L5392 Color LinkStation

DESCRIPTION

The LinkStation is a high speed intelligent microprocessor device used for industrial process control applications. It provides a color LCD touch screen interface for *LINK* control system networks.

Using the Windows based graphical software package Drive System Designer (DSD) and appropriate LinkCards, you can configure the L5392 for line sequencing, process control functions, such as draw and loadcell control, and direct control of all motor drive controllers connected to the same *LINK* control network.

NOTE. You must use DSD or ConfigEd version 5 or greater to configure this unit. This module is *not* compatible with earlier versions.

The screen is set up in a six band format, where each band can be software configured with any of the 'LinkStation' blocks available in DSD. These blocks include meters, potentiometers, combination potmeters, annunciators, pushbuttons and more.

The L5392 supports multi-paging. Using the appropriate default configuration in DSD, you can program them to display multiple pages in the standard six band format. Special page handlers and two dedicated buttons allow the user to scroll up and down between pages.

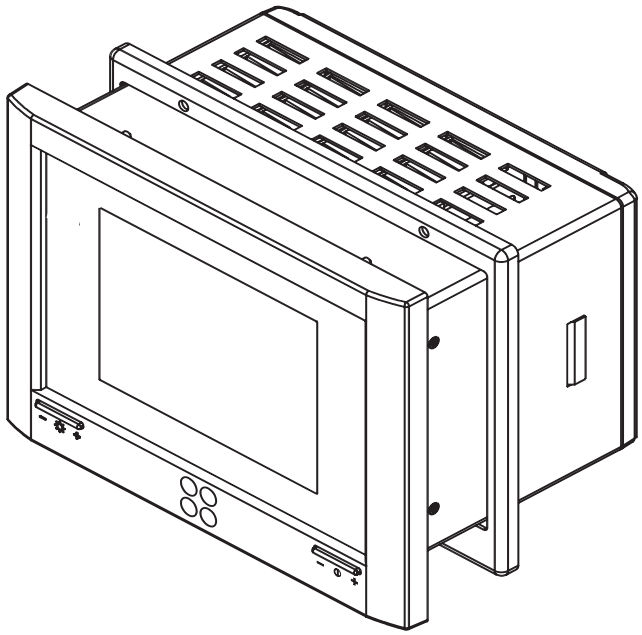


Figure 1 - The LinkStation

The L5392 has four slots for adding various LinkCards. An L5311 RTN LinkCard is required with each unit to communicate with the standard acrylic fiber *LINK* network and is usually fitted in the leftmost slot. Other LinkCards include analog and digital I/O, DeviceNet, Profibus and more. Detailed information on these LinkCards may be found in individual datasheets. A LinkCard may be fitted in any slot; the site mapping is done in software by the user. EMI shields in the form of blank LinkCards fill the remaining unused slots (see the REAR VIEW drawing on page 4).

WARNING!

This equipment accepts supply power that can be a shock hazard and can cause injury or death. *Never* install or wire any electrical equipment without first isolating all incoming and outgoing power supplies.

 © 2004, SSD Drives, Inc., 9225 Forsyth Park drive, Charlotte, NC 28273-3884

INSTALLATION

Mounting

The cutout for through the panel mounting is shown in Figure 2. For convenience, the inner edge of the mounting bracket can be used as a cutout template.

The L5392 mounts through the panel with the panel sandwiched between it and the mounting bracket, as shown in the SIDE VIEW sketch on page 4. Use the four nuts supplied in a separate plastic bag to fasten the unit to your panel. You can use the included fastening tool or a size M3 hex key to tighten the nuts. The L5392 will fit into an existing L5102 Link op station cutout

