

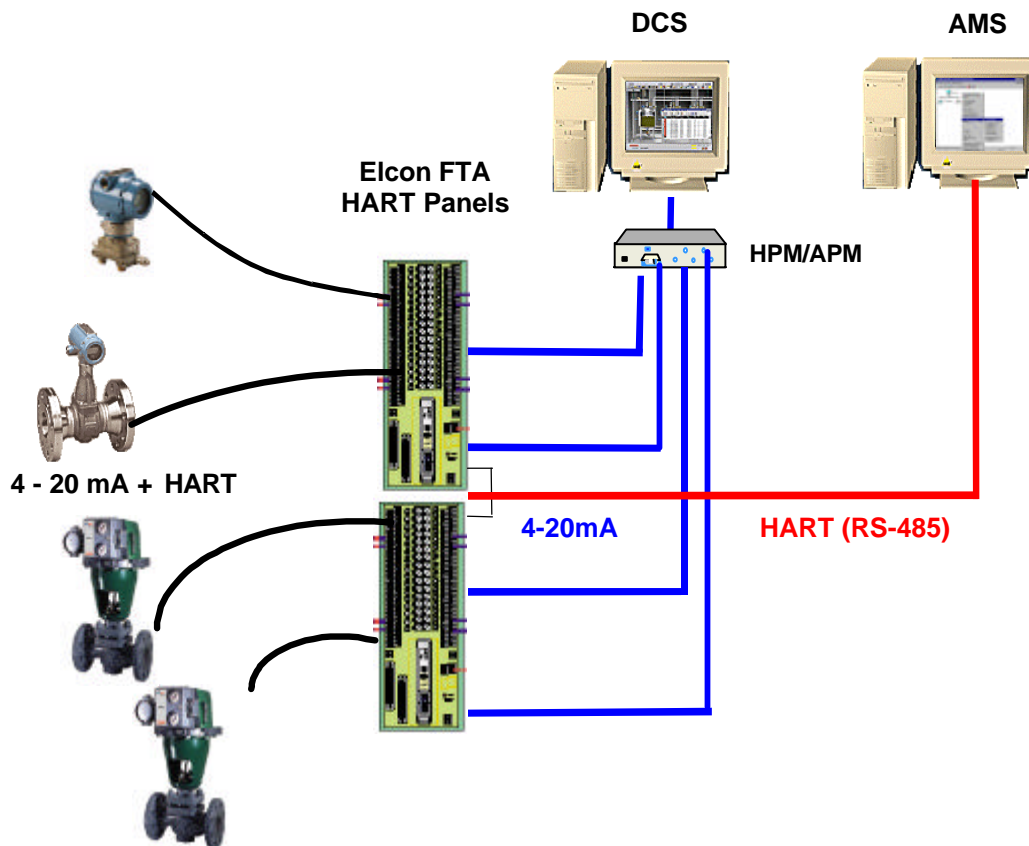
Elcon's HART Interface Solutions for Honeywell

Recently we have had some exciting successes implementing AMS with the Elcon multiplexers for projects that are using the Honeywell TDC-3000 DCS. The flexibility, ease of integration and performance of the Elcon solutions have allowed customers to integrate AMS into their process very efficiently.

Our recent success has primarily come from two solutions, our FTA Replacement Solution and our Honeywell HART FTA Interface Solution. They both offer the customer a competitive and effective interface for their Honeywell DCS platform.

Solution I. Elcon's Customized Honeywell FTA Replacement

This solution features an Elcon Instruments panel that replaces the Honeywell FTA's that are normally provided with a TDC-3000. *



Elcon's FTA Replacement Solution for Simplex Analog Inputs and Analog Output I/O Cards.

Solution I.

We developed FTA replacement solutions for the following I/O cards:

- 32 point analog input simplex; HPTB/32/HONB-AI-01 (Mx-PAIH03)
- 32 point analog input redundant ; HPTB/32/HONB-AI-R-01 (Mx-PAIH03)
- 32 point analog output redundant; HPTB/32/HONB-AO-R-01 (Mx-PAOY33)

The main features of the Elcon solution are:

- Mounts right into the standard Honeywell cabinet structure
- Increases the density of the FTA's by more than 50%
- Simple retrofit solutions. Plug to plug compatibility with existing Honeywell FTA's
- "All on one board" solution simplifies the installation

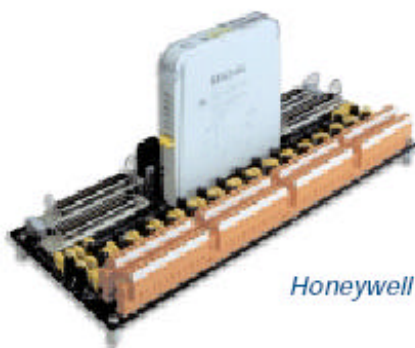
Installations:

Elcon's FTA replacement solutions have been recently used by:

- **Mead Paper** (Rumford, ME.),
- **BP Amoco** (Decatur, AL. and Texas City, TX.), and
- **Valero Refining** (Houston, TX.).

The **BP Amoco** situation was interesting as the Elcon panels were actually purchased and installed by Honeywell directly.

