

Instructions specific to hazardous area installations (reference European ATEX Directive 94/9/EC, Annex II, 1.0.6.)

The following instructions apply to the Intrinsically Safe Type 122 I/P Converter covered by certificate number Sira 02ATEX2123X:

1 Certification Marking Label:



- 2 It is recommended that the installer refers to Watson Smith drawing number 96-133; system drawing, also attached on page 2.
- 3 The equipment should not be used outside the stated ambient temperature range
- 4 The certificate number has an 'X' suffix, which indicates that the certificate contains special conditions for safe use. Those installing or inspecting the equipment should have access to this section of the certificate.
- 5 The equipment has not been assessed as a safety-related device (as referred to by Directive 94/9/EC Annex II, clause 1.5)
- 6 Installation and maintenance of this equipment shall be carried out by suitably-trained personnel in accordance with the applicable codes of practice
- 7 Repair of this equipment shall be carried out by the manufacturer or in accordance with the applicable code of practice
- 8 If the equipment is likely to come into contact with aggressive substances, then it is the responsibility of the user to take suitable precautions that prevent it from being adversely affected, thus ensuring that the type of protection is not compromised.
 - ◆ Aggressive substances: e.g. acidic liquids or gases that may attack metals, or solvents that may affect polymeric materials
 - ◆ Suitable precautions: e.g. regular checks as part of routine inspections or establishing from the material's data sheet that it is resistant to specific chemicals.



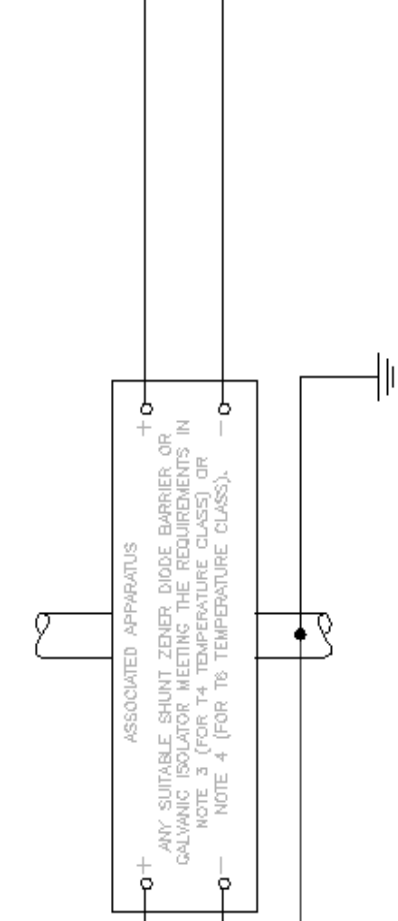
DO NOT SCALE DRAWING. IF IN DOUBT ASK.

NON-HAZARDOUS AREA

SYSTEM DRAWING SYS Sira Ex 96D2003

HAZARDOUS AREA

NON-HAZARDOUS AREA
UNSPECIFIED EXCEPT THAT IT MUST NOT BE SUPPLIED FROM NOR CONTAIN UNDER NORMAL OR ABNORMAL CONDITIONS A SOURCE OF POTENTIAL WITH RESPECT TO EARTH IN EXCESS OF 250 VOLTS RMS OR 250V DC



SEE NOTE 2

OPTIONAL SCREEN

TYPE 122
CURRENT TO PRESSURE
CONVERTER
SCS Ex 96D 2004X
Ex ia IIC T5 To 55°C
T4 To 80°C
or Sira 02ATEX 2123X
or Sira 02ATEX 2355X
U_i = 30V d_e I_i = 110mA dc
C_i = 0, L_i = 0
P_i = 0.33W (T6) / 1.1W (T4)

TABLE 1.

