

Limit Formation in the Interface Level

Interface transmitter power supplies enable the substitution of field devices with transmitters without changing the control level

At a Glance

- Existing barrier replaced with the KFD2-CRG2-EX1.D transmitter power supply
- Old field devices converted from analog to digital
- No changes on the control side necessary (PLC/DCS cards)
- Existing cabling retained



The Application

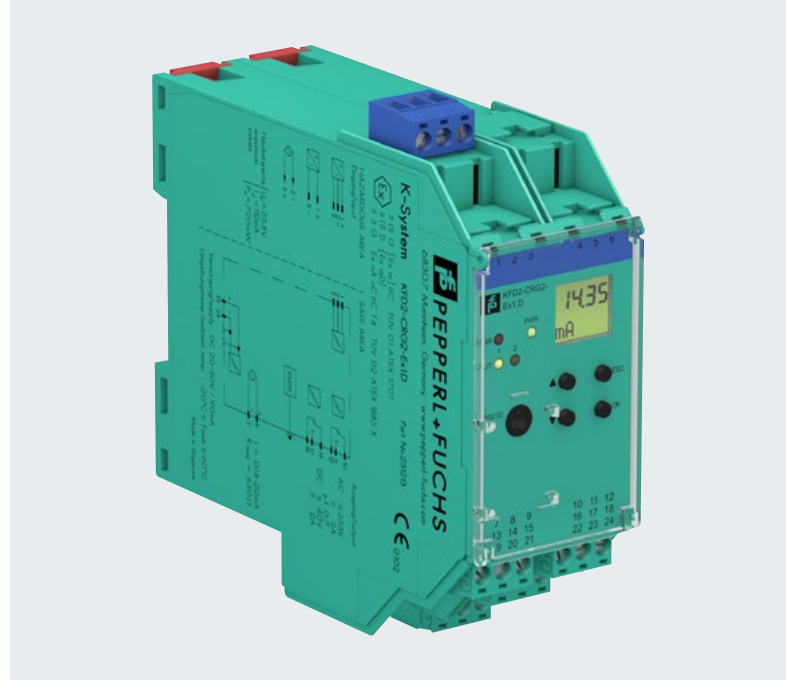
The Indian Oil Corporation Limited refinery in Panipat was established in 1998 and is one of the largest integrated petro-chemical plants in Southeast Asia. The refinery meets the demand for petroleum products for all of Northwest India. The plant's capacity was recently increased from 6 million tons to 12 million tons per year, at a cost of 41.6 billion rupees. Both domestic and imported crude oil is processed at the refinery. The plant also houses PX-PTA units, which were commissioned in 2006 and produce both Paraxlyene (PX) and Purified Terephthalic Acid (PTA), a raw material used in the production of polymers. Benzene is produced as one of the byproducts of PTA production.

The Goal

The aim is to enable a substitution of the pressure and level switches with more reliable transmitters. The existing cabling and the I/O cards should not be changed.

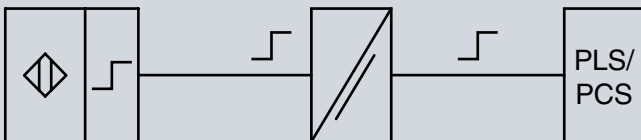
The Solution

The KFD2-CRG2-EX1.D transmitter power supply from Pepperl+Fuchs was used to provide the limit values of the analog input values from the level measuring devices and pressure transducers directly on the relay outputs. The values can be connected directly to the DI cards in the Triconex PLC system. The customer only has to replace the existing barrier with the KFD2-CRG2-EX1.D transmitter power supply from Pepperl+Fuchs. The existing I/O cards and cabling are retained.

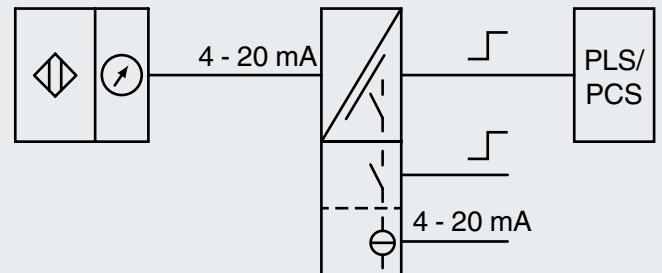


The Benefits

- The old field devices are converted from analog to digital without having to make modifications to the control side.
- The existing pressure and level switches are easily modified with new transmitters.
- An analog output of 4 ... 20 mA and two digital relay contact outputs are available on the control level. The analog output can be used to monitor process values online.
- The transmitter power supplies allow broader limit values than the old field device.
- The KFD2-CRG2-EX1.D transmitter power supply can distribute the limit value to another control or even display two different values thanks to two relay outputs.



In previous applications, transmitters communicated the limits of analog signals via barriers to the control panel.



In the new application, field devices with analog outputs are used. The transmitter power supply from Pepperl+Fuchs undertakes the conversion of the analog input value into limit values and passes them via two relay outputs to the control panel.