Examples of Elcon's Customized Honeywell FTA Replacement solution



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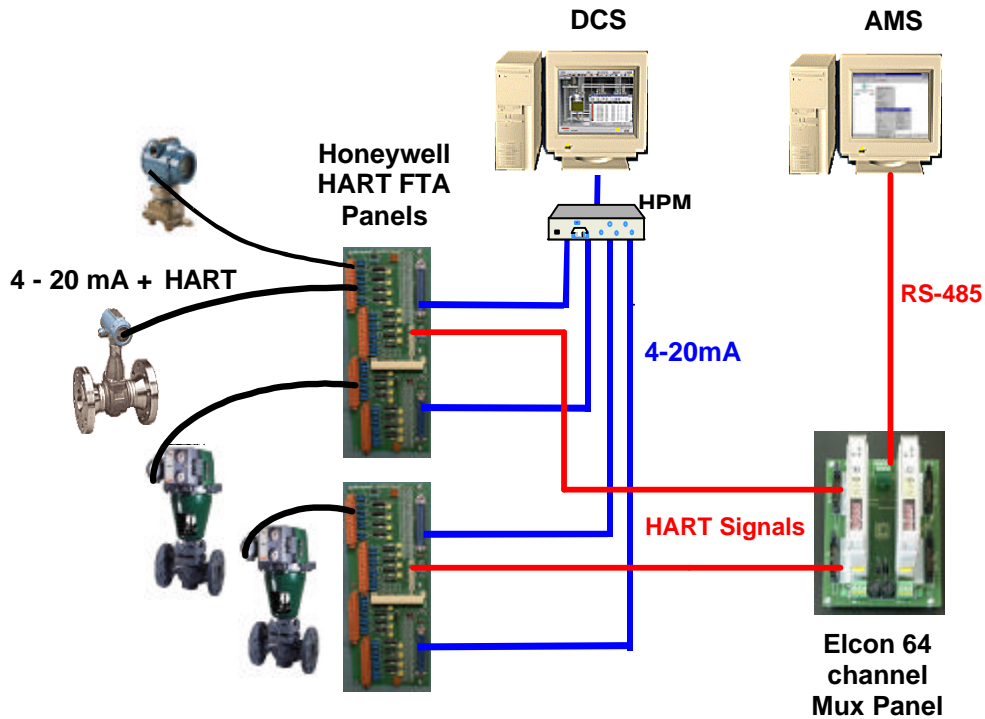
Elcon FTA Panel for Redundant AO signals



Elcon FTA Panel for non-Redundant AI+AO signals

Solution II. Elcon's Customized Panel for Honeywell HART Boards

This solution features an Elcon Instruments panel that connects via ribbon cable to the Honeywell HART Panels that are normally provided with a TDC-3000 for HART Signal Access.



The Elcon 64 Channel Mux Panel will work with the following Honeywell HART FTA's:

- Model # BU-THAI11; FTA 16 ch. analog input
- Model # BU-THAO11; FTA 16 ch. Analog output
- Model # BU-GHAI11; FTA 16 ch. Analog input with Intrinsic Safety
- Model # BU-GHAO11; FTA 16 ch. Analog output with Intrinsic Safety

Solution II.

Continued

The Elcon 64 Channel Mux Panel has the following advantages over the Honeywell/MTL multiplexer solution:

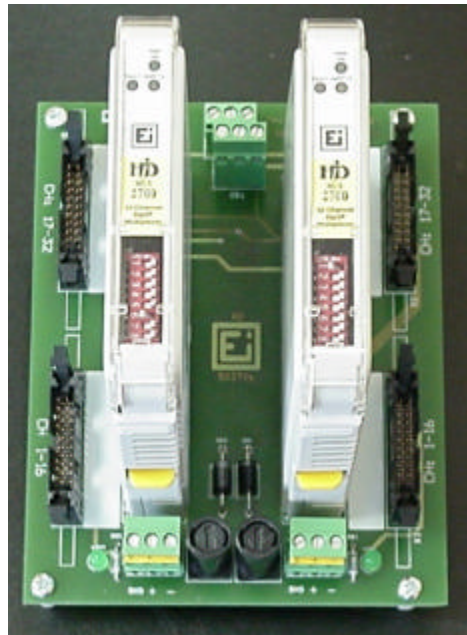
- Much faster multiplexer allows for quicker start up and faster advanced valve diagnostics
- Elcon's 2700 HART multiplexer has 3 port isolation and individual high reliability capacitors per wire maintaining system integrity and protecting against a multiplexer fault creating a loss of the 4-20 mA signal.
- Our panel is exactly the same size as the Honeywell FTA "A" type, which allows them to be mounted within the Honeywell cabinets. The MTL panel must be mounted in a separate cabinet.
- Plug to plug compatible with the Honeywell HART FTA and cables, so no customization is required.
- Optional DIN rail mounting if required.

Installations:

Elcon's 64 Channel Mux Panel has been recently used by:

- **Suncor** (Alberta, Canada), and
- **Marathon Oil** (Kentucky)

Examples of Elcon's Customized Panel for Honeywell HART Boards



Elcon 64 Channel Multiplexer Panel for Honeywell System