

An aerial photograph of a large industrial refinery or chemical plant. The facility is composed of numerous tall distillation columns, complex piping networks, and storage tanks. In the background, a large body of water is visible with several ships docked at a pier. Beyond the water, a dense urban skyline with many skyscrapers is visible under a clear sky. A dark blue banner is overlaid on the top left of the image, containing white text.

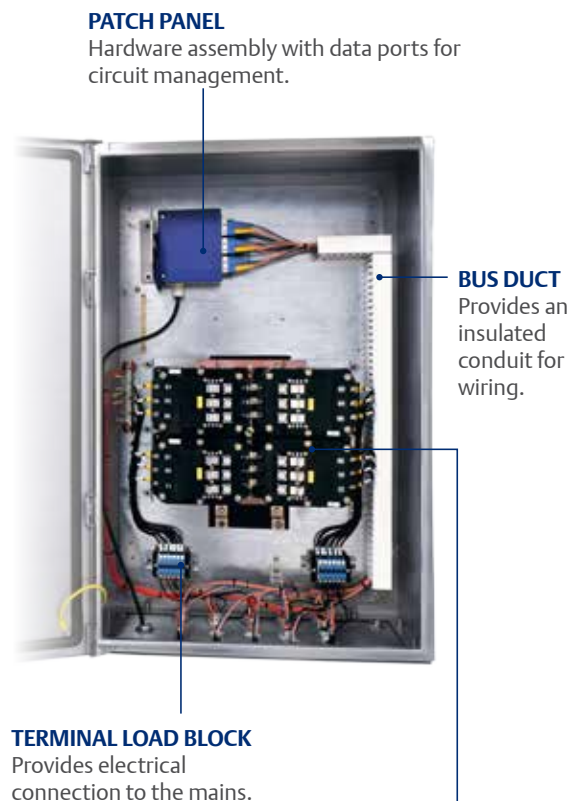
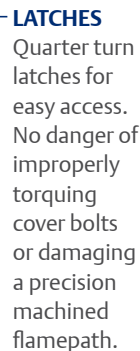
Combining Power and Data into a Single Solution

Appleton™ PlexPower™ Fiber Panel
Technology and Application Guide.



Break With Tradition

Boasting Class I, Zone 1 IIB+H₂, and Class I, Division 2, Groups B, C, D certifications — in addition to a Type 4X rating — the Appleton PlexPower Fiber Panel provides end users flexibility and convenience in a smaller, light weight footprint.



QC ASSEMBLY

Appleton PlexPower circuit breaker housing offers component level protection. It maintains a hazardous location rating while allowing for easy disassembly for servicing. This leads to less downtime and provides greater inventory flexibility. You have the standard off-the-shelf replacement parts you need, when you need them. Designed to provide anti-loosening termination and efficient heat dissipation ensures reliable breaker performance without de-rating.

- 1. Rugged Termination:** Breaker housing connects to the panelboard by means of line terminations.
- 2. Flameproof enclosure housing:** Labyrinth joint construction and flame arrestors.
- 3. Venting plate:** Unique design of breaker housing allows safe heat dissipation, while eliminating nuisance tripping.
- 4. Field Replaceable Breaker:** Standard, off-the-shelf circuit breakers are easy to obtain and reduce inventory costs and downtime.



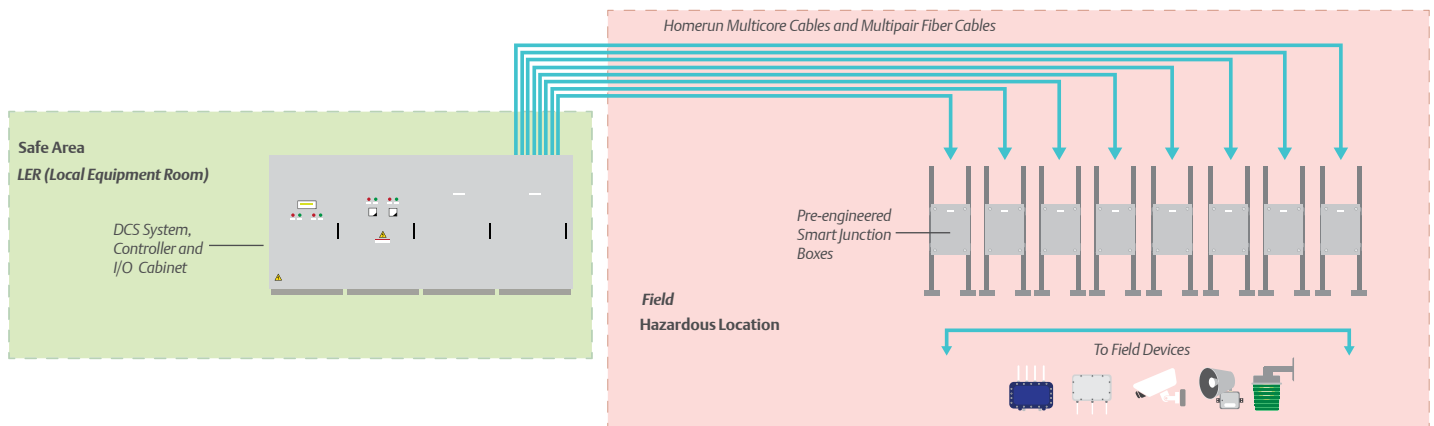
Innovative Design Meets Intelligent Technology

