# AGENT-2 C40D

## IEC61850/IEEE1613 Hardened
## 10/100BASE-TX to 100BASE-FX Media Converters

## Overview

This Line of Fast Ethernet media converters is designed for Electric Utility automation applications such as those present in substations; wind power systems; hydro power plants; distributed energy resources; and water control system… etc environments. This Line of products complies standards IEC61850-3, IEEE1613 and EN50121-4; as well as functions at temperatures ranging from -40°C to 75°C (-40°F to 167°F). Whether on the factory floor or the street corner, these Fast Ethernet media converters will provide flawless communications when you need it most. This product Line is available in all types of fibre cabling, and connector types. The RJ-45 port on this unit provides Auto-MDIX and auto-negotiation. The link-fault-pass-through feature allows the network management agent on adjacent equipment to react to a broken link. Flexibility is the main feature of this Line of Fast Ethernet media converters, which may be DIN rail or panel mounted; and it comes with power options to match the applications that require a tough, environmentally hardened, Fast Ethernet media converter.

## Features

- Complies with IEC 61850 EMC and Environment requirement, and IEEE 1613 standard for substation and power automation
- Complies with EN 50121-4 environmental requirement for Railway applications
- Complies with NEMA TS1 & TS2 Environmental requirements for Traffic control equipment
- DIP switch configuration for "Link-Fault-Pass-Through", link down alarm, speed, duplex mode
- 768K bits buffer memory
- 10/100 Mbps-Full/Half-duplex, Auto-Negotiation, Auto-MDI/MDIX
- Full wire-speed forwarding rate
- Alarms for power and port link failure by relay output
- Redundant power inputs with Terminal Block and DC Jack
- -40°C to 75°C (-40°F to 167°F) operating temperature range
- Hardened aluminium case
- Supports DIN-Rail, Panel or Rack Mounting installation

# Technical specifications

## Technology

**Standards**
IEEE802.3 10BASE-T, IEEE802.3u 100BASE-TX/100BASE-FX, IEEE802.3x

**Forward and Filtering Rate**
- 14,880pps for 10Mbps
- 148,810pps for 100Mbps

**Packet Buffer Memory:** 768K bits

**Processing Type**
- Store-and-Forward
- Half-duplex back-pressure and IEEE802.3x full-duplex flow control

## Power

**Input**
Input Voltage: 12 to 48VDC (Terminal Block) / 12VDC (DC Jack)

**Power Consumption**
2.4W MAX. 0.2A@12VDC, 0.05A@48VDC

**Overload Current Protection:** Present

**Reverse Polarity Protection:** Present

## Mechanical

**Casing**
- Aluminium case
- IP30

**Dimensions**
50mm (W) x 110mm (D) x 135mm (H)
(1.97" (W) x 4.33" (D) x 5.31" (H))

**Weight:** 0.8Kg (1.76lbs.)

**Installation**
DIN-Rail (Top hat type 35mm), Panel, Rack Mounting

## Interface

**Ethernet Port**
- 10/100BASE-TX: 1 port
- 100BASE-FX: 1 port

**LED Indicators**
- Per Unit: Power Status (Power 1, Power 2, Fault), Link-Fault-Pass-Through
- Per Port: 10/100TX: Link/Activity, Full-duplex Collision, Speed
100FX: Link/Activity, Full-duplex/Collision

**Relay Contact**
- Relay contact rating with current 1A@30VDC, 0.5A@120VAC

## Environment

**Operating Temperature**
-40°C to 85°C (-40°F to 185°F)

**Storage Temperature**
-45°C to 85°C (-40°F to 185°F)

**Ambient Relative Humidity**
5% to 95% (non-condensing)

## Regulatory Approvals

**ISO:** Manufactured in an ISO9001 facility

**Safety:** UL508

**EMI**
- FCC Part 15, Class A
- EN61000-6-4
  *EN55022*
  *EN61000-3-2*
  *EN61000-3-3*

**EMS**
EN61000-6-2
- ***EN61000-4-2*** (ESD Standards)
  Contact: + / - 8KV; Criteria B
  Air: + / - 15KV; Criteria B
- ***EN61000-4-3*** (Radiated RFI Standards)
  35V/m, 80 to 1000MHz; 80% AM Criteria A
- ***EN61000-4-4*** (Burst Standards)
  Signal Ports: + / - 4KV; Criteria A
  D.C. Power Ports: + / - 4KV; Criteria A
- ***EN61000-4-5*** (Surge Standards)
  Signal Ports: + / - 2KV; Line-to-Line; Criteria A
  D.C. Power Ports: + / - 2KV; Line-to-earth; Criteria A
- ***EN61000-4-6*** (Induced RFI Standards)
  Signal Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
  D.C. Power Ports: 10Vrms @ 0.15~80MHz; 80% AM Criteria A
- EN61000-4-8 (Magnetic Field Standards)
  1000A/m @ 50, 60Hz; Criteria A

**Environmental Test Compliance**
- IEC60068-2-6 Fc (Vibration Resistance)
5g @ 10~150KHz, Amplitude 0.35mm (Operation/ Storage/Transport)
- IEC60068-2-27 Ea (Shock)
25g @ 11ms (Half-Sine Shock Pulse; Operation)
50g @ 11ms (Half-Sine Shock Pulse; Storage/ Transport)
- IEC60068-2-32 Ed (Free Fall)
1M (3.281ft.)