softing 1784-U2CN UsbLink CN USB to ControlNet Interface

softing 1784-U2CN UsbLink CN USB to ControlNet Interface Installation Guide

Contents

softing 1784-U2CN UsbLink CN USB to ControlNet Interface

Specifications

- Product Name: usbLink CN USB-to-ControlNet Interface
- Catalog Number: SOFTING 1784-U2CN
- Interface: USB-to-ControlNet
- Connectivity: USB port on a computer to ControlNet network
- Discontinued Model: Allen Bradley 1784-U2CN
- Enclosure Dimensions: Length: 7.62cm (3in.), Width: 5.08cm (2in.), Thickness: 2.54cm (1in.)
- USB Cable Length: 0.61m (2ft)

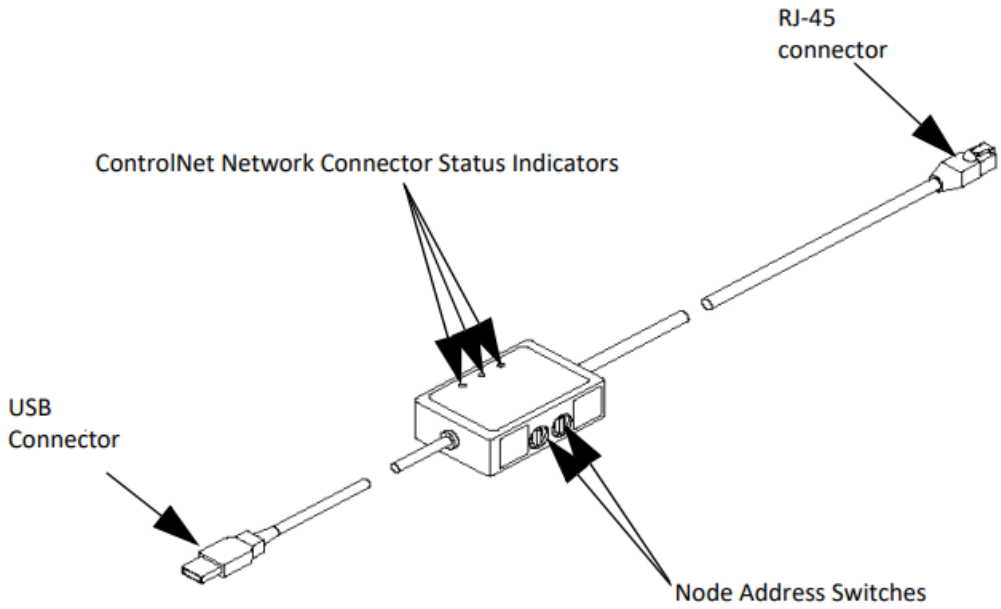
Installation Instructions

Original Instructions usbLink CN

USB-to-ControlNet Interface
Catalog Number SOFTING 1784-U2CN

About the Interface

The usbLink CN, USB-to-ControlNet interface, lets you connect a notebook or desktop computer to a ControlNet™ network by using an unused USB port on the computer. The Allen Bradley 1784-U2CN was discontinued in April 2024. End users needing the Allen Bradley 1784-U2CN should contact Softing to purchase the usbLink CN with part number SOFTING 1784-U2CN.



North American Hazardous Location Approval

The following information applies when operating this equipment in hazardous locations. Products marked “CL I, DIV 2, GP A, B, C, D” are suitable for use in Class I Division 2 Groups A, B, C, D, Hazardous Locations and nonhazardous locations only. Each product is supplied with markings on the rating nameplate indicating the hazardous location temperature code. When combining products within a system, the most adverse temperature code (lowest “T” number) may be used to help determine the overall temperature code of the system. Combinations of equipment in your system are subject to investigation by the local Authority Having Jurisdiction at the time of installation.

WARNING: Explosion Hazard

- Do not disconnect equipment unless power has been removed or the area is known to be nonhazardous.
- Do not disconnect connections to this equipment unless power has been removed or the area is known to be nonhazardous. Secure any external connections that mate to this equipment by using screws, sliding latches, threaded connectors, or other means provided with this product.
- Substitution of components may impair suitability for Class I, Division 2.
- If this product contains batteries, they must only be changed in an area known to be nonhazardous.

