



Open-Frame Modules and Sealed Terminals

Serial Products Based on EL Monochrome Displays

There are three basic serial products: controllers, open-frame modules and terminals. Deeco controllers include the communications and display circuitry to drive EL monochrome flat panel displays.

Controller	Module	Terminal
C9	M9ST*	ST3500
C4	M4ST	ST3200
C320	M320ST	ST2200
C3	M3-15	No terminal

*ST after the module part number indicates an IR touchscreen installed on the system. IR touchscreens are optional.

Module = Controller + Display + Infrared Touch

Terminal = Controller + Display + Enclosure + Power Supply

Open-Frame Modules

Deeco serial modules combine Deeco's SealTouch infrared touch controller technology with EL flat panel displays for embedded applications. When mounted, the display and touch systems provide a NEMA 4/12 (IP65) seal. The module can display host computer output and provide input through the SealTouch infrared touchscreen controller. They are based on Digital Equipment Corporation's popular VT series. The VT series is the originator and prime user of the ANSI 3.64 standard command language for text terminals. These modules emulate DEC VT100 or VT320 standards. Most modules include non-volatile memory to store setup parameters and commands. On-board non-volatile memory allows users to pre-position the button, text and graphics for local recall, thus minimizing host processing burdens and reducing communications overload. Deeco modules communicate with the host using hex/ASCII characters over a standard RS-232 or RS-422/485 line.

Sealed Terminals

Deeco terminals are designed with lightweight, compact NEMA 4/12 (IP65) aluminum enclosures that can be mounted on a swing arm, pedestal, wall, workbench or bolted to heavy machinery. There are no fans or filters, making them suitable for operating in extreme environments. Our sealed serial terminals are small, thin and rugged. Deeco incorporates features not found in other serial products, such as on-board memory and logic for display decision-making, data stream analysis and fast-page graphics. The SealTouch infrared touchscreen system makes interacting with the display intuitively simple. Just touch the screen with your finger to initiate the command or enter data. Easy-to-use Touch Assist II or Quick Assist II development software makes developing custom-application graphics and menu-driven interface straightforward.

Open-Frame Modules and Sealed Terminals - Based on EL Monochrome Displays

Open-Frame Specifications

Dimensions

- M9, M4, M320:
10.5" (W) x 6.9" (H) x 2.0" (D)
267 mm x 175 mm x 51 mm
- M3:
10.3" (W) x 5.7" (H) x 2.5" (D)
262 mm x 145 mm x 64 mm

Display

- 9.2" EL 640x400; 9.2" EL 640x200; 8.9" EL 512x256; color display option (M9)

Graphics

- Pixel (ASCII text character on M320)

Touchscreen

- Sealed infrared touchscreen (optional)

Memory

- Up to 128k EEPROM or SRAM

I/O

- RS-232C, RS-422 (with optical isolation); RS-485 multi-drop (with optical isolation); parallel port; serial printer-AUX serial port; IBM keyboard port

DEC emulation

- VT100 text; VT320 text; VT100

Communication

- RS-232, RS-422 or RS-485 (up to 4,000 ft. from host with RS-422/485); RS-232 standard for M3 with optional RS-449

Development Software

- Windows-based Touch Assist II or Quick Assist II program translates visual representation of desired screen image and touch button operation into Deeco command language

EMI

- Shielded to MIL-461-C-A2b at front (opt.)

Shock

- 60g, 11mS (operating and non-operating) Half-Sine

Vibration

- 1g rms (operating); 2g rms (non-operating) - @10- 500 Hz sine sweep

Relative humidity

- 5%-95%, non-condensing

Power supply

- 90-264 VAC, 47-63 Hz autosensing input power supply (optional)

Power

- +24V DC or 100-240V AC input (+5V DC for controller logic and +12 VDC for display voltage converter if no power supply is selected)

MTBF

- Controllers > 80,000; display > 45,000 — nominal @ 25° C

Regulatory compliance

- NEMA 4/12 (IP65) at front panel

Sealed Specifications

Dimensions

- 11.6" (W) x 10.6" (H) x 3.2" (D)
295 mm x 269 mm x 81 mm

Enclosure

- NEMA 4/12 (IP65) sealed aluminum

Memory

- Up to 128k EEPROM; up to 128k SRAM

Connectors

- Host serial 25-pin D-sub with RS-232/RS-422/RS-485; AUX serial 9-pin D-sub with RS-232/RS-422/RS-485; power 3-prong; IEC standard; keyboard IBM PC/AT

Touch Modes

- Up to 121 button sets; up to 121 buttons per set; Enter/Exit/Track; X-Y coordinate reporting; pop-up menus; QWERTY & ABC/numeric keyboards

DEC emulation

- VT100 text; VT320 text

Weight

- 13.6 lb. (6.2 kg)

Temperature

- 0°C to +50°C (operating)
- -40°C to +85°C (storage)

Power

- +24V DC or 100-240V AC input, +5/+12 without power supply

MTBF

- Controller > 80,000 hours; display > 45,000 hours — nominal @25° C

Sealed Options

Cover

- Rear conduit cover kit

Development software

- Windows-based Touch Assist II or Quick Assist II program

Cable

- Adapter cable for keyboard (5" 5-pin DIN to 4-pin LEMO FG plug)

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Sealed Specifications (continued)

Module P/N	DEC Emulation	Graphics	Display	Options	Enclosed Terminal P/N
M9ST	VT100 Text	Deeco Pixel Graphics	EL 640x400; 9.2" diag.	<ul style="list-style-type: none">• 128k EEPROM or SRAM• 90-264V AC, 47-63 Hz, +20-36V DC power supply	ST3500 (C9-based)
M4ST	VT100 Text	Deeco Pixel Graphics	EL 640x400; 9.2" diag.	<ul style="list-style-type: none">• 128k EEPROM or SRAM• 100-240V AC, 50-60 Hz, +20-36V DC power supply	ST3200 (C4-based)
M320ST	VT320 Text VT220 Text VT100 Text	ASCII Text Character Graphics	EL 640x200; 9.2" diag.	<ul style="list-style-type: none">• 100-240V AC, 50-60 Hz, +5, +12V DC power supply	ST2200 (C320-based)
M3	VT100	Deeco Pixel Graphics	EL 512x256; 9.9" diag.	<ul style="list-style-type: none">• Up to 32k EEPROM / SRAM memory• RS-449 serial port• Infrared touch array, filter and bezel	N/A

Special terminal configurations are available, including:

- Class I, Division 2
- Thick filter (3.2 mm)
- Panel mount
- Sunlight-readable display
- Extended temperature (-25° C to +60° C)

About Computer Dynamics

Computer Dynamics (A GE Intelligent Platforms Company) is a leading global provider of flat panel display solutions for a wide range of industries and applications. Our comprehensive product offering includes open-frame, enclosed, and environmentally sealed flat panel display systems in both computer and monitor configurations. The company is headquartered in the U.S. and is a part of GE Intelligent Platforms. Whether you're looking for one of our standard products or a fully custom solution, Computer Dynamics has the breadth, experience and 24/7 support to deliver what you need. For more information, visit www.cdynamics.com.

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