



1 **EC - TYPE EXAMINATION CERTIFICATE**

2 **Equipment or Protective System Intended for use in Potentially Explosive Atmospheres  
Directive 94/9/EC**

3 EC - Type Examination Certificate Number: **Baseefa07ATEX0190**

4 Equipment or Protective System: **TX2121 Single Port Isolator**

5 Manufacturer: **Trolex Limited**

6 Address: **Hazel Grove, Stockport, Cheshire, SK7 5DY**

7 This equipment or protective system and any acceptable variation thereto is specified in the schedule to this certificate and the documents therein referred to.

8 Baseefa (2001) Ltd., Notified Body number 1180, in accordance with Article 9 of the Council Directive 94/9/EC of 23 March 1994, certifies that this equipment or protective system has been found to comply with the Essential Health and Safety Requirements relating to the design and construction of equipment and protective systems 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. 07(C)0171-1

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

**EN 60079-0: 2006      EN 60079-11: 2007      EN 50303: 2000**

except in respect of those requirements listed at item 18 of the Schedule.

10 If the sign "X" is placed after the certificate number, it indicates that the equipment or protective system 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 and construction of the specified equipment or protective system. Further requirements of the Directive apply to the manufacturing process and supply of this equipment or protective system. These are not covered by this certificate.

12 The marking of the equipment or protective system shall include the following :

**⊕ I (M1) [Ex ia] I (-20°C ≤ Ta ≤ +50°C)**

This certificate may only be reproduced in its entirety, without any change, schedule included.


Baseefa Customer Reference No. 1159

Project File No. 07/0171

This certificate is granted subject to the general terms and conditions of Baseefa (2001) Ltd. It does not necessarily indicate that the equipment may be used in particular industries or circumstances.

**Baseefa**

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R S SINCLAIR  
DIRECTOR  
On behalf of  
Baseefa (2001) Ltd.



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## Schedule

14

Certificate Number Baseefa07ATEX0190

### 15 Description of Equipment or Protective System

The TX2121 Single Port Isolator is designed to take a single serial communications interface and repeat it via an isolated interface. The TX2121 Single Port Isolator is mounted in the non-hazardous area and provides an intrinsically safe serial interface into the hazardous area.

The apparatus consists of two PCB's mounted within a plastic DIN rail mounted enclosure. The TX2121 Single port Isolator measures approximately 105mm x 85mm x 60mm. On the side of the enclosure is an eight way DIL switch block used to set the address of the repeater. LED indicators are situated on the top of the enclosure indicating power and communications status.

Electrical connections to the apparatus are made via screw terminals. The TX2121 Single Port Isolator is intended to be mounted in a separate outer enclosure offering additional protection suitable for a mining environment.

Power Connections: CN101/7 w.r.t. CN101/5 (0V)

$$U_m = 253V_{rms}$$

The circuit connected to the non-hazardous area terminals is designed to operate from a nominal supply voltage of 12Vdc.

Serial Interface Connections: CN101/1 and CN101/3 w.r.t. 0V (CN101/5)

$$U_m = 253V_{rms}$$

The circuit connected to the non-hazardous area terminals is designed to operate from a nominal supply voltage of 5Vdc.

#### 3.1.1.1 Hazardous Area Terminals

Power Connections: CN201/7 w.r.t. CN201/5 (0V)

$$U_i = 14.4V$$

$$I_i = 3.33A$$

$$C_i = 6.86\mu F$$

$$L_i = 0$$

Serial Interface Connections: CN201/1 and CN201/3 w.r.t. 0V (CN101/5)

$$U_o = 5.66V$$

$$I_o = 65mA$$

$$P_o = 0.208W$$

$$U_i = 6.88V$$

$$C_i = 1.08\mu F$$

$$L_i = 0$$

$$C_o = 130\mu F$$

$$L_o = 50mH$$

$$L_o/R_o = 3355\mu H/\Omega$$



**16 Report Number**

07(C)0171-1

**17 Special Conditions for Safe Use**

None.

**18 Essential Health and Safety Requirements**

All relevant Essential Health and Safety Requirements are covered by the standards listed at item 9.

**19 Drawings and Documents**

Number	Sheet	Issue	Date	Description
P5554.02	1 to 2	B	08/02/07	TX2121 Single Port Isolator Circuit Diagram Main PCB
P5554.04 #	1 of 1	A	08/02/07	TX2120 Series Repeater/Isolator Circuit Diagram, LED PCB
P5554.14	1 to 5	B	20/02/08	TX2121 Single Port Isolator PCB, Main
P5554.16	1 of 1	B	29/10/07	TX2121 Single Port Isolator General Arrangement
P5554.24 #	1 of 1	A	08/02/07	TX2120 Series Repeater/Isolator PCB, LED
P5554.29	1 of 1	B	01/02/08	TX2121 Single Port Isolator Label Details

# Drawings also associated with Baseefa07ATEX0191X.