Environment and Enclosure

ATTENTION: This equipment is intended for use in overvoltage Category II applications (as defined in EN/IEC 60664-1), at altitudes up to 2000 m (6562 ft) without derating.

This equipment is not intended for use in residential environments and may not provide adequate protection to radio communication services in such environments. This equipment is supplied as enclosed equipment. It should not require additional system enclosure when used in locations consistent with the equipment Enclosure Type Ratings. Subsequent sections of this publication may contain more information regarding specific enclosure type ratings, beyond what this product provides, that are required to comply with certain product safety certifications.

In addition to this publication, see the following:

- Industrial Automation Wiring and Grounding Guidelines, publication 1770-4.1, for more installation requirements
- NEMA Standard 250 and EN/IEC 60529, as applicable, for explanations of the degrees of protection provided by enclosures

ATTENTION: Installation, adjustments, putting into service, use, assembly, disassembly, and maintenance are required to be carried out by suitably trained personnel in accordance with applicable code of practice.
In case of malfunction or damage, no attempts at repair should be made. The module should be returned to the manufacturer for repair. Do not dismantle the module.

IMPORTANT To comply with the CE Low Voltage Directive (LVD), this equipment must be powered from a source compliant with Safety Extra Low Voltage (SELV) or Protected Extra Low Voltage (PELV).

Prevent Electrostatic Discharge

ATTENTION: This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Wear an approved grounding wriststrap.
- Do not touch connectors or pins on component boards.
- Do not touch circuit components inside the equipment.
- Use a static-safe workstation, if available.
- Store the equipment in appropriate static-safe packaging when not in use.

ATTENTION: Read this document and the documents listed in the Additional Resources section about installation, configuration, and operation of this equipment before you install, configure, operate, or maintain this product. Users are required to familiarize themselves with installation and wiring instructions in addition to requirements of

all applicable codes, laws, and standards.

At the end of its life, this equipment should be collected separately from any unsorted municipal waste.

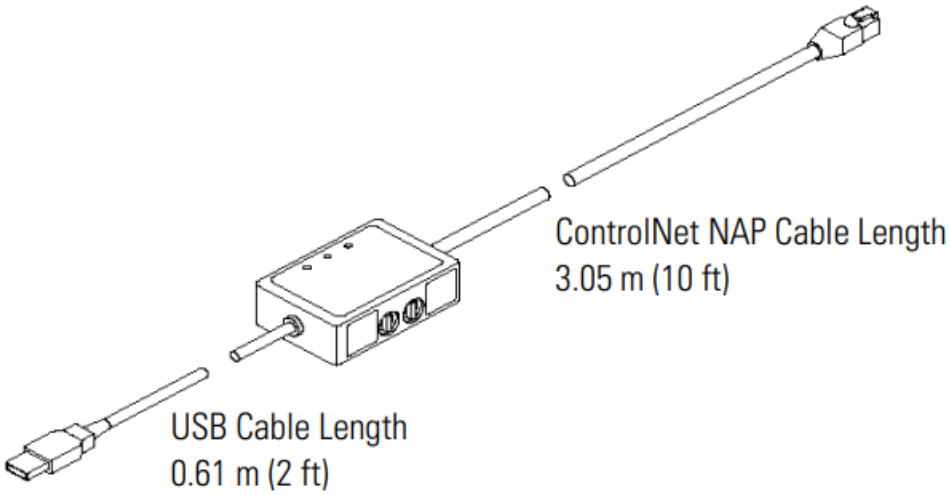
ATTENTION: Use only a soft dry anti-static cloth to wipe down equipment. Do not use any cleaning agents.

ATTENTION: This equipment is certified for use only within the surrounding air temperature range of 0…55 °C (32…131 °F). The equipment must not be used outside of this range.

Product Dimensions

Enclosure

- Length: 7.62 cm (3 in.)
- Width: 5.08 cm (2 in.)
- Thickness: 2.54 cm (1 in.)



Install the Cable

Follow these procedures to install the cable.

ATTENTION: This equipment is sensitive to electrostatic discharge, which can cause internal damage and affect normal operation. Follow these guidelines when you handle this equipment:

- Touch a grounded object to discharge potential static.
- Do not touch connectors or pins.
- Store the equipment in appropriate static-safe packaging when not in use.

