515RTAAIC
Interface Converter
Product User Manual

Version 1.2

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Overview

The 515RTAAIC-NWR is a replacement product for the Allen-Bradley 1761-NET-AIC.

Operation Modes

The 515RTAAIC interface converter can be used in the following modes:

- Point-to-point isolator
- RS-232 to RS-485 isolator
- RS-232 to half-duplex user mode ASCII isolator

Communication is established using hardware handshaking or auto transmit signals.

Device Compatibility

The 515RTAAIC interface converter can be used to interconnect the following devices:

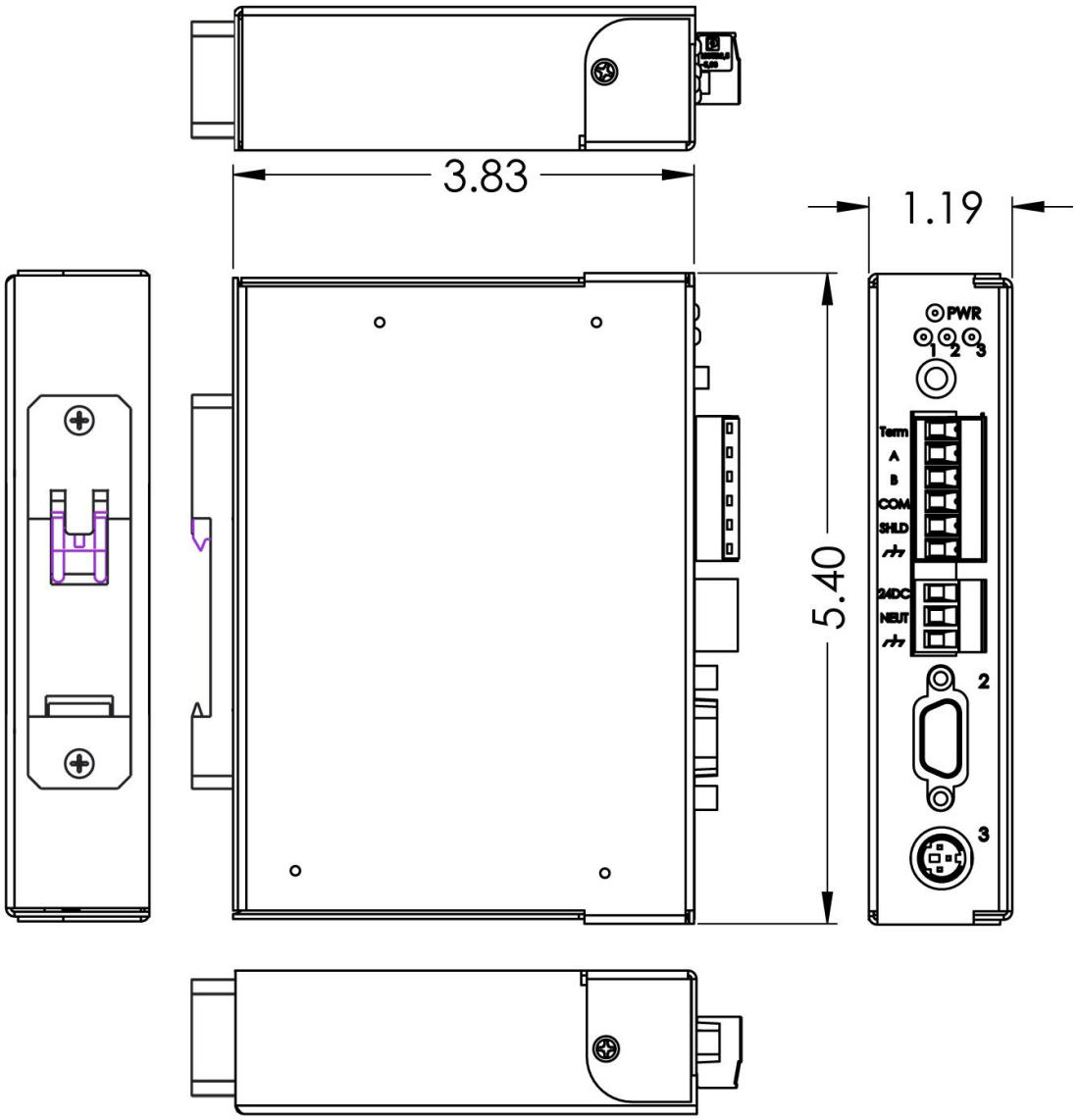
- SLC 500, 5/01, 5/02, and 5/03 processors (channel 1)
- SLC 5/03, 5/04, and 5/05 processors (channel 0)
- MicroLogix controllers
- Logix controllers
- 1756-DH485 ControlLogix module
- Operator interface devices
- Personal computer serial ports (or any 9-pin DTE serial port)
- Modems

