5. WARRANTY

The AC700-CUA Communications & Firmware Upgrade Modules are warranted to be free from defects in material and workmanship for a period of five years from the date of purchase.

Littelfuse Startco will (at Littelfuse Startco's option) repair, replace, or refund the original purchase price of an AC700-CUA that is determined by Littelfuse Startco to be defective if it is returned to the factory, freight prepaid, within the warranty period. This warranty does not apply to repairs required as a result of misuse, negligence, an accident, improper installation, tampering, or insufficient care. Littelfuse Startco does not warrant products repaired or modified by non-Littelfuse Startco personnel.

APPENDIX A
AC700-CUA REVISION HISTORY

MANUAL RELEASE DATE	MANUAL REVISION
January 23, 2015	1-A-012315

MANUAL REVISION HISTORY
REVISION 1-A-012315

SECTION 2

Updated installation instructions.

SECTION 4

Ordering information updated.

APPENDIX A

Revision history added.

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AC700-CUA MANUAL

COMMUNICATIONS & FIRMWARE UPGRADE MODULES

REVISION 1-A-012315

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DISCLAIMER

Specifications are subject to change without notice. Littelfuse Startco is not liable for contingent or consequential damages, or for expenses sustained as a result of incorrect application, incorrect adjustment, or a malfunction.

1. INTRODUCTION

1.1 GENERAL

AC700-CUA is the base model number for the firmware upgrade module and communication modules which can be installed in various products available from Littelfuse.

1.1.1 FIRMWARE UPGRADE MODULE

The AC700-CUA-00 is used to upgrade compatible-relay firmware and is field-installable. Detailed instructions are included in the help files of the SE-Flash Firmware Upgrade Software.

Field upgrades allow for the addition of new or enhanced features and firmware maintenance. The field upgrade module provides isolation between the unit under service and the computer running SE-Flash.

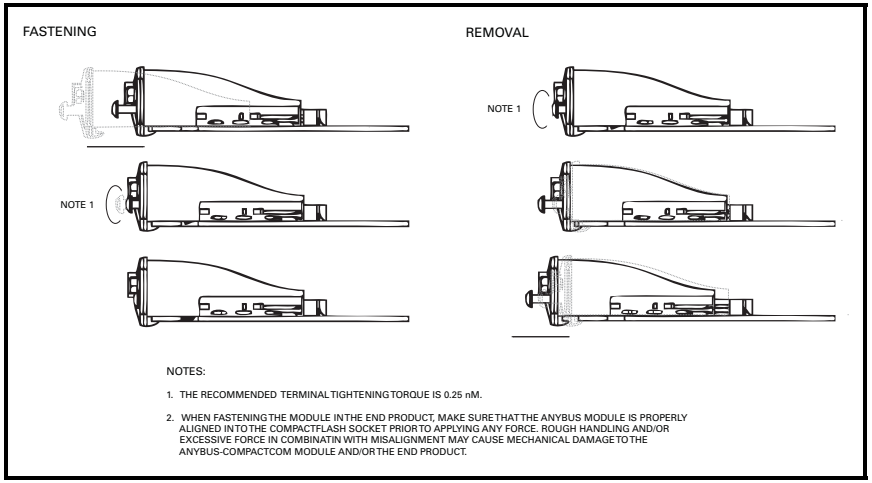

FIGURE 5. Anybus Communications Module Installation.

Shipping Weight ..... 0.1 kg (0.3 lb)

Environment:
- Operating Temperature ..... -40 to 60°C (-40 to 140°F)
- Storage Temperature ..... -40 to 85°C (-67 to 160°F)
- Humidity ..... 85% Non-Condensing

Shock and Vibration:
- Shock Test ..... Operating IEC 68-2-27 half-sine 30 g, 11 ms, 3 positive and 3 negative shocks in each of three mutually-perpendicular directions.
- Shock Test ..... Operating IEC 68-2-27 half-sine 50 g, 11 ms, 3 positive and 3 negative shocks in each of three mutually-perpendicular directions.
- Sinusodial Test ..... Operating IEC 68-2-6 10-500 Hz, 0.35 mm 5 g, 1 oct/min., 10 double sweep in each of three mutually-perpendicular directions.

4. ORDERING INFORMATION

AC700-CUA-0□[(1)] Communications Upgrade Adapter

Adapter Type
- 0 Firmware Upgrade Module
- 1 DeviceNet™
- 2 Profibus®
- 3 EtherNet/IP™
- 4 Modbus® TCP

NOTES:

(1) Communications adapters can be ordered separately to field upgrade EL731-X0-X0 models.

FIGURE 3. Firmware Upgrade Module (AC700-CUA-00) installed in an EL731.

FIGURE 4. Ethernet/IP Communications Module (AC700-CUA-03) installed in an EL731.

1.1.2 Communications Modules

AC700-CUA serial-communication modules can be factory installed or purchased separately. An existing device not purchased with the communications option can be upgraded in the field.

1.2 AC700-CUA Features

1.2.1 Firmware Upgrade Module

- RJ45 connector providing TIA232 communication (CA-945 Interface Converter available separately)
- Mini USB Connector (with included USB cable)
- 2,500 Vrms isolation
- Field upgrade capability

1.2.2 Communications Modules

- Isolated network interface (on applicable modules)
- On-board network status indication according to network standard
- On-board network connectors according to network standard
- Compact size: 52 x 50 mm (2” x 2”)
- Pre-compliance tested for CE
- UL Compliant (documented by UL in file E214107)

2. Installation

NOTE: Before performing service on the device, remove supply and control voltage.