Obtain the Device Driver for the Cable
Follow these steps to download and install the device driver for the cable.

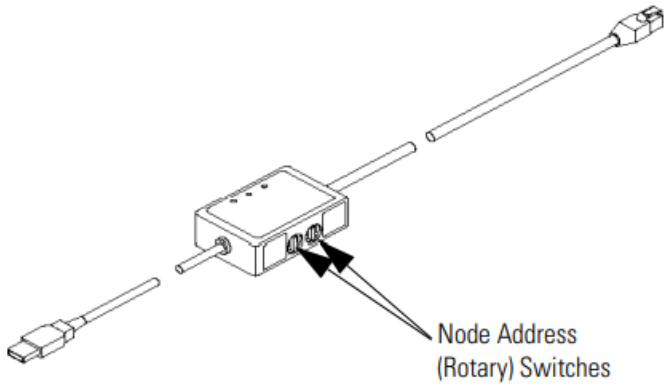
IMPORTANT RSLinx® Classic software, version 2.51 or later is required for use with the cable.

IMPORTANT If RSLinx Classic software, version 2.54 or later, is installed on the computer, the device driver is already installed on the computer. Skip this section.

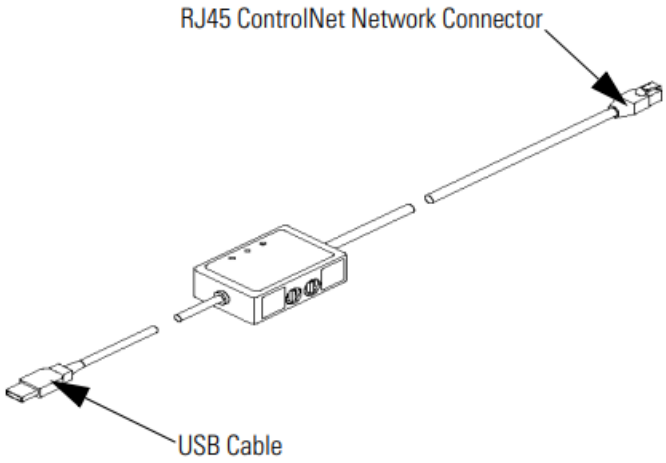
Configure and Connect the Cable

ATTENTION: USB and ControlNet connection lengths must be less than 3 meters. Do not attempt to extend the cables.

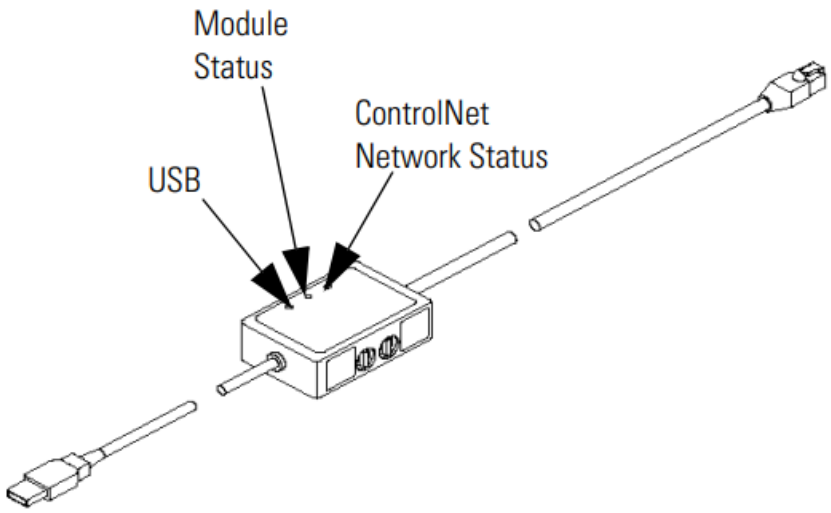
1. Use the rotary switches to set the module node address to a valid number (1…99).



2. Insert the end of the cable having the USB connector into a USB port on a computer.
3. Insert the end of the cable having the RJ45 network connector into the ControlNet network access port (NAP) of a ControlNet network-enabled device.