If at any time you need further assistance do not hesitate to call Real Time Automation support.

Support Hours are Monday-Friday 8am-5pm CST

Toll free: 1-800-249-1612
Email: support@rtaautomation.com

Dimensions

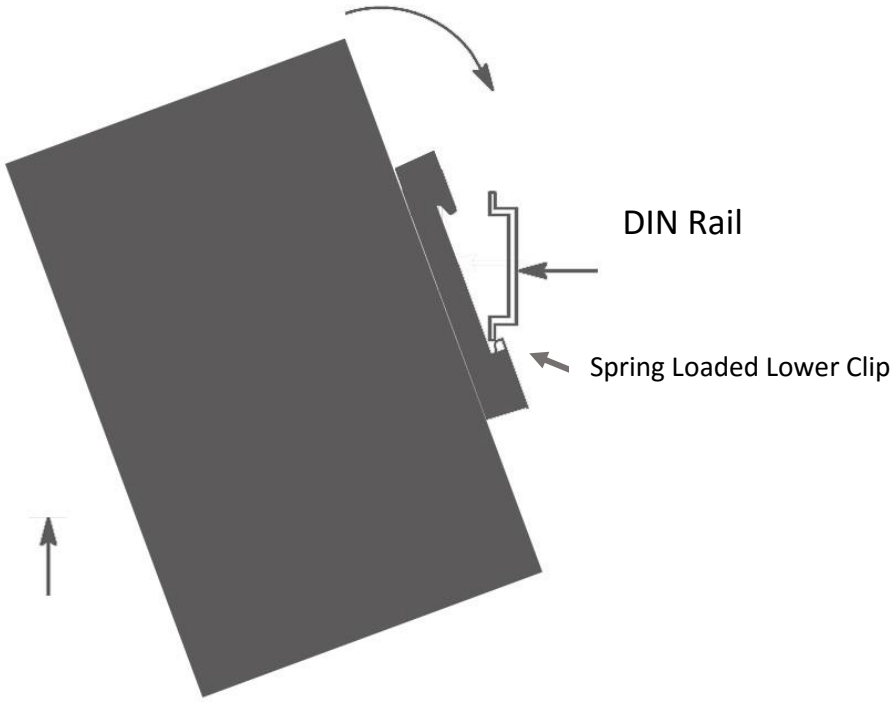


Mounting with a DIN Rail

Installing

Follow these steps to install your interface converter.

1) Mount your DIN Rail.
2) Hook the bottom mounting flange under the DIN Rail.
3) While pressing the 515RTAAIC against the rail, press up to engage the spring loaded lower clip and rotate the unit parallel to the DIN Rail.
4) Release upward pressure.



Removing

Follow these steps to remove your interface converter.

1) Press up on the unit to engage the spring loaded lower clip.
2) Swing top of the unit away from the DIN rail

