

Pepperl+Fuchs GmbH – Lilienthalstrasse 200 – 68307 Mannheim – Germany

Please indicate the following contact information for publication:

Tel.: +49 621 776-2222, Fax: +49 621 776-27-2222, www.pepperl-fuchs.com, pa-info@de.pepperl-fuchs.com

Editorial contact: Christa Blas (extension: -1420, fax: -1108), cblas@de.pepperl-fuchs.com

DART Fieldbus – Just say ‘No’ to sparks

DART cranks up intrinsically safe Power

The first real application for DART, Dynamic Arc Recognition and Termination is DART Fieldbus. It is part of the FieldConnex series of fieldbus infrastructure components by Pepperl+Fuchs. DART Technology, which is also known as ‘Power-I’ and driven by a consortium of 13 companies, enables high power levels while maintaining ignition protection intrinsic safety (I.S.) – the safest way to protect plants in hazardous areas from unintended ignitions and explosions.

DART Fieldbus is made for hazardous area Zone 1 and gas group IIC. It is certified “by the book” through PTB, the German Metrology Institute, according to the standard that is well-known by all hazardous area specialists: IEC 60079-11. And this means the highest degree of protection in hazardous area Zone 1 through intrinsic safety.

For today’s fieldbus instrumentation

Real simplicity is built into DART Fieldbus: It offers all the benefits of FISCO, the Fieldbus Intrinsically Safe Concept regarding engineering, application, and maintenance. Only DART Fieldbus enables more than five times the power of current intrinsically safe fieldbus installations—enough to drive long cable lengths and many devices. Ten years ago, with FISCO the acceptance of intrinsically safe fieldbus began with rules simplifying application and validation of explosion protection. And today, DART Fieldbus breaks through even more barriers—lifting the power limits and enabling the greatest freedom of choice:

Existing intrinsically safe fieldbus instrumentation can be applied or remains in place on upgrades. “Our first idea for DART Fieldbus was to come up with a full I.S. fieldbus segment with the same attributes and power compared to fieldbus in the safe area”, says Michael Kessler, Technical Director, Components and Technology at Pepperl+Fuchs”. This is why DART only protects the trunk. The spurs are intrinsically safe in the classic way. DART Fieldbus can be used for existing I.S. instrumentation.” The differences between DART Fieldbus and fieldbus in safe areas are negligible.

Other attributes include physical layer diagnostics and load-sharing redundancy of power supply. Load sharing means that power supplies are controlled to carry exactly half the load current each. This means optimal operating conditions, a longer service life of power supply and higher system availability. DART Fieldbus may well become the best-in-class solution for intrinsically safe fieldbus installations – it has the power, the options, and the experience from the leading innovator and specialist in hazardous area products, Pepperl+Fuchs.

DART has been recognized as a major innovation for the process industry and was one of the top five nominees for the prestigious Hermes Award of Hannover Fair in Germany. Only two years after the nomination, Pepperl+Fuchs puts this technology into practice and products. Michael Kessler: “It fills us with pride to have been recognized in this way. We are looking to create a solution that is practical and easy to apply.” To get all the facts about DART Fieldbus visit: www.dart-fieldbus.com

Risk Reduction Included

- Safest fieldbus installation with power – all intrinsically safe
- Working without hot work permit
- Same equipment for all gas groups: Certified for gas group IIC
- Reduced planning risks without special considerations for the hazardous area
- Protection of investment: For intrinsically safe fieldbus instrumentation
- Higher plant availability through built-in supply redundancy

Lifting Power Limits

- Intrinsic safety with more power
- Long cable runs: Up to 1000 m trunk / up to 120 m spur
- Optional Advanced Diagnostics for the physical layer
- Up to 32 instruments per segment
- Designed and conformant to standards for explosion protection IEC 60079-11

About Pepperl+Fuchs

Pepperl+Fuchs is a leading developer and manufacturer of electronic sensors and components for the global automation market. For more than 60 years, our continuous innovation, high quality products, and steady growth has guaranteed us continued success.

