

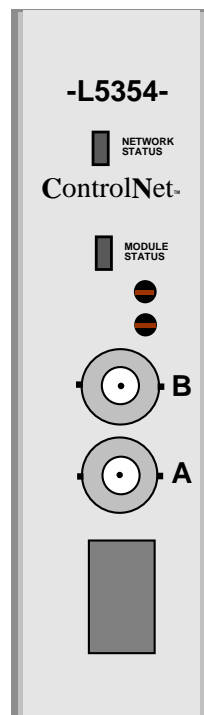
## L5354 ControlNet™ LINKCard

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### GENERAL DESCRIPTION

ControlNet™ is an open-protocol network standard that provides direct connectivity with a ControlNet™ master device. The L5354 ControlNet™ LINKCard is part of the *LINK2* family and provides a gateway between a *LINK* control system and ControlNet™, when installed in a LINK Station or LINK Rack. At present, the L5354 will operate with and must be controlled by a ControlNet™ master (server), such as a scanner in a PLC.

Terminals are in the form of 2 coaxial BNC.



### FUNCTION BLOCKS

The L5354 is a function block, which can be used within a LINK Rack L5300 or LINK Station L5392 configuration. It is accessible using the Windows™ based graphical configuration package, DSD, by opening an L5300 or L5392 file. Clicking on **Block/LinkCard/L5354 ControlNet** makes the L5354 block appear. Double-click on it to set the “Site” information. This refers to the slot number in the L5300 or L5392 where the ControlNet LINKCard is inserted. Choose from J2 (leftmost) to J4 (rightmost). After creating the required registers, they should be mapped in the **L5354 ControlNet** block, which acts as assembly instance (#1). For details, refer to the on-line function block descriptions and specifications under the **Help** menu in DSD.

Module Status LED

This bi-color (green - red) LED provides device status. It indicates whether or not the device is powered and operating properly. Table 1 defines the different states of the Module Status LED.

Table 1

Status	LED state	Reason
Power off	<b>Off</b>	<ul style="list-style-type: none"> <li>No power applied to the device</li> <li>Host LINK2 module is not running its configuration</li> <li>Invalid parameters e.g. Mac ID set to 0</li> </ul>
Device in standby Needs to be or in process of being commissioned	<b>Flashing Green</b>	<ul style="list-style-type: none"> <li>Device is being commissioned or Device needs commissioning because of missing, incomplete or incorrect configuration</li> </ul>
Device operational	<b>Green</b>	<ul style="list-style-type: none"> <li>The device is operating in a normal condition</li> </ul>
Configuration fault	<b>Red</b>	<ul style="list-style-type: none"> <li>After configuration attempt – Module hardware failure</li> </ul>
Device Self-testing	<b>Flashing Red / Green</b>	<ul style="list-style-type: none"> <li>Self test mode</li> </ul>
Device Self-test failure	<b>Flashing Red</b>	<ul style="list-style-type: none"> <li>Device self test failure – may need replacing, try power down/up sequence</li> </ul>

Network Status LED

This bi-color (green - red) LED indicates the status of the communications link. Table 2 defines the different states of the Network Status LED.

Table 2

Status	LED state	Reason
Power off or not on-line	<b>Off</b>	<ul style="list-style-type: none"> <li>The device is not online.</li> <li>the device has no ControlNet master</li> <li>the device may not have power applied to it. Look at Rack Status LED</li> </ul>
On-Line – Not owned	<b>Flashing Green</b>	<ul style="list-style-type: none"> <li>The device is online with ControlNet master but master is not enabled</li> <li>no connection (not owned) forced listen mode</li> </ul>
Link OK, on-line, connected	<b>Green</b>	<ul style="list-style-type: none"> <li>The device is online and has connections in the established state</li> <li>Owned by, communicating with, correct configuration between L5354 and Master</li> </ul>
Checking for Cable	<b>Flashing Red</b>	<ul style="list-style-type: none"> <li>Cable improperly terminated or connected</li> </ul>
Alive Announcement	<b>Red</b>	<ul style="list-style-type: none"> <li>LinkCard is powered on but in state of waiting for network messages</li> <li>Network not communicating with the LinkCard</li> </ul>
Listen Only	<b>Orange</b>	<ul style="list-style-type: none"> <li>Module forced into listen only mode</li> </ul>
Listen Only	<b>Flashing Orange</b>	<ul style="list-style-type: none"> <li>Duplicate MAC address</li> <li>Module forced into listen only mode</li> </ul>

## TECHNICAL SPECIFICATIONS

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### Environmental

Operating temperature	0°C to 50°C (32 to 122°F)
Storage temperature	-10 °C to +70 °C (14 to 158°F)
Humidity	85% RH. in a dry, non-condensing environment
Enclosure Rating	Touchsafe IP20. To be mounted inside a SSD L53XX series enclosure

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### Supply

Supply Voltage	5VDC, supplied by backplane 5VDC supplied to network (isolated - 20mA maximum)
Current Consumption	350 mA @ 5VDC
Power Dissipation	1.75 W

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### ControlNet

Connection Types	Polled I/O connections provided via Predefined Master/Slave connection set. Fragmentation supported for polled I/O.
Baud Rate	5 M Baud
Data Types	Unsigned Integers (LINK Ordinals)
Indicators supported	Network status bi-color LED, Module status bi-color LED
ControlNet Loading	-
Transfer delay	Typically < 10 ms <i>LINK</i> input to ControlNet output and vice-versa
Configurability	LINKCard configuration performed using DSD. ControlNet network and PLC programmed independently
Connector type	dual BNC – coaxial connectors.

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### Physical

Height	120mm (4.72 in)
Width	32mm (1.25 in)
Depth	90mm (3.54in)
Weight	0.16 kg (0.35 lbs)