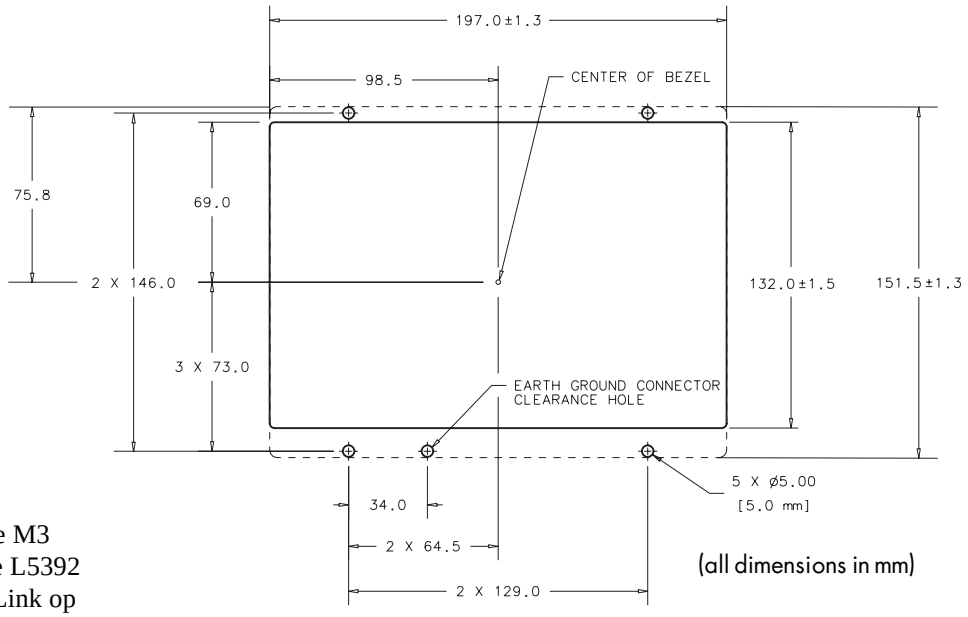


Figure 2 - LinkStation Panel Cutout

NOTE. Be certain that the L5392 is properly ventilated to ensure that it does not exceed its temperature rating, listed in the *Technical Specifications* section.

Wiring

The L5392 accepts an 85 to 265 VAC, 50/60 Hz supply. It is designed for a standard three-wire AC supply connection (LINE, NEUTRAL and GROUND). Refer to the *Technical Specifications* section below for wire sizes.

NOTE. Installation of this equipment must comply with all applicable national and local electrical codes. Be certain to ground the case by tying the unit's grounding stud to a suitable ground point using the included star washer and nut.

The fiber optic terminals on the L5311 acrylic RTN LinkCard accept *only* Thomas and Betts (T&B) connectors. If you are replacing older model *LINK* operator stations, you will not need to re-terminate existing cable since the unit's fiber optic terminals are identical to those on first generation *LINK* products. Otherwise, 1000 micron diameter polypropylene fiber optic cable is recommended. You do not need special cutting and polishing tools to terminate this cable to T&B connectors.

Switch Position	1000 micron plastic cable
center (low)	0 to 20m (0 to 66ft)
left (medium)	20 to 40m (66 to 132ft)
right (high)	40 to 60m (132 to 196ft)

Figure 3 - Fiber Optic Transmission Range Settings

You can connect the unit to a *LINK* fiber optic network as a simple, tapped or redundant ring. Refer to the *LINK Overview Manual* (HA350678) for a discussion of *LINK* network topologies. Each transmitter has an adjustable transmission range (see the table in Figure 3).

Caution

Do not operate the unit without the LinkStation cover. It is a functional element of the LinkStation without which the module will not operate satisfactorily.

Caution

Do not operate the unit without the EMI shields (blank LinkCards) fitted in unused slots.

© 2004, SSD Drives, Inc., 9225 Forsyth Park Drive, Charlotte, NC 28273-3884

SETUP & TROUBLESHOOTING

Apply power once you have fully wired the unit. If the unit has a configuration pre-installed in its memory, the *LINK* network is established and all *LINK* devices on the network are functional, the LCD screen should light up.

If the display does not power up, connect the serial port on a personal computer running DSD or ConfigEd version 5 or higher, to the module's RTNX port located on the back of the unit. Poll the module with the `GET INFO` function to identify the state. Or, check the status display on the back of the unit. Each number or letter indicates a different error. Use the table below to identify the error and correct the problem.

> NOTE. All *LINK2* modules operate in either a "boot" or a "run" state. The decimal point in the status display differentiates between the two. If the decimal is on, then the module is in boot mode; if off, it is in run mode. A blinking status number— shown below with an asterisk (*)— indicates that the module is not running its configuration.

Status Display codes

BOOT CODES

Code		Status	Meaning/Action
1.	*	Halted	DSD/ConfigEd requested boot mode or rear cover is off. Replace rear cover or restart the module.
2.	*	No Config	Flash memory is empty, or persistents were invalid. Reinstall the configuration.
5.	*	Self-Test-Failure	One or more self tests failed. Contact Customer Service.

RUN CODES

Code		Status	Meaning/Action
0	*	Initializing	DSD/Configuration is decompressed from flash into ram.
1 module.	*	Halted	DSD/ConfigEd requested halt. Use DSD/ConfigEd to restart
2	*	No Config	Persistents were invalid. Reinstall the configuration.
3	*	L-Error	Low-level error. See *LINK Overview Manual* section 8.3.3.
4	*	H-Error	High-level error. Indicates a problem with a function block. Contact customer service.
6	*	Shutdown	A function block (likely `SYSTEM CONTROL`) forced a shutdown.
7		OK	Module is running and the fiber optic network is OK locally.
8		Network Warning	Brief loss of received *LINK* signal, or a long-term loss in topologies where the signal is redundant or optional. Network is intact but may require service.
9		Net Fail	Long-term loss of a fiber optic signal which is required by the configured topology.
A	*	Checking Net	Module is starting-up and attempting to send a message to itself. If it persists, the ring is physically broken.
b	*	Peer Halted	Module is starting-up and was able to send a message to itself. It waits here for all other modules to do the same.
C	*	Dup. Address	While "Peer Halted", the module found duplicates of its configured address in other module(s). Use ConfigEd to install configurations with unique addresses.