One Company – Two Divisions

Pepperl+Fuchs – PROTECTING YOUR PROCESS

The **Process Automation Division** is a market leader in intrinsically safe explosion protection. We offer comprehensive, application-oriented system solutions, including customer-specific control cabinet solutions for the process industry. A large portfolio of components is available from our various product lines: isolated barriers, fieldbus infrastructure solutions, remote I/O systems, HART interface solutions, level measurement devices, purge and pressurization systems, industrial monitors and HMI solutions, power supplies, separator alarm systems for oil and petrol separators, signaling equipment, lighting as well as emergency shutdown equipment and accessories.

Pepperl+Fuchs – SENSING YOUR NEEDS

With the invention of the inductive proximity sensor in 1958, the company set an important milestone in the development of automation technology. Under the motto “Sensing your needs”, customers benefit from tailor-made sensor solutions for **factory automation**. The main target markets of the factory automation are machine and plant construction, the automotive industry, storage and material handling, printing and paper industry, packaging technology, process equipment, door, gate and elevator construction, mobile equipment, renewable energies.

The division offers a wide product range of industrial sensors whether it's inductive, photoelectric or ultrasonic sensors, rotary encoders, identification systems, barcodes, code readers for data-matrix-codes and vision sensors.

Key words: FOUNDATION Fieldbus, PROFIBUS PA, Power-I, DART, Dynamic Arc Recognition and Termination, intrinsic safety, explosion protection, FieldConnex, Power Hub, Fieldbus power supply, Segment Protector, fieldbus coupler, innovation

Author: Dipl.-Ing. Andreas Hennecke MBA
Product Marketing Manager FieldConnex®
Division Process Automation

Characters: 2,682, without space characters
Characters short text: 743, without space characters
Pictures: No. MC7522_260810_01, No. MC7522_110112_03

January 2011

For royalty free use for publications.



Fig. 1: Eye catcher

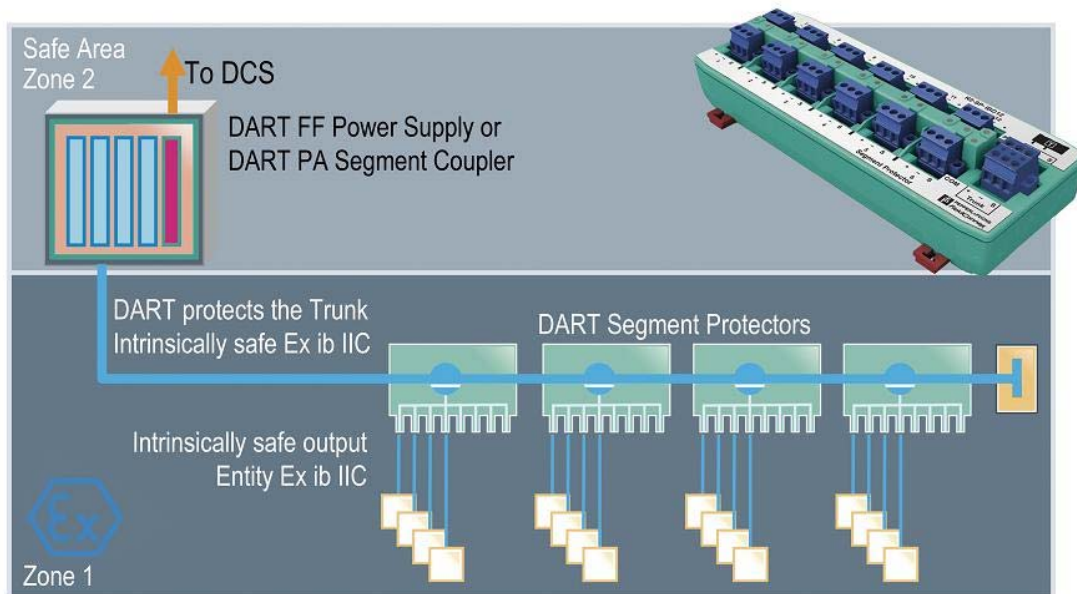


Fig. 1: The intrinsically safe High-Power Trunk: Reaches with power into the hazardous area allowing long cable runs and offers all the benefits of FISCO: Intrinsic safety