









## **Variable Message Signs (VMS)**

MAIN FEATURES	
Certificate	EN12966-1:2005+A1: 2009
Type of sign	Full or dual colour LED matrix signs that shows pictograms and text in up to six traffic colours – white, yellow, green, red, blue and orange.
LED	LEDs with high luminous intensity and long-life expectancy.
Maintenance	The hardware is designed so that each part can be easily removed and replaced.
Brightness control	Brightness could be:
	a) Automatically adjustable using an external light sensor.
	b) Automatically adjustable using a day time precise algorithm. The precise daytime brightness algorithm depends on the geographical location of the sign, taking into account daytime changes throughout the year.
	c) Pre-adjusted or set from the system.
Temperature monitoring	The VMS is equipped with sensors to continuously measure the temperature inside the cabinet.
	The temperature monitoring and control system provides the optimal working temperature and prevents condensation or component overheating. The system also protects the LEDs from temperature peaks during the sign operation.
Internal time	The VMS has real time clock with 2ppm precision.
Operation logs	The logging system provides information about the VMS working conditions. Logs are stored in the VMS internal memory e.g.  VMS reset, maximum and minimum temperature, cooling and heating system activation, messages displayed,
	malfunctions e.g. LED errors individual LEDs, each colour, light sensor, overheating, or communication errors. The precise time each log event happens is recorded in the VMS memory.

Cooling	Air circulation cooling with fans, air filters and vents.
LED errors	LED error detection feature. LED self- error detection and thermal error. The error history is stored in the VMS memory. The self-diagnostic testing does not affect the display information.
Interfaces	Ethernet, RS232, Wi-fi, Bluetooth, GSM GPRS
Protocols	NTCIP UTMC NMCS2 with others available
Power supply	230V AC, 12V DC

MECHANICAL FEATURES	
Material	Aluminium AlMg3, powder coated
Housing colour	Grey, RAL 9007
Front colour	Black, RAL 9005
Physical performance	T1, T2, T3 / P3 in accordance with EN12966
Resistance to pollution	D3 in accordance with EN12966
Opening	Front opening

OPTICAL FEATURES	
Optical performance in accordance with EN12966	Luminous intensity: class L3 / L3(*) / L3(T) Contrast ratio: class R3 Beam width: class B3 Colour: class C2
LED currents	Less than 20% of the nominated current for each colour, providing long-life LEDs. Constant current LED drivers ensure stable luminance even with fluctuating supply voltages.
LED protection	UV resistant lenses for each LED

DISPLAY FEATURES	
Pixels pitchs	25mm 20mm 16mm 10mm options
Pixel composition	1 SMD LED
Flashers diameter	125mm 200mm simulated within the Matrix field to TSRGD

OPERATION	
Text messages	The VMS is able to display all character heights and types and pictograms in accordance with TSRGD.
	A number of text messages and pictograms can be stored in the VMS's memory.
	The user can create their own messages, fonts or pictograms.
	It is possible to alternate 2 or more messages and pictograms using programmable intervals.

Disclaimer: All Information contained in this document is up-to-date and correct at the date of issue. E&OE. Issue no: 2 - 22.3.22

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