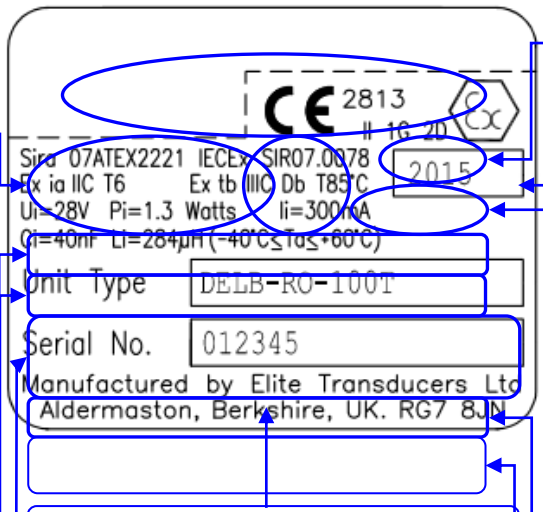
UNDERSTANDING ELITE Ex LABEL

on our ATEX and IECEx Certified Load Cells
Sira 07ATEX2221 issue 6
IECEx Sir 07.0078 issue 5

This is the CE marking showing compliance with all EU Directives applicable to this product, here it is the ATEX Directive 94/9/EC. Following number is the serial number of the Notified Body certifying the type examination. (This is issued by CSA Netherlands BV and their serial number is 2813)

07ATEX2221 is the ATEX certificate number.

IECEx SIR07.0078 is the IEC certificate number.



Manufacturer's name and address

Year of Manufacture of the Product

This hexagon with Ex in it is the European explosive atmosphere symbol.

This group always follows the 'hexagon' symbol; it gives the equipment group and category.

II is for surface applications (not mining)

1G indicates the product is suitable for use in Gas zones 0, 1 and 2.

2D indicates the product is suitable for use in Dust zones 21 and 22.

This is the serial number of the load cell, which is unique to this device and it sets up traceability of all the relevant documentation in our formal Quality Management System (QMS).

This is the type (model) of the load cell. These are listed on the ATEX and IECEx certificates.

Ex ia IIC T6 (for gas zones)

Ex is for explosion protection.

'ia' indicates it is intrinsically safe device assessed against protection concept used for assessing the load cell, it limits the energy of sparks and surface temperature. It must be used with a safety barrier.

IIC is the gas group; highest level includes all explosive gasses.

T6 is the temperature classification which is 85°C, which means that no part of the load cell will reach 45°C even with two faults, best that can be achieved.

Ex tb IIIC Db T85°C (for dust zones)

'tb' is for protection against rugged tight enclosure suitable for use in zones 21 and 22.

T85°C is the temperature classification same as T6 above.

(-40°C≤Ta≤ +60°C) is the permissible operating ambient temperature.

These figures are referred to as the 'safety parameters' of the device.

Ui is the maximum input voltage, 28V volts.

Pi is the maximum input power to the device, 1.3 watts.

Above must be limited by the safety barrier, it must not supply more than 28 volts and 1.3 watts.

Ii is the typical intrinsically safe current input; however any intrinsically safe current may be used.

Ci is the capacitance of the load cell.

Li is the inductance of the load cell.

These latter two contribute to the stored energy of the total system and must be taken into account including the capacitance and inductance of all the cables used when an intrinsically safe system is designed.

Important Points To Remember

- When 'ia' version is used always use a safety barrier installed in the Non-hazardous area to limit the amount of power supplied to the load cell(s). Ensure that the power available from the safety barrier is less than 1.3W.
- When tb version is used, its protection is based on good robust build of the load cell so safety barriers are not always necessary.
- Always read the 'Safe Use Manual' supplied with the Ex load cell and its Ex certificate.
- Refer to other Elite Technical Notes for more information on Ex zones.

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