ATEX ZONE 2/22 Approved
M-Series Industrial Flat Panel Displays

Ex UL cUL CE

intel 55°c

ATEX ZONE 2/22 Approved

M2200W-ATEX
22.0" Widescreen WSXGA+

M1200- ATEX
12.1" SVGA

M1500SRT-ATEX
15.0" XGA

M1500-ATEX
15.0" XGA

M1700-ATEX
17.0" SXGA

M1900-ATEX
19.0" SXGA

Overview

Offering unparalleled value and superb quality, the M-Series are high performance LED-backlit 12.1", 15", 15" Sunlight Readable, 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 Displays now carry ATEX Zone 2/22 certificates of approval.

M-Series monitors accept standard analog VGA inputs and can display VESA[1] video modes up to 1680 x 1050 with 16 million colors. A 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, and meet CE requirements.

All M-Series monitors are shipped with a power input wiring receptacle, VGA cable, touchscreen cables, mounting hardware, manual and driver software.
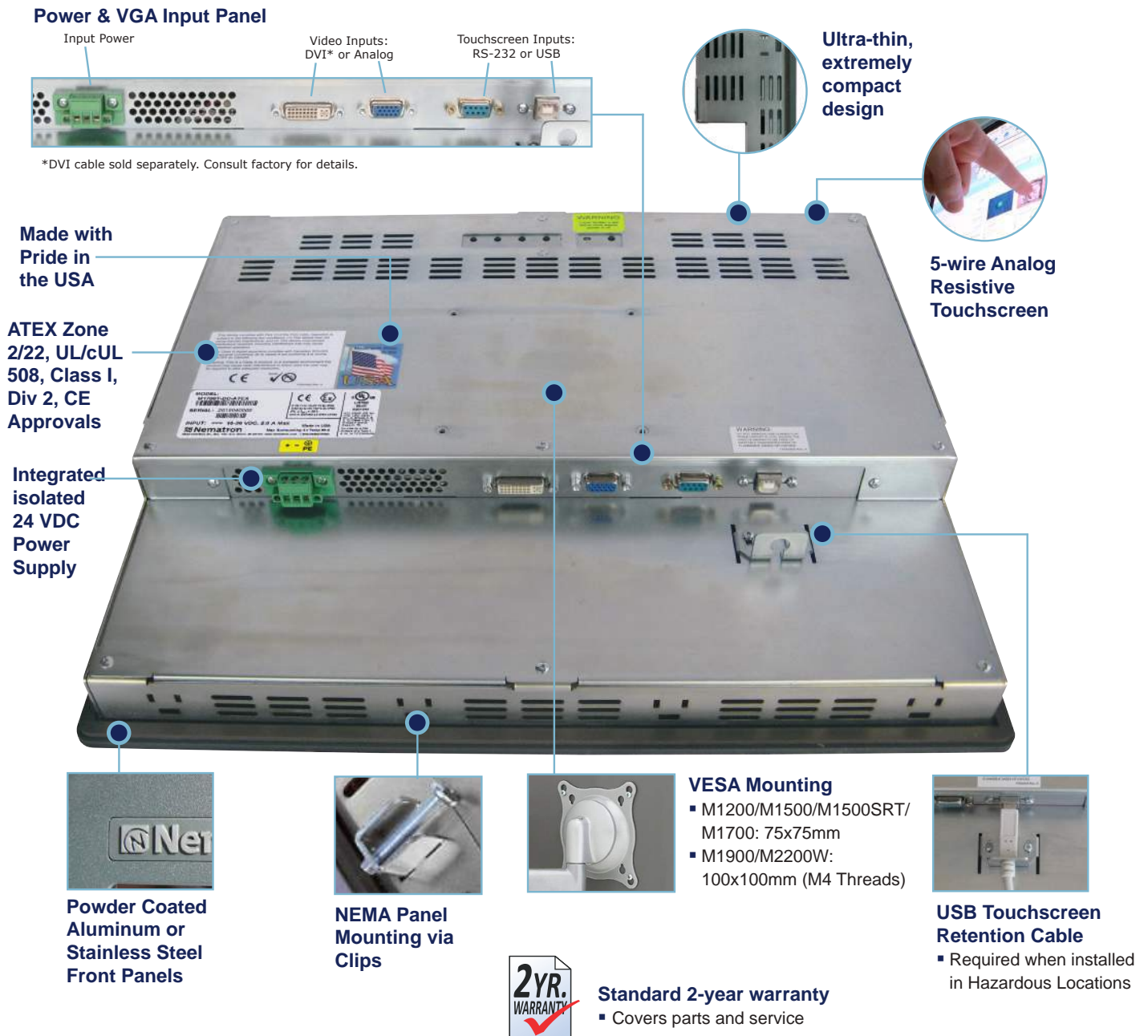
[1] *Video Electronics Standards Association (VESA®)*
* Check factory for availability of M1500SRT and M2200W stainless front panels - not always stocked and may take 6 weeks or more for delivery)