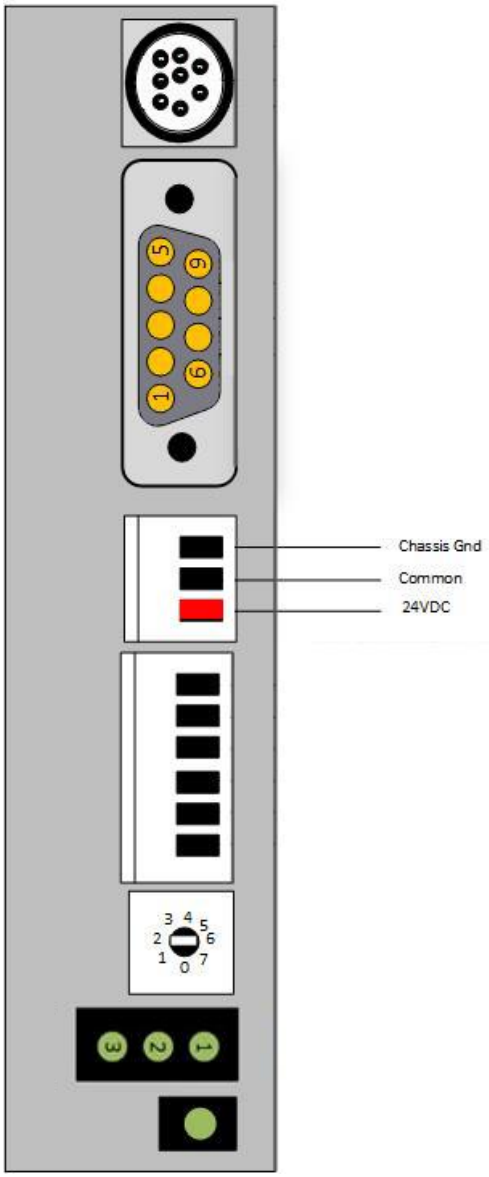
Powering

External Power Supply 515RTAAIC-NWRE

The unit will accept 24VDC.

(18 VDC @ 120 mA to 28 VDC @ 80 mA)

Warning: Improper wiring will cause unit failure



Processor Supplied Power 515RTAAIC-NWRI

MicroLogix 1000, 1200, and 1500 controllers can provide power to the 515RTAAIC interface converter via the RS-232 8-pin mini-DIN port's cable.

Changing Power Source

1. Remove the screws on either side of enclosure and remove the 2 screws fastening the DIN Rail mount.
2. Remove cover.
3. Move jumpers J6 and J5 into to the "P2 PWR" position.
4. Replace cover, DIN Rail mount and screws.

If a MicroLogix controller is not connected to the 8-pin mini-DIN port, then external supply will be required.

IMPORTANT

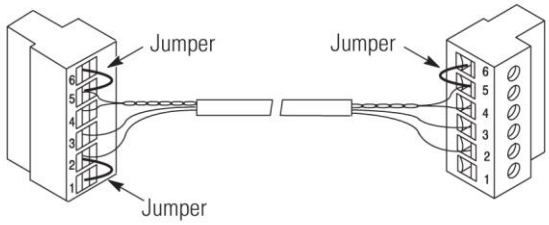
Always connect the CHS GND (chassis ground) terminal to the nearest earth ground. This connection must be made whether or not an external 24V dc supply is used.

Pinouts & Wiring

All connectors on the 515RTAAIC are pin compatible with the Allen-Bradley 1761-NET-AIC. Replacement application will not require any alterations to existing cabeling.

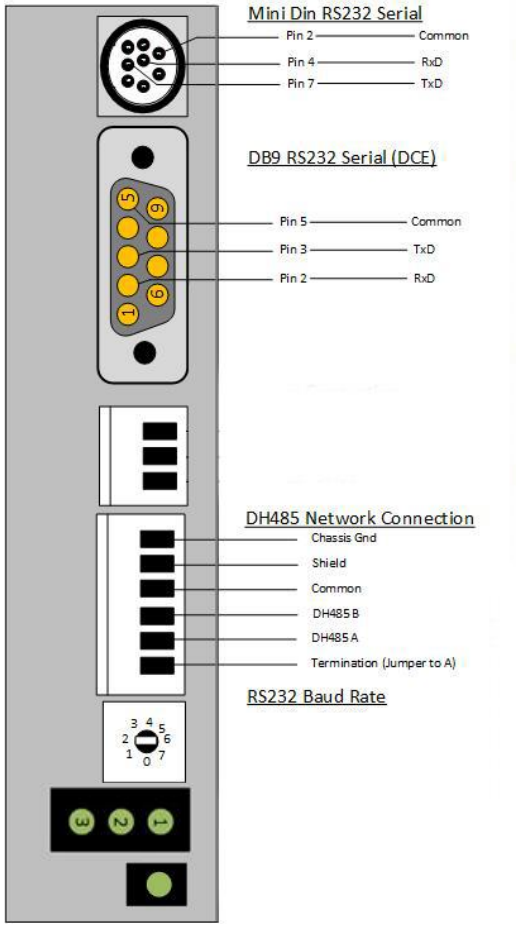
DH485 Line Termination

Both ends of the DH485 network must have Terminals 5 and 6 jumpered together. This connects the termination impedance (120 Ω) that is built into each 515RTAAIC interface converter.



