Redundant FISCO Power Supplies

Highest system availability for FOUNDATION™ fieldbus networks in hazardous areas
MTL has made a major enhancement to its class-leading range of Fieldbus Intrinsically Safe Concept (FISCO) wiring components for FOUNDATION™ Fieldbus networks.

Such networks require conditioned power for the fieldbus instruments, and FISCO power supplies employ the internationally recognised intrinsic safety technique to provide high levels of security for the field wiring in flammable atmospheres.

The introduction of power supply redundancy means FISCO can now be specified for the most critical hazardous area classifications, while retaining the key benefits of intrinsic safety such as the ability to conduct ‘live maintenance’ on the entire field network. The redundancy scheme eliminates the risk of network failure in the event of the loss of a single power supply. Such redundancy is routinely specified by end users and engineering companies where failure could result in down-time and lost production.

Redundant FISCO from MTL...an industry first

- Providing the highest levels of reliability and system availability for your critical hazardous area networks
- Bringing safe and secure ‘live working’, even in the most demanding control environments
- Lowering the Total Cost of Ownership of your asset base
- Protecting your revenue streams, reputation and business continuity

Redundant FISCO power supplies from MTL...brining higher levels of security to demanding control environments

KEY BENEFITS

- High system availability compared with alternative techniques
- Safe and secure ‘live working’ throughout the field network
- Simple and reliable Megablock™ wiring components in field enclosures
- Intrinsically safe network from control room to field
- Fully compliant with internationally recognised IEC 60079-27 FISCO standard
- Easily maintained in hazardous areas using established Intrinsic Safety practice
- No ‘mixed protection’ techniques requiring special operator training

“USERS WILL BE ABLE TO CONFIDENTLY SELECT FISCO FOR EVEN THE MOST DEMANDING CONTROL ENVIRONMENTS, INCLUDING OIL & GAS, REFINING & PHARMACEUTICALS”

IAN VERHAPPEN, MTL DIRECTOR OF INDUSTRIAL NETWORKS
THE SOLUTION YOU HAVE BEEN WAITING FOR...IS NOW AVAILABLE FROM MTL

Redundant FISCO Power Supplies from MTL, providing a low-risk solution requiring simple design, installation and commissioning skills in the field.

Redundancy Mechanism

- On power-up, output is defaulted to FISCO A
- On detected failure of FISCO A or corresponding Supply Arbitration Module, FISCO B is selected
- Failure notification (open-circuit alarm) is provided to host control system
- LED indicators help identify failed module, to allow replacement under power
- FISCO power supplies and Supply Arbitration Modules are redundant

CONTROL ROOM

HAZARDOUS AREA ZONE 1 / DIVISION 1

INTRINSICALLY SAFE TRUNK & SPURS (1 SEGMENT OF 4)
The use of FOUNDATION™ fieldbus in critical process applications demands the highest levels of system availability. Power supply redundancy, combined with highly reliable field wiring components, provides the basis for taking this industry-leading technology into a wider range of hazardous area applications in the process industries. MTL’s Redundant FISCO power supplies satisfy the combined requirements of intrinsic safety standards and rigorous Foundation compliance specifications to provide highly available fieldbus power for intrinsically safe networks.

MTL’s clever, patent-pending approach uses two FISCO power supplies - one in ‘active’ and the other in ‘hot-standby’ mode - together with twin supply arbitration modules (SAMs) that negotiate and manage power supply changeover in the event of a power supply failure. Continuous handshaking between the two SAMs ensures that they can never both be "on" at the same time.

Features for reliability and ease of use

- Arbitration modules electronically transfer field load to hot-standby FISCO power supply module, if loss of output of active module is detected
- Rapid fail-over occurs within the limits of FOUNDATION fieldbus™ specifications, removing the risk of losing fieldbus devices from the bus
- Innovative mechanical interlock ensures power and communications are maintained during module replacement
- Selection of power supply module types according to the hazardous area Gas Group optimises trunk cable length and number of fieldbus devices supported per segment

Power supply module carriers

- Full redundancy on each of 4 segments
- Versions for DCS integration
- Redundant 24Vdc bulk power inputs
- Alarm output to host control system
- Sized to maximise the number of power supply segments supported in typical floor-standing marshalling cabinets

FISCO field enclosures reduce capital and life-cycle costs

A key advantage of the Fieldbus Intrinsically Safe Technique is simplicity of the field-wiring enclosures. In comparison with other techniques, FISCO junction boxes are smaller, lighter, simpler and easier to maintain. The elimination of complex, non-redundant electronic circuitry from harsh field environments enhances the overall reliability of FISCO networks:

- Simple, high reliability ‘Megablock™’ wiring hub for up to 12 intrinsically safe spurs
- All circuits inside enclosure are intrinsically safe
- Compact design without need for ancillary components to enable live-working
- Optional surge protection for trunk and spurs
- No restrictions on removal of covers in presence of flammable atmospheres
- Compatible with IS hand-held diagnostic tools such as MTL-Relcom FBT-6
GLOBAL LOCATIONS

AUSTRALIA
MTL Instruments Pty Ltd, 1/30 Canvale Road
Canning Vale, Perth, WA 6155
Tel: + 61 (0)8 9455 2984  Fax: + 61 (0)8 9455 2805
E-mail: enquiries@mtlaus.com.au

CANADA
MTL Canada Safety Instrumentation
#102, 4249 97 Street, Edmonton
Alberta, T6E 5Y7
Tel: + 1 780 485 3132  Fax: + 1 780 485 3122
E-mail: cinfo@mtlnh.com

CHINA
MTL Instruments China Co. Ltd. Room 1002A, The Gateway
No 10 Yasao Road, Chaoyang District, Beijing 100020
Tel: + 86 010 8962 5711/5720/5721  Fax: + 86 010 8962 5725
E-mail: bjsales@mtl-inst.cn

FRANCE
MTL Instruments sarl, Les Carrés du Parc
10 rue des Rosières, 69410 Champagne au Mont d’Or
Tel: + 33 (0)4 78 64 98 32  Fax: + 33 (0)4 78 35 79 41
E-mail: info@mtl-inst.fr

GERMANY
MTL Instruments GmbH, An der Gümpgesbrücke 17
D-41564 Kaarst
Tel: + 49 (0)2131 718930  Fax: + 49 (0)2131 7189333
E-mail: info@mtl.de

INDIA
MTL India Pvt. Limited, No.36, Nehru Street
Off Old Mahabalipuram Road
Sholinganallur, Chennai - 600 119
Tel: + 91 (0) 44 24501660 /24501857  Fax: + 91 (0) 44 24501463
E-mail: sales@mtlindia.com

ITALY
MTL Italia srl, Via Cantù 11
I - 20092 Cinisello Balsamo MI
Tel: + 39 02 61601011  Fax: + 39 02 61294560
E-mail: info@mtl-inst.it

JAPAN
MTL Instruments KK, 3rd Floor
Gotanda Masujima Building
1-8-13 Higashi-Gotanda, Shinagawa-Ku
Tokyo 141-0022
Tel: + 81 (0)3 5420 1281  Fax: + 81 (0)3 5420 2405
E-mail: sales@mtlkko.jp

NETHERLANDS
MTL Instruments BV, PO Box 55, 6680 AB Bemmel,
de Houtakker 36, 6681 CW Bemmel
Tel: + 31 (0)481 450250  Fax: + 31 (0)481 450260
E-mail: info@mtlbemmelux.com

SINGAPORE
MTL Instruments Pte Ltd, 31 Ubi Road 1
#04-10 Aestech Building
Singapore 408694
Tel: + 65 6 487 7887  Fax: + 65 6 487 7897
E-mail: sales@mtlsing.com.sg

UNITED ARAB EMIRATES
MTL Instruments, Villa No. 4, Sector 2-17
Street 6, PO Box 53234
Abu Dhabi, UAE
Tel: + 971 2 446 6840  Fax: + 971 2 446 6841
E-mail: mtlufl@mtlinst.com

UNITED KINGDOM
Measurement Technology Limited
Power Court, Luton, Bedfordshire LU1 3JJ
Tel: + 44 (0)1582 723633  Fax: + 44 (0)1582 422283
E-mail: enquiry@mtlinst.com

USA
MTL Incorporated, 4001 W. Sam Houston Parkway N.
Suite 150, Houston TX 77043
Tel: + 1 281 571 8065  Fax: + 1 281 571 8069
E-mail: info@mtlinst.com

www.mtl-inst.com  enquiry@mtl-inst.com