 © 2004, SSD Drives, Inc., 9225 Forsyth Park Drive, Charlotte, NC 28273-3884

TECHNICAL SPECIFICATION

Electrical

Supply Type	3 wire, single phase, type TN only
Voltage	85-265 VAC, 48-62 Hz; Overvoltage category 3
Rating	35 VA (300 mA at 115 VAC, 150 mA at 230 VAC)
Backplane Rating	1700mA at 5 VDC, available for LinkCards
Leakage Current	0.38 mA
Power Terminals	14-18 AWG (Copper only) wire size to plug-in screw terminal block Terminal torque 5 to 7 in-lbs.
Fiber Optic Terminals	Up to 196 ft. (60 m.) maximum transmission distance, 1000 micron polypropylene cable with 2 mm acrylic jacket

Mechanical

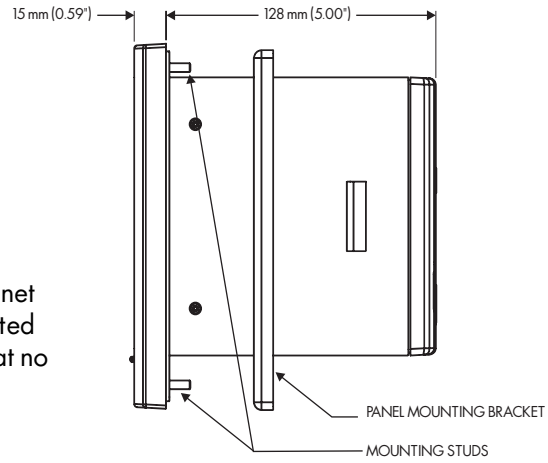
Weight	6.6 lbs. (3.0 Kgs.)
Overall Dimensions	6.61 H x 8.50 W x 5.59 D inches (168 H x 216 W x 142 D mm)

Display

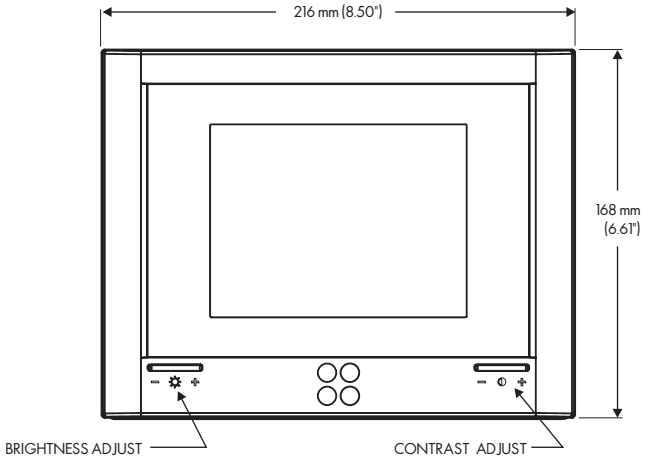
Screen Size	6 inch diagonal (152 mm)
Type	Passive color LCD with backlight Digital resistive membrane and contrast and Brightness Adjustments
Resolution	320 x 240 pixels

Environmental

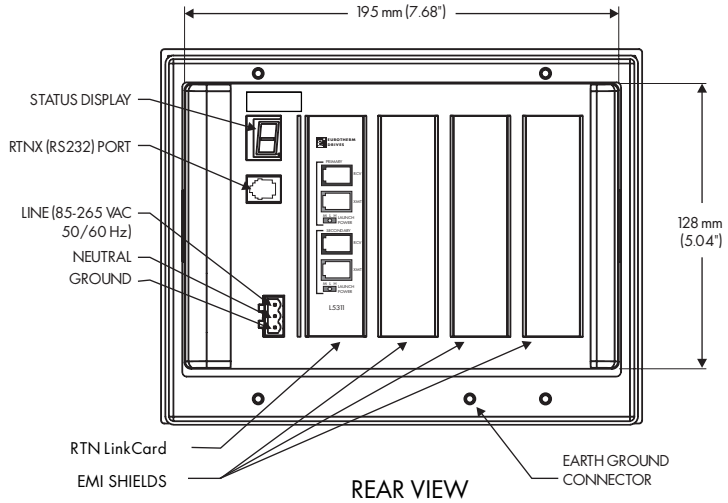
Operating Temperature	0 to 50°C (32 to 122°F) Meets or exceeds Class 3K3
Storage Temperature	-10 to 70°C (14 to 158°F)
Power Dissipation	13 Watts without LinkCards
Humidity	85% relative humidity, dry, non-condensing environment
Ratings	UL Type 12, NEMA 12 & IP-52 (when properly mounted in a panel or cabinet of the same or better rating. If mounted with the screen facing up, ensure that no pockets of fluid collect on the unit)
Pollution	Degree 2



SIDE VIEW



FRONT VIEW



REAR VIEW

© 2004, SSD Drives, Inc., 9225 Forsyth Park Drive, Charlotte, NC 28273-3884