| Maintenance                | Back Maintenance   |            |               |
| Electrical Specifications  |  |            |               |
| Power Supply               | 90 ~ 260VAC (50/60Hz)  |            |               |
| Solar Power System         | 12/24 VDC  |            |               |
| Communication              | RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / 5G / Optic Fiber  |            |               |
| Protocol                   | NTCIP 1203 / MODBUS / UTMIC / XML / JetfileII / Profibus / RSMP / HTTP / API   |            |               |
| EMC / FCC Certification    | Compliant with EN50293, FCC Part 15B:2017, ICES-003:2016   |            |               |
| Certification              | EN12966, ETL, CETL   |            |               |



EN12966 M Series VMS

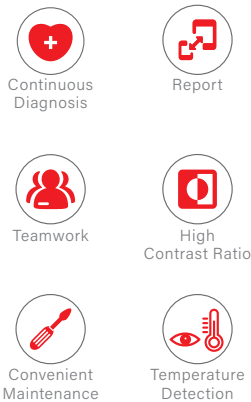


Feature

- SMD LED technology, better color mixture and uniformity
- Modular design for easy maintenance
- Integrated sensors for temperature and brightness detection
- Chainzone’s ball-shaped lens composition
- The reflection of light is greatly reduced, ensuring high contrast ratio and delivering more clear images. Comprehensive color management technology, excellent display quality.
- The embedded system can perform constant diagnosis and report errors to the central system.
- The VMS can be monitored by the central management system **ChainSpot®** which is developed independently by Chainzone’s R&D team

Visual Performance

- **High luminance ratio of LED modules**  
Chainzone’s modular design with ball-shaped optical lens achieves higher Luminance Ratio by reducing sunlight reflection and increasing luminance output. Thus, VMS can reach L3 & R3 class at very low power consumption.
- **Unique rear design:fast and better heat dissipation in VMS**  
The heat generated by electronic components on the circuit boards is dissipated to open air directly. Extraordinary thermo-stability and environment-adaptability. High IP Level.



Specification

| VMS M-Series               |  |         |            |            |            |
|----------------------------|--|---------|------------|------------|------------|
| Model                      | VMS10M-RGB   |         | VMS12M-RGB | VMS16M-RGB | VMS20M-RGB |
| Pixel Pitch (mm)           | 10   |         | 12         | 16         | 20         |
| Module Resolution (pixels) | 12×24  | 16×32   | 8×16       | 8×16       | 8×16       |
| Size of Module (mm) (H×W)  | 120×240  | 160×320 | 96×192     | 128×256    | 160×320    |
| Optical Characteristics    |  |         |            |            |            |
| Conformity                 | EN12966 Standards & NEMA TS4   |         |            |            |            |
| Luminance                  | L3/L3(*) (Red > 3100 cd/m², Green > 3720 cd/m², Yellow > 7440 cd/m², White > 12400 cd/m²)                              |         |            |            |            |
| Luminance Ratio            | R3   |         |            |            |            |
| Color                      | C2   |         |            |            |            |
| Beam Width                 | B1, B2, B3, B4, B5, <b>B6</b> (±15° horizontal & -10° vertical down), <b>B7</b> (±30° horizontal & -20° vertical down) |         |            |            |            |
| Brightness Control         | 100 Levels   |         |            |            |            |
| Physical Characteristics   |  |         |            |            |            |
| Enclosure Material         | Aluminum   |         |            |            |            |
| Enclosure Surface          | Powder Coated, Matte Blank (Other colors available)  |         |            |            |            |
| Working Temperature        | <b>T1</b> (-15°C ~ +60°C ), <b>T2</b> (-25°C ~ +55°C ), <b>T3</b> (-40°C ~ +40°C )                                     |         |            |            |            |
| Humidity Range             | RH<95%   |         |            |            |            |
| Resistance to Pollution    | D3   |         |            |            |            |
| Ingress Protection Class   | IP54, IP56, IP65, IP66   |         |            |            |            |
| Maintenance                | Back Maintenance   |         |            |            |            |
| Electrical Specifications  |  |         |            |            |            |
| Power Supply               | 90 ~ 260VAC (50/60Hz)  |         |            |            |            |
| Solar Power System         | 12/24 VDC  |         |            |            |            |
| Communication              | RS232 / RS485 / Ethernet Via RJ45 / GPRS / 3G / 4G / Optic Fiber   |         |            |            |            |
| Protocol                   | NTCIP 1203 / MODBUS / UTMCI / XML / JetfileII / Profibus / RSMP / HTTP / API   |         |            |            |            |
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| Certification              | EN12966, ETL, CETL   |         |            |            |            |