2.1 Firmware Upgrade Module Installation

- Remove system and control voltage from the device.
- Remove the access panel from device to be upgraded. See Fig. 3.
- Slide module into opening, such that the rails on the circuit board slot align with the sides of the firmware upgrade module.
- Apply pressure to ensure proper connection.
- Install SE-Flash before connecting to the Firmware Upgrade Module.
- Connect either a TIA-232 or mini USB communications cable between the module and a computer.
- Follow the SE-Flash help instructions for the product to be upgraded, and apply system power.

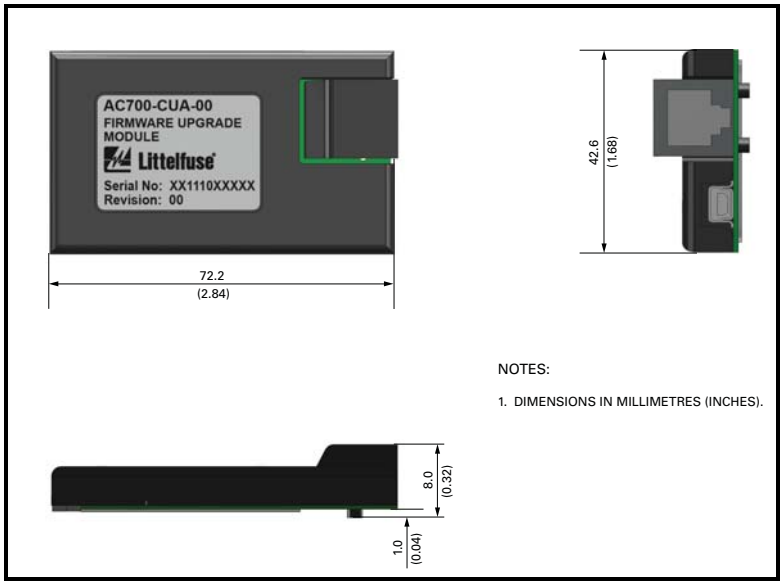

FIGURE 1. Firmware Upgrade Module (AC700-CUA-00) Outline.

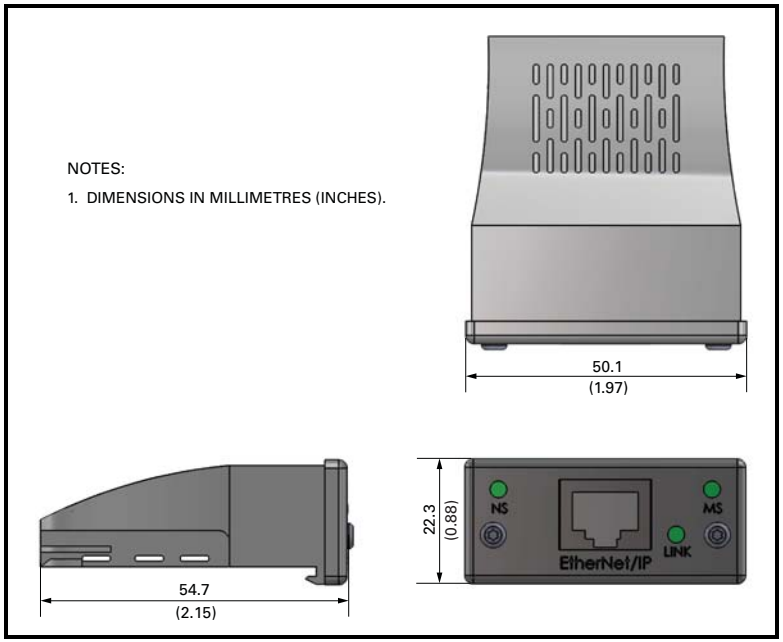

FIGURE 2. Communications Module (AC700-CUA-03) Outline.

2.2 Communications Module Installation

- Remove system and control voltage from the device.
- Remove the access panel from device to be upgraded. See Fig. 3.
- Slide module into opening, such that the rails on the circuit board slot align with the sides of the communication module. See Figs. 4 and 5.
- Apply pressure to ensure proper connection while aligning clips to circuit board.
- Tighten the installation screws using a Torx screwdriver, size 8 (T8).
- Connect the communications cable as required by the network interface.
- See the upgraded device's manual for instructions on how to enable the communications module, and definitions of the LED indications.
- Apply system power.

3. Technical Specifications

3.1 Firmware Upgrade Module

Isolation:
Device to Network:
Voltage.....2,500 Vrms
Distance.....7.6 mm (0.3")

Computer Interface Terminals .....TIA-232 through RJ45 Connector, Mini USB

Dimensions:
Height.....8 mm (0.3")
Width.....43 mm (1.7")
Depth.....72 mm (2.8")

Shipping Weight .....0.1 kg (0.3 lb)

Environment:
Operating Temperature.....-40 to 60°C (-40 to 140°F)
Storage Temperature.....-55 to 80°C (-67 to 160°F)
Humidity .....85% Non-Condensing

3.2 Communications Module

Isolation:
Device to Network:
Voltage.....2,500 Vrms
Distance.....2.5 mm (0.08")

Terminals .....Dependent upon communication standard.

Dimensions:
Height.....22 mm (0.9")
Width.....50 mm (2.0")
Depth.....52 mm (2.0")

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