

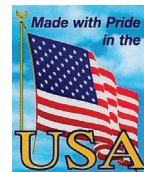


DS M-Series, Rev D2

For more information or to request a quote, visit us online at www.nematron.com

M-Series

Industrial Flat Panel Monitors, 12.1"-22" High Performance LCDs



Overview

Offering unparalleled value and superb quality, the M-Series are high performance 12.1", 15", 17", 19" and 22" widescreen color TFT flat panel monitors specifically designed for harsh industrial environments including Class I & II, Division 2 Hazardous Locations when mounted in a NEMA enclosure.

M-Series monitors accept standard analog VGA inputs and can display VESA video modes up to 1680 x 1050 with 16 million colors. An optional 5-wire analog touchscreen is available that offers RS-232 or USB interface capability.

M-Series monitors are housed in heavy duty steel chassis with powder coated machined aluminum bezels. The monitors are certified to NEMA 4/4X/12 standards, are UL/CUL listed, meet CE requirements and are RoHS compliant.

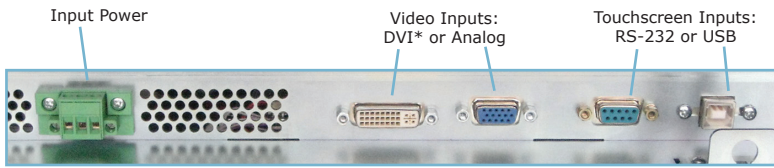
All M-Series monitors are shipped with a power input wiring receptacle, VGA cable, touchscreen cables, mounting hardware, manual and driver software.

Standard Features

- 12.1" SVGA to 22" WSXGA+ Color TFT LCD Display
- 5-wire Analog Resistive Touchscreen
 - Optional clear Lexan window
- Ultra-Thin panel mounting depth, less than 2.7" behind bezel
- NEMA 4/4X/12 front bezel
 - Optional 304 stainless steel front bezel (Not applicable on M2200W)
- Integral 100-240 VAC power supply
 - Optional 24 VDC input power
- Simplified installation with no studs
- Accepts analog 15-pin video input or DVI input
- VESA compliant - modes up to WSXGA+, 16 million colors (depends on size chosen)
- Optional 5-wire resistive touch screen with RS-232 or USB interface
- UL and cUL Ordinary Locations Listed
- UL and cUL Hazardous Locations Listed
 - Class I Division 2, Groups A, B, C, & D; Class II Division 2, Groups F & G; Class III when mounted in a NEMA enclosure
- CE & RoHS Compliant
- 2-Year warranty

Features & Benefits

Power & VGA Input Panel



*DVI cable sold separately. Consult factory for details.

Ultra-thin,
extremely
compact
design



Optional
5-wire Analog
Resistive
Touchscreen

Made with
Pride in
the USA

UL 508,
Class I, Div 2,
CE, & RoHS
Approvals

Integral
100-240
VAC or
24 VDC
Power
Supply



Powder Coated
Aluminum or
Stainless Steel
Front Panels



VESA Mounting

- M1200/M1500/M1700:
75x75mm
- M1900/M2200W:
100x100mm
(M4 Threads)



NEMA Panel
Mounting via
Clips



USB Touchscreen Retention Cable

- Required when installed
in Hazardous Locations



Meet all RoHS Hazardous
Safety Standards.



Standard 2-year warranty

- Covers parts and service



Technical Specifications

DISPLAY



	M1200	M1500	M1700	M1900	M2200W
Display Diagonal	12.1" (307.34mm)	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)	22" (558.8mm)
Display Sizes (Active Area H x V)	9.69" x 7.26" (246.0mm x 184.5mm)	11.97" x 8.98" (304.0mm x 228.1mm)	13.30" x 10.64" (337.9mm x 270.3mm)	14.82" x 11.85" (376.4mm x 301.0mm)	18.65" x 11.65" (473.8mm x 296.1mm)
Native Resolution	SVGA, 800 x 600	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024	WSXGA+, 1680 x 1050
Displayable Colors	262K	16M	16M	16M	16M
Brightness, Typical	400 Nit	300 Nit	380 Nit	300 Nit	300 Nit
Contrast Ratio, Typical	500:1	800:1	1000:1	2000:1	1000:1
Horizon/Vertical View Angle, CR>5, Typical	130°/110°	150°/145°	170°/170°	178°/178°	178°/178°
Backlight Life, Typical	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs

TOUCH SCREEN (all models)

Touch Screen Technology	5-wire Analog Resistive
Positional Accuracy (Maximum Error)	0.18" (0.19" M1900T / 0.28" M2200WT) 4.57mm (4.83mm M1900T / 7.11mm M2200WT)
Positional Accuracy (Standard Deviation of Error)	< 0.08" (< 2.0 mm)
Expected Life	>35,000,000 Activations (10,000,000 M2200WT)

ELECTRICAL

AC Input Voltage	100-240 VAC, 50/60 Hz
AC Input Current	M1200/1500 - 0.5 A Max M1700/1900/2200W - 1.0 A Max
DC Input Voltage (optional)	18-36 VDC
DC Input Current (optional)	M1200/1500/1700/1900 - 2.0 A Max M2200W - 4.5 A Max
Input Power	M1200/1500 - 25 W Typical M1700 - 30 W Typical M1900 - 35 W Typical M2200W - 60 W Typical

ENVIRONMENTAL

	Operating 0°C to 50°C	Non-operating -20°C to 60°C
Temp. ¹		
Humidity	20% to 80% RH, noncondensing	
Shock	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration	.006" peak to peak displacement 5-2000 Hz	.015" peak to peak displacement 2.5g maximum acceleration
Altitude ²	Sea level to 10,000 feet	

¹ Temperature specifications are for air temp surrounding the unit (i.e. inside any enclosure being utilized).
² Altitude specification is established by using all internal component specifications.

AGENCY

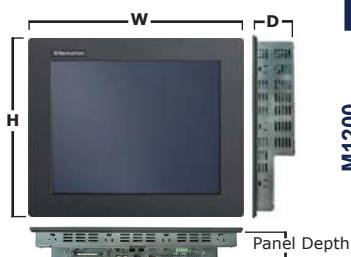
NEMA Rating	NEMA 4/4X/12, IP65
FCC	47 CFR, Part 15, Class A
EU CE Marking Compliance	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1, RoHS compliant
Safety Agency Approvals *	UL 508 Listed, ANSI/ISA 12.12.01-2012 ³ , cUL Listed CSA 22.2, #142, cUL Listed CSA 22.2, #213 *

* Class I Division 2, Groups A, B, C, D; Class II Division 2, Groups F & G; Class III; Temp. Code: T5, when installed on a flat surface of a Type 1, 4, 4X, or 12 enclosure
³ ANSI/ISA 12.12.01-2012 is the new standard listed to show Hazardous Locations Agency Approval. UL1604 will be discontinued by July 31, 2012.

PHYSICAL

	M1200	M1500	M1700	M1900	M2200W
Overall Dimensions (H x W x D)	10.475" x 12.9" x 2.65" (266.1mm x 327.7mm x 67.3mm)	12.80" x 15.80" x 2.65" (325.1mm x 401.3mm x 67.3mm)	14.48" x 17.14" x 2.85" (367.8mm x 442.0mm x 72.4mm)	15.70" x 18.66" x 2.95" (398.8mm x 474.0mm x 75.0mm)	15.0" x 22.0" x 2.95" (381.0mm x 558.8mm x 75.0mm)
Panel Mounting Depth	2.4" (61.0mm)	2.4" (61.0mm)	2.6" (66.0mm)	2.7" (68.6mm)	2.7" (68.6mm)
Cutout Dimensions (H x W)	9.68" x 12.10" (245.9mm x 307.3mm)	12.00" x 15.00" (305.0mm x 381.0mm)	13.70" x 16.35" (348.0mm x 415.3mm)	14.90" x 17.75" (378.5mm x 450.9mm)	14.2" x 21.2" (360.68mm x 538.48mm)
VESA Mount Pattern (M4 Threads)	75x75mm	75x75mm	75x75mm	100x100mm	100x100mm
Weight	9.5 lbs. (4.31kg)	14.0 lbs (6.35kg)	18.5 lbs (8.39kg)	22.5 lbs (10.21kg)	23.0 lbs. (10.43kg)
Shipping Weight	13.0 lbs. (5.89kg)	19.0 lbs (8.62kg)	23.5 lbs (10.66kg)	27.5 lbs (12.47kg)	30.0 lbs. (13.60kg)
Option Weight (SS)*	+2.5 lbs. (1.13 kg)*	+3.5 lbs (1.58kg)*	+3.75 lbs (1.70kg)*	+4.0 lbs (1.81kg)*	N/A

* Additional weight for Stainless Steel option.