GROUP	MAXIMUM CABLE CAPACITANCE FROM EN 50022: 2002 TABLE A2	MAXIMUM CABLE INDUCTANCE	MAXIMUM CABLE L/R RATIO
IIC	83 nF	2.9 mH	46 μH/√L
IIB	650 nF	11.7 mH	185 μH/√L
IIA	2150 nF	23.5 mH	370 μH/√L

NOTES

1. THE ELECTRICAL CIRCUIT IN THE HAZARDOUS AREA MUST BE CAPABLE OF WITHSTANDING AN A.C. TEST VOLTAGE OF 500 VOLTS R.M.S. TO EARTH OR FRAME OF THE APPARATUS FOR 1 MINUTE.
2. THE CAPACITANCE AND INDUCTANCE OR INDUCTANCE/RESISTANCE (L/R) RATIO OF THE HAZARDOUS AREA CABLES MUST NOT EXCEED THE VALUES SPECIFIED IN TABLE 1.

HAZARDOUS AREA

3. ONE CHANNEL OF A POSITIVE POLARITY, 28V BARRIER OR ISOLATOR, CERTIFIED [EEx ia] IIC OR [EEx ib] IIC, WITH OUTPUT PARAMETERS AS FOLLOWS:
U_o NOT GREATER THAN 28V, I_o NOT GREATER THAN 110mA,
A SOURCE RESISTANCE OF 255 OHMS MINIMUM
C_o AT LEAST 83nF, L_o AT LEAST 2.8mH, L_o/R_o AT LEAST 46μH/OHM
EXAMPLE: MTL 728
4. ONE CHANNEL OF A POSITIVE POLARITY, 28V BARRIER OR ISOLATOR, CERTIFIED [EEx ia] IIC OR [EEx ib] IIC, WITH OUTPUT PARAMETERS AS FOLLOWS:
U_o NOT GREATER THAN 28V, I_o NOT GREATER THAN 110mA,
A SOURCE RESISTANCE OF 500 OHMS MINIMUM
C_o AT LEAST 83nF, L_o AT LEAST 2.9mH, L_o/R_o AT LEAST 46μH/OHM

5. THE INSTALLATION INCLUDING THE BARRIER EARTHING ARRANGEMENTS (IF APPLICABLE), SHALL COMPLY WITH THE INSTALLATION REQUIREMENTS IN THE COUNTRY OF USE, E.G. IEC/EN 60079-14. INSTALLATION SHALL ALSO BE IN ACCORDANCE WITH THE MANUFACTURER'S GUIDELINES.

CERTIFIED PRODUCT
No modifications are permitted without the approval of the
SIRA



THE QUEEN'S AWARD
FOR EXPORT

DIRECTIVE 94/9/EC (ATEX) EC DECLARATION OF CONFORMITY TYPE 122 I/P CONVERTER

IMI Watson Smith Ltd declares under our sole responsibility that the product listed below conforms with the relevant provisions of directive 94/9/EC of 23 March 1994.

Product: Type 122 I/P Converter

Manufactured by: IMI Watson Smith Limited
Cross Chancellor Street
Leeds
LS6 2RT, UK

Notified Body: Sira Certification Services (0518)
Rake Lane
Ecclestone
Chester
CH4 9JN, UK

Conformity has been demonstrated with reference to the following documentation:

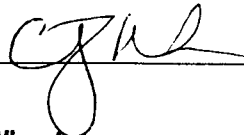
EC Type Examination Certificate: Sira 02ATEX2123X dated 6th Nov 2002
Sira 02ATEX2355X dated 6th Nov 2002
Sira 02ATEX4124X dated 6th Nov 2002
Sira 02ATEX1122 dated 6th Nov 2002

Quality Assurance Notification: Sira 02ATEX M189 dated 09th Aug 2002

Compliance with the Essential Health & Safety Requirements has been assessed by reference to the following standards:

EN 50014: 1997
EN 50018: 2000
EN 50020: 2002
EN 50021: 1999
EN 50284: 1999

Signed: _____



Date: _____

04.XII.02

Name: _____

C. Wheeler

Position: _____

Technical Manager