



(1) **CERTIFICATE OF CONFORMITY**

(2) Equipment intended for use in potentially explosive atmospheres – Directive 94/9/EC

(3) Certificate of Conformity Number: **KEMA 03ATEX1198**

(4) Equipment: **MTL 9121 - IS and 9122 - IS with Yokogawa Field Transmitters Fisco Systems**

(5) Manufacturer: **Measurement Technology Limited**

(6) Address: **Power Court, Luton, Bedfordshire, LU1 3JJ, England**

(7) This equipment is specified in the schedule to this certificate and the documents therein referred to.

(8) KEMA Quality B.V., notified body number 0344 in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment intended for use in potentially explosive atmospheres given in Annex II to the Directive.

The examination and test results are recorded in confidential report no. 2028937.

(9) Compliance with the Essential Health and Safety Requirements has been assured by compliance with:

IEC 60079-25 (31G/115/FDIS, dated 02.05.2003) IEC TS 60079-27 : 2002

(10) If the sign "X" is placed after the certificate number, it indicates that the equipment is subject to special conditions for safe use specified in the schedule to this certificate.

(11) This EC-Type Examination Certificate relates only to the design, examination and tests of the specified equipment according to the Directive 94/9/EC. Further requirements of the Directive apply to the manufacturing process and supply of this equipment. These are not covered by this certificate.

(12) The marking of the equipment shall include the following:



II 2 G Ex ib IIC or Ex ib IIB

Arnhem, 28 June 2003
KEMA Quality B.V.

T. Pijpker
Certification Manager

* This Certificate may only be reproduced in its entirety and without any change



(13)

SCHEDULE

(14)

to Certificate of Conformity KEMA 03ATEX1198

(15) **Description**

The Measurement Technology Ltd 9121 - IS and 9122 - IS with Yokogawa Field Transmitters FISCO Systems consist of:

1. Apparatus located in the non hazardous area or in a hazardous area requiring the use of equipment category 3 G apparatus:
 - 1.1 A Measurement Technology Ltd 9121-IS FISCO Power Supply to EECS Certificate No. BAS02ATEX7276 and coded [EEx ib] IIC; or
 - 1.2 A Measurement Technology Ltd 9122-IS FISCO Power Supply to EECS Certificate No. BAS02ATEX7277 and coded [EEx ib] IIB
2. Apparatus which may be located in the hazardous area:
 - 2.1 A Yokogawa Series EJA Pressure Transmitter to KEMA Certificate No. KEMA 02ATEX1344 X and coded EEx ia IIC T4 or EEx ia IIB T4;
 - 2.2 A Yokogawa Series YVP110 Valve Positioner to KEMA Certificate No. KEMA 02ATEX1274 X and coded EEx ia IIC T4 or EEx ia IIB T4;
 - 2.3 A Yokogawa Series YTA Temperature Transmitter to KEMA Certificate No. KEMA 02ATEX1324 X and coded EEx ia IIC T4 or EEx ia IIB T4;
 - 2.4 Any other certified device compliant with IEC TS 60079-27.
 - 2.5 Measurement Technology Ltd FBT1-IS Terminator to Baseefa (2001) Certificate No. Baseefa 02ATEX0042, or equivalent certified terminator in accordance with IEC TS 60079-27, clause 5.
3. Permissible Interconnecting Cables:
 - 3.1 Following cable parameters apply:
 - loop resistance R_c 15 Ω /km ... 150 Ω /km;
 - loop inductance L_c 0,4 mH/km ... 1 mH/km;
 - capacitance C_c 80 nF/km ... 200 nF/km;
 - max. length of each spur cable 30 m in IIC and IIB;
 - max. length of each trunk cable 1000 m in IIC and 5000 m in IIB

Installation instructions

The following installation instructions apply:

- up to 32 field devices may be connected to the system;
- the field devices may be connected either directly to the trunk, or on one or more spurs from the trunk;
- a spur may be connected to the trunk either by a passive connector or by a suitably certified accessory;
- the terminator shall be located at the end of the trunk;
- the FISCO Power Supply shall be located not more than 30 m from one end of the trunk; where the power supply is connected via a spur, the spur is restricted to a length of 30 m;
- the FISCO System, which includes the cables and the field devices, is coded EEx ib IIB or EEx ib IIC, depending on the power supply used and on the length of the trunk cable;
- for the installation of the system components, the instructions and special conditions for safe use, if applicable and laid down in the respective certificates must be observed.

(13) **SCHEDULE**
(14) **to Certificate of Conformity KEMA 03ATEX1198**

(16) **Report**

KEMA No. 2028937.