Cutout Dimensions

M1200	12.10" (W) 307.3mm	15.00" (W) 381.0mm	M1700	16.35" (W) 415.3mm	M1900	17.75" (W) 450.9mm	M2200W	21.2" (W) 538.48mm
	9.68" (H) 245.9mm	12.00" (H) 305.0mm		13.70" (H) 348.0mm		14.90" (H) 378.5mm		14.20" (H) 360.68mm

Order Number Generation

Base Unit Configuration: Mxx00(T or WT), where x = 12, 15, 17, 19, or 22 (for display size) NEMA 4/4X/12 panel mount, TFT flat panel monitor with 5-wire analog resistive touch screen, built in AC power supply, and powder coated aluminum front panel. Units ship with AC wiring receptacle, 10' VGA cable, 10' RS-232 cable (touchscreen equipped units only), 3m USB cable (touchscreen equipped units only), mounting hardware, and operator's guide (DVI cable sold separately).

M	
Display Size:	
1200	12.1" SVGA LCD
1500	15.0" XGA LCD
1700	17.0" SXGA LCD
1900	19.0" SXGA LCD
2200W	22.0" WSXGA+ LCD
Input Options:	
T	Touchscreen
blank	None
Power Supply:	
blank	100-240 VAC
-24	24 Volt DC (N/A on M2200W)
-DC	Isolated 24 Volt DC (M2200W only)
Front Panel:	
blank	Powder Coated Aluminum
-NL	Powder Coated Aluminum w/o Logo
-SS	Machined 304 Stainless Steel (N/A on M2200W)
-RM	Rackmount Powder Coated Aluminum (M1900 only) ¹

¹ Rackmount front panel is not NEMA 4/4x/12 and is required to be installed on a rack in a Type 1 enclosure.

Accessories

CBL-10-VGA	15-Pin analog VGA cable, 10' length	MTG-CAP-5015	Cutout adapter plate for mounting an M1500 in a Xycom 5015T or 5015T/R2 cutout. Requires drilling 16 mounting holes around the present cutout.
CBL-25-VGA	15-Pin analog VGA cable, 25' length	MTG-CAP-5017	Cutout adapter plate for mounting an M1700 in a Xycom 5017 cutout. Requires drilling 16 mounting holes around the present cutout.
CBL-50-VGA	15-Pin analog VGA cable, 50' length	PWR-AC	Plug for field wiring AC power
CBL-10-RS232	Serial RS-232 touch screen cable, 10' length	PWR-DC	Plug for field wiring DC power
CBL-25-RS232	Serial RS-232 touch screen cable, 25' length	PWR-AC-EN	IEC connector for field wiring longer (than 2.5 meters) AC power cables on Enclosed units only. Cable not provided. Not for use on standard panel mount versions.
CBL-50-RS232	Serial RS-232 touch screen cable, 50' length	MISC-CLIP	Mounting clip kit, includes 16 clips and screws
CBL-10-USB	USB touch screen cable, 10' length	CBL-PWR-AC	6' AC wiring cable with standard 3-prong US end on one side and Phoenix Power Wiring connector with cover on other end. NOTE: NOT allowed for use in Hazardous Conditions.
CBL-15-USB	USB touch screen cable, 15' length		
CBL-3M-DVI	DVI (type D) video cable, 3 m length		
CBL-3M-HDMI/DVI	3 meter HDMI to DVI-D video cable		
CBL-25-HDMI/DVI	25 feet HDMI to DVI-D video cable		
CBL-50-HDMI/DVI	50 feet HDMI to DVI-D video cable		
MTG-RM-1500	Rackmount adapter plate for M1500/M1500T		
MTG-RM-1700	Rackmount adapter plate for M1700/M1700T		

Additional Models

Nematron offers additional models which are cut out compatible with units from other suppliers. These are for replacement installations only and are not recommended for new applications. Consult sales@nematron.com for more details. Some examples are:

- Nematron M1900 replaces the Viewtronix SXT1811 and Xycom 5019
- Nematron M1502 replaces the Viewtronix/Xycom XT1502

Contact Information

Headquarters - Nematron Corporation
 5840 Interface Drive, Suite 100
 Ann Arbor, MI 48103 USA
 Tel: 1.734.214.2000
 Fax: 1.734.994.8074
 Email: info@nematron.com