Typically, in hazardous location facilities, data and power are routed from two separate enclosures in a control room located in the safe or non-hazardous area. This results in separate cables for power and data from each and every field device being fed back to the control room. With this configuration, installations are more complex, maintenance times are longer and cabling costs are significantly higher.

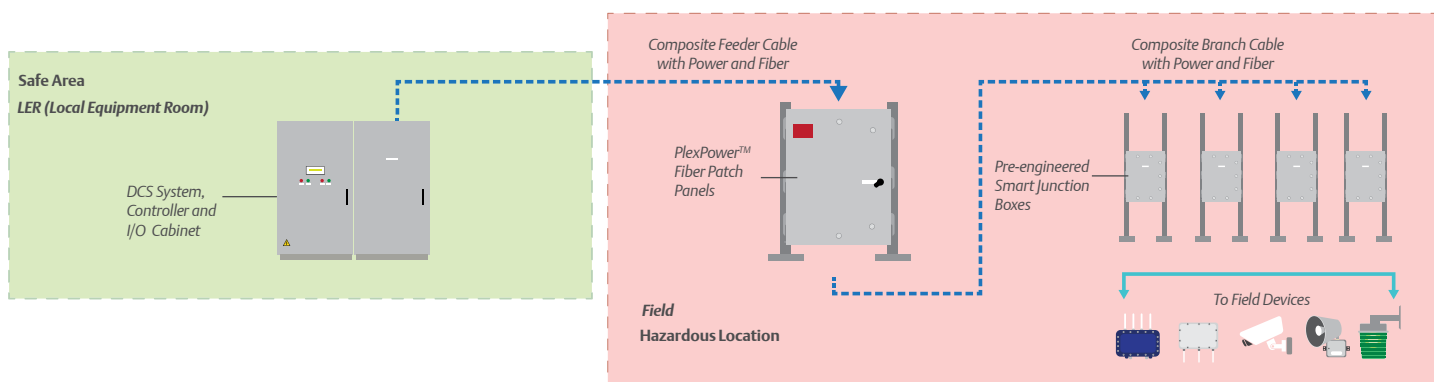
Through unprecedented engineering and design, the Appleton™ PlexPower™ Fiber Panel by Emerson answers the need for simplified process monitoring and data communications. Utilizing the technology of our PlexPower panelboards, the PlexPower Fiber Panel combines power distribution technology and instrumentation/process monitoring together into a single solution for hazardous, wet and corrosive environments.

Our PlexPower Fiber Panels bring hybrid cables (power/fiber together in one cable) from up to 24 field junction boxes back to one enclosure located in the hazardous area, drastically reducing the number of long dedicated cable runs while also limiting potential failure points. Field junction boxes can also be connected to multiple PlexPower Fiber Panels, creating redundant pathways to increase reliability.

Before PlexPower Fiber Panels



After PlexPower Fiber Panels



Hazardous Location Facility

With the presence of flammable gases and vapors, hazardous locations around the world demand electrical products engineered to provide proper protection from dangers like heat or spark-induced ignition. Our engineers have developed innovative advancements in supplying power and data throughout a facility.



2. Composite Feeder Cable with Power

4-6 AWG single phase
24 pair fiber optic
Typical conductors

Safe Area



1. Network / Power Cabinet

Composite feeder cable(s) originate in the safe area control room.



5b. Field Junction Box

Instrumentation junction boxes located throughout the facility's hazardous area. Field devices are hardwired or connected wirelessly.

Feeder Cable and Fiber

phase.
c.
or size.



3. PlexPower™ Fiber Panel

Hazardous certified panel(s) with IP66 and Type 4X Environmental Ratings in Hazardous (Classified) Area.

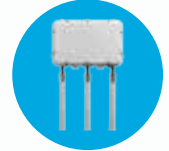


4. Composite Branch Cable with Power and Fiber

12-14 AWG single phase.
4 pair fiber optic.
Typical conductor size.

6. Field Devices

- Emerson DELTAV CHARM I/O Junction Box
- Industrial Router
- Other Process Field Devices
- Wireless Access Point (WAP) System
- CCTV System



5a. Emerson Smart Junction Box

Smart junction boxes located throughout the facility's hazardous area. Field devices are hardwired or connected wirelessly.

Greater configuration flexibility and improved power safety.



Appleton is the cornerstone brand of Emerson's Electrical Apparatus and Lighting business; trusted worldwide to make electrical installations safer, more productive and more reliable.

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