End of Line Earth Ground

One connector at the end of the link must have Terminals 1 and 2 jumpered together. This provides an earth-ground connection for the shield of the communication cable.



Pin #	DB-9 RS-232	RS-232 (8Pin mini-DIN)	DH-485 Connector
1	Received line signal detector (DCD)	NA	Chassis Ground
2	Received data (RxD)	Signal common (GRN)	Cable shield
3	Transmitted data (TxD)	Request to send (RTS)	Signal ground
4	DTE ready (DTR)	Received data (RxD)	DH-485 data B
5	Signal common (GRD)	Same state as port 1's DCD signal	DH-485 data A
6	DCE ready (DSR)	Clear to send (CTS)	Termination
7	Request to send (RTS)	Transmitted data (TxD)	NA
8	Clear to send (CTS)	NA	NA
9	NA	NA	NA

Cables

Should replacement cables be needed for a retrofit, below are the recommended AB cables:

Allen-Bradley 1747-CP3, 1761-CBL-AC00 for connections to:

- SLC 5/03, 5/04 and 5/05
- PC Serial Port
- PanelView through NULL modem

Allen-Bradley 1761-CBL-AS03, 1761-CBL-AS09 for connections to:

- SLC 500 Fixed
- SLC 5/01, 5/02, 5/03, 5/04, 5/05
- PanelView through RJ45 Port

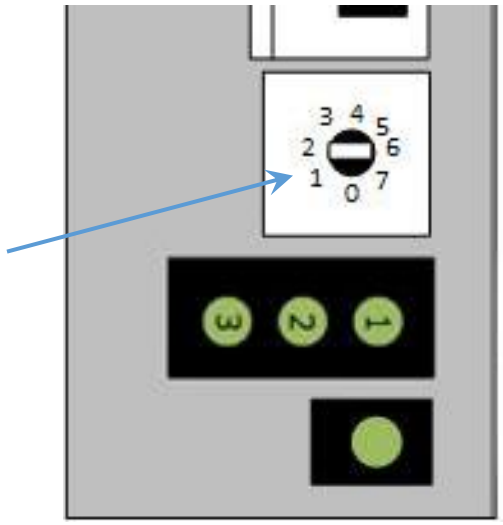
Allen-Bradley 1761-CBL-AP00, 1761-CBL-PM02 for connections to:

- SLC 5/03, 5/04, 5/05
- MicroLogix 1000, 1200 and 1500
- PanelView through NULL Modem

Settings

Baud Rate

The baud-rate selector switch does not change the network communication rate and is normally left in the AUTO position. In high noise environments, the communication-rate selector switch should be taken out of the AUTO mode and set to the same communication rate as the network.



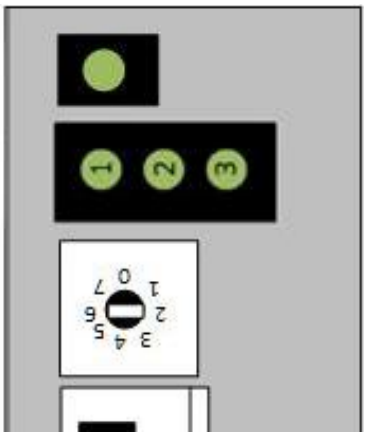
	RS232 Baud Rate
0	Auto
1	19200
2	14400
3	9600
4	4800
5	2400
6	1200
7	600

Addressing

The 515RTAAIC does not have any addressable settings. All network address settings should correspond to the devices connected through the 515RTAAIC.

LEDs

1. **DH-485 TX**
2. **RS-232 DB-9 TX**
3. **RS-232 8-pin mini-DIN TX**



LED INDICATORS 1-3

Status	Condition
Flashing	Transmitting
Off	Receiving or Idle

POWER LED

Status	Condition
On	Powered
Off	No Power