

MAKING THE MESSAGE CLEAR

MS3 SERIES

VARIABLE MESSAGE SIGN

Electronic variable message signs have become a familiar sight on the motorways and major highways of many countries. They provide road users with information on road conditions ahead, improving safety and helping to reduce congestion.

Rigel LED technology is at the heart of the MS3 series. The individual character modules can be configured as discrete characters or continuous matrices and have been built in numerous one, two, three, four and five line configurations.

Applications include:

- Variable Speed Limit Signs
- Lane Control Indicators
- Lane Control
- Controlled Motorway Indicator
- Changeable Message Signs
- Dynamic Message Signs
- Free Text Message Signs
- Dynamic Route Information Panels



The MS/ MS3 Series consists of three models offering 2 and 3 lines of text. The 400mm character signs incorporate a graphics area capable of displaying symbols and legends.

TYPICAL DESIGN PARAMETERS MAY INCLUDE:

- Three lines of 18 x 320mm or 400mm characters
- Two or Three lines of 12 with an matrix display
- Two lines of 16 characters
- 320mm and 400mm characters

MS3 signs can be mounted on a variety of structures, including a cantilever, and can be controlled by GSM, Radio, TCP-IP, Internet and an RS485 bus.

TECHNICAL DETAILS

Model	Lines x characters per line	Character pixels (H x W)	LEDs per pixel	Enhanced Matrix Indicator Display (Pixels H x W)	Overall dimensions (W x H) (mm)	Weight (Kg)	Power consumption (max) (Watts)
320 mm Character							
MS	2 x 12	7 x 5	1	no	4410 x 1755	420	1000
400 mm Characters							
MS3 2x16	2 x 16	7 x 5	2	14 x 20 ^[1]	7200 x 2190	715	1500
MS3 3x18	3 x 18	7 x 5	2	14 x 20 ^[2]	8000 x 2600	945	1900

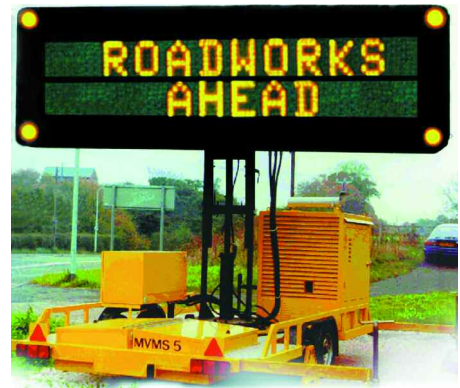
^[1] Text capability of 2x16 Sign is reduced to 2 x 12 characters when EMI feature is in use

^[2] Text capability of 3x18 Sign is reduced to 3 x 12 characters when EMI feature is in use





- Flexible messaging capability
- Alphanumeric, legend and symbol display
- Character size, configuration and mounting options
- RIGEL LED technology
- Performance to European specification EN 12966



FEATURES AND BENEFITS

- 2-line signs offer 12 characters of 320mm text, or 16 characters at 400mm
- 3-line signs offer 18 characters at 400mm
- Aluminium enclosure, fully welded with internal strength and support members
- Signs mount on cantilevered posts
- 320mm sign designed for overhead gantry mounting
- All signs use RIGEL high intensity LED technology with exceptionally long life MTBF > 45,000 hours
- Dual colour upper and lower flashing red and amber lanterns also use long life RIGEL LEDs
- Environmental protection to IPX6
- Operating temperature range -20°C to +60°C
- Window material: 6mm anti-reflective, UV-protected, polycarbonate with anti-scratch coating
- Optical performance conforming to European Standard EN 12966
- Visibility of 400mm characters > 300m
- Contrast ratio better than 10:1
- Brightness controlled by ambient light over 16 levels
- Display angle $\pm 5^\circ$ horizontal and vertical
- Communications: NMCS2 Protocol over RS485 bus, with GSM, radio, TCP-IP, modem, or Internet options possible
- Custom designs: We are able to offer you a fully designed and integrated product, from product conception to on-site installation and testing. We are happy to work with you to develop a specification to meet your requirements.



GENERAL TECHNICAL SPECIFICATIONS

Text	Alphanumeric and punctuation	Enclosure	Fully welded Aluminium
Graphics	Standard legends and symbols	Windows	6mm polycarbonate, UV protected, anti-scratch coating
LED display angle	$\pm 5^\circ$ horizontal, 5° down	Dimensions	See table
Colour	Amber 590 nm	Weight	See table
Luminous intensity	> 7,440 cd/m ²	Communication	RS485 standard, others available
Brightness levels	16	Communications protocol	Highways Agency NMCS2, NTC/IP and others
Environment class	IPX6	Temperature range	-20°C to +60°C
Lanterns	200 mm red/amber	Operating voltage	230V(+15%-20%) 50/60Hz
Conformity	EN 12966 and TR2516B	Maximum power	See table



Variable Message Signs Limited

Monkton Business Park, Mill Lane, Hebburn, Tyne & Wear, NE31 2JZ, UK

T +44 (0)191 423 7070 F +44 (0)191 423 7071 E traffic@vmslimited.co.uk W www.vmslimited.co.uk

**MAKING THE
MESSAGE
CLEAR**