HINZ
A Rockwell Automation Company

Esso Resources Canada
CPR "A" Battery - Gas Detection Upgrade

The Client:

The Bonnie Glen facility (formerly Texaco Canada) is the centre of several productive fields. This area has developed over the past twenty five years. One of the fields, CPR-A, has a battery plant in the Bonnie Glen complex.

The CPR-A Battery provides the crude oil feed for the Solution 2 plant from the wells in the area. The Bonnie Glen facility is one of Esso's most productive areas. Reliability and safety are prime concerns for our client.

The Requirement:

During the first two years of Esso's takeover of Texaco plants, Esso had identified several operation and safety systems that needed modifications to comply with Esso's Standard Practice. The CPR-A Battery was found to require installation of approximately thirty gas detection heads and an annunciation system. The annunciation system needed to be redundant under the Practice's interpretation.

The Design Solution:

Different design options were considered, including redundant PLCs. A cost effective design was selected using two different annunciation systems, both centered in the PLC. The first used a small message display driven from a conventional relay output module. The second used an ASCII/BASIC card embedded on existing GE Fanuc Series Six PLC. The Series Six was the existing plant controller. These annunciation devices were considered to cause the minimum intrusion on the existing control system while still providing the levels of annunciation required.

Six new GENIUS analog I/O blocks were installed in the plant and were connected to an existing bus controller on the Series Six.

The ASCII/BASIC card was installed in the Series Six CPU. An OIT (Operator Interface Terminal) was connected to the ASCII/BASIC card. A relay output card was installed in an I/O rack and in turn connected to the message display. The ASCII/BASIC program receives its analog information directly from the register table and performs its own thresholding. A small amount of ladder logic was written to support the message display. Each system was independent of the other. This met the redundancy requirements for this system. If the Series Six PLC were to fail, the entire plant would shut in, eliminating redundancy at the PLC level.

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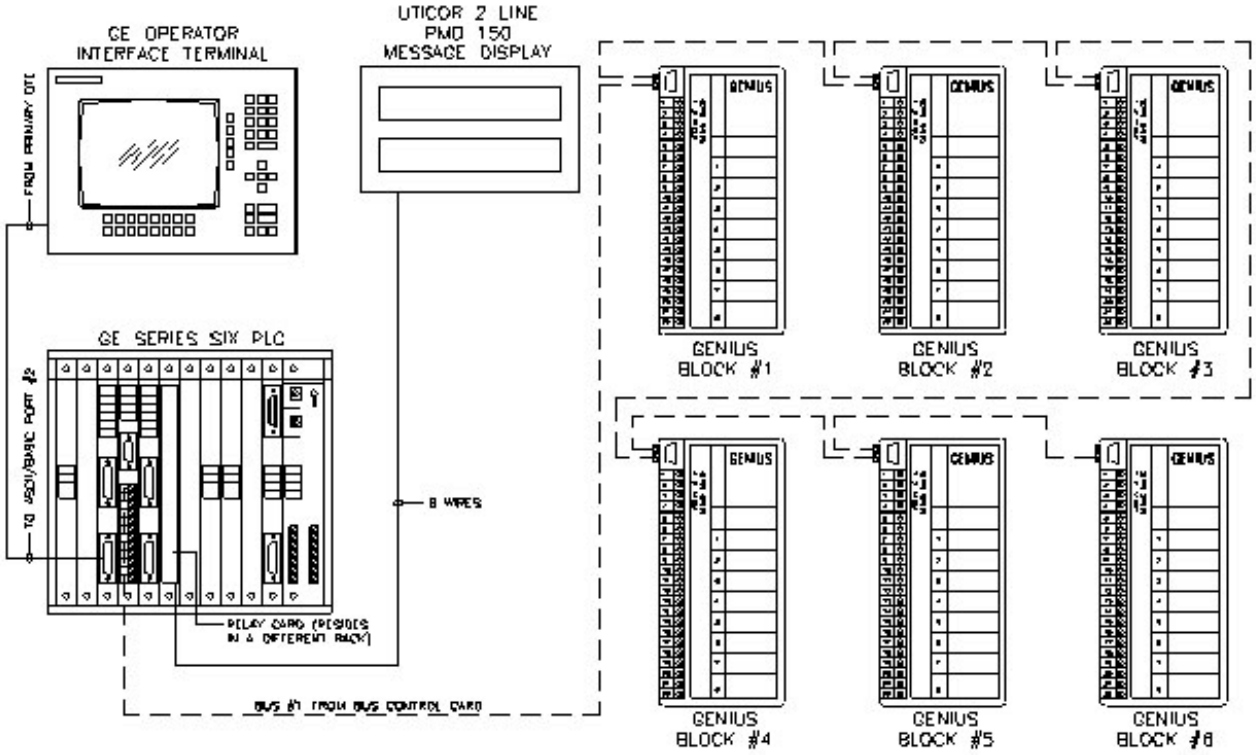
Gas Detection and Alarm Interface



System Specifications:

- GE Fanuc Series Six
- Genius I/O, ASCII/BASIC OIT

For further information or to contact a Hinz office near you, please check our website at:

www.hinz.com

"Automation and Power Specialists"

Project Year 1991

Updated April 2007
E1EBG22