(17) **Special conditions for safe use**

None

(18) **Essential Health and Safety Requirements**

Covered by the standards listed at (9).

(19) **Test documentation**

1. EC-Type Examination Certificate BAS02ATEX7276
 BAS02ATEX7277
 Baseefa 02ATEX0042
 KEMA 02ATEX1344 X
 KEMA 02ATEX1274 X
 KEMA 02ATEX1324 X

2. Declaration of Conformity MTL02ATEX9121X
 MTL02ATEX9122X

dated

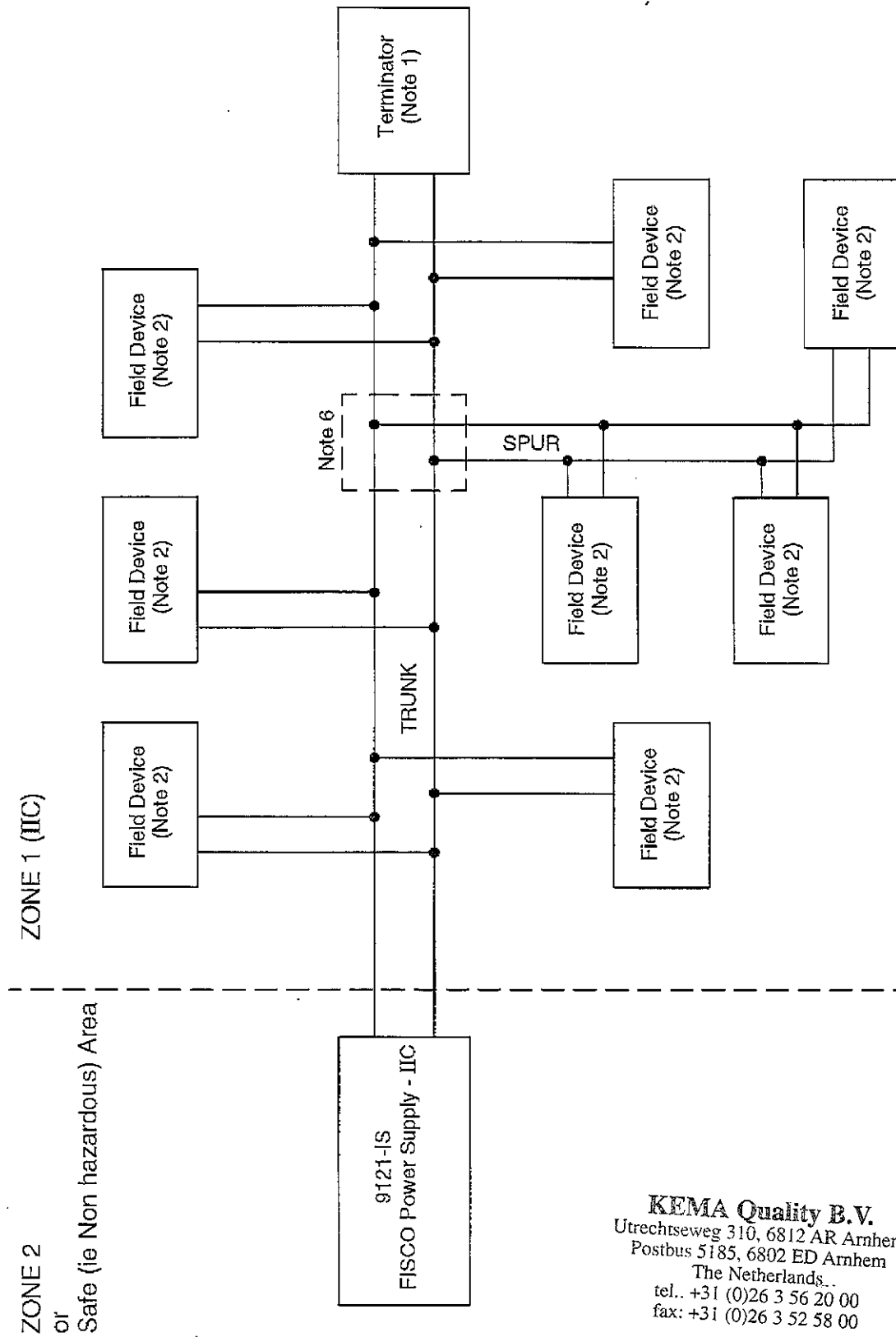
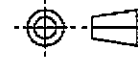
3. Drawing No. SCI-973, issue 1 (2 sheets) 4.03 (April 2003)
 SCI-974, issue 1 (2 sheets) 4.03 (April 2003)