Status Indicators


Module
Status
ControlNet
Network Status
USB

Indicator	Status	Description
USB	Green	The cable is configured, but no network traffic is present.
	Flashing green	Network traffic is present.
	Off	Unable to transfer data. • Disconnected from host. • In one of the following states: ◦ default ◦ powered ◦ address ◦ suspend
Module Status (MS)	Green	The cable is operating normally.
	Off	No power to the cable.
	Flashing green	The cable is operating in a normal condition and is online with no connections established. • The cable may be in Standby mode. • The cable needs commissioning due to missing, incomplete, or incorrect configuration.
	Flashing red	The cable has a recoverable fault.
	Red	The cable has an unrecoverable fault and may need to be replaced.
	Flashing red/green	The cable is performing a self-test.
ControlNet Network Status (NS)	Off	Not on network.
	Red	Network interface faulted.
	Flashing red/green	Invalid network configuration (for example, a MAC ID above UMAX).
	Flashing red	• Duplicate node detected. • Link fault. • No MAC frames received.
	Flashing green	• Temporary channel error. • Listen only.
	Green	Normal operation. MAC frame received without error.

Specifications

Part number	SOFTING 1784-U2CN
Enclosure type rating	Meets IP30
Supply voltage	5.25V DC
Supply current	225 mA
Isolation voltage	30V continuous, Basic Insulation TypeType tested at 500V AC for 60 s, ControlNet to USB
Wiring category	2 – on communication ports
ControlNet current value	70 mA @ 24V
Temperature, operatingIEC 60068-2-1 (Test Ad, Operating Cold),IEC 60068-2-2 (Test Bd, Operating Dry Heat),IEC 60068-2-14 (Test Nb, Operating Thermal Shock):	0…55 °C (32…131 °F)
Temperature, nonoperating IEC 60068-2-1(Test Ab, Unpackaged Nonoperating Cold),IEC 60068-2-2(Test Bb, Unpackaged Nonoperating Dry Heat),IEC 60068-2-14(Test Na, Unpackaged Nonoperating Thermal Shock):	-10…+85 °C (14…185 °F)
Temperature, ambient, max.	55 °C (131 °F)
Relative humidityIEC 60068-2-30 (Test Db, Unpackaged Damp Heat)	5…95% noncondensing
Emissions CISPR 11	Group 1, Class A
ESD immunity IEC 61000-4-2	8 kV air discharges
Radiated RF immunity IEC 61000-4-3	10V/m with 1 kHz sine-wave 80% AM from 80…2000 MHz10V/m with 200 Hz 50% Pulse 100% AMat 900 MHz10V/m with 200 Hz 50% Pulse 100% AMat 1890 MHz10V/m with 1 kHz sine-wave 80% AM from 2000…2700 MHz

Certifications

Certifications(when product is marked)	SOFTING 1784-U2CN
CE	European Union 2004/108/EC EMC Directive, compliant with: EN 61326-1; Meas./Control/Lab., Industrial Requirements EN 61000-6-2; Industrial Immunity EN 61000-6-4; Industrial Emissions EN 61131-2; Programmable Controllers (Clause 8, Zone A & B)
WEEE	Waste Electrical and Electronic Equipment directive

Softing Inc. Support
Use the following resources to access support information.

Technical Support CenterSales and quotes	Knowledgebase Articles, How-to Videos, FAQs, Chat, User Forums, and Product Notification Updates.To purchase usbLink C N, order part number: SOFTING 1784-U2CN	https://industrial.softing.com/us/support.html sales.us@softing.com

FAQ

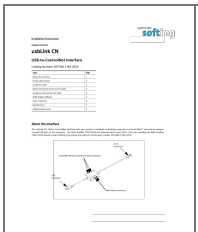
- **Q: Can the usbLink CN be used in residential environments?**

  A: No, the usbLink CN is not intended for use in residential environments.
- **Q: What should I do in case of malfunction or damage to the usbLink CN?**

  A: Do not attempt to repair the module yourself. Return it to the manufacturer for repair.
- **Q: How should I clean the usbLink CN?**

  A: Use a soft dry anti-static cloth to wipe down the equipment. Do not use any cleaning agents.

Documents / Resources

	softing 1784-U2CN UsbLink CN USB to ControlNet Interface [pdf] Installation Guide 1784-U2CN, 1784-U2CN UsbLink CN USB to ControlNet Interface, UsbLink CN USB to Control Net Interface, ControlNet Interface

References

- Technology Partners | Rockwell Automation | US
- Industrial Services Center | Softing
- User Manual