Standard Features

- 12.1" SVGA to 22" WSXGA+ Color TFT LED-backlit LCD Displays
  - High Bright 1500-Nit LED Display (M1500SRT)
- 5-wire Analog Resistive Touchscreen with RS-232 or USB interface
- Ultra-Thin panel mounting depth, less than 2.7" behind bezel
- NEMA 4/4X/12 front bezel
  - Optional 304 stainless steel front bezel *
- Integrated isolated 24 VDC input power supply
- Simplified mounting clip installation with no studs
- Accepts analog 15-pin video input or DVI input
- VESA[1] compliant - modes up to WSXGA+,16 million colors (depends on size chosen)
- ATEX Zone 2/22 approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X
- 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
- FCC & CE Compliant
- 2-Year warranty

Features & Benefits

Power & VGA Input Panel

Input Power

Video Inputs:
DVI* or Analog

Touchscreen Inputs:
RS-232 or USB

*DVI cable sold separately. Consult factory for details.

Ultra-thin, extremely compact design

Made with Pride in the USA

ATEX Zone 2/22, UL/cUL 508, Class I, Div 2, CE Approvals

Integrated isolated 24 VDC Power Supply

5-wire Analog Resistive Touchscreen

Powder Coated Aluminum or Stainless Steel Front Panels

NEMA Panel Mounting via Clips

VESA Mounting
- M1200/M1500/M1500SRT/ M1700: 75x75mm
- M1900/M2200W: 100x100mm (M4 Threads)

USB Touchscreen Retention Cable
- Required when installed in Hazardous Locations

2YR. WARRANTY

Standard 2-year warranty
- Covers parts and service

M-Series ATEX Marking

$C \in$ ⟨Ex⟩

II 3G Ex ic nA IIC T4 Gc IP66
II 3D Ex tc IIIC T67°C Dc IP66
0°C ≤ T$_{AMB}$ ≤ 55°C
Cert #: DEMKO 14 ATEX 1374X

For more details on Nematron ATEX markings, go to: http://www.nematron.com/atex/nematron_atex_markings_0415.pdf
Reference DEMKO 14 ATEX 1374X Certificate "Special Conditions for Safe Use", go to: http://www.nematron.com/atex/demko_1374x.pdf

Technical Specifications

Physical	M1200T-ATEX	M1500SRT-ATEX	M1500T-ATEX	M1700T-ATEX	M1900T-ATEX	M2200WT-ATEX
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)	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)	15.00" x 22.00" x 2.95" (381.0mm x 558.8mm x 75.0mm)
Panel Mounting Depth	2.4" (61.0mm)	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)	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)
Weight	9.5 lbs (4.31kg)	14.0 lbs (6.35kg)	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)	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 (1.13kg)*	+3.5 lbs (1.58kg)*	+3.5 lbs (1.58kg)*	+3.75 lbs (1.70kg)*	+4.0 lbs (1.81kg)*	N/A

* Additional weight for Stainless Steel option.

Display	M1200T-ATEX	M1500SRT-ATEX	M1500T-ATEX	M1700T-ATEX	M1900T-ATEX	M2200WT-ATEX
Display Diagonal	12.1" (307.34mm)	15.0" (381.0mm)	15.0" (381.0mm)	17.0" (431.8mm)	19.0" (482.6mm)	22.0" (558.8mm)
Display Size *Active Area Horz x Vert*	9.69" x 7.26" (246.0mm x 184.5mm)	11.97" x 8.98" (304.0mm x 228.1mm)	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	XGA, 1024 x 768	SXGA, 1280 x 1024	SXGA, 1280 x 1024	WSXGA+, 1680 X 1050
Brightness / Contrast Ratio	450 nit / 600:1	1500 nit (minimum) [1] / 600:1 (through touchscreen)	400 nit / 600:1	350 nit / 1000:1	300 nit / 2000:1	300 nit / 1000:1
Horz/Vert Viewing Angle	140°/120°	160°/160°	140°/120°	170°/170°	178°/178°	178°/178°
Backlight Life / Typical	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs	50,000 hrs

[1] Adjust turned off with full brightness will yield 1500 nit minimum.

Typical* Power	M1200T-ATEX	M1500SRT-ATEX	M1500T-ATEX	M1700T-ATEX	M1900T-ATEX	M2200WT-ATEX
Input Power	25W	50W	25W	30W	35W	60W
DC Input Voltage	18-36 VDC	18-36 VDC	18-36 VDC	18-36 VDC	18-36 VDC	18-36 VDC
DC Input Current	2.0 A Maximum	2.75 A Maximum	2.0 A Maximum	2.0 A Maximum	2.0 A Maximum	4.5 A Maximum

* Typical power is measured per model/per processor and without any additional I/O or expansion inputs. Any additional I/O installed during application can increase this value.

COMMON SPECS

I/O

Available I/O	(1) Analog Video Port, (1) Digital Video (DVI) Port, Touchscreen inputs: (1) RS-232, (1) USB

Touchscreen

Technology	5-wire Analog Resistive

Environmental

	Operating	Non-operating
Temperature [2] / Humidity	0°C to 55°C / 20% to 80% RH, noncondensing	-20°C to 70°C / 20% to 80% RH, noncondensing
Shock	15g peak acceleration, 11msec	30g peak acceleration, 11msec
Vibration *(5-2000 Hz)*	.006" peak to peak displacement, 1.0g maximum acceleration	.015" peak to peak displacement, 2.5g maximum acceleration
Altitude [3]	Sea level to 10,000 feet	Sea level to 40,000 feet

[2] Temperature specifications are for air temp surrounding the unit (i.e. inside any enclosure being utilized). Meets US Federal Requirements specified in 46 CFR 111.01-15 (d) for offshore electrical systems.
[3] Altitude specification is established by using all internal component specifications.

Agency Approvals

Front Panel NEMA Rating	NEMA 4/4X/12, IP66
FCC	47 CFR, Part 15, Class A
ATEX Compliance	ATEX Zone 2/22 approved when installed in an approved enclosure as described in the certificate DEMKO 14 ATEX 1374X *(see product labeling on previous page)*
EU CE Marking Compliance	CE, EN 55022: Class A, EN 61000-3-3, EN 61000-6-2, IEC 60950-1
Safety Agency Approvals *	UL508 Listed, ANSI/ISA 12.12.01-2012 [4], cUL Listed CSA C22.2, #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.
[4] ANSI/ISA 12.12.01-2012 is the new standard listed to show Hazardous Locations Agency Approval. UL1604 discontinued July 31, 2012.

Options

Front Panel Options	Powder-Coated Aluminum Front Panel; with No Logo; Machined 304 Stainless Steel [5]

[5] Check factory for availability and delivery schedule. M1500SRT and M2200W stainless front panels are not always stocked and may take 6 weeks or more for delivery.

Order Number Generation

Base Unit Configuration: Mxx00(T or WT)-DC-ATEX, 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, isolated 24 VDC power supply, and powder coated aluminum front panel. Units ship with power input 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).

$$\textbf{M} \underline{\quad} \quad \textbf{T} \quad \textbf{DC} \underline{\quad} \textbf{-ATEX}$$

Display Size:

1200	12.1" SVGA LCD
1500SR	15.0" XGA Sunlight Readable LCD
1500	15.0" XGA LCD
1700	17.0" SXGA LCD
1900	19.0" SXGA LCD
2200W	22.0" WSXGA+ LCD

Input:

T	Touchscreen

Power Supply:

-DC	Isolated 24 Volt DC

Front Panel:

blank	Powder Coated Aluminum
-NL	Powder Coated Aluminum w/o Logo
-SS	Machined 304 Stainless Steel [1]

[1] Check factory for availability and delivery schedule. M1500SRT and M2200W stainless front panels are not always stocked and may take 6 weeks or more for delivery.

Accessories

CBL-3-VGA	15-Pin analog VGA cable, 3' length
CBL-10-VGA	15-Pin analog VGA cable, 10' length
CBL-25-VGA	15-Pin analog VGA cable, 25' length
CBL-50-VGA	15-Pin analog VGA cable, 50' length

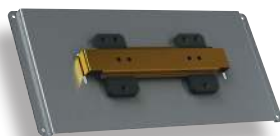|	
CBL-3-RS232	Serial RS-232 touch screen cable, 3' length
CBL-10-RS232	Serial RS-232 touch screen cable, 10' length
CBL-25-RS232	Serial RS-232 touch screen cable, 25' length
CBL-50-RS232	Serial RS-232 touch screen cable, 50' length

CBL-3-USB	USB touch screen cable, 3' length
CBL-10-USB	USB touch screen cable, 10' length
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

PWR-DC	Plug for field wiring DC power
MISC-CLIP	Mounting clip kit, includes 16 clips and screws

MTG-DIN-nPC300

DIN Rail Mounting Kit - Mounting kit includes DIN Rail bracket that mounts nPC300 Nodes to M1500SRT Monitors using the 75mm VESA mounting pattern on the rear of the units.