Iss	1	Date Dtm	4.03 CMB	Modification		Chd	
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Dimensions in mm

Do Not Scale

Third Angle Projection






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 Sheet 1 of 2

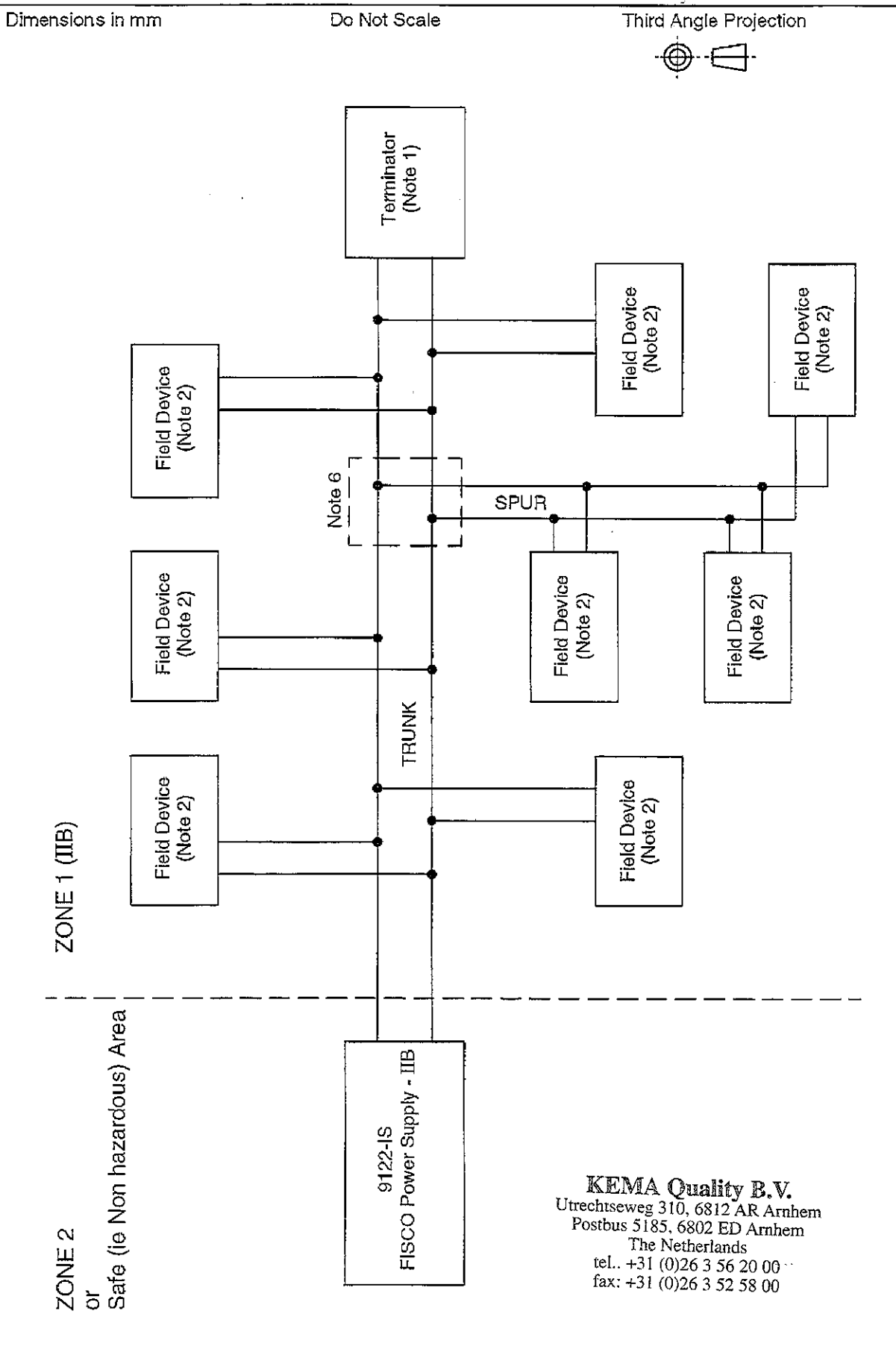
Title
 FISCO IIC System Drawing

Drg. No.
 SCI-973


Chd		Dimensions in mm		Do Not Scale		Third Angle Projection	
Modification		<p>NOTES</p> <ol style="list-style-type: none"> The 9121-IS FISCO power supply - IIC (Certificate BAS02ATEX7276) contains a terminator for the FISCO bus. The terminator at the other end of the FISCO bus is to be an MTL FBT1-IS (Certificate Baseefa02ATEX0042) or equivalent. Each field device can be any of the Yokogawa transmitters, from the EJA 100 (Certificate KEMA 02ATEX1334 X), YTA (Certificate KEMA 02ATEX1324 X), or YVP (Certificate KEMA 02ATEX1274 X) series, or any other device compliant with IEC TS 60079-27. Field devices which have been approved to EEx ia, provided that their safety parameters are compatible with the parameters of the FISCO power supply, may be used in this EEx ib system. The unprotected residual capacitance C_i of each field device is not greater than 5nF, and the residual inductance L_i not greater than 10µH. Provided the electrical characteristics of the cable are as defined in IEC TS 60079-27 then no further consideration of the cable parameters is necessary. As defined in IEC TS 60079-27, up to 32 field devices may be connected to the FISCO power supply. In practice, the current capacity of the power supply and the total current requirements of the field devices will limit the number of field devices. The field devices may be connected either directly to the FISCO bus, or on one or more spurs from that bus. The maximum length of the Trunk, and the maximum length of each Spur, are defined in IEC TS 60079-27. A Spur may be connected to the Trunk either by a passive connector (e.g. Screw Terminals, plug and socket) or by a suitably-certified accessory such as a device for limiting the current drawn by a Spur if the latter were short-circuited. This marking should normally appear on or adjacent to the principal item of electrical apparatus in the system or at the interface between the intrinsically safe and non-intrinsically safe circuits. 					
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Chd	7/2/97						
Modification		<p>9121 - IS System KEMA 03ATEX1198  II 2 G Ex ib IIC Measurement Technology Ltd.</p>					
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FISCO IIC System Drawing		SCI-973					

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Title		Sheet	1 of 2
FISCO IIB System Drawing		Org. No.	SCI-974

Chd		Dimensions in mm	Do Not Scale	Third Angle Projection
Modification		<p>NOTES</p> <ol style="list-style-type: none"> The 9122-IS FISCO power supply - IIB (Certificate BAS02ATEX7277) contains a terminator for the FISCO bus. The terminator at the other end of the FISCO bus is to be an MTL FBT1-IS (Certificate Baseefa02ATEX0042) or equivalent. Each field device can be any of the Yokogawa transmitters, from the EJA 100 (Certificate KEMA 02ATEX1334 X), YTA (Certificate KEMA 02ATEX1324 X), or YVP (Certificate KEMA 02ATEX1274 X) series, or any other device compliant with IEC TS 60079-27. Field devices which have been approved to EEx ia, provided that their safety parameters are compatible with the parameters of the FISCO power supply, may be used in this EEx ib system. The unprotected residual capacitance Ci of each field device is not greater than 5nF, and the residual inductance Li not greater than 10µH. Provided the electrical characteristics of the cable are as defined in IEC TS 60079-27 then no further consideration of the cable parameters is necessary. As defined in IEC TS 60079-27, up to 32 field devices may be connected to the FISCO power supply. In practice, the current capacity of the power supply and the total current requirements of the field devices will limit the number of field devices. The field devices may be connected either directly to the FISCO bus, or on one or more spurs from that bus. The maximum length of the Trunk, and the maximum length of each Spur, are defined in IEC TS 60079-27. A Spur may be connected to the Trunk either by a passive connector (e.g. Screw Terminals, plug and socket) or by a suitably-certified accessory such as a device for limiting the current drawn by a Spur if the latter were short-circuited. This marking should normally appear on or adjacent to the principal item of electrical apparatus in the system or at the interface between the intrinsically safe and non-intrinsically safe circuits. <div style="border: 1px solid black; padding: 5px; text-align: center; margin: 10px auto; width: fit-content;"> <p>9122 - IS System KEMA 03ATEX1198  II 2 G Ex ib IIB Measurement Technology Ltd.</p> </div> <ol style="list-style-type: none"> Each apparatus in the system must be installed taking into account the temperature class, ambient temperature range, and any special conditions and installation instructions stated in the appropriate apparatus certificate. <p style="text-align: right;">KEMA Quality B.V. Utrechtseweg 310, 6812 AR Arnhem Postbus 5185, 6802 ED Arnhem The Netherlands tel.: +31 (0)26 3 56 20 00 fax: +31 (0)26 3 52 58 00</p>		
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<p>Title</p> <p style="text-align: center;">FISCO IIB System Drawing</p>		Sheet	2 of 2	
		Drg. No